

Financial Stability, Depressive Symptomatology, and Relationship Satisfaction: Findings
from a Healthy Marriage and Relationship Education Program

by

Nicholas Andre Hardy

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Chair of Committee: Sheara Jennings, Ph.D., MSW

Committee Member: Dean Luis Torres-Hostos, Ph.D.

Committee Member: Juan Barthelemy, Ph.D., LCSW

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Abstract

African Americans and Hispanics represent the two largest minority groups in the United States, and they fare worse in key measures of relationship satisfaction, including marriage and divorce rates, cohabitation, and the age of first marriage. The implications of a satisfying relationship have far reaching effects, especially on the outcomes for children and rates of poverty. The purpose of this dissertation study is to explore whether participation in a federally funded Healthy Marriage and Relationship Education (HMRE) program impacts relationship satisfaction in a sample of African American and Hispanic adults, and if financial stability and depressive symptomatology influence relationship satisfaction. Empowerment theory was utilized as a lens for understanding how a government funded program can support an individual's ability to improve their relationship by overcoming psychological, organizational, and community barriers. This study is a secondary data analysis based on a subset of data from a five year, federally funded grant by the Administration of Children and Families. The sample (N=278) includes African American and Hispanic adults who identified as being in a relationship. Bivariate tests were used to assess the relationship between the variables in this study and logistic regression analyses were conducted to explore the impact of participation in a HMRE program on relationship satisfaction, along with the influences of financial stability and depressive symptomatology on relationship satisfaction among treatment participants over time. Findings from this study were not significant. Limitations related to measurement, response bias and operationalization are discussed as well as implications for future research, policy and social work practice.

Keywords: Relationship Satisfaction, Depression, and Financial Stability

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Chapter 1: Introduction

Traditionally, healthy marriages and relationships have not been a key priority for policy makers and government officials. Although marriage has been a consistent part of American culture, views on the functions of marriage have evolved. In the mid-twentieth century, the customary norm was to leave home, get married, and have children when one had the economic means to do so (Billari & Liefbroer, 2010; Furstenberg et al., 2005, Shanahan, 2000). This transition was an embedded standard and worked seamlessly in a social and economic environment that was both structured and predictable. However, as the composition of businesses changed, gender roles evolved, and the financial demands for survival increased, so did the meaning of marriage. Previously, marriage was considered a viable means to economic stability, whereas now it operates as a capstone of young adulthood and serves as a sign that two individuals have reached other adult milestones (Kefalas & Carr, 2012; Watson & McLanahan, 2011).

Changes in views about marriage and its function are also apparent in various demographic trends like marriage and divorce rates, cohabitation rates, and children born out-of-wedlock. These changes are best understood by examining two fundamental shifts that have occurred in our society: (1) evolving cultural norms that have established new trends and altered what is considered acceptable; and (2) declining overall relationship satisfaction among couples. The median age for first marriages offers one example of large-scale cultural changes occurring in the marriage landscape.

A review of marriage data from the U.S. Census Bureau over the past four decades reinforces this fact and further highlights changes in the age of first marriages for men and women. In 1980, the median age of first marriage for women was 22 years of age. Between

1980 and the 2000, the average age for women rose to 25, followed by another increase in 2010 to 26. Most recently, in 2018, the median age of first marriage for women was 27. While this number reflects a modest upturn from the previous decade, this is an all-time high. Similar to women, there has been an upward trajectory in the age of first marriage for men. Since 1980, when the average age of first marriage was 24, there have been gradual increases over the years. In 1990, the median age of first marriage for men was 26, and in 2010 it was 28, followed by another incremental shift in 2018, where the age of first marriage for men had grown to 29.

Another change in cultural norms relates to the broader acceptance of cohabitation, which has also increased among young adults. For individuals 19–24 years of age, there was a 30% increase in cohabitating unions between 1980 and 2010 (Manning, 2013). This can be explained by changes in social norms, where cohabitating or remaining single is viewed less negatively than in preceding decades and has become a more acceptable social norm (Balestrino & Ciardi, 2008). Although individuals who cohabit are less likely to get married (Bumpass & Lu, 2000), cohabitating has seemingly become an acceptable form of union among young adults (Settersten & Ray, 2010). Despite the wide acceptance of cohabitation, cohabitating relationships are still less stable than those of married couples (Kennedy & Ruggles, 2013). Cohabitating unions have a lower “exit cost” than marriage and allow individuals the opportunity to experience the benefits of co-residence without the same degree of commitment (Lundberg et al., 2016). This commitment is evident both in the formalities of a legal union and in collective financial investments, such as retirement and future education. Furthermore, cohabitation is more prevalent among individuals who do not have a college degree. Research shows that women who have a college degree, were more likely to get married following cohabitation than those without a college degree (Sassler et al., 2018; see also Sassler & Miller, 2017). Although divorce and

remarriage have risen among wealthier individuals with higher education, changes in family structure are still more prevalent among individuals with lower income and less education. (Cherlin, 2009).

The second demographic shift that has occurred in recent decades is the overall decrease in marriage rates and overall increase in divorce rates, which can be seen as a comment on individuals' growing dissatisfaction with marriage. In the United States, marriage rates have declined over the past 50 years and continue to do so. According to a study conducted by the Pew Research Center, 72% of Americans were married in 1960, yet in 2016 only half of Americans were married. In relation to gender, 68% of men and 66% of women were married in 1950, but in 2019, only 54% of men and only 51% of women were married (U.S. Census Bureau, 2019). However, declining marriage rates are partially explained by increased cohabitation and an older age at first marriage.

The divorce rate, while arguably the most relevant measure of relationship satisfaction among married couples, has fluctuated over the past several decades. Between 1950 and 1979, divorce rates doubled. Prior to 1950, only one in four marriages ended in divorce (Rotz, 2016). Although vital statistics reports show that divorce rates have declined since the 1980s, there has been a general upward trend when compared against divorce in the early and mid-nineteenth century. In the 1980s, divorce rates fell back to previous levels and have continued to decline over the past three decades. The divorce rate per 1,000 populations has decreased from 4.0 in 2000 to 3.6 in 2010 and 2.9 in 2017 (U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, 2000 to 2017). This decrease is largely attributed to increased rates of cohabitation and individuals waiting longer to marry for the first time. Nevertheless, the United States has the highest rate of divorce in the Western world (Ganong et

al., 2016). A similar negative trend is found in second marriages as well. These unions dissolve more rapidly (Coleman et al., 2000), and when compared to first marriages, have a 10% higher rate of divorce (Ganong et al., 2006).

In response to these major cultural shifts (delaying marriage, marrying less often, increased divorce rates, and increased cohabitation) researchers, community organizations, government agencies, and other stakeholders who have a vested interest in relationship outcomes (e.g., child advocates) have been exploring solutions to strengthen relationships. The challenge, however, is that relationships are not static. Instead, they are comprised of multiple, complex dynamics that consistently evolve over time and are influenced by a multitude of factors, both within and outside of one's control. Factors such as family history, education, age, and early childhood experiences, have been positively and/or negatively correlated with the degree of satisfaction one experiences in his or her relationship.

To further complicate the changing landscape of relationships, a problem “within a problem” is found in the rapid erosion of marriage among African Americans and Hispanics, two historically traditional and family-centered minority groups. While it is true that African Americans and Hispanics experience disparaging rates of relationship satisfaction in comparison to non-minorities, the lowest rate still occurs among African Americans and Hispanics with lower income. Further examination between high- and low-income African American and Hispanic couples show that both value marriage equally; however, financial problems are deemed the primary concern in the relationship of low-income couples (Trail & Karney, 2012). Among disadvantaged populations, the perception of an “economic bar” (e.g. earnings, employment, asset achievement, or economic success) must be reached prior to marriage

(Gibson-Davis, 2018). This belief, coupled with environmental stressors associated with limited resources, places greater strain on low-income African American and Hispanic couples.

This poses added concern because of the growing number of African Americans and Hispanics in the United States. According to population estimates in the 2017 American Community Survey, African Americans and Hispanics represent the two largest minority groups in the United States and comprise 13.4% and 18.1% of the total U.S. population, respectively, almost a third of the U.S. population. Furthermore, the U.S. Census Bureau's 2017 national population projections and 2017 vintage population estimates indicate that the U.S. Hispanic population will reach 111 million by 2060 and will account for 28% of the total U.S. population.

The implications of a satisfying relationship have far-reaching effects. Generationally, the outcomes of children in areas such as education and social and emotional health are related to the quality of their parents' relationship. The same is true when considering factors such as economic viability, safety in a community, and a tax base that allows for expenditures related to supporting vulnerable populations. These factors all hinge, directly or indirectly, on the quality of a relationship.

This dissertation research study considers the complex and ever-evolving topic of relationship satisfaction among low-income African Americans and Hispanics. In particular, this study explores the impact of depressive symptomatology and financial stability on relationship satisfaction among African Americans and Hispanics who participated in a federally funded Healthy Marriage and Healthy Relationships Education program.

Statement of the Problem

When assessing relationship satisfaction and the state of marriage in the United States, there are at least four demographic rates that can be examined: marriage rates, divorce rates,

cohabitation rates, and the number of children born outside of marriage. Each of these demographics has far-reaching implications on child outcomes and on the socioeconomic and political landscapes. Attention is given to minorities who fare worse than their White counterparts in all these measures. In regard to marriage, rates in general have declined since the mid-nineteenth century. Amidst a descending general pattern, African Americans and Hispanics have experienced the sharpest decline. This stark contrast is particularly apparent among African Americans, who not only have the lowest rates of marriage, but also marry at an older age, have a higher rate of divorce, and experience a higher percentage of non-marital child births (Dixon 2009; Raley, 2015). As an example, from 1960–2010, marriage rates dropped from 74% to 55% among Whites, 72% to 48% among Hispanics, and from 61% to 31% among African Americans (Cohn et al., 2011).

The evolving changes in family structure are also seen in rates of cohabitation and the percentage of children who are born outside of marriage. In 1960, only 5% of children were from non-marital births, a number that grew to 20% in 1983 and to 40% in 2010 (Daniels et al., 2017). Although there was a modest decrease in 2016, the number of children born outside of marriage was still at 39% (Martin et al., 2017). When dissecting the percentages of children born outside of marriage by race, there are similar disparities between African Americans (69%) and Hispanics (52%) when compared to Whites (28%).

In addition to marriage rates and children born outside of marriage, there has also been a shift in cohabitation. In 2018, 15% of young adults ages of 25 to 34 were cohabitating, reflecting a 2% increase from the previous 10 years and a 14% increase since 1970 (U.S. Census Bureau, Current Population Survey Annual Social and Economic Supplements, 1968-2018). However, a divergence occurs when exploring cohabitation through the context of race, most notably in the

percentage of cohabitating unions that lead to marriage. At five years of cohabitating, African Americans (48%) are the least likely to get married to their cohabitating spouse, followed by Hispanics (61%) and then Whites (75%) (Child Trends Databank, 2015).

Race alone does not offer insight into what exactly contributes to these relationship patterns. Instead, factors such as education and socioeconomic status are more closely associated with negative relationship outcomes. The problem, however, is that both African Americans and Hispanics have lower household incomes and less education than non-Hispanic Whites. African Americans have a median household income of \$38,555, Hispanics have a median household income of \$46,882, and Whites have a median household income of \$61,349 (U.S. Census Bureau, American Community Survey, 2016). Not surprisingly, a similar trend exists with the educational attainment of minorities. According to the 2015 U.S. Census Bureau Population Survey, 22.5% of African Americans have a college degree compared to 15.5% of Hispanics and 32.8% of Whites.

The disparities that exist among African Americans, Hispanics, and Whites clearly depict alarming patterns in the outcomes of their relationships, yet it is difficult to identify viable solutions to combat these inequities. For one, these challenges are complex, with multidimensional factors that range from historical origins of oppression to environmental influences. Secondly, minorities are heterogeneous, with individualized experiences that shape their decisions and outlook; therefore, it is impossible to standardize solutions into a “minority, one size fits all” approach. Nonetheless, this dissertation pursues answers to questions of how to improve relationship satisfaction and what influences relationship satisfaction. More specifically, this dissertation examines the impact of a federally funded Healthy Marriage and Relationship education (HMRE) program on relationship satisfaction, and the potentially

intervening role of depressive symptomatology and financial stability on relationship satisfaction.

Significance

When considering the significance of “why” relationship satisfaction is important, it is vital to explore the various domains that directly and indirectly influence the state of one’s relationship. As an example, research has found strong associations between healthy marriages and the intersectionality of economic, social, and psychological well-being (Blackman et al., 2005). Consequently, the more satisfied an individual is in their relationship, the more likely they are to stay with their partner. However, longevity alone does not fully explain why studying relationship satisfaction is significant, both in practice and social science research. Another critical aspect that has long-term implications involves the impact of relationship satisfaction on the outcomes of children. Children who live with parents in a healthy marriage have fewer behavioral concerns, delay the onset of sexual activity, obtain higher levels of education, and are less likely to use drugs (Chambers & Kravitz, 2011).

Conversely, the benefits provided to children of healthy marriages and relationships are equally valuable in relation to their educational trajectory, earning potential, and bottom-line financial contribution to the economy. Children whose parents are in a healthy marriage achieve higher levels of education (Chambers & Kravitz, 2011), which is associated with many positive outcomes. Among the many ways a child’s education supports their professional and personal future, their financial earning potential is the most notable demarcation of their respective educational level. In 2015, an individual with a bachelor’s degree who worked full-time earned 67% more than an individual with just a high school diploma (U.S. Census Bureau, Income,

Poverty, and Health Insurance in the United States, 2015). This disparity is also reflected in the amount of taxes an individual will pay, as individuals with higher incomes pay higher taxes.

This dissertation study is based on data collected in the second year of a five-year, federally funded Healthy Marriage and Relationship Education program. The Administration of Children and Families (ACF) has awarded grants to organizations to provide healthy marriage and relationship education services, along with career and job advancement activities, for the past 15 years. Special attention has been given to organizations that offer these services to economically disadvantaged populations in underserved communities. This initiative is part of an overarching strategy to enhance the well-being of children and families. Hence, the context of the study is the evolving cycle between relationship satisfaction and a wide range of life outcomes (e.g., education, poverty, health, economic vitality, etc.) that showcase the importance of both relationship satisfaction and our understanding of contributing factors, such as depressive symptomatology and financial stability.

Definition of Terms

The following terms are used to assist in the understanding of this dissertation and provide clarity for readers:

African American. The term *African American* in the study is defined as an individual's race, which, according to the definition outlined by the Office of Management and Budget, is described as an individual's self-identification with one or more social groups. The census continued by defining *African American* or *Black* as any person with origins in any of the Black racial groups of Africa (U.S. Census Bureau, 2010).

Hispanic. *Hispanics* are defined as individuals who identify as Mexican, Puerto Rican, South or Central American, or another of five Spanish-speaking groups, regardless of race, that

can identify as Hispanic, according to the U.S. Office of Management and Budget (U.S. Census Bureau, 2018). *Hispanic* is used to describe an individual's ethnicity. Based on the standards identified by the Office of Management and Budget, which follow the *1997 Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity*, Hispanic origin is closely aligned with a social definition, versus an established biological, anthropological, or genetic standard. In the 2010 U.S. Census questionnaire, the term *Hispanic* or *Latino* was used to describe an individual of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin (U.S. Census Bureau, 2010). Furthermore, federal mandate required that race and ethnicity be separated, and the minimum categories for ethnicity include *Hispanic* or *Latino*. Hispanics/Latinos can be of any race.

White. In this study, the term *White* is based on the Office of Management and Budget definition, which has provided guidance to the U.S. Census Bureau. Accordingly, *White* refers to individuals who selected *White* as their race and who have origins in Europe, the Middle East, and North Africa. Moreover, *White* refers to individuals who classified themselves as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian (U.S. Census Bureau, 2010). Because Hispanics can be of any race, it is customary in research to refer to “non-Hispanic Whites”, when both race and ethnicity are assessed, and it becomes possible to disaggregate such a group.

Relationship Satisfaction. In this study, the terms *relationship satisfaction* and *marital satisfaction* will be used interchangeably, as relationship satisfaction includes a broader group of individuals (i.e., married and non-married but in a committed relationship), but is still based on an individual's perception of their relationship (Archuleta et al., 2011). The literature uses terms such as *marital satisfaction*, *quality*, *happiness*, and *adjustment* synonymously (Heyman et al., 1994). Further rationale for using various terms to define relationship satisfaction lies within

challenges associated with measuring this term. It is increasingly difficult to separate the constructs of relationship satisfaction when they are poorly defined in the measurement literature (Vaughn, 1999). Consequently, *relationship satisfaction* in this study will be measured according to the extent that an individual experiences satisfaction in their interpersonal relationship (American Psychological Association, 2015).

Depressive Symptomatology. *Depressive symptomatology* can be defined as symptoms associated with depression (Radloff, 1977), such as hopelessness, restlessness, loss of appetite, or decreased levels of energy. *Depressive symptomatology* in this study is based on an individual's self-identified feelings within the past 30 days.

Financial Stability. *Financial stability*, in this study, is defined according to the level of difficulty an individual has in paying their bills.

Limitations of Study

This study is not without limitations; however, efforts have been made to improve the reliability of the study's findings. The first notable limitation includes the accuracy of measuring relationship satisfaction. When establishing a causal relationship, controlling for outside variables is an essential component to assessing the degree to which one variable influences the other. As such, relationship satisfaction is often determined by a wide range of variables, many of which are not included in the survey. As an example, family dynamics (i.e., divorce, separation, etc.), early childhood experiences, communication patterns, conflict resolution skills, and education levels are just a few ways that relationship satisfaction may be impacted. However, despite the abundance of factors that *could* impact the extent to which one is satisfied in his or her relationship, efforts to limit this have been made by assessing relationship satisfaction at multiple time points over the course of a year. Another limitation present in this

study pertains to the scales used to assess depressive symptomatology and financial stability. This study utilizes secondary data, which was collected for the primary purpose of evaluating the effectiveness of a Healthy Marriage and Relationship Education program. Consequently, the main objective did not include a focus on depressive symptomatology or financial stability. Therefore, parts of larger scales were used (i.e., Center for Epidemiologic Studies Depression Scale), which inadvertently challenges the measurement reliability of these constructs.

In summary, this study addresses some of the previous limitations in the research (e.g., limited representation among African Americans and Hispanics) that have challenged our understanding of relationship satisfaction. Primarily, this study explores the effects of depressive symptomatology and financial stability on relationship satisfaction over time, utilizing a longitudinal data collected for a Healthy Marriage and Relationship Education program. Research has consistently linked healthy marriages with economic, social, and psychological well-being (Blackman et al., 2005). As such, the overarching aim of this study aligns with the funding priorities set forward by the U.S. Department of Health and Human Services' Administration for Children and Families.

Summary

Overwhelming evidence shows that African Americans and Hispanics are disproportionately represented in areas such as divorce, cohabitation, and single parenthood. However, there are various factors outside the context of one's immediate relationship that contribute to these conditions. Relationships that develop under such circumstances are often plagued by economic hardship, limited resources, low rates of employment, and experiences of acute stressors (Karney et al., 2003; McLeod & Kessler, 1990). Therefore, assessing how satisfied low-income African American and Hispanic couples are in their intimate relationships

could vary more than those in stable, middle- or upper-class households because of exposure to additional, external stressors (Jackson et al., 2017). As a result, further challenges are posed when determining what most affects relationship satisfaction among low-income African Americans and Hispanics.

Chapter 2: Literature Review

The literature review for this dissertation is concentrated in the following areas: (1) federally funded Healthy Marriage and Relationship Education programs; (2) trends specific to African American and Hispanic populations in regards to relationship outcomes; and (3) the relationships between relationship satisfaction, depressive symptomatology, and financial stability. This literature review begins with an outline of the theoretical framework used (empowerment theory) to guide this dissertation, and it establishes the foundation and structure on which this study is based. This dissertation research study will be conducted with data collected from a federally funded Healthy Marriage and Relationship Education program. Consequently, this literature review begins with a description of how the federal government became invested in healthy marriages and relationships, and the evolution that has occurred regarding federal spending priorities for disadvantaged populations. Given the disproportionate rates of divorce, cohabitation, and children born outside of marriage among African Americans and Hispanics, and the direct associations with negative economic, educational, and social outcomes, improving the quality of relationships has been a key funding priority. Accordingly, this literature review examines the current state of relationship outcomes and trends among African Americans and Hispanics. Furthermore, the relationship between relationship satisfaction and depressive symptomatology, along with relationship satisfaction and financial stability, are explored at length, as well as the degree to which each influences the other, along with gaps in prior studies that mandate further research.

This literature review was guided by keywords in the following topic areas: relationship satisfaction in African American and Hispanic populations and depressive symptomatology, and financial stability in African American and Hispanic populations. The databases used to conduct

literature searches included PsycINFO, JSTOR, SAGE Research Methods, ERIC, and EBSCO. The parameters were restricted to peer-reviewed articles published since 2013.

Theoretical Framework: Empowerment Theory

This section will present an overview of empowerment theory, which will provide a lens through which to assist in the understanding of relationship satisfaction among African Americans and Hispanics, as well as the influences of both depressive symptomatology and financial stability following participation in a federally funded Healthy Marriage and Relationship Education program. Subsequent sections will also define empowerment, chronicle the historical origins of empowerment, and describe the multi-dimensional nature of empowerment theory (e.g., psychological, organizational, and community) as it relates to this study.

Definition of Empowerment Theory

The word *empowerment* is derived from the Latin verb for power, *potere*, which is translated as *to be able* (Nyatanga & Dann, 2002). Empowerment has been defined as the process of increasing personal, interpersonal, or political power in order to take action and improve the lives of vulnerable populations (Gutierrez & Lewis, 1999). Empowerment theory is based on a conflict model. It asserts that people possess different levels of power and control varying amounts of resources (Fay, 1987; Gould, 1997). Empowerment also continuously develops over the course of life (Freire, 1973; Kieffer, 1984) rather than indicating a destination or final state that individuals reach.

Moreover, one of the core tenets of empowerment theory is that it addresses barriers that have limited individuals from accessing resources (Robbins et al., 2012). This contrasts with other deficiency-oriented theories that attribute problems encountered by individuals to their

personal, psychological, or behavioral shortcomings (e.g., theory of learned helplessness; Seligman, 1975). These evaluations ignore the social context of different human problems and are inherently unjust (Fondacaro & Weinberg, 2002; Kroeker, 1995).

In essence, the overriding theme of empowerment theory is the restructuring of power, minimizing powerlessness in vulnerable populations, and increasing an individual's capacity to reassume control of their life (e.g., Cochrane, 1992; Dunst et al., 1994; Rappaport, 1981; Solomon, 1976; Staples, 1990; Zimmerman, 1990). Within African American and Hispanic populations, empowerment is particularly poignant because of centuries-old forms of racism and oppression, which have greatly contributed to education and economic disparities, social and emotional tension, and a wealth of other factors that have adversely influenced outcomes related to relationship satisfaction.

Historical Origins of Empowerment Theory

Brazilian educator Paulo Freire can be credited with pioneering the concept of empowerment theory. His work focused on oppressed populations, and he believed that in order to understand their needs, one must empathize and enter into their world (Hipolito-Delgado & Lee, 2007). Freire's beliefs in personal empowerment highlight oppression, as well as the implications of political and social discrimination (Gutierrez, 1990; Freire, 1970; Hipolito-Delgado & Lee, 2007).

Empowerment has always been embedded in social work and was developed out of early social reform (Simon, 1994). For instance, every major movement (i.e., civil rights movement, women's movement, etc.) that has challenged oppressive laws in the United States has incorporated tenets of empowerment. As an example, Jane Addams, the "mother of social work," co-founded one of the first settlement houses in 1889, which addressed structural barriers by

providing education and social services to immigrants and working mothers (Addams, 1910).

Dr. Martin Luther King, Jr., leader of the civil rights movement, advocated for the Civil Rights Act of 1964, which outlawed discrimination on the basis of race, color, religion, sex, or national origin. These shifts, along with other major social and political changes, have encapsulated various facets of empowerment.

Empowerment theory is best suited for this study's theoretical framework because of two primary areas of focus:

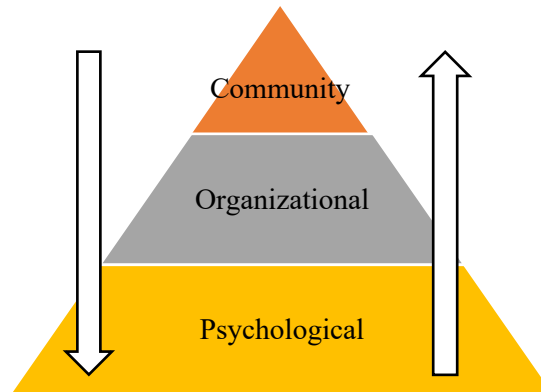
- 1) Implementation of the federally funded, Healthy Marriage and Relationship Education program, which is aimed at improving relationship satisfaction, financial literacy, and social and emotional well-being; and
- 2) Emphasis on low-income African Americans and Hispanics, two minority populations that have encountered systematic barriers.

Empowerment Theory: Psychological, Organizational, and Community

In relation to this dissertation study, empowerment is best understood as multidimensional, encompassing psychological, organizational, and community levels (Zimmerman, 1995, 2000). Exploring empowerment theory beyond a unidimensional framework provides a holistic understanding of the interconnected nature of empowerment, along with each individual level of empowerment. Moreover, this explains how the process of empowerment, which is defined by individuals' abilities to create opportunities and assume control over their lives (Zimmerman, 1995), has been restricted by barriers and systems of oppression. Figure 2.1 illustrates this relationship and shows the bilateral relationships that exist at each level.

Figure 2.1

Empowerment Levels



Psychological empowerment relates to empowerment at the individual level (Zimmerman, 1995). In this dissertation study, African Americans and Hispanics from low-income communities are the primary focus and represent the “individual level” of analysis. Empowerment at the psychological level also helps explain how historical and existing challenges experienced by both populations have negatively impacted relationship satisfaction, mental health, and financial stability. As an example, systematic forms of racism and trauma resulting from centuries of oppression have restricted access to valuable resources and created additional stressors for African Americans and Hispanics. The literature has shown that the subjective sense of psychological well-being contributes to an individual’s sense of control over life events (Christens et al., 2011; Grabe, 2012; Kristenson et al., 2004). The perceived lack of control unfortunately leads to stress and can be associated with alienation and depression (Christens et al., 2011b; Zimmerman, 1990; Zimmerman & Zahniser, 1991). The relationship between perceived lack of control and depression is so closely tied together that depressive symptoms have been used to assess the discriminate validity of instruments that measure empowerment (Zimmerman & Rappaport, 1988). A similar relationship exists between financial

stability and empowerment: individuals who have higher income and education are perceived to possess more sociopolitical power than those who are financially unstable (Christens, Speer & Peterson, 2011). This perception often lends itself to stronger beliefs about individuals' personal abilities to achieve positive outcomes and change the trajectories of their circumstances.

Organizational empowerment is the second component of empowerment theory and refers to systems and structures that give individuals opportunities to improve their skills and to connect with community organizations (Zimmerman, 2000). Organizational empowerment is predicted by pronounced needs, which are often discovered through research. Unfortunately, African Americans and Hispanics are absent from the vast majority of research studies that explore relationship satisfaction. Countless studies on relationship satisfaction have been conducted; however, these studies mainly include White, middle-aged, married couples (Dion, 2005; Halford et al., 2008), resulting in failed attempts to understand the dynamics of relationship satisfaction among African Americans and Hispanics and leveraging other studies for inaccurate generalizations. Research has also shown that in order for a group of people to become empowered, it is important to understand that different cultural contexts require different skills and knowledge (Bespinar, 2010; Foster-Fishman et al., 1998; Rappaport, 1987; Speer & Hughey, 1995). This study addresses this gap through its programmatic emphasis on African Americans and Hispanics in low-income communities and the opportunities the program creates for individuals to gain better access to resources and services.

Lastly, empowerment theory at a community level refers to individuals working together to improve their lives collectively (Zimmerman, 2000). While this study is more closely linked with psychological and organizational forms of empowerment, outcomes can be leveraged to inform public policy and showcase the need and value of future Healthy Marriage and

Relationship Education programs that are provided to communities by organizations committed to such communities.

In conclusion, empowerment theory provides a framework for understanding the relationship between depressive symptomatology, financial stability, and relationship satisfaction following participation in a federally funded Healthy Marriage and Relationship Education program. This program provides education and opportunities for skills development, and it gives individuals additional resources to improve their lives in certain targeted areas. As a result of participation in this program, African Americans and Hispanics, two traditionally marginalized groups, are afforded access to opportunities that were previously limited because of racism and systematic oppression. This newfound opportunity creates a sense of power that is foundational to empowerment theory.

The Origin of Government-Funded Healthy Marriage/Relationship Programs

The government's role in supporting economically disadvantaged populations has evolved throughout history. The public's perception about aid, the economy, and ongoing questions about which subgroup of disadvantaged people are most in need have contributed to these changes. For example, in the early 1900s, a "Widow's Pension" or cash grant was given to single mothers in many states (Abramovitz, 2006). As the name implies, this form of support was given to women who presumably had been married and, thus, well-deserving of public aid (Abramovitz, 2006; Gordon, 1994). However, with the enactment of the Social Security Act of 1935, government support was more inclusive and extended beyond single mothers who were considered widows. As a result of this legislation, income and services were provided to economically disadvantaged families, and the existence of poor families was finally recognized by the federal government (Cohen, 1985). Furthermore, this legislation shifted social welfare

responsibility to the federal government and served as an entitlement to income support (Abramovitz, 2006).

The next major overhaul to the welfare system came about in 1996 under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). The primary goals of this legislation were: 1) to assist families in need and allow children the opportunity to be cared for in their homes or with relatives; 2) to promote marriage and workforce readiness so that dependence on government assistance would be eliminated; 3) to prevent and minimize the occurrence of children born outside of marriage; and 4) to support the creation and maintenance of two-parent homes (CRS Report, 2021). Much attention was given to revisions that addressed work requirements, placing restrictions on certain benefits. Many states required that individuals obtain work or participate in work-related activities within 24 months of receiving assistance (Loprest et al., 2000).

The “work first” approach was accompanied by harsh penalties at the individual and state levels. Individuals who did not meet the requirements outlined were in jeopardy of benefit reduction. States were also at risk of losing federal funding based on their respective caseload and hours worked by welfare recipients (Center on Budget and Policy Priorities, 2005).

Under the new legislation, states had greater discretion in how federal funds were used. For example, investments were made in areas that would increase participation in the marketplace, and so investments in childcare were substantially higher than before, averaging a 24% increase between 1996 and 1998 (Loprest et al., 2000).

Additionally, efforts were made to promote healthy marriages and limit the number of children born outside of marriage. The initial strategy used by policymakers who pushed for welfare reform was to leverage gender and racial stereotypes in order to regulate the choices of

single mothers (MacDonald, 1997, 1998; Mead, 1992; Murray, 1984). This tactic was evidenced by provisions in the PRWORA through abstinence-only grants, family caps, and the “illegitimacy bonus,” which awarded \$100 million in each of five years to the five states with the greatest reduction in the nonmarital birth ratio (Abramovitz, 2006).

However, through the reauthorization of Temporary Assistance for Needy Families (TANF) legislation, funds were allocated for marriage-strengthening activities (Brotherson & Duncan, 2004). With increased funding to support healthy marriage and relationship programs, there was a renewed focus in this area. Under the PRWORA Act of 1996, the House of Representatives allocated \$300 million dollars per year in state funding for marriage promotion. This remained a key priority during the administration of George W. Bush, and in 2002, the Healthy Marriage Initiative furthered grant investments in programs that addressed marriage and relationship education and skills programs (U.S. Department of Health and Human Services, 2011).

A healthy relationship is one of the foremost preventive ways to combat negative outcomes related to physical and emotional health, poverty, and the behavior and educational trajectory of children. Therefore, promoting healthy relationships through federally funded programs has remained a key priority among policymakers. Furthermore, a healthy relationship provides a positive return on investment in areas often unrelated to the relationship itself. To illustrate, divorce is associated with increased alcohol abuse (Liang & Chikritzhs 2012; Rodriguez et al., 2014), lower work productivity, decreased earning potential (deVaus et al., 2014; Gadalla, 2008; Loeppke et al., 2009), and dependence on public welfare-assistance programs (Gadalla, 2008; Weaver & Schofield, 2015). Secondly, relationship education programs have had moderate effects on relationship quality and couple’s communication when assessed at short-term follow-ups after successful completion (Hawkins et al., 2008). These

positive results are most evident in vulnerable and high-risk populations, whereby low-risk couples reportedly do not experience the same degree of benefit as others (Halford et al., 2001).

Considering the long-term impact of a healthy relationship and modest improvements among high-risk couples, the Administration for Children and Families provided a third wave of five-year funding (2015–2020) to 46 organizations through healthy marriage and relationship education programs. These educational programs target common challenges in relationships (i.e., communication, conflict resolution, and parenting skills), along with barriers associated with job-skill training, financial literacy, and money management. A national non-profit organization that serves low-income families primarily in the state of Texas is one of the organizations that received funding and is the funding source for the data for this proposal.

Improving an individual's and a couple's ability to engage and sustain a healthy, positive relationship is the crux of this grant's funding priority. Accordingly, this dissertation aligns with the overarching goals and investigates two major inclusive areas that have grave influence on the quality of relationships: depressive symptomatology and financial stability, and their role in relationship satisfaction. Subsequent sections in this literature review will examine previous research associated with relationship outcomes among African Americans and Hispanics, as well as historical trends in the areas of marriage and divorce rates, children born outside of marriage, and cohabitation. Additionally, the literature review will investigate relationship satisfaction through the lens of depressive symptomatology and financial stability.

Literature on Relationship Satisfaction, Financial Stability, and Depressive Symptomatology

Relationship satisfaction is one of the most commonly studied variables in the research literature. Beginning in 1938, Terman et al. published one of the first studies on the topic of

marriage, along with one of the foremost measures of marital satisfaction (Gottman, 1999). While the term relationship satisfaction is regularly interchanged with relationship/marital quality, happiness, and adjustment (Cohen, 1985; Fincham & Bradbury, 1987; Heyman et al., 1994), a broadly accepted definition is an individual's subjective general evaluation of contentment, fulfillment, and gratification in their relationship (Graham et al., 2011). Another measurement tool for assessing relationship satisfaction is the evaluation of marriage and divorce rates, cohabitation, and the percentage of children born outside of marriage. Although these measures do not account for individual nuances (e.g., a cohabitating couple that is in a satisfying relationship), they allow researchers to extract general themes and insights related to the trajectory of relationship satisfaction.

Relationship Satisfaction among African Americans and Hispanics

The state of relationship satisfaction among African Americans and Hispanics is alarming when compared to other groups. First, exploring rates of marriage and divorce—arguably the most uniform measurements of relationship satisfaction—shows that African Americans and Hispanics plan to get married at the same rate as Whites. However, African Americans and Hispanics are less likely to actually get married (Brown et al., 2000; Ellwood & Jencks, 2004). Research shows that the rate of first marriage for women over the age of 18 was 20.6% for African American women, 42% for Hispanic women, and 52.4% for White women (Payne, 2018). Since the 1950s, there has been a consistent decline in marriage rates for African Americans. This downward trajectory has led many to view marriage as a “minority lifestyle” (McAdoo 2007, p.145), referring to a minority of individuals, not to racial/ethnic minority status.

This decline has created a new normal that is widely accepted; unfortunately, this standard has overshadowed many of the benefits provided as a result of marriage. For example,

marriage positively correlates with well-being (Grover & Helliwell, 2019) and safety. One study found that married women are three times less likely to experience abuse than women who are cohabitating (Salari & Baldwin, 2002). Married couples are also less likely to experience poverty (Dixon, 2009). In marriage, household responsibilities and financial obligations are offset by two people, and the brunt of stressful events are buffered through a collective union. Still, African Americans and Hispanics who do get married are also getting divorced at higher rates than individuals from other racial/ethnic groups. To illustrate, 2018 marked a 40-year low for the number of divorces that occurred in the United States, with 15.7 divorces occurring per thousand marriages (U.S. Census Bureau, ACS, 1-yr est., 2018). However, for African American and Hispanic women, a blatant contrast highlighted a different reality. African American women exceeded the average rate of divorce with 28.7/1,000 marriages, followed by Hispanic women with 22/1,000 marriages (Allred & Schweizer, 2020). The consistency of these trends reinforces the notion that African Americans and Hispanics are experiencing lower levels of relationship satisfaction than non-Hispanic Whites in all categories.

Despite the abundance of statistics that depict negative relationship outcomes for African Americans and Hispanics, what is not accounted for in the literature are the unique stressors that have direct and indirect impacts on relationships. One of the more pervasive examples includes environmental stressors. Research has shown exposure to stressful environments can cause unstable psychosocial stress for those who reside in such places (McCann, 2011). This directly affects African Americans and Hispanics because of the disproportionate number of minorities who live in low-income communities. Tolan et al. (2013) reported that families who live in low-income communities are forced to fight against life stressors at an elevated level because of their environment, which consequently, adversely impacts physical health and well-being. Similarly,

racism and unfair treatment also have pronounced effects on mental health (Lewis et al., 2015; Paradies et al., 2015; Schmitt et al., 2014; Williams & Mohammed, 2009).

Depressive Symptomatology among African Americans and Hispanics

In the United States, depression is a widespread mental-health disorder that impacts 9.5% of the adult population over the span of a 12-month period (Kessler et al., 2005). The prevalence of depression is higher among African Americans and Hispanics. Although research shows that Whites will experience depression more often during their lifetime, African Americans (12.8%), followed by Hispanics (11.4%) and Whites (7.9%), have a higher current rate of depression (Kessler et al., 2005).

Inequalities in the rates of depression can be explained by a variety of different factors among African Americans and Hispanics. In regard to African Americans, a lineage of oppression that spans multiple centuries (i.e., slavery, family separation, Jim Crow laws, physical violence, etc.) has forced African Americans to endure a substantially larger number of stressors. Research supports this and has found that African Americans are exposed to psychosocial stressors that adversely impact mental health and well-being at disproportionate rates (Mizell, 1999). When exposed to chronic racial discrimination, a sequence of physiological responses can lead to the development of disease (Mays et al., 2007). Examples of the impact of such racism experienced by African Americans includes the widening wealth gap and racially charged discipline practices in schools, both of which reflect systemic forms of racism (Wang et al., 2014; Anyon et al., 2017; Holland, 2016). Incarceration and homicide violence (Boyd, 2007; Rogers et al., 2001), as well as lower life expectancy and higher infant mortality (Xu et al., 2016), have also amplified rates of depression in the African American community.

To fully understand what contributes to depression among African Americans, it is necessary to explore barriers that have limited access to traditional mental-health services (e.g., counseling or medication treatment). As an example, African Americans are more inclined to rely on family members, clergy, or a primary-care physician when seeking mental-health support (Hays & Gilreath, 2017). The origins of this skepticism of the mental-health profession date back to slavery, when the church was the only acceptable outlet for African Americans to receive emotional support (Hays, 2015; Lincoln & Mamiya, 1990). Consequently, spirituality became the primary coping strategy when responding to depression. Another barrier to obtaining quality mental-health treatment for African Americans is financial resources. Minority groups, in general, have less power and privilege in society when compared to individuals of majority groups (Barreto et al., 2010). This is important when considering that individuals from higher socioeconomic groups are more likely to access medical and psychiatric treatment than those from lower socioeconomic groups (Kohn et al., 2018).

Like African Americans, Hispanics are less likely to seek mental-health services in comparison to Whites (González et al., 2010). However, in addition to socioeconomic limitations and cultural beliefs, Hispanics encounter additional barriers, such as acculturation and English proficiency (Bauer et al., 2010; Cabassa et al., 2006; Chang et al., 2013; Rosales & Calvo, 2017). Acculturation has been defined as the “*sociocultural process in which members of one cultural group adopt the beliefs and behaviors of another group*” (Lopez-Class et al., 2011, p. 1556). Although both high and low levels of acculturation provide mixed benefits, research shows that lower levels of acculturation are associated with increased stress, isolation, identity conflict, and psychological dysfunction (Al-Omari & Pallikkathayil, 2008). Lower acculturation levels have also been linked with poorer health and decreased utilization of preventive healthcare

(Siatkowski, 2007). English proficiency is another obstacle that that has impeded access to vital mental-health services because individuals generally feel more comfortable talking with someone who can communicate in a language in which they are fluent.

Depressive Symptomatology and Relationship Satisfaction

Relationship dissatisfaction has largely been associated with depression. As individuals experience more distress in their relationships, their level of stress increases, and their coping abilities decrease (Beach et al., 1990). Similarly, when the quality of a relationship fluctuates, emotional security is challenged (Stanley et al., 2002), confidence is lower, and the risk of depression is higher (Whitton et al., 2007). This instability is also associated with decreased levels of commitment and higher rates of dissolution (Arriaga, 2001). The association between depression and relationship satisfaction is not a new phenomenon; it has been long established that when attachment bonds were disrupted, individuals were more susceptible to depression (Bowlby, 1969). Research has also substantially documented an association between a spouse's depressive symptoms and decreased relationship satisfaction in married and cohabitating couples (Heene et al., 2005; Kouros & Cummings, 2011; Whisman et al., 2004). However, we live in an interconnected society and are influenced by a wide range of factors outside of an intimate relationship (Jones & Asen, 2000). Therefore, the possibility of an inverse association in which relationship satisfaction influences depression must be considered.

Despite the abundance of existing literature on relationship satisfaction and depression, there are a number of limitations that validate the need for more research. As an example, the difficulty in establishing causality when measuring relationship satisfaction and depression creates barriers when identifying the directional influence of each variable. Furthermore, most studies are cross-sectional and do not account for changes in affect and mood over time, examine

whether relationship dissatisfaction leads to increased depressive symptoms, or examine whether increases in depressive symptoms lead to relationship dissatisfaction (Whisman & Kaiser, 2008). Therefore, longitudinal research is needed to measure the relationship between these variables at different time points. Another gap in the literature includes the limited number of national samples that include any or substantial numbers of members of racial-ethnic minority populations, especially non-English speaking individuals (Fortuna et al., 2010). Historically, there has been little effort to actively recruit adequate minority representation. Additional factors also include cultural mistrust of the mental-health system (Whaley, 2001) and limited ethnic minority matching between a patient and a provider (Cooper & Gonzales, 2003).

Financial Stability among Africans Americans and Hispanics

Financial stability is frequently associated with the performance of a financial system in challenging financial times (Allen & Wood, 2006; Schinasi, 2004). Similarly, the financial health of a household is measured against its ability to sustain basic essential needs (i.e., mortgage, utilities, and food) on a consistent basis and amidst financial hardships. Among African Americans and Hispanics, this degree of financial stability has trailed other racial and ethnic groups. As an example, the average White household in the United States has at least one month's income in savings, compared to twelve days for Hispanics and five days for the average African American family (Pew Charitable Trust, 2015). African American couples report lower household incomes than any other racial and ethnic group (DeNavas-Walt, et al., 2013) followed by Hispanics, according to data presented by the United States Census Bureau (Current Population Survey, 2019). Likewise, the median net worth for Whites in the United States is 9.7 times that of African Americans and 8.2 times more than Hispanics (Bhutta, et al., 2020). These inequities are also prevalent in areas such as homeownership, business equity, inheritance, and

retirement accounts, each of which is used to assess a family's overall net worth. While this highlights the diverse range of financial disparities among African Americans and Hispanics in comparison to Whites, these gaps should be considered within the context of historical barriers that have created an unequal playing field.

The unsettling nature of financial stability among African Americans and Hispanics predates modern culture and has origins in centuries-old forms of racism and systematic oppression. Beginning in the 1600s and followed by over 250 years of slavery in the United States, African Americans were considered property, denied basic rights, and were faced with oppressive laws that prohibited them from reading, owning property, and obtaining access to other forms of wealth creation. Ninety years of Jim Crow laws imposed racial segregation in southern states, where it was against the law for African Americans to use the same facilities (i.e., public transportation, public schools, and public places) as Whites. These facilities were often underfunded and of poorer quality than those used by Whites.

African Americans and Hispanics have also been faced with years of discriminatory housing policies, which have levied higher interest rates, enforced price inflation, and limited buying power (Oliver & Shapiro, 2006). More recently, the financial crisis that rattled the housing market in 2007/2008 had a more substantially negative impact on housing equity for minorities than for Whites (McKernan et al., 2013). As one research study discovered, if current trends persist, it is estimated that it will take 228 years for African American families to generate similar amounts of wealth as Whites and 84 years for Hispanic families (Asante-Muhammed et al., 2016). Collectively, this still only represents a fragment of the conditions experienced by minorities in this country; nonetheless, it does aid in the understanding of why African Americans and Hispanics fare worse than Whites regarding financial stability.

Relationship between Financial Stability and Relationship Satisfaction

Despite the disparaging financial state of African Americans and Hispanics, understanding linkages between financial stability and relationship satisfaction is critically essential. Finances are often viewed as the cornerstone of whether a relationship is successful or results in failure, and disagreements about money are a major source of conflict and frequently contribute to relationship dissatisfaction and divorce (Britt & Huston, 2012). As noted in the literature, financial instability is the primary barrier to sustaining a lasting relationship among low-income couples (Charles et al., 2006) and is viewed as a more important currency than actual income (Saleh & Hilton, 2011). In a study that examined financial stability among low-income fathers, financial stability was defined as steady employment and the ability to obtain economic resources in times of need (Saleh & Hilton, 2011).

Understanding financial stability through the lens of one's ability to obtain economic resources in times of need paints a vivid image of the lived experience of low-income African Americans and Hispanics. To illustrate, economically stable families who experience temporary unemployment or who work at a lower wage are still able to access important resources like healthcare and childcare, along with safe and affordable housing, through their personal networks (Boushey & Gundersen, 2001; Caraley, 2001; Chavkin et al., 2000). With access to prior savings and strong credit history, these families have temporary relief and are able to minimize the effects of financial grief. On the other hand, low-income African Americans and Hispanics with limited access to such resources are forced to endure various stressors that overshadow important elements of a healthy relationship (e.g., communication, intimacy, and shared activities).

Additionally, findings in the literature report that when compared to Whites, African Americans and Hispanics are more likely to identify external problems as more relevant within their marriages (Jackson et al., 2016). This helps explain why relationship education programs that only address interactional patterns between couples (e.g., communication or problem solving) are limiting and neglect the implications of broader social and environmental influences. As an example, external factors such as finances are equally important when evaluating relationship satisfaction in African American and Hispanics couples, along with other areas such as discrimination, substance use, infidelity, and problems with friends (Trail & Karney, 2012).

The relationship between financial stability and relationship satisfaction is further evident when exploring other external factors that are inextricably linked with finances. For example, financial stability is strongly associated with health (Phelan et al., 2010). Research shows a positive, linear relationship between the two, and with additional increases to one's socioeconomic standing, there is an increase in their overall health (Adler & Rehkopf, 2008). Although this can be explained by the higher volume of hospital admissions and reduced preventive care sought by individuals in lower socioeconomic groups (Zhang & Oldenburg, 2014), African Americans and Hispanics also have higher rates of obesity, diabetes, and poor blood-sugar levels (Millstein et al., 2009).

A similar association is made when investigating the relationship between financial stability and mental health. The literature consistently shows that individuals with higher income levels present with fewer mental-health concerns than those with lower incomes (Gresenz et al., 2001; Muntaner et al., 2013). Consequently, African Americans and Hispanics are more likely to experience challenges related to mental health.

Developing an accurate understanding of the relationship between financial stability and relationship satisfaction means broadening our scope to consider the multiplicity of how financial stability creates a ripple effect. Yes, financial stability influences relationship satisfaction; however, it also impacts physical and emotional health, the number of environmental stressors we experience, and a myriad of other areas that factor into whether or not we experience satisfaction in our relationships.

Literature Review of Healthy Marriage and Relationship Education Programs, Depressive Symptomatology, and Financial Stability in the Context of Relationship Satisfaction

Healthy Marriage and Relationship Education (HMRE) Programs

The benefits of a healthy marriage and relationship are well-established in the literature, as well as the repercussions of relationships marked by strenuous conflict and dissolution. Among individuals who are in a healthy relationship, such benefits include better mental and physical health (Braithwaite et al., 2010; Whisman et al., 2010) and more viable coping options when responding to stressful events in life (Coan et al., 2006). Conversely, research shows that when couples end their relationships, they face heightened risk of stress and associated health problems (Amato, 2010). The same applies for children of these families, who are equally at risk of maladjustment (Yu et al., 2006) and mental health concerns (Shimkowski & Ledbetter, 2018). However, among low-income families, these outcomes are compounded. Limited financial resources, environmental stressors, lack of positive role models, and greater likelihood of divorce in their family of origin all contribute to negative interactions and poorer relationship satisfaction outcomes for children (Cherlin, 2005; Dion, 2005).

In response to these deleterious outcomes, the federal government championed efforts to invest in programs that promoted healthy relationships. Since the Personal Responsibility Work Opportunity and Reconciliation Act of 1996, hundreds of millions of dollars have been invested to stabilize the family unit and create healthier relationships. Despite bipartisan support, these efforts have garnered much scrutiny over the years, as the outcomes have posited mixed results. At the onset, there were questions about whether relationship education programs were effective with low-income, unmarried couples (Amato & Maynard, 2007). Prior research that evaluated the fidelity of such programs was conducted with middle-class, engaged, or married couples (Dion, 2005; Halford et al., 2008). Studies with low-income couples found that existing models for addressing challenges in marriage were insufficient for understanding the experiences of low-income couples (Johnson & Bradbury, 2015). Moreover, there was a general assumption that the components of relationship education programs were universal; subsequently, these programs did not account for differences that existed in low-income couples (Ooms & Wilson, 2004). This partially explains why systematic evaluations of these programs initially produced few tangible benefits for couples (Lundquist et al., 2014; Wood et al., 2012; Wood et al., 2014). Furthermore, researchers believed that stable relationships were a byproduct of social and economic circumstance and less about government-funded relationship education programs (Randles, 2017).

Nonetheless, despite early criticism that was based on the initial rollout of HMRE programs and challenges associated with implementing a new national policy initiative, further evaluations and continued investments offered promising results. First, these programs shed light on the level of interest among low-income populations, which was an area of concern among academics and policymakers. Researchers estimated that during the first eight years of HMRE

programs, a total of 2.2 million individuals completed these programs (Hawkins, 2019). Second, distressed couples experienced greater effects and more positive changes following participation when compared to less distressed couples (Carlson et al., 2018). Several studies found small but statistically significant positive effects on marital quality, which yielded less psychological abuse and more cooperative co-parenting among fathers (Lundquist, 2014; Williamson, 2016). Moreover, burgeoning evidence found that children of parents who participated in HMRE programs displayed fewer behavioral problems, which research credits to less parental stress (Hawkins, 2019).

Overall, evaluations of HMRE programs have offered mixed findings. As such, there is a continued need to evaluate the degree of effectiveness on relationship quality. There is also a prevailing need to reach low-income, minority populations. During the first eight years of HMRE programs, 36% of participants were White, 29% were African American, and 28% were Hispanic (Hawkins, 2019). The disproportionate number of Whites participating in the relationship education programs provides minimum evidence that these programs are reaching their target audience and perpetuate existing gaps in the literature. Lastly, researchers have urged that HMRE initiatives move beyond program success to population impact (Goodman et al., 2019).

Depressive Symptomatology and Relationship Satisfaction

Research that has explored the influence of depressive symptomatology on relationship satisfaction has provided evidence of a strong association between individuals' emotional health and well-being and the quality of their relationships. Findings in the literature highlight that couples who undergo distress provide and receive less support and have increased negative interactions (Parker et al., 2013). The same is true when examining the reverse: a poor

relationship can become apparent when mental health issues are present (Graham et al., 2006; Parker et al., 2013; Rosand et al., 2012). These findings are supported by multiple longitudinal studies (Beach et al., 2003; Beach & O’Leary, 1993; Davila et al., 2003). For example, using a nationally representative sample of older married adults, Choi and Mark (2008) found a direct relationship between marital conflict and depressive symptoms. In a similar longitudinal study that assessed data from 260 couples (Gustavson et al., 2012), an individual’s depressive symptoms became evident in their behavior over time (e.g., criticism and withdrawal) and negatively impacted both partners’ assessment of relationship quality.

However, despite an abundance of research on this subject, a key shortcoming is that previous empirical literature has focused on non-Hispanic White, married couples (Marcussen, 2005; Simon, 2002). This limitation imposes increased difficulty when generalizing findings to an increasingly ethnically and racially diverse population in the United States. This is especially true for African Americans and Hispanics, two traditionally marginalized groups who have endured unique environmental stressors related to racism, systematic oppression, and challenges associated with acculturation. For example, in a study conducted with women, researchers discovered differences between African American and White women when examining depressive symptoms, relationship status, and demographic variables (Jones-Webb & Snowden, 1993). In this article, African Americans experiences with racism, and exposure to stress earlier in life increased their risk factors.

Another limitation found in prior studies was the utilization of samples of predominantly, upper-middle class couples who had a college education (Thomas et al., 2019). Eliminating financial hardship when evaluating depression and relationship satisfaction can threaten the accuracy of measuring relationship quality in select demographics. For instance, low-income

individuals experience additional challenges in their relationships, which can exacerbate depressive symptoms (Papp, 2010). Whether economic hardship alone produces these negative feelings (Parke et al., 2004) or the related daily challenges and the inability to cope with them leads to depressive symptoms (DeCarlo Santiago et al., 2011; McLeod & Kessler, 1990), it is increasingly evident that a relationship between the two exist. This study will aid our understanding of the role of financial stability on relationship satisfaction in minority populations, as the sample consists almost exclusively of low-income African Americans and Hispanics. Over the past 25 years, there has been a rise in depressive symptomatology (Mojtabai & Olfson, 2016; Case & Deaton, 2015), which further illustrates the urgency of exploring the association between depressive symptomatology and relationship satisfaction in low-income African Americans and Hispanics.

Financial Stability and Relationship Satisfaction

There is substantial evidence that highlights the adverse effects of economic hardship on relationship satisfaction. Research shows that financial stressors negatively correlate with marital satisfaction (Archuleta et al., 2011; Conger et al., 1999; Dew 2011; Gudmunson et al., 2007). In another study, conflicts over finances exceeded any other conflicts when predicting divorce (Dew et al., 2012). When couples experience financial stress, they are more hostile towards one another (Hraba et al., 2000). Consequently, this lends itself to negative interactions, poorer communication, and an onslaught of challenges that threaten the quality of a relationship.

Despite the general consensus that financial stability and relationship satisfaction are related, there are still gaps in the literature that necessitate further investigation. For instance, research shows that finances are a concern among all couples, regardless of income level (Lawrence et al., 1993). The tipping point of when this problem becomes a disruption is less

understood. As a result, further studies have investigated this topic and discovered that issues related to financial irresponsibility (Amato & Rogers, 1997; Aniol & Snyder, 1997), substantial financial loss (Rea et al., 2016), or overall values and beliefs about finances equally contribute to conflicts about finances. Another limitation in the literature involves the exclusion of outside issues that may also contribute to relationship satisfaction. As an example, couples who report that finances are their number-one problem cite higher levels of negative interactions when compared to those who list other problems first (Stanley et al., 2002). However, when considering issues that also contribute to financial stability, such as education, questions arise about whether this conflict is attributed to finances or to lack of communication and problem-solving skills. Finally, the literature is limited in the number of studies that utilize samples of African Americans and Hispanics, particularly those from low-income communities. Research shows that economic pressure can exacerbate emotional problems for parents (Conger et al., 2010) and thus cause tension in their relationship. However, there are gaps in the literature on whether economic hardship influences relationship satisfaction differently across various socioeconomic groups.

CHAPTER 3: METHODS

This chapter introduces the purpose of the study, guiding research questions and hypotheses, research design, the sample population, data-collection methods, and the statistical procedures. This study is a longitudinal analysis of secondary data from a five-year, federally funded Healthy Marriage and Relationship Education (HMRE) program. The sample includes low-income African American and Hispanic participants who identified as either married or currently in a relationship at the time of data collection. Participants were randomly assigned to the intervention, a seven-week Healthy Relationship and Education curriculum, or a 12-month wait-list control group. The focus of this study is on participants during the second year of the program and their control group counterparts, and on their outcomes from pre-test to 12-month follow-up. Variables for this study consist of relationship satisfaction as the dependent variable and symptoms of depression and financial stability as the independent variables. The statistical procedures include univariate descriptive statistics, as well as bivariate and multivariate statistical tests.

Purpose of the Study

The purpose of this dissertation study is to investigate whether participation in a federally funded Healthy Marriage and Relationship Education program impacts relationship satisfaction in a sample of African American and Hispanic adults. Moreover, this study explores whether depressive symptomatology and financial stability influence relationship satisfaction.

Research Questions and Hypotheses

Given the importance of mental health and economic stability to relationship satisfaction and the increasing use of healthy-relationship programming that targets low-income minorities, this dissertation study is guided by three overarching questions with corresponding hypotheses:

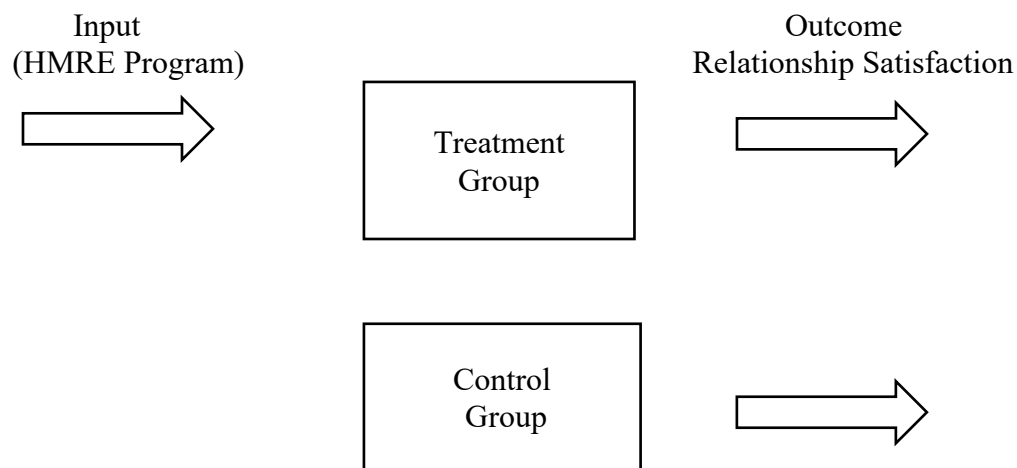
Research Question 1. Does participation in a Healthy Marriage and Relationship Education program improve relationship satisfaction (over time) in low-income African American and Hispanics compared to control group participants?

H₁: Treatment group participants will experience greater increases in relationship satisfaction from pre-test to 12 months' post-participation than control group participants.

Figure 3.1 graphically depicts that treatment group participants participated in the HMRE program and that, following participation, relationship satisfaction is the central focus.

Figure 3.1

Participation in a Healthy Marriage and Relationship Education Program



Research Question 2. How does initial financial stability impact growth in relationship satisfaction for program participants?

H_{2a}: Financial stability will moderate the growth from pre-test to post-test in relationship satisfaction for program participation.

H_{2b}: Financial stability will moderate the growth from pre-test to six-month follow-up in relationship satisfaction for program participation.

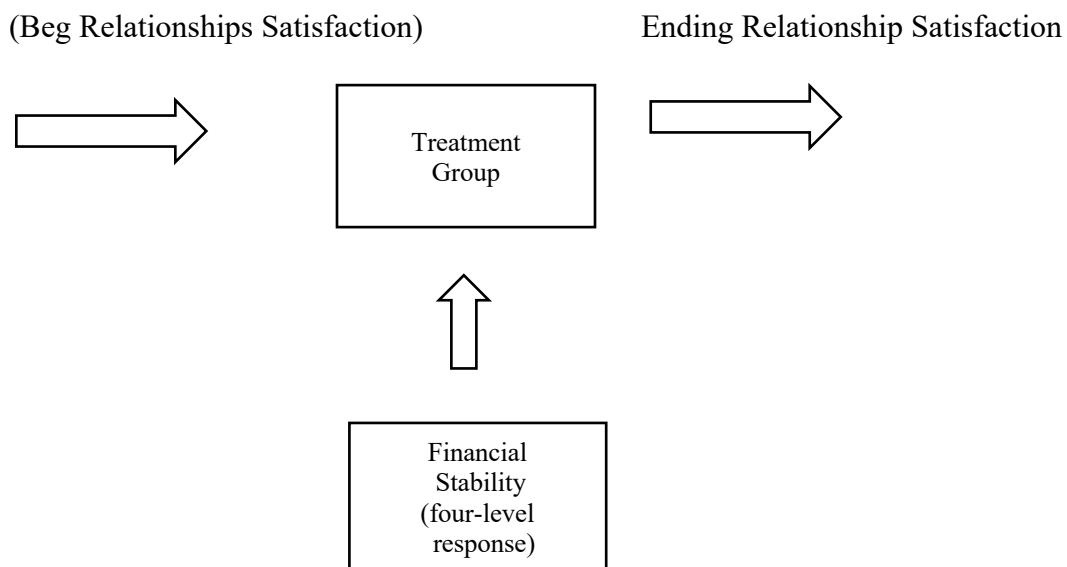
H_{2c}: Financial stability will moderate the growth from pre-test to 12-month follow-up in relationship satisfaction for program participation.

Nine tests were run and tested at a .05 significance level using a Bonferroni correction ($.05/9 = .005$). This allowed independent tests for each time point while not inflating the Type I error rate for this hypothesis.

Figure 3.2 illustrates the hypothesized moderating effect of financial stability between beginning relationship satisfaction and ending relationship satisfaction among treatment participants over time. In this study, financial stability was assessed at pre-test, and was used to evaluate the impact on relationship satisfaction at three time points (post-test, 6 months, and 12 months).

Figure 3.2

Moderating Impact of Financial Stability on Relationship Satisfaction



Research Question 3. How does initial depressive symptomatology impact growth in relationship satisfaction for program participants?

H_{2a}: Depressive symptomatology will moderate the growth from pre-test to post-test in relationship satisfaction for program participation.

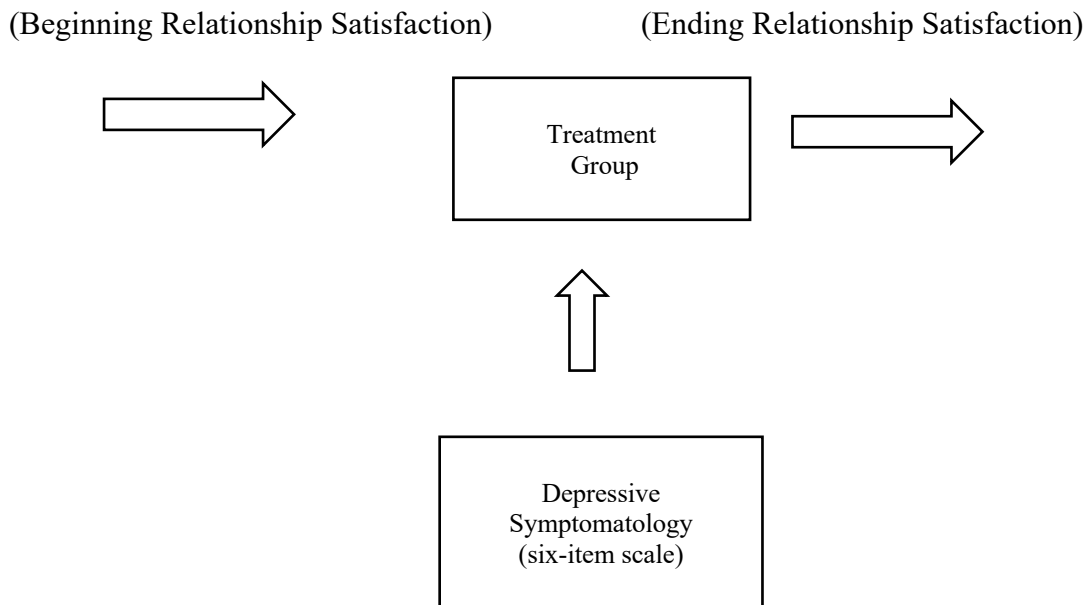
H_{2b}: Depressive symptomatology will moderate the growth from pre-test to six-month follow-up in relationship satisfaction for program participation.

H_{2c}: Depressive symptomatology will moderate the growth from pretest to 12-month follow-up in relationship satisfaction for program participation.

Nine tests were run and tested at a .05 significance level using a Bonferroni correction ($.05/9 = .005$). This allowed independent tests for each time point while not inflating the Type I error rate for this hypothesis.

Figure 3.3

Moderating Impact of Depressive Symptomatology on Relationship Satisfaction



Relationship between Hypotheses and Variables in Study

The relationships among relationship satisfaction, depressive symptomatology, and financial stability following participation in a federally funded Healthy Marriage and Relationship Education program are hypothesized based on empowerment theory and research findings in the literature. Considering hypothesis one, this study posits that treatment group participants will experience greater increases in relationship satisfaction from pre-test to six months' post-participation, compared to control group participants. Literature that has evaluated healthy marriage and relationship education programs has found a consistent pattern of small, yet statistically significant positive effects on couples' relationship satisfaction (Lundquist, 2016). In the same study, treatment participants reported that they were 12% less likely to suggest their marriage was in trouble when compared to control participants. This is partially explained by an aspect of empowerment theory, whereby an individual's health and well-being are improved when access to resources is no longer restricted (Robbins et al., 2012). This is particularly notable among African Americans and Hispanics, who historically, have less representation in federally funded, healthy marriage and relationship education programs. These programs have focused instead on predominantly White, middle-class couples. As a result of limited representation in research, interventions designed to improve relationship satisfaction provide little to no benefit for African Americans and Hispanics. Therefore, by applying empowerment theory, resources and opportunities are made available through opportunities like Healthy Marriage and Relationship Education programs.

Hypothesis two states that financial stability will moderate the relationship between program participation and relationship satisfaction. This study anticipates that financial stability is positively associated with relationship satisfaction because being financially stable can

increase an individual's personal power, as substantiated by findings in the literature. For example, prior studies have shown that financial strain decreases marital satisfaction (Dew, 2008; Gudmunson et al., 2007) and is a key contributor to separation and divorce (Britt & Huston, 2012; Dew, 2009; Rosand et al., 2017). Moreover, Grable et al. (2007) found that financial satisfaction strongly correlates with relationship satisfaction. Therefore, in response to the question of whether or not "money can buy happiness," empirical studies suggest that the answer is yes (Sacks et al., 2013). Among vulnerable populations, empowerment theory suggests that with increased power, there is greater ability to overcome debilitating situations. This allows individuals to invest in opportunities such as improved education, safer communities, and better healthcare, thus minimizing stressors associated with having limited resources.

Hypothesis three states that depressive symptomatology will moderate the relationship between program participation and relationship satisfaction. Research highlights that oppressed populations are more prone to display symptoms of mental distress (Christens, 2012). However, when viewed through the lens of empowerment theory, individuals who have increased control and influence over events that occur in their lives show improved mental and physical health (Kristenson et al., 2004; Schulz et al., 1995). Therefore, one would expect that although program participation will influence relationship satisfaction, this relationship will be moderated by depressive symptomatology.

Participants

This study focused on data collected from treatment and control group participants in the second year of a five-year, federally funded Healthy Marriage and Relationship Education program. Participants in this study resided in a large, metropolitan city in the southern region of

the United States and were recruited from various low-income communities. The demographic profiles of individuals in this study are fully presented in Table 4.1 in Chapter 4.

Participant Selection

Participants were recruited by staff members of the nonprofit organization via printed flyers, social and traditional media (i.e., radio), door-to-door outreach, and informational presentations given by the staff. Participants were invited to attend an orientation and were provided details about the HMRE program and the evaluation component associated with the awarded grant. Participants were informed that participation was completely voluntary. Interested participants provided informed consent, and staff members were readily available to answer questions.

Participants were randomized into either a treatment group or a 12-month, waitlist-control group, using simple random sampling. In this sampling design, individuals are assigned a single number in the sampling frame without bypassing any number in the process (Rubin & Babbie, 2014). The evaluation team used an online randomizer program. The sampling frame consisted of adult participants in year two of the five-year, federally funded program. All participants were able to participate in the program; however, according to their random assignment, individuals were either able to start the HMRE immediately or 12 months following their orientation date (wait list).

Measures

The grantee's local evaluator team at the University of Houston requested and received permission from the funder to use its Information, Family Outcomes, Reporting, and Management (nFORM) data collection system, which incorporated the measures provided on the

Fatherhood and Marriage Local Evaluation (FaMLE) website. Each of these measures was collected at four different time points: pre-test, post-test, 6 months, and 12 months.

Relationship Satisfaction

The dependent variable relationship satisfaction was measured using a single-item indicator: “How satisfied are you with your current relationship?” The response categories ranged from 1 (not satisfied) to 3 (very satisfied).

Depressive Symptomatology

Depressive symptomatology was measured by a 6-item scale that assessed how often an individual felt nervous, hopeless, restless/fidgety, so depressed that nothing could cheer them up, that everything was an effort, or worthless in the last 30 days. Responses ranged from 1 (none of the time) to 5 (all of the time). A total score was calculated based on responses to this question, with scores ranging from 6 – 30. Lower scores indicated no/little symptoms of depression, and higher scores represented higher symptoms of depression.

Financial Stability

In this study, financial stability was measured by the question, “How often do you find it difficult to pay your bills?” Response categories ranged from 1 (never) to 4 (very often).

In addition to an individual’s ability to pay his/her bills, descriptive analyses were conducted to describe the participant’s monthly income, involvement in social welfare programs, and employment status.

Regarding monthly income, response categories ranged from 1 (less than \$500 per month) to 7 (greater than \$5,000 per month); response categories for receipt of social welfare programs was measured by a yes/no response and included the following programs: SSI, TANF, WIC, unemployment insurance, and SNAP. Lastly, employment status was assessed in five

categories: full-time employment (35 hours or more a week); part-time employment (1-34 hours/week); employed, but number of hours change week to week; temporary/occasional employment; and not currently employed.

Table 3.2 provides an overview of each variable used in this study and how it was measured. These variables were used to provide demographic and descriptive information and answer questions in this study.

Table 3.2

Variables Items

Variable	Items	Scale	Level of Measurement
Relationship Satisfaction (DV)	How satisfied are you with your current relationship?	1=Not satisfied; 2=Satisfied; 3=Very Satisfied	Ordinal
Depressive Symptomatology (IV)	During the past 30 days, how often have you felt... nervous, hopeless, restless or fidgety, so depressed that nothing could cheer you up, that everything was an effort, worthless?	1=None of the time; 2=A little of the time; 3=Some of the time; 4=Most of the time; 5=All of the time	Ordinal
Financial Stability (IV)	How often do you find it difficult to pay your bills?	1=Never; 2=Once in a while; 3=Somewhat often; 4=Very often	Ordinal
Financial Well-Being	In the past month, have you or anyone in your household received the following types of assistance? Yes/No	A=Temporary Assistance for Needy Families (TANF); B=Supplemental Security Income (SSI); C=Social Security Disability Insurance (SSDI); D=Supplemental Nutrition Assistance Program (SNAP)/Food stamps; E=Woman, Infants, and Children	Nominal

Variable	Items	Scale	Level of Measurement
		(WIC); F=Unemployment Insurance; G=Housing choice Voucher (Section 8); H=Cash Assistance; I=Child Support J=Other	
Race/Ethnicity	Which of the following best describes your race/ethnicity?	1=African American; 2=Hispanic; 3=White (non-Hispanic); 4= Native Hawaiian or Pacific Islander; 5= Other	Nominal
Age	What is your current age?	1=18-20; 2=21-24; 3=25-34; 4=35-44; 5=45-54; 6=55-64; 7=65 years or older	Interval
Gender	Are you male or female?	1=Male; 2=Female	Nominal
Education	What is the highest degree, diploma, or certification you have earned?	1=No degree or diploma earned; 2=High school General Education Development or GED; 3=High school diploma; 4=Vocational/technical certification; 5=Some college but no degree completion; 6=Associate's degree; 7=Bachelor's degree; 8=Master's degree	Ordinal
Income	In the past 30 days, how much money did you make?	1 = Less than \$500; 2=\$500-\$1,000; 3=\$1,001- \$2,000; 4=\$2,001 - \$3,000; 5=\$3,001 - \$4,000; 6 = \$4,001 - \$5,000; 7 = More than \$5,000	Ratio
Employment Status	What is your current employment status?	1=Full-time employment (usually work 35 or more hours	Nominal

Variable	Items	Scale	Level of Measurement
		a week); 2= Part-time employment (usually work 1-34 hours a week); 3=Employed, but number of hours changes from week to week; 4= Temporary, occasional, or seasonal employment, or odd jobs for pay; 5=Not currently employed	

Research Design

This research study is a longitudinal design that utilizes secondary data from a five-year, federally funded Healthy Marriage and Relationship Education program. In secondary data analyses, “data collected and processed in one study are reanalyzed in a subsequent study” (Rubin & Babbie, 2014, p. 405). The local evaluation of the Healthy Marriage and Relationship Education program that generated the data used for this study utilized a randomized controlled trial in years two, three, and four of the projects. Participants were randomized, using software (randomizer.com) to safeguard against bias and to allow equal chance of being randomized into either the treatment or control group. Participants randomized to the treatment group were eligible to participate in the HMRE program immediately, and participants in the 12-month waitlist control group were eligible after a year. All participants (treatment and control) were assessed at four time points: pre-test (before the start of the seven-week program), post-test (immediately after the program), during the seventh session, and at six- and 12-months post-completion.

Secondary Data Benefits and Limitations

Utilizing secondary data for analysis has multiple advantages and disadvantages in research and when exploring new aspects of various subjects. A key advantage is that the central focus of this research topic aligns with one of the study's original intended goals, which was to assess the impact of a relationship education program among low-income minorities (a population that is often overlooked in relationship education research). Secondly, utilizing secondary data creates ample opportunity for researchers to evaluate comparable data, which lends itself to greater consistency when evaluating and interpreting findings. As a result of this federally funded grant award, substantial resources were available to attract a large sample population, which generally results in higher response rates and more available data. According to Sales et al. (2006), samples in these studies are often representative of populations from which they are derived. Consequently, findings in this research will inform both local and national initiatives that target relationship quality and can be used to guide further discussion of various social policies.

Despite the benefits of secondary data analyses, there are also limitations. In particular, concerns of validity and limited variation pose challenges to this approach (Rubin & Babbie, 2014). For example, because of how the federal government defined the selected variables (relationship satisfaction, depression, and financial stability) and their intended goals, there may be slight differences between those variables and goals used in the survey questions and nationally recognized scales (e.g., Hamilton Depression Scale or Relationship Assessment Scale).

Dissertation Study

Data for this dissertation study is from year two of a five-year program, with primary emphasis on the program's effects on relationship satisfaction among low-income African Americans and Hispanics, along with the influence of depressive symptomatology and financial stability. The rationale for utilizing data from year two is that year two was the first year of the RCT. The first year of the five-year study provided the nonprofit organization sufficient time to onboard required staff, implement recruitment strategies, and learn evaluation protocols. As the program developed, year two offered enhanced opportunities to engage participants and collect sufficient data. In the second year of this study, control participants were also able to be evaluated at the conclusion of their 12-month, waitlist control period. Collecting data during this time frame also provided control participants an incentive to stay involved in the program and receive services following their participation. This added incentive increased the likelihood of survey completion and limited the amount of missing data.

The variables used in this study to explore relationship satisfaction following participation in the HMRE program, along with the influence of depressive symptomatology and financial stability, were assessed at four time points: pre-test, post-test, and six- and 12-months.

Procedures

This dissertation study is a secondary analysis, which utilized year two data of a five-year, federally funded grant by the Administration of Children and Families (ACF). A large nonprofit organization that serves low-income families was the recipient of this grant award during the project period 2015–2020. A requirement of this grant was an external evaluation to determine the impact of the HMRE program. Accordingly, an impact evaluation with

randomized assignment to treatment or 12-month wait-list control group was conducted by the University of Houston's Graduate College of Social Work.

Prior to participation in the Healthy Marriage and Relationship Education program, informed consent was obtained from participants. The informed consent included information related to the purpose of the study, procedures, the duration of the program, risk and benefits of participation, confidentiality, and subject rights. This consent was explained verbally and provided in writing for participants in both English and Spanish to sign and date. Participation in the program was completely voluntary, and individuals were notified that they were still eligible for other programs and services offered by the organization if they declined participation in the research study. In order to maintain confidentiality, each participant was assigned a unique identification number that was automatically generated via nFORM upon initial registration. NFORM is a web-based data management system developed by Mathematica Policy Research Inc. for the Department of Children and Families. Data was downloaded from nFORM periodically and stored in encrypted, password protected computers at the University of Houston.

Data in this study were taken from two surveys administered by program staff on computer tablets and uploaded directly to the nFORM website. The first was an *Applicant Characteristics Survey* (ACS) that included questions related to demographics, financial well-being, health, and why individuals participated in the Healthy Marriage and Relationship Education program. The ACS was administered only once, during participant enrollment. Participants' names were maintained separately from their responses. The survey was completely voluntary, and participants were permitted to skip questions.

The questions in the ACS were compiled from a number of sources that were vetted to correspond with the target population, setting, and overall program goals. The sources used to develop the ACS include:

- ***The Parents and Children (PACT)*** survey (Mathematica, 2013a, 2013b) was created from previous Healthy Marriage and Responsible Fatherhood programs funded by the Administration of Child and Families.
- ***Building Strong Families (BSF)*** survey was developed by a federally funded Healthy Marriage Program that served unmarried parents (Moore et al., 2012).
- ***Supporting Healthy Marriage (SHM)*** survey (Lowenstein et al., 2014) served as an evaluation of Healthy Marriage programs among married parents.
- **Performance measures** of 2011 grantees in Healthy Marriage and Responsible Fatherhood programs (Administration for Children and Families, 2011).

The second survey was the *Healthy Marriage Program, Pre-Program Survey/Post-Program Survey* and addressed parenting, relationships, well-being, economic stability, and program experiences. The *Healthy Marriage Program Pre-Program Survey/Post-Program Survey* contained 24 questions and was segmented by topics on parenting, marriage and relationships, personal development, economic stability, and participants' overall experience with the program. This survey was administered four times over the course of a year to both control and treatment participants: prior to beginning the program/orientation, at seven weeks or at the conclusion of the Healthy Marriage and Relationship curriculum, at six months, and at one year. Participants' names were excluded from the survey, and their identification was based on a unique, computer-generated identifier. Questions in this survey were derived from various sources, including:

- PACT surveys (Mathematica, 2013a),
- Child Trends compendium for adult Healthy Marriage outcomes (Child Trends, 2003a, 2003b),
- Performance measures for Responsible Fatherhood grantees (Administration for Children and Families, 2011),
- Building Strong Families Surveys (Moore et al., 2012), and
- Measures and tools that were gathered from previous healthy marriage grantees that were used to assess client outcomes while participating in their program

In the overall study, data was collected at four different time points. The first session included baseline data collection, whereby participants completed a questionnaire on nForm and were randomized into either a treatment or a 12-month waitlist control group via the online software randomizer.com. Access to nForm was restricted to the HMRE Manager and Evaluation Coordinator. Additionally, questionnaire responses were entered in a de-identified form in the database, which was used for the purpose of analyses. This allowed for greater protection of participant data and process consistency. The second data-collection session (post-test) occurred after six weeks, following the completion of the Healthy Marriage, Healthy Relationship curriculum. Following the post-test data collection at seven weeks, participants in the treatment and wait-list control groups completed additional follow-up questionnaires at six months and one year. Participants also had the option to complete the post-test, six months, and 1-year questionnaires over the phone. Individuals who were randomized into the wait-list control group were not allowed to participate in the Healthy Marriage, Healthy Relationship program until 12 months had passed.

Data Analysis Strategy

Data in this study was analyzed using the Statistical Package for the Social Sciences (SPSS), Version 25 (IBM, 2017). The analysis strategy began with univariate descriptive statistics, followed by bivariate analyses and multivariate analyses. In the univariate analyses, descriptive statistics were used to describe the demographics of participants in both treatment and control groups. Measures of central tendency were calculated for the independent and dependent variables. Bivariate analyses examined the relationship between participation in the HMRE program and relationship satisfaction, depressive symptomatology, and financial stability. Lastly, multivariate analyses assessed the influence of depressive symptomatology and financial stability on relationship satisfaction. Results of the bivariate and multivariate analyses answered the research questions in this study.

Pre-Analysis Data Screening

Prior to conducting a multivariate analysis, Mertler and Vannatta (2002) recommend screening data. This process provided an opportunity to evaluate the accuracy of the data and determined the effects of missing data (if any), identifying outliers, and consider the appropriateness of the fit between the data and the assumptions of the selected statistical procedure. Table 3.3 highlights the main tenets of the (univariate frequencies, normality, and measures of central tendency and variance) preliminary analyses.

Table 3.3*Preliminary Analysis*

Univariate Frequencies	Normality	Measures of Central Tendency and Variability
Frequency Distributions	Measures of Skewness	Mean
	Histogram	Median
	Q-Q plot	Mode
		Range
		Variance
		Standard Deviation
		Box Plots

Univariate statistics were assessed through the development of frequency tables and described the frequency of each of the variables in the study (see Table 4.1). Descriptive statistics describe, characterize, and/or classify data into understandable categories without distorting relevant information (Abu-Bader, 2011). This provided information on the quantity and percentage of each variable, as well as the amount of missing data.

Normality was assessed for the dependent variable of relationship satisfaction, and for the independent variables of financial stability and depressive symptomatology. These were evaluated via computations of central tendency, variability, and skewness, and by inspecting both histogram and Q-Q plots. If data was severely skewed, data would have been transformed (Abu-Bader, 2011).

The three measures of central tendency (mean, median, and mode) were used to describe independent and dependent variables in this study based on their level of measurement, the type of data, and their distribution. Measures of variability measured the distribution of continuous

scores around the mean (Abu-Bader, 2011) and included standard deviation, range, and variance. Following the completion of univariate analysis, bivariate and multivariate analysis answered this study's research questions and evaluated the relationship of the hypotheses.

Multivariate Analyses

To answer the research questions, logistic regressions were conducted. The dependent variable for each research question, relationship satisfaction, is measured at the nominal level. Relationship satisfaction was originally measured at the ordinal level on a 3-point Likert scale. However, because participants in the study only selected two options (somewhat satisfied and very satisfied), the analysis was changed from an ordinal regression to a logistic regression. In the first research question, a logistic regression was used to determine if participation in the HMRE program improved relationship satisfaction among treatment participants when compared to control participants at post-test, six months, and 12-months. A logistic regression assessed whether participation in the HMRE program impacted relationship satisfaction given the person's starting level of relationship satisfaction. In the second and third research questions, a logistic regression assessed if depressive symptomatology and financial stability moderated the impact of participation in the HMRE program on their ending relationship satisfaction, given their starting level of relationship satisfaction at different time points (post-test, six months, and 12-months). Table 3.4 details the variables used to answer each of the research questions. Additional variables such as age, education, race, and ethnicity were used to provide demographic information and describe participants in the data set. In addition to the research questions and variable input, Table 3.5 includes the level of measurement for each variable and the statistical test.

Table 3.4*Research Questions and Variable Input*

Research Question	Variable Input
1. Does participation in a Healthy Marriage and Relationship Education program improve relationship satisfaction over time in low-income African American and Hispanics compared to control group participants?	End Relationship Satisfaction = Start Relationship Satisfaction + Group Membership
2. How does initial financial stability impact growth in relationship satisfaction for program participants?	End Relationship Satisfaction = Start Relationship Satisfaction + Financial Stability + Group Membership (Treatment)
3. How does initial depressive symptomatology impact growth in relationship satisfaction for program participants?	End Relationship Satisfaction = Start Relationship Satisfaction + Depressive Symptoms + Group Membership (Treatment)

Table 3.5*Research Questions, Variables, and Statistical Tests*

Research Question	Independent Variable	Level of Measurement	Dependent Variable	Level of Measurement	Control (Covariate) moderator	Level of Measurement	Statistical Test
Does participation in a Healthy Marriage and Relationship Education program improve relationship satisfaction over time in	Group Membership (Control/Treatment Group)	Nominal	End Relationship Satisfaction	Nominal (2 = somewhat Satisfied, 3 = Very Satisfied)	Beginning Relationship Satisfaction	Nominal (2 = Somewhat Satisfied, 3 = Very Satisfied)	Logistic Regression

low-income
African
American
and
Hispanics
compared to
control group
participants?

How does financial stability impact relationship satisfaction for program participants?	Beginning Relationship Satisfaction	Nominal	End Relationship Satisfaction	Nominal (2 = somewhat Satisfied, 3 = Very Satisfied)	Financial Stability	Ordinal (1 = Never, 2 = Once in a while, 3 = Somewhat often, 4 = Very Often)	Logistic Regression
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How does depressive symptomatology impact relationship satisfaction for program participants?	Beginning Relationship Satisfaction	Nominal	End Relationship Satisfaction	Nominal (2 = somewhat Satisfied, 3 = Very Satisfied)	Depressive Symptomatology	Interval (Scale 6 – 30)	Logistic Regression
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Ethical Considerations

Ethical considerations for this research study were a chief priority. The standards outlined by the National Association of Social Workers (NASW) and the International Review Board guided the study's design, recruitment efforts and procedures, participant selection, program implementation, data collection and analysis, and interpretation of the study's findings. Prior to conducting the evaluation of the HMRE program, approval from the University of Houston's Committee for the Protection of Human Subjects (CPHS) was obtained in September 2016. The CPHS's responsibility is to ensure that the rights and interests of human participants are protected and that associated risk is minimal and justified by the benefits of the project (Rubin &

Babbie, 2015). Participation in the HMRE evaluation study was completely voluntary and did not jeopardize a participant's ability to obtain services and resources from the community organization. Informed consent was obtained, and participants were made aware that findings from the Healthy Marriage and Relationship Education program would be used for research purposes. Members from the University of Houston's evaluation team presented the program's evaluation and RCT design. Specific to this dissertation research, a de-identified secondary data set was used.

Another ethical priority when conducting this study was the anonymity and confidentiality of participants. In consideration of anonymity, a computer-generated identification number was given at registration, and surveys were completed on individual tablets. This information was protected on a secure network, and participant information was only available to the Data Manager.

The data used in this study came from secondary data collection, whereby participant information was de-identified. Secondly, I previously served as Graduate Research Assistant on the original study, which obtained approval in September of 2016. As a result of the following, approval to conduct this study was not required.

Explanation of Missing Data

The analytic sample for this study is a subset of data from a larger, five-year federally funded, healthy marriage and relationship education program. Before deciding to use imputations, or which imputations to use, consideration of the sample to be used was undertaken. The total study sample was 664 individuals. Due to restrictions of most statistics, independence of observations is an assumption, so for the 31 intact couples who had both members of the couple participating in the study, one person from each couple was randomly chosen to be

dropped from this smaller study. This reduced the sample to 633 subjects. Next, subjects who screened positive for domestic violence or who were part of a sub-sample who participated in a weekend healthy relationship retreat were eliminated, as they were not part of the hypothesized target sample, leaving 449 individuals for consideration in the present study. The next step retained only those individuals who were currently in a relationship, leaving 297 in the potential sample. Finally, 12 people were eliminated for not answering the initial relationship satisfaction question and seven individuals were not African American or Hispanic and were therefore eliminated, resulting in a final sample of 278 for the present study.

When considering the usage of imputations, up to this point, only 12 individuals were eliminated for missing data. Furthermore, relationship satisfaction was assessed by a single-item measure. Relationship satisfaction was used as the covariate for the analyses of all nine hypotheses' models and it was therefore determined that replacement of that single important data point should not be imputed in any way. The only other data that was missing, that was necessary for the analysis applied to the construction of the Depression Symptomology Scale, utilizing the sum of six items. When examining this depression data, one person was found to have only answered one question, so that individual was also eliminated from only the three analyses regarding hypotheses two. Additionally, there were 13 subjects missing one or two items from the depression measure. For these individuals a mean of the valid answers for the six questions were averaged and that mean was used to impute the missing data for those individuals. This is a straight-forward approach and valid when creating subscales from more than 50% of donor items. In a much more in depth, sophisticated study approach, Gottschall, West & Enders (2012), showed this technique to be superior to scale-level imputation with regards to bias and efficiency of scale-level parameter estimates.

Summary

The goal of this chapter was to describe the methodology used to answer three research questions. These questions were answered using year-two data of a five-year, federally funded Healthy Marriage and Relationship Education program. The study utilized an RCT design, and the outcomes of treatment participants and 12-month, wait-list control participants were evaluated in the categories of relationships and marriage, parenting, personal development, and financial stability at four time points (pre-test, post-test, six months, and one year). A logistic regression was used to evaluate outcomes of the program participants and assess the influence of depressive symptomatology and financial stability on relationship satisfaction. Data was further contextualized through univariate, descriptive statistics. Participants were recruited at various events and through different media outlets by staff members employed at the community-based, nonprofit organization. Individuals in the study included African American and Hispanic adults (ages 18 and older) from low-income communities.

Chapter 4: Results

This chapter consists of the results from a secondary data analysis using a subset of data from a five-year federally funded, healthy marriage and relationship education (HMRE) program. This study utilized year two data for adult African Americans and Hispanics in a committed relationship. This section begins with descriptive data regarding demographics, living arrangements, relationship satisfaction, financial stability, and symptoms of depression. Following the presentation of descriptives, bivariate statistics provide information about the relationships between variables in the study. Lastly, the results of logistic regression and moderation analyses are discussed with regard to the research questions.

Descriptives and Frequencies

To contextualize data in this study and further understand participant characteristics, descriptive data was analyzed. The sample size of this dissertation study included 278 individuals. There were 134 individuals in the control group and 144 individuals in the treatment group. The majority of participants identified as female (86%), and the remaining participants identified as male (14%). This dissertation research only included African Americans and Hispanics, and the racial/ethnic breakdown in year two was 84% Hispanic and 16% African American. Regarding age, the largest group (40%) were between the ages of 25 and 34, followed by individuals aged 35–44 (35%). Most respondents in this study reported that they were unemployed (76%), and the monthly income of most participants (64%) was less than \$500. Table 4.1 summarizes the results.

Table 4.1*Sample Demographics and Frequencies (n = 278).*

	Control Group		Treatment Group		Total	
	n	%	n	%	n	%
Gender						
Male	17	6.1%	23	8.3%	40	14.5%
Female	117	42.2%	120	43.3%	237	85.5%
Race & Ethnicity						
Black/African American	17	6.1%	28	10.0%	45	16.1%
Hispanic	117	42.2%	116	41.7%	233	83.7%
Age						
18-20 Years	2	.75%	3	.8%	5	1.55%
21-24 years	10	3.6%	11	3.9%	21	7.5%
25-34 years	50	18.1%	62	22.4%	112	40.5%
35-44 years	51	18.4%	48	17.3%	99	35.7%
45-54 years	17	6.5%	13	4.7%	30	11.2%
55-64 years	4	1.4%	4	1.4%	8	2.8%
65 and older	0	0.0%	2	.75%	2	.75%
Monthly Income						
< \$500	61	27.6%	81	37%	142	64.6%
\$500 - \$1000	16	7.2%	19	8.5%	35	15.7%
\$1001 - \$2000	17	7.6%	11	4.9%	28	12.5%
\$2001 - \$3000	5	2.2%	7	3.2%	12	5.4%
\$3001 - \$4000	0	0.0%	3	1.4%	3	1.4%
\$4001 - \$5000	0	0.0%	1	.40%	1	.40%
Education Level						
No Degree or Diploma Earned	47	18.8%	40	16%	87	34.8%
High School General Education (GED)	21	8.4%	18	7.2%	39	15.6%
High School Diploma	21	8.4%	26	10.4%	47	18.8%
Vocational / Technical Certification	12	4.8%	21	8.4%	33	13.2%

	Control Group		Treatment Group		Total	
	n	%	n	%	n	%
Some College but no degree completed	15	6%	17	6.8%	32	12.8%
Associate's Degree	1	.4%	4	1.6%	5	2%
Bachelor's Degree	3	1.2%	3	1.2%	6	2.4%
Master's /Advanced Degree	1	.4%	0	0.0%	1	.4%
Employment Status						
Full Time (35 hours or more per week)	9	3.3%	15	5.5%	24	8.8%
Part Time (1-34 hours per week)	10	3.7%	11	3.9%	21	7.6%
Employed, but number of hours change week to week	4	1.4%	5	1.8%	9	3.2%
Temporary, Occasional, Seasonal Employment or Odd jobs for pay	3	1.1%	7	2.5%	10	3.6%
Not employed	108	39.1%	104	37.7%	212	76.8%
Received Social Welfare Program						
SSI	12	4.8%	6	2.4%	18	7.2%
TANF	7	2.8%	6	2.4%	13	5.2%
WIC	46	18.4%	47	18.8%	93	37.2%
Section 8	2	.8%	4	1.6%	6	2.4%
SNAP	50	20%	62	24.8%	112	44.8%
Unemployment Insurance	5	2%	3	1.2%	8	3.2%

Note. Due to missing data, not all categories equal 278.

Next, Table 4.2 showcases the descriptive frequencies for the measure of financial stability. Financial stability is the independent variable in the second research question, “how does initial financial stability impact growth in relationship satisfaction for program participants?”

Financial stability was assessed by the question, “How often do you find it difficult to pay your bills?” Respondents were given the following answer choices: never, once in a while,

somewhat often, and very often. The majority of participants answered once in a while (53%), followed by never (22%). Less than 10% of participants answered “often” to describe how often they experience difficulty paying bills.

Table 4.2

How Often Do You Find it Difficult to Pay Your Bills at Pre-test? (N= 278)

Difficulty Paying Bills	n	%
Never	62	22%
Once in a While	146	53%
Somewhat Often	43	16%
Often	26	9%

Note. Percentages are rounded to the nearest whole number

Table 4.3 displays the descriptive frequencies for beginning relationship satisfaction, the covariate, at intake among African American and Hispanic participants in this study.

Relationship satisfaction was assessed by the question, “How satisfied are you with your current relationship?” Participants were given three answer choices: very satisfied, somewhat satisfied, and not satisfied. However, respondents only selected “very satisfied” and “somewhat satisfied” for this question, with the majority (69.8%) selecting “somewhat satisfied” to describe their current relationship. Despite three available answer choices, participants only selected “very satisfied” and “somewhat satisfied.” The impact of how this limited data analyses is discussed in greater detail further in the analysis section.

Table 4.3*How Satisfied Are You in Your Current Relationship at Pre-test? (n = 278)*

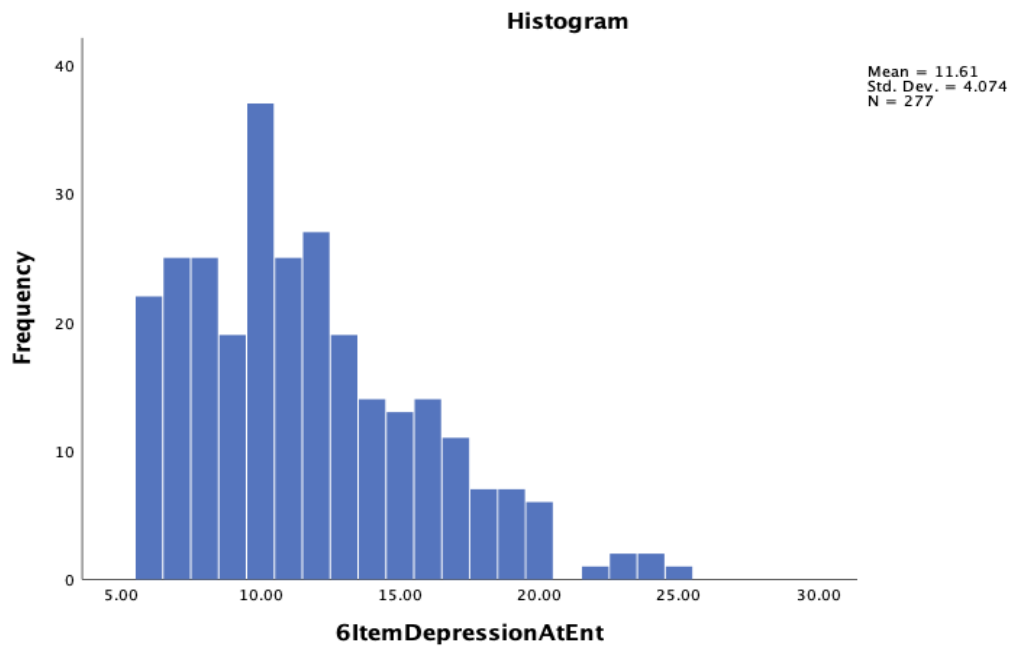
Relationship Satisfaction	n	%
Very Satisfied	84	30%
Somewhat Satisfied	194	70%
Not Satisfied	0	0%

Note. Percentages are rounded to the nearest whole number.

Figure 4.4 displays the frequencies of feelings experienced among participants in the last 30 days. These feelings were used as a proxy for depressive symptomatology and included a six-item scale. Participants were asked how often they felt the following: nervous, hopeless, worthless, restless/fidgety, everything was an effort, and so depressed that nothing could cheer them up. Each symptom was scored on a scale from 1 – 5, with higher scores meaning higher symptomatology. The answer choices ranged from none of the time (1), a little of the time (2), some of the time (3), most of the time (4), and all of the time (5). The minimum depression score was 6, and the maximum depression score was 25 out of a possible score of 30. The mean depression score was 11.6, and the standard deviation was 4.07. Figure 4.4 depicts the overall distribution of depression scores among participants in the study. The mean depression score for participants was below the midpoint (12.5). This suggests that the majority of participants in this study experienced lower amounts of depressive symptoms.

Figure 4.4

Depressive Symptomatology among Study Participants



Bivariate Analysis

Bivariate analyses provide information about the relationships that exist between variables. Understanding these relationships first allows for a better understanding of subsequent logistic regressions. Chi-square was used to determine the preliminary relationship between the three variables measured at intake (relationship satisfaction, financial stability, and depressive symptomatology) and two demographic characteristics (race and gender). African Americans and Hispanics are the two largest minority groups in the United States. However, to avoid falsely assuming homogeneity, an analysis was conducted to compare the two groups, which was used to assess if there was a statistically significant difference at pre-test. Similarly, an analysis was conducted to compare men and women at baseline, also assessing if there was a statistically significant difference prior to being randomized in their group assignment.

Finally, the research questions were assessed using the appropriate analysis for each. For the first research question, a logistic regression compared the relationship satisfaction outcomes of treatment and control participants following participation in a healthy marriage and relationship education program. The second research question used a logistic regression to assess the impact of financial stability on relationship satisfaction among treatment participants at three time points (post-test, six months, and 1-year). The third research question also used a logistic regression to assess the impact of depressive symptomatology on relationship satisfaction among treatment participants at three time points (post-test, six months, and 1-year).

Bivariate Analysis between Variables in the Study, and Gender, Race and Ethnicity

Table 4.5 shows relationship satisfaction percentages for males/females in this study. The table shows pre-test results and Chi-square results, which did not produce significant findings. At pre-test, there were no significant differences by race/ethnicity on relationship satisfaction.

Table 4.5

*Relationship Satisfaction at Pre-Test * Gender (N = 277)*

Gender	Very Satisfied		Somewhat Satisfied	
	n	%	n	%
Males	10	12%	30	16%
Females	74	88%	163	84%
Total	84	100%	193	100%

$\chi^2 (1) = .627, p = .428$

Table 4.6 displays the results of relationship satisfaction by race/ethnicity among participants at pre-test. This table also includes the Chi-Square results.

Table 4.6*Comparison of Relationship Satisfaction at Pre-Test * Ethnicity (N=278)*

Race/Ethnicity	Very Satisfied		Somewhat Satisfied	
	n	%	n	%
African Americans	12	14%	33	17%
Hispanics	72	86%	161	83%
Total	84	100%	194	100%

 $\chi^2 (1) = .321, p = .571$

Tables 4.7 and 4.8 show preliminary results for financial stability by gender and race/ethnicity. Financial stability in this study was assessed by the question, “How often do you find it difficult to pay your bills?” The answer choices ranged from “never” to “very often” on a four-point Likert scale. The results of the Chi-square analyses are presented below. At pre-test, there were no significant different by gender or by race/ethnicity on financial stability.

Table 4.7*Comparison of Financial Stability at Pre-Test * Gender (N=276)*

Gender	Difficulty Paying Bills							
	Never		Once in a While		Somewhat Often		Very Often	
	n	%	n	%	n	%	n	%
Males	8	3%	18	7%	7	3%	7	3%
Females	54	20%	127	46%	36	13%	19	7%
Total	62	22%	145	53%	43	16%	26	9%

 $\chi^2 (1) = 3.98, p = .263$

Table 4.8*Comparison of Financial Stability at Pre-Test by Race/Ethnicity (N=277)*

Race/Ethnicity	Difficulty Paying Bills							
	Never		Once in a While		Somewhat Often		Very Often	
	n	%	n	%	n	%	n	%
African Americans	10	4%	18	6%	9	3%	8	3%
Hispanics	52	19%	128	46%	34	12%	18	6%
Total	62	23%	145	52%	43	15%	26	9%

 $\chi^2 (1) = 6.37, p = .095$

Table 4.9 displays the results of an independent-samples t-test that was conducted to compare depressive symptomatology between African Americans and Hispanics. At pre-test, there were no significant differences by race/ethnicity (African Americans ($M=10.62$, $SD=4.64$) and Hispanics ($M=11.27$, $SD=4.47$); $t(275) = -.87$, $p = .38$).

Table 4.9*Comparison of Depressive Symptomatology at Pre-Test by Race/Ethnicity*

Race/Ethnicity	Depressive Symptomatology				
	n	%	Mean	Std. Deviation	Std. Error Mean
African Americans	44	16%	10.62	4.64	0.69
Hispanics	233	84%	11.27	4.47	0.29

Figure 4.10 displays the mean score of each item on the depression scale by African Americans and Hispanics. Depressive symptomatology was assessed according to the frequency in which individuals experienced the following symptoms within the past 30 days. The most endorsed item among African Americans was “effort” and for Hispanics, feelings of “nervousness”.

Figure 4.10

Mean Depressive Symptomatology Score by Race/Ethnicity at Pre-Test

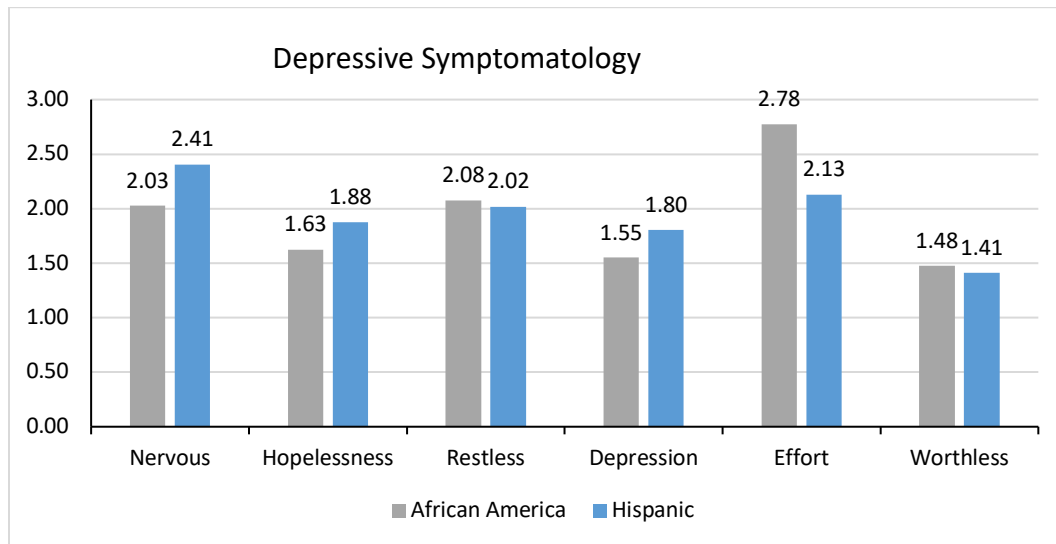


Table 4.11 displays the results of an independent-samples t-test comparing depressive symptomatology by gender. At pre-test, there were no significant difference between females ($M=11.20$, $SD = 4.4$) and males ($M= 10.95$, $SD = 4.83$); $t(274) = .31$, $p = .75$ on depressive symptoms.

Table 4.11

Comparison of Depressive Symptomatology at Pre-Test by Gender

Gender	Depressive Symptomatology					
	N	%	Mean	df	Std. Deviation	Std. Error Mean
Females	236	85%	11.2	11.2	4.45	0.29
Males	40	15%	10.95	10.95	4.83	0.76

Bivariate Analysis between Variables in the Study, and Group Assignment

Table 4.12 displays frequencies for relationship satisfaction by group assignment (treatment vs. control group). Relationship satisfaction was assessed by a question on “how

satisfied an individual was in his/her relationship”, with the following answer choices: not satisfied, somewhat satisfied, and very satisfied. It is important to note, that no one reported that they were “not satisfied” in their relationship.

Table 4.12

Relationship Satisfaction by Group Assignment at Pre-Test.

	Very Satisfied	Somewhat Satisfied	Total
Control Group			
Count	38	96	134
% of Total	13.70%	34.50%	48.20%
Treatment Group			
Count	46	98	144
% of Total	16.50%	35.30%	51.80%
Total			
Count	84	194	278
% of Total	30.20%	69.80%	100.00%

Financial Stability

Table 4.13 displays the descriptive statistics and frequencies of financial stability by group assignment at pre-test, which was measured by participants difficulty paying bills. At pre-test, there were no significant differences by group assignment on financial stability.

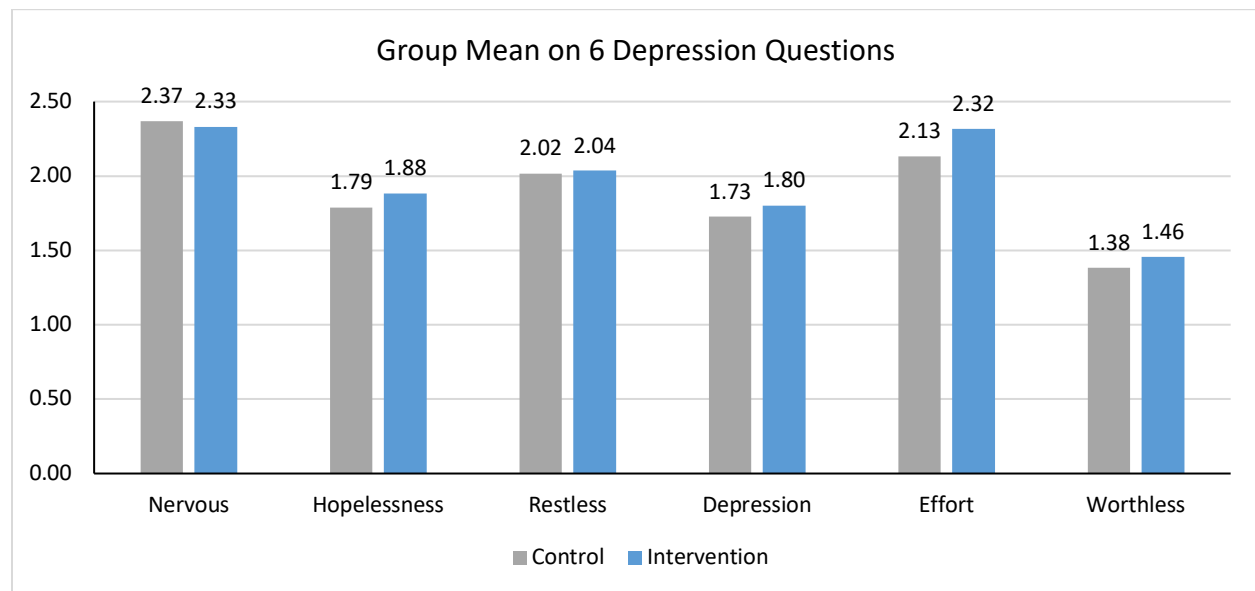
Table 4.13*Difficulty Paying Bills by Group Assignment at Pre-Test*

	Never	Once in a While	Somewhat Often	Often	Total
Control Group					
Count	30	75	19	9	133
% of Total	10.80%	27.10%	6.90%	3.20%	48.00%
Treatment Group					
Count	32	71	24	17	144
% of Total	11.60%	25.60%	8.70%	6.10%	52.00%
Total					
Count	62	146	43	26	277
% of Total	22.40%	52.70%	15.50%	9.4	100.00%

Figure 4.14 displays the mean score of six items used to measure depressive symptomatology according to group assignment. This chart shows that at pre-test, there was equality of variance (homoscedasticity) between the control and intervention group.

Figure 4.14

Mean Depression Score by Group Assignment at Pre-Test



Hypothesis Testing for Logistic Regression

For this study, nine logistic regression models were tested. Three different independent variables were tested for effects at three separate time points on the dependent variable. The three independent variables were assignment (intervention/treatment or control group), rating of feelings of depressive symptoms at intake (pre-test), and rating of difficulty paying bills at intake. The three time points used for the dependent variables measuring relationship satisfaction were at exit (posttest), six months post-exit and 12-months post-exit.

Each of the models used intake rating of relationship satisfaction as a covariate to control for initial feelings. This makes the dependent variable the measurement of relationship satisfaction beyond initial feelings of relationship satisfaction. The outcomes will be presented within independent variables across time points. First, intervention will be discussed and will include only participants who had all of the data points available at four time points (pre-test, post-test, six months, and 1 year). Next, the effects of depression and the effects of having

difficulty paying bills will be examined for the treatment/intervention group only. Because nine models will be tested, Table 4.15 presents the corresponding hypothesis, dependent and independent variables, covariates, and total number of subjects.

Table 4.15

Total Number of Individuals for Each Hypothesis

Hypothesis	Dependent Variable	Independent Variable	Covariate	N
H1a	Relationship Satisfaction at exit	Group (Intervention vs. Control)	Intake Relationship Satisfaction	213
H1b	Relationship Satisfaction at 6 months	Group (Intervention vs. Control)	Intake Relationship Satisfaction	180
H1c	Relationship Satisfaction at 12 months	Group (Intervention vs. Control)	Intake Relationship Satisfaction	176
H2a	Relationship Satisfaction at exit	Intake Difficulty Paying Bills	Intake Relationship Satisfaction	104
H2b	Relationship Satisfaction at 6 months	Intake Difficulty Paying Bills	Intake Relationship Satisfaction	89
H2c	Relationship Satisfaction at 12 months	Intake Difficulty Paying Bills	Intake Relationship Satisfaction	84
H3a	Relationship Satisfaction at exit	Intake Depression Rating	Intake Relationship Satisfaction	99
H3b	Relationship Satisfaction at 6 months	Intake Depression Rating	Intake Relationship Satisfaction	87
H3c	Relationship Satisfaction at 12 months	Intake Depression Rating	Intake Relationship Satisfaction	81

Assumption Testing for Logistic Regression

Logistic regression has seven assumptions. The first assumption is that there is one dependent variable, and it is measured at the nominal level. For each of the nine models, rating of relationship satisfaction is the dependent variable. There were only two answers given by all participants (although the rating scale had a potential of three answers: very satisfied, somewhat

satisfied, and not satisfied). As a result of how participants responded, logistic regression was the appropriate option for analyses.

The second assumption tested was one or more variables that are nominal or continuous. Independent variables, which may appear ordinal, will be treated as continuous variables for this study. For the first hypothesis, we included only a nominal IV (intervention participation) and a nominal covariate (initial relationship status). The second hypotheses used a continuous IV (rating of difficulty paying bills). The third hypothesis used a continuous IV (rating of depression at intake) and the same nominal covariate.

The third assumption is that there is an independence of observations. This means no participant can be related to another participant in any way. The original data did show membership within couples, as couples often enrolled in the intervention together. Prior to any analysis, if a participant was a part of a couple, one person from each couple was randomly eliminated from the data set. Therefore, the data analyzed met the assumption of independence of observations.

The fourth assumption is that there be a minimum of 15 cases per IV. Binomial logistic regressions rely on maximum likelihood estimation (MLE), and if there are very few cases in any combination, the reliability of the estimates declines. In each of the nine (9) analyses, there are only two independent variables (including the covariate), and there are well over 30 cases to analyze.

The fifth assumption is that there should be a linear relationship between the continuous IVs and the logit transformation of the DV. In other words, this assumption requires that for every one-unit increase in a continuous independent variable, the value of the log odds (logit) of the dependent variable increases by a constant amount (Laerd, 2021). To test this fifth

assumption using the Box-Tidwell (1962) procedure (Tabachink & Fidell, 2018), the natural log for each continuous IV is computed and saved. Then a logistic model is run with the variables that were used in the hypothesis test and an interaction term created from the continuous IV and its natural log. This interaction term is examined for significance. If it is significant, the assumption of linearity is not met.

Six models were tested, as only the IVs depression and difficulty paying bills are considered continuous (see Tables 4.16 through 4.21).

Table 4.16

Test of Linearity for Assumption 5, H2a

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction at Intake	-2.168	.647	11.214	1	.001	.114
Difficulty with Bills at Intake	-.109	2.550	.002	1	.966	.897
Difficulty with Bills at Intake by Natural Log	.325	1.355	.057	1	.811	1.384

Note. DV: Relationship Satisfaction at Exit

Table 4.17

Test of Linearity for Assumption 5, H2b

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction at Intake	-1.941	.685	8.035	1	.005	.144
Difficulty with Bills at Intake	-5.369	4.419	1.476	1	.224	.005
Difficulty with Bills at Intake by Natural Log	2.840	2.242	1.604	1	.205	17.108

Note. DV: Relationship satisfaction at six months

Table 4.18*Test of Linearity for Assumption 5, H2c*

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction at Intake	-2.911	.772	14.213	1	.000	.054
Difficulty with Bills at Intake	-1.305	3.505	.139	1	.710	.271
Difficulty with Bills at Intake by Natural Log	.859	1.796	.229	1	.632	2.361

Note. DV: Relationship Satisfaction at 12 months**Table 4.19***Test of Linearity for Assumption 5, H3a*

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction at Pretest	-1.128	.595	3.592	1	.058	.324
Depression at Intake	-1.831	2.642	.480	1	.488	.160
Depression at Intake by Natural Log	.563	1.463	.148	1	.700	1.756

Note. DV: Relationship satisfaction at Exit**Table 4.20***Test of Linearity for Assumption 5, H3b*

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction Pretest	-1.944	.682	8.122	1	.004	.143
Depression at Intake	-7.048	3.912	3.245	1	.072	.001
Depression at Intake by Natural Log	4.273	2.394	3.185	1	.074	71.709

Note. DV: Relationship satisfaction at six months

Table 4.21*Test of Linearity for Assumption 5, H3c*

Predictor	B	SE (β)	Wald's χ^2	df	p	Exp (β)
Relationship Satisfaction at Pretest	-2.253	.719	9.817	1	.002	.105
Depression at Intake	-8.533	3.725	5.247	1	.022	.000
Depression at Intake by Natural Log	4.369	2.043	4.575	1	.032	78.983

Note. DV: Relationship satisfaction at 12 months

The sixth assumption is that there is no multicollinearity among the IVs. In the first set of hypotheses, regarding intervention, there are no continuous IVs, and in the second and third sets of hypotheses (depression and difficulty paying bills), there is only one continuous IV; therefore, there is no possibility of multicollinearity.

The seventh assumption is that there be no statistical outliers. This assumption will be tested during the main logistic regression analyses. Each of the nine models will be tested at .05, but with a Bonferroni correction, the threshold for significance is .005.

Research Question Results

Logistic regression was used to answer the three research questions in this study. In addition, a series of models were run to test for a moderation effect between the covariate and independent variable in each model. The results are presented below.

Research Question #1: Does participation in a Healthy Marriage and Relationship Education program improve relationship satisfaction (over time) in low-income African American and Hispanics compared to control group participants?

A series of logistic regression models were run to test the impact of being in the intervention group on changes in feelings regarding relationship satisfaction from pre-test to posttest, from pre-test to six months posttest, and from pre-test to 12-months posttest. The posttest logistic regression model was significant, $\chi^2(2) = 43.379$, $p < .0005$, even when applying a Bonferroni correction for nine models (threshold of .005). However, only the pre-test relationship satisfaction covariate was significant, the group membership was not (see Table 4.22). This means that while knowing an individual's pretest answer on their feeling about relationship satisfaction significantly improves prediction of their posttest answer, knowing their group membership does not. Therefore, group membership had no impact on how a person answered the relationship satisfaction question at posttest when controlling for pretest relationship satisfaction.

Table 4.22

Relationship Satisfaction at Pre-Test

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-2.321	0.375	38.770	1	0.000	0.098	0.047	0.205
Group	-0.330	0.374	0.778	1	0.378	0.719	0.345	1.497

Note. DV: Relationship satisfaction at posttest

The six months posttest logistic regression model with intervention as the predictor was also significant, $\chi^2(2) = 32.116$, $p < .0005$; however, only the pre-test relationship satisfaction covariate was significant, the group membership was not (see Table 4.23).

Table 4.23*Posttest Relationship Satisfaction with Intervention*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-2.256	0.421	28.666	1	0.000	0.105	0.046	0.239
Group	-0.467	0.422	1.227	1	0.268	0.627	0.274	1.432

Note. DV: Relationship satisfaction at 6 months

The 12-months posttest logistic regression model with intervention as the predictor was also significant, $\chi^2(2) = 25.773$, $p < .0005$; however, only the pre-test relationship satisfaction covariate was significant, while the group membership was not significant (see Table 4.24).

Table 4.24*Posttest Relationship Satisfaction at 12 Months with Intervention*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-1.886	0.386	23.908	1	0.000	0.152	0.071	0.323
Group	-0.223	0.387	.332	1	0.564	0.800	0.375	1.707

Note. DV: Relationship satisfaction at 12 months

To examine the first research question, “does participation in a Healthy Marriage and Relationship Education program improve relationship satisfaction (over time) in low-income African American and Hispanics compared to control group participants”, a moderation analysis was conducted. This analysis assessed if initial relationship satisfaction moderated ending relationship satisfaction at posttest, six months, and one year among treatment participants. To

assess for moderation, an additional three logistic regression models were run adding an interaction term to each. The interaction term was created by multiplying initial relationship satisfaction and group membership. The dependent variable of these regression models was ending relationship satisfaction at posttest, six months, and one year. The interaction was not significant in any of the three models; therefore, the moderation was not supported, and thus, initial relationship satisfaction does not moderate ending relationship satisfaction among participants. The results for posttest, six months, and 12 months are displayed in Tables 4.25, 4.26, and 4.27 below.

Table 4.25

Results for Moderation of Group Participation on Relationship Satisfaction at Posttest

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	2.877	.548	27.570	1	.000	17.766
Group	1.971	1.170	2.840	1	.092	7.177
Group * Relationship Satisfaction	-1.119	.752	2.215	1	.137	.327

Note. DV: Relationship satisfaction at posttest

Table 4.26*Results for Moderation of Group Participation on Relationship Satisfaction at six months*

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	2.427	.580	17.526	1	.000	11.329
Group	1.005	1.303	.595	1	.440	2.733
Relationship Satisfaction * Group	-.368	.841	.192	1	.661	.692

Note. DV: Relationship satisfaction at six months**Table 4.27***Results for Moderation of Group Participation on Relationship Satisfaction at 12 months*

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	1.285	.506	6.457	1	.011	3.614
Group	-1.854	1.240	.2237	1	.135	.157
Relationship Satisfaction * Group	1.423	.818	3.031	1	.082	4.151

Note. DV: Relationship satisfaction at 12 months

Research Question 2: How does initial financial stability impact growth in relationship satisfaction for program participants?

A series of logistic regression models were run to test the impact of financial stability at intake on change in feelings regarding relationship satisfaction from pre-test to posttest, from pre-test to six months posttest, and from pre-test to 12-months posttest.

The posttest logistic regression model was significant, $\chi^2(2) = 14.387$, $p < .001$; however, only the pre-test relationship satisfaction covariate was significant, while financial stability was not significant (see Table 4.28). This means that while knowing an individual's pre-test answer on their feeling about relationship satisfaction significantly improves the ability to predict their posttest answer, knowing their level of financial stability does not. In other words, financial stability had no impact on how a person answered the relationship satisfaction question at posttest, when controlling for pre-test relationship satisfaction.

Table 4.28

Financial Stability and Relationship Satisfaction at Pre-Test

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-2.207	.632	12.192	1	.000	.110	.032	.380
Difficulty with Bills	.497	.362	1.886	1	.170	1.643	.809	3.339

Note. DV: Relationship satisfaction at posttest

The six months posttest logistic regression model with financial stress as the predictor was also significant, $\chi^2(2) = 12.693$, $p < .001$; however, only the pre-test relationship satisfaction covariate was significant, while financial stress was not significant (see Table 4.29).

Table 4.29*Financial Stability and Relationship Satisfaction at Six Months*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-2.167	.700	9.595	1	.002	.114	.029	.451
Difficulty with Bills	.130	.402	.105	1	.746	1.139	.518	2.503

Note. DV: Relationship satisfaction at 6 months

The 12-months posttest logistic regression model with financial stability as the predictor was also significant, $\chi^2(2) = 23.001$, $p < .0005$; however, only the pretest relationship satisfaction covariate was significant, while financial stress was not significant (see Table 4.30).

Table 4.30*Financial Stability and Relationship Satisfaction at 12 Months*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	.029	.451	.029	.451	.029	.451	.011	.218
Difficulty with Bills	.518	2.503	.518	2.503	.518	2.503	.608	3.332

Note. DV: Relationship satisfaction at 12 months

To examine the second research question, “How does initial financial stability impact growth in relationship satisfaction for program participants”, a moderation analysis was conducted to assess if financial stability moderated relationship satisfaction from posttest, six months, and one year. To assess for moderation, an additional three logistic regression models

were tested adding an interaction term to each. The interaction term was created by multiplying initial relationship satisfaction and financial stability together. The dependent variable of these regression models was ending relationship satisfaction at posttest, six months, and one year. However, the interaction was not significant in any of the three models; therefore, the moderation was not supported, and thus, financial stability does not moderate relationship satisfaction among treatment participants. The results for posttest, six months, and 12 months are displayed in Tables 4.31, 4.32 and 4.33 below.

Table 4.31

Results for Moderation of Financial Stability at Posttest

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	2.761	1.712	2.601	1	.107	15.821
Financial Stability	.870	1.132	.590	1	.442	2.387
Relationship Satisfaction * Financial Stability	-.251	.714	.123	1	.725	.778

Note. DV: Financial Stability at Posttest

Table 4.32*Results for Moderation of Financial Stability at Six Months*

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	3.147	1.948	2.610	1	.106	23.272
Financial Stability	.750	1.216	.380	1	.537	2.117
Relationship Satisfaction * Financial Stability	-.431	.788	.299	1	.585	.650

Note. DV: Financial Stability at Six Months**Table 4.33***Results for Moderation of Financial Stability at 12 Months*

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	3.424	2.101	2.655	1	.103	30.681
Financial Stability	.611	1.317	.215	1	.643	1.842
Relationship Satisfaction * Financial Stability	-.205	.988	.043	1	.835	.814

Note. DV: Financial Stability at 12 Months

Research Question #3: How does initial depressive symptomatology impact growth in relationship satisfaction for program participants?

A series of logistic regression models were run to test the impact of depression symptoms as measured by the sum of six questions at intake on change in feelings regarding relationship

satisfaction from pre-test to posttest, from pre-test to six months posttest, and from pre-test to 12-months posttest.

The posttest logistic regression model was significant, $\chi^2(2) = 14.5$, $p = .001$. For this model, neither the covariate (pre-test relationship satisfaction) or the independent variable (depression at intake) was significant predictors once the Bonferonni correction was made (see Table 4.34). The Bonferroni correction, using nine models, would be a probability threshold of $p < .005$.

Table 4.34

Depression and Relationship Satisfaction at Posttest

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-1.256	.555	5.117	1	.024	.285	.096	.846
Depression	-.176	.074	5.612	1	.018	.839	.726	.970

Note. DV: Relationship satisfaction at posttest

The six months posttest logistic regression model with level of depression as the predictor was also significant, $\chi^2(2) = 9.335$, $p < .001$; however, only the pre-test relationship satisfaction covariate was significant, while the level of depression was not significant (see Table 4.35).

Table 4.35*Depression and Relationship Satisfaction at 6 Months*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-1.864	.631	8.726	1	.003	.155	.045	.534
Depression	-.053	.067	.625	1	.429	.949	.833	1.081

Note. DV: Relationship satisfaction at 6 months

The 12 months posttest logistic regression model with level of depression as the predictor was also significant, $\chi^2(2) = 29.72$, $p < .001$; however, only the pre-test relationship satisfaction covariate was significant, while the level of depression was not significant (see Table 4.36).

Table 4.36*Depression and Relationship Satisfaction at 12 Months*

Predictor	95% CI for Exp (β)							
	B	SE (β)	Wald's χ^2	df	p	Exp (β)	Lower	Upper
Relationship Satisfaction at Pretest	-2.360	.665	12.609	1	.000	.094	.026	.347
Depression	-.159	.091	3.071	1	.080	.853	.714	1.019

Note. DV: Relationship satisfaction at 12 months

To assess the third research question, “How does depressive symptomatology impact growth in relationship satisfaction for program participants”, moderation analyses were also conducted to assess if depression moderated relationship satisfaction from posttest, six months, and one year. To assess for moderation, three additional logistic regressions were conducted.

The interaction term was created by multiplying relationship satisfaction and depression together after depression was centered to have a mean score of 0. The dependent variable of these regression models was ending relationship satisfaction at posttest, six months, and one year. However, the interaction was not significant in any of the three models; therefore, the moderation was not supported, and thus, depression does not moderate relationship satisfaction among treatment participants in this study. The results for posttest, six months, and 12 months are displayed below in Tables 4.37, 4.38, and 4.39.

Table 4.37

Results for Moderation of Depressive Symptomatology at Posttest

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	1.655	.618	7.162	1	.007	5.233
Depression	.150	.233	.413	1	.521	1.162
Relationship Satisfaction * Depression	-.213	.149	2.047	1	.153	.808

Note. DV: Depressive Symptomatology at Posttest

Table 4.38

Results for Moderation of Depressive Symptomatology at Six Months

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	1.854	.668	7.706	1	.006	6.383
Depression	-.191	.329	.338	1	.561	.826
Relationship Satisfaction * Depression	-.101	.207	.236	1	.627	1.106

Note. DV: Depressive Symptomatology at Six Months

Table 4.39

Results for Moderation of Depressive Symptomatology at 12 Months

	B	S.E.	Wald	df	Sig.	Exp(B)
Relationship Satisfaction at Pretest	2.324	.709	10.733	1	.001	10.218
Depression	-.198	.288	.475	1	.491	.820
Relationship Satisfaction * Depression	.026	.184	.020	1	.886	1.027

Note. DV: Depressive Symptomatology at 12 months

Although none of the models utilizing depression were significant, there was an increase in rate of correctly identifying the value of relationship satisfaction at some time points when adding the depression information. For posttest, the percentage correctly classified stayed at 78.80% when adding the information about depression; for six months, the percentage correctly classified went from 82% to 83.10%; and for 12 months, the percentage went from 79.80% to 86.90%.

For comparison to the other six models, see Table 4.40. Clearly, the information about depression had the most effect in adding to the model's ability to correctly predict 12-month relationship satisfaction, although it was not statistically significant in the logistic regression model.

Table 4.40*Classification Accuracy from Block 1 to Block 2 in 9 models*

Dependent Variable	Posttest		6 months		12 months	
	Block 1	Block 2	Block 1	Block 2	Block 1	Block 2
H1 (IV= Groups)	78.9%	81.2%	80.0%	81.70%	76.1%	73.9%
H2 (IV=Financial Stability)	78.8%	80.8%	82.2%	82.0%	79.8%	81.0%
H3 (IV=Depression)	78.8%	78.8%	82.0%	83.10%	79.8%	86.9%

In addition to the analyses outlined in this chapter, the percentage of individuals that did not change their relationship satisfaction level over time were also calculated for control and treatment group participants.

In the control group, 83.49% of participants did not change their level of relationship satisfaction from pre-test to posttest. Furthermore, only 6.42% improved their relationship satisfaction level from “satisfied” to “very satisfied” and 10.09% downgraded their relationship satisfaction level from “very satisfied” to only satisfied” in the control group.

In the treatment group, 74.04% of participants did not change their level of relationship satisfaction from pre-test to posttest, and only 7.69% improved their relationship satisfaction level. Conversely, 18.27% of treatment participants reported a lower rating of relationship satisfaction.

A similar trend emerged among control and treatment group participants from their pre-test relationship satisfaction level to their six months relationship satisfaction level. Among control group participants, 81.32% did not report a change in their level of relationship satisfaction level, and only 7.69% increased their level of satisfaction. However, 10.99% reported a decrease in relationship satisfaction from pre-test to six months. Among Intervention

group participants, 76.40% did not change their rating at six months, 5.62% had a positive increase in their relationship satisfaction, and 17.89% felt less satisfaction.

At 12 months, 70.65% of control group participants did not change their level of relationship satisfaction from pre-test, 11.96% of participants had an increase in satisfaction level, and 17.39% felt less satisfied in their relationship. For treatment group participants, an overwhelming 90.54% of participants did not change their level of relationship satisfaction, and only 5.41% improved from pre-test. However, following participation in the HMRE program, 17.57% of treatment participants had a decrease in relationship satisfaction level.

The above percentages show that the overwhelming majority of participants did not change their rating from entry to exit at any of the three time points.

Summary

The purpose of this study was to investigate the impact of a government-funded Healthy Marriage and Relationship Education program on relationship satisfaction among low-income African Americans and Hispanics. Secondly, this study explored the influences of financial stability and depressive symptomatology on relationship satisfaction among treatment participants. This chapter reported the study findings, and included a description of participant characteristics, along with frequencies of measures for the independent and dependent variables. Bivariate analyses were also run to explore the relationship among the variables in this study (e.g., relationship satisfaction, financial stability, and depressive symptomatology) and between gender and race/ethnicity. The analysis did not yield any significant relationships between the independent variable and the change in relationship satisfaction over time. The overall models were significant; however, no independent variable contributed significantly to the models.

Chapter 5: Discussion

The investment made in government funded relationship education programs from 2000 to 2020 has exceeded \$1 billion (Hawkins 2013; Heath 2012; Randles 2017). While these programs focus on improving interpersonal skills in relationships such as communication, conflict-resolution, and attitudes, the overarching goals of these initiatives were poverty reduction and improved outcomes for children through two-parent families (Cherlin 2009). Therefore, it is important to understand the interrelatedness of relationship satisfaction and factors that contribute to poverty and negative outcomes for children within the context of a relationship.

As an example, individuals with low socioeconomic status experience greater relationship discord and distress, which is largely attributed to financial hardship and exposure to adversity (Conger et al., 2010; Hardie & Lucas, 2010; Lorant et al., 2003; Trail & Karney, 2012). Racial and ethnic differences are also important to examine, as cultural differences offer context for understanding factors impacting individuals' relationship satisfaction (Dillaway and Broman, 2001; Wilson, 1987). However, minorities in low socioeconomic classes are historically underrepresented in research (e.g., Tennen et al., 1995; Unger et al., 2013). This leads to broad generalizations from studies conducted with limited representation, and undermines the unique relational challenges experienced by African Americans and Hispanics.

This chapter includes an exploration of the findings presented in Chapter Four and discussions of the implications of this study for future research, legislation, and clinical social work practice. Recommendations regarding healthy marriage and relationship education

programs are also presented, along with findings related to the influence of financial stability and depressive symptomatology on relationship satisfaction.

Summary of Findings

This dissertation study was designed to answer three research questions regarding a HMRE program, relationship satisfaction, financial stability and depressive symptomatology. Among a series of logistic regressions, no statistically significant findings emerged. Moderation was also tested for each of the three research questions by adding an interaction term. However, neither beginning relationship satisfaction, financial stability, or depressive symptomatology moderated the relationship between the independent and dependent variables. Data issues led to several limitations related to measurement and limited variability, which likely influenced these results. Furthermore, there are a myriad of factors that contribute to how satisfied an individual is in his or her relationship, many of which were beyond the scope of subjects' beginning relationship satisfaction level, financial stability, or depressive symptoms. As an example, personality, temperament, and number of children may also contribute to relationship quality; however, these factors were not measured in the study.

The Impact of Healthy Marriage and Relationship Education (HMRE) Programs on Relationship Satisfaction

The first research question explored whether participation in a healthy marriage and relationship education program would improve relationship satisfaction among low-income African Americans and Hispanics. Prior to answering this research question, bivariate analyses were performed to assess baseline equivalence of gender, race/ethnicity and relationship satisfaction between the control and treatment groups. There were no statistically significant differences between the groups on measures of gender, race/ethnicity, and relationship

satisfaction. While gender, race, and ethnicity are not the central theme of this study, lack of significant findings does align with some prior research that suggests these are not predictive of how satisfied an individual is in his or her relationship. Instead, the literature has posited that relationship satisfaction is correlated with the number of negative interactions in comparison to positive interactions experienced (Resand, Slinning, Reysamb, & Tamb, 2014).

Results of the first set of logistic regression analyses suggest that participation in this program, did not contribute to improvements in relationship satisfaction. These findings were not supportive of the proposed hypothesis, which stated that treatment group participants would experience greater increases in relationship satisfaction from pre-test to 12 months post participation than their control group counterparts. Exploring “why” the results produced from this study were not statistically significant can provide insight into future research on relationship satisfaction, the populations served, and other limitations that may have influenced the results. As an example, relationship satisfaction was measured with a single item, on which participants only selected two of the three response options: “somewhat satisfied” and “very satisfied” on their survey response. This creates range restriction and limits variability. Additionally, this limits a more comprehensive understanding of what it means for participants to be satisfied in a relationship. Furthermore, it is curious that no one in the sample reported “not satisfied” to this query, which warrants further exploration. There are several possible explanations that should be considered when exploring the influence of social desirability on participant answer choices. For instance, if individuals believe their survey answers will be revealed to their partner, fear of backlash may lead to an individual adjusting how they respond. The same is true for individuals who question the intent of how their survey answers will be used. The surveys were completed on an electronic tablet provided by the funding government

agency. As a result, fear of selecting undesirable answers may be an issue for individuals who have concerns about government entities and the usage of their personal data. Additionally, 30% of individuals selected “very satisfied” at pre-test. Therefore, improvements in relationship satisfaction among these 84 individuals could not be detected because there was no more room for growth/improvement based on the measure.

Financial Stability and Its Impact on Relationship Satisfaction

The second set of logistic regressions assessed whether initial financial stability impacted improvement in relationship satisfaction among group participants. The hypotheses stated that financial stability would moderate growth from pre-test to post-test, six months, and 12 months among program participants. These hypotheses were based on prior literature that has found marital problems are frequently rooted in financial concerns (e.g., Kerkmann, Lee, Lown, & Allgood, 2000). Longitudinal studies that have also examined this topic noted that financial pressures can predict poorer relationship outcomes (e.g., Masarik et al., 2016; Plagnol, 2011). However, results from this study did not yield a statistically significant impact on how satisfied individuals were in their relationship at different time points (posttest, six months, 1-year), when controlling for relationship satisfaction at pre-test.

When exploring the relationship between financial stability and relationship satisfaction, there are multiple possible explanations that help us understand this result (i.e., measurement and response bias). It is important to note the discrepancy between participant’s reported income, and their response to the question on difficulty paying bills. In this study, 75% of individuals reported that they either “never” or “once in a while” had difficulty paying their bills. Conversely, 76% of individuals were unemployed and 64% earned less than \$500 a month. This

raises the possibility of individuals underreporting their monthly income. One plausible explanation is that this was done out of fear of disqualifying themselves for future benefits. Although issues of confidentiality were discussed, many still had questions about how their information would be used, and who would be able to access it. Additionally, this study was predominately comprised of Hispanics (84%). The political climate at this time was viewed as anti-immigration by many in the Hispanic community. As a result, there was heightened fear and sensitivity around reporting information for the purposes of a government funded grant. Lastly, although it is mostly considered a negative, having a lower income can lead to greater resourcefulness and improve an individual's ability to navigate available community resources. This can allow an individual to discover and leverage existing resources in a way that helps them overcome potential barriers.

Depressive Symptomatology and Its Impact on Relationship Satisfaction

The third set of logistic regression analyses assessed whether depressive symptomatology impacted growth in relationship satisfaction among treatment participants. It was hypothesized that depressive symptomatology would moderate growth from pre-test to post-test, six months, and 12 months. These connections were hypothesized in the context of prior research in the literature, which has correlated depressive symptoms with lower relationship satisfaction (Pei-Fen Li & Johnson, 2018). There are several explanations that help us better understand this relationship. As an example, depressed individuals often perceive themselves as unlikeable or view their spouse as unsupportive (Baucom, Whisman & Paprocki, 2012). Consequently, the relationship is negatively impacted through a transference of depressed feelings, often referred to as partner affect (Pei-Fen Li & Johnson, 2018). It is impossible to separate the social and emotional aspect of how one feels internally, and how they interact with their partner. Research

supports this belief and asserts that when one person is depressed in the relationship, the couple has less constructive communication (Byrne, Carr & Clark, 2004). This breakdown in communication can ignite an onslaught of other issues that may damage the quality of the relationship, including their ability to problem solve. When couples have greater levels of depression, there is higher use of avoidance, and an attacking style of conflict resolution (Marchand & Hock, 2000).

Despite the prevalence of literature, which has associated symptoms of depression with lower levels of relationship satisfaction, the findings in this study were not significant, as most participants reported low levels of depressive symptoms. When exploring these results, it is important to understand the relationship that has existed with mental health in low-income, African American and Hispanic communities. Historically, depression has had a negative stigma. This has affected beliefs about mental health and can influence the identification of symptoms. Consequently, it is plausible that both groups underreported the degree of their own depressive symptoms. Furthermore, self-reporting has multiple limitations that can restrict the accuracy of responses. For example, there is always a possibility that individuals are not completely forthcoming in their responses, and/or they may have limited introspective ability. Secondly, individuals may derive different meanings or misunderstanding when interpreting questions from a survey. Another important limitation in this study was the items used to measure depression. This measure for depression was not derived from a pre-existing, validated scale. Instead, symptoms of depression statements were used assess for depression, which were developed based on prior grants and feedback from participants. This limits the ability to accurately measure overall depression and individual scores.

Another consideration could be protective factors. Despite environmental stressors and many social disadvantages, ethnic identity (Herd & Grube, 1996; Mossakowski, 2003) and religious participation (Wallace & Forman, 1998; Varon & Riley, 1999; Ellison et al. 2001; Lee & Newberg, 2005) are safeguards that buffer the impact of mental health concerns; the data used in the present study did not include measures for these variables.

Policy and Practice Implications

Although the statistical analyses yielded insignificant results, there are still implications for practice and policy to consider for future efforts to improve relationship satisfaction among low-income, African American and Hispanic populations. For this study, there are three policy and practice implications that could be considered related to the following: 1) Healthy Marriage and Relationship Education Programs; 2) Financial Stability and Relationship Satisfaction; and 3) Depressive Symptomatology and Relationship Satisfaction.

Policy Implications of Healthy Marriage and Relationship Education Programs

Although this study did not produce statistically significant findings regarding relationship satisfaction when comparing treatment and control group participants, evidence from prior studies suggest a strong need for these programs and highlight value among marginalized populations. The goals of government funded healthy marriage and relationship education programs have been to improve relationship satisfaction and the outcomes of children who are impacted by these relationships. From a policy perspective, greater emphasis should be placed on male recruitment and program delivery. Most participants in this study were female (85%), which invariably, limits our understanding of male involvement in Healthy Marriage and Relationship Education Programs. As a result, this could provide a different perspective and strengthen our understanding of factors that may contribute to relationship satisfaction among

males. Secondly, policy makers should consider additional efforts to improve participants sense of safety. When individuals feel safe, there is an increased likelihood of improved reporting accuracy.

Social Work Practice Implications of Healthy Marriage and Relationship Education Programs

African Americans and Hispanics are not homogenous groups of people; therefore, their unique differences should be accounted for when developing interventions aimed at improving relationship satisfaction. When consideration for cultural and ethnic diversity is taken into account, this personifies a core value in Social Work, which is dignity and a person's worth. Regarding the clinical implications of this program, emphasis should be placed on who and how these programs are being administered. Participants knew they were volunteering for a relationship strengthening program. However, they did not know what would be included in the program. Moreover, they may have wanted to convey that their relationships were healthier than they were or may genuinely have believed they were in healthy relationships despite their challenges. In social work practice, the difference between these two responses, "somewhat satisfied" and "very satisfied" can vary drastically, but in research, this poses limited variability and thus, limits our understanding of how HMRE programs impact relationship satisfaction in this study.

Policy Implications on Financial Stability and Relationship Satisfaction

Financial stability has been considered a major contributor to relationship satisfaction in previous research (Britt & Huston, 2012). Although more money doesn't equate to more happiness, it does influence one's ability to meet their basic needs. Additionally, individuals with

lower income may also be more prone to live in communities where they are exposed to certain environmental stressors (Jackson et al., 2017). In this study, there was not a statistically significant relationship between financial stability and levels of satisfaction in a relationship. Consequently, the study findings contradict those in prior research literature. However, with closer examination of some observations, this study still offers possible implications for policy makers. For example, one implication is for policymakers to develop a more comprehensive understanding of what it means to have a low income and one's ability to meet their basic needs via measurement. Most participants in this study reported a monthly income less than \$500 (64%), yet the majority of participants (53%) reported that they only had difficulty paying their bills "once in a while." If policy makers assume that an individual with low income is unable to meet their basic needs, this can influence what programs they allocate funding to, and how they prioritize support for different organizations, specifically those focused on improving relationship satisfaction. Additionally, participants in this program may have greater reluctance when it comes to reporting their income because of need-based services that are government funded and that have eligibility requirements based on income. Furthermore, people with low-income levels may have learned, with practice and much sacrifice, to live within their means. As such, income level alone may not explain difficulty paying bills.

Social Work Practice Implications for Financial Stability and Relationship Satisfaction

In social work practice, observations from this study can be used to inform expansion of conversation on how and if money really impacts relationship satisfaction. If challenges in relationships are misdiagnosed as "money problems," the likelihood of addressing core issues is limited. When this occurs, unhealthy relationship patterns may continue, relationship

dissolutions increase, and the negative impact on children may persist across generations. Money is frequently touted as one of the most important factors in a relationship. Based on trends observed in this study's data, questions arise about the meaning of, and value African Americans and Hispanics may hold about money in terms of the relationship between low income and difficulty paying bills. However, it is important to highlight that there was not an equitable balance between males and females in this study. Considering the sample was comprised of individuals who reported that they were in a relationship, we must consider the fact that their partner could be contributing financially to the bills. Consequently, this would buffer the degree of difficulty they experience, as an individual, in paying their bills.

Policy Implications for Depressive Symptomatology and Relationship Satisfaction

The World Health Organization (2020) reports that depression affects over 264 million people globally. The magnitude of this mental health disorder has brought mental health to the forefront of public policy and has become a heavily researched topic. In this study, results showed that the average depression score for participants (11.6) was below average (15) meaning that they did not have a high number of depressive symptoms. While the results from analyses were not statistically significant, symptoms of depression had a higher impact on relationship satisfaction than financial stability. Therefore, policy makers should also consider opportunities to improve mental health as a viable means to enhance relationship satisfaction. This suggests that depression could play a factor in how satisfied an individual is in his or her relationship; however, further research is needed to explore this possibility.

Practice Implications for Depressive Symptomatology and Relationship Satisfaction

From a clinical perspective, practitioners should always evaluate the individual, as well as the individual in the context of their relationship. If a person is not satisfied in their relationship, they should consider their personal emotional well-being outside of the relationship. Although results for depressive symptomatology were not statistically significant in this study, in comparison to financial stability, depression had more of an impact on relationship satisfaction. The questions related to depressive symptomatology were not taken from an empirically validated tool; instead, questions were used from a series of several different tools and resources. However, more consideration should still be explored in efforts to combating depression, particularly, as a means of improving relationship satisfaction. When investments are made to decrease the number of depressive symptoms an individual experiences, the quality of a relationship may improve as well.

Implications for Future Research

This study was characterized by some limitations that can be used to guide and improve future research about HMRE programs and relationship satisfaction, specifically in low-income, African American and Hispanic populations. As an example, enhancements to the measure of relationship satisfaction and depression would improve our understanding of what contributes to a satisfying relationship. This study utilized a single measure to assess relationship satisfaction, which ultimately limited variability and excluded other aspects known to contribute to a successful relationship (i.e., communication, conflict resolution, personality, temperament). Therefore, by including additional items or by increasing the range of scores, a more comprehensive understanding is developed. Furthermore, it is important consider cultural influences and environmental factors, as many previous measures were validated among predominately White, middle-class populations. Utilizing a validated scale for measures of

depression and financial stability that are also culturally normed, may have improved this study's results and allowed for some statistically significant findings. The limitations presented in this study raise questions about the validity of the results; therefore, the corresponding implications must be considered with caution and scrutiny. Another recommendation for future research involves the use of secondary data versus primary data collection. While there are many benefits to secondary data collection, primary data collection allows researchers to develop the study based on the original goals. This increases the likelihood that the study could answer the intended research questions with greater accuracy. Lastly, relationship status could have changed from one time point to another, which was not accounted for in this study.

Summary and Conclusion

This study was developed to assess whether a federally funded, healthy marriage and relationship education program would influence relationship satisfaction in low-income, African American and Hispanic populations. Prior research has been conducted on the effectiveness of such programs, but were done primarily with White, middle-class individuals. This raised questions on the effectiveness of these programs in marginalized communities. African Americans and Hispanics are the two largest minority groups and have experienced differential and disparate outcomes when compared to their White counterparts on key relational measures like marriage/divorce rates, age of first marriage, cohabitation, and children born outside of marriage. These problems are foundational to the purpose of this study. Additionally, financial stability and depressive symptomatology were also evaluated to assess their impact on relationship satisfaction. Financial stability and depression are frequently correlated with relationship satisfaction, but research is limited on the extent in which they influence relationship

satisfaction in African American and Hispanic populations – particularly, following participation in a program designed to improve relationship satisfaction.

Despite prior research which has shown modest improvement in relationship satisfaction, this study did not produce any significant findings. There were several limitations noted in this study, which may have influenced these findings. However, compared to prior research, inconclusive evidence from this study highlights the need for future research. Overall, findings in this study indicate the interest in and potential for 1) healthy marriage and relationship education programs in African American and Hispanic communities in terms of participation, and the need for more consistent, positive results to determine true effectiveness; 2) the need of a more comprehensive understanding of financial stability within low-income populations; and 3) the importance of using reliable and valid tools to assess for mental health, especially when working with groups that historically associate stigma with depression.

References

- Abramovitz, M. (2006). Welfare reform in the United States: Gender, race and class matter. *Critical Social Policy*, 26(2), 336–364. <https://doi.org/10.1177/0261018306062589>
- Abu-Bader, S. H. (2011). *Using statistical methods in social science research: with a complete SPSS guide*. Lyceum Books.
- Administration for Children and Families. (2011). *Pathways to responsible fatherhood OLDC report questions*.
<http://www.reginfo.gov/public/do/DownloadDocument?objectID=32763201>.
- Addams, J. (1910). *Twenty Years at Hull House*. MacMillan.
- Adler, N. E., & Rehkopf, D. H. (2008). U. S. disparities in health: Descriptions, causes, and mechanisms. *Annual Review of Public Health* 29, 235e252.
<https://doi.org/10.1146/annurev.publhealth.29.020907.090852>
- Allen, W., & Wood, G. (2006). Defining and achieving financial stability. *Journal of Financial Stability*, 2(2), 152–172. <https://doi.org/10.1016/j.jfs.2005.10.001>
- Allred, C.A., & Schweizer, V. J. (2020). *FP-20-02 first divorce rate in the U.S., 2018*. National Center for Family & Marriage Research Family Profiles, no. 2.
<https://doi.org/10.25035/ncfmr/fp-20-02>
- Al-Omari, H., & Pallikkathayil, L. (2008). Psychological acculturation: A concept analysis with implications for nursing practice. *Journal of Transcultural Nursing*, 19(2), 126-133.
<https://doi.org/10.1177/1043659607313072>
- Amato, P., & Rogers, S. (1997). A longitudinal study of marital problems and subsequent divorce. *Journal of Marriage and Family*, 59(3), 612-624. <https://doi.org/10.2307/353949>

- Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage & Family* 72(3), 650–666. <https://doi.org/10.1111/j.1741-3737.2010.00723.x>
- Amato, P. R., & Maynard, R. A. (2007). Decreasing nonmarital births and strengthening marriage to reduce poverty. *The Future of Children*, 17(2), 117–141. <https://doi-org.ezproxy.lib.uh.edu/10.1353/foc.2007.0012>
- Aniol, J., & Snyder, D. (1997). Differential assessment of financial and relationship distress: Implications for couple's therapy. *Journal of Marital & Family Therapy*, 23(3), 347-352. <https://doi.org/10.1111/j.1752-0606.1997.tb01042.x>
- Anyon, Y., Lechuga, C., Ortega, D., Downing, B., Greer, E., & Simmons, J. (2017). An exploration of the relationships between student racial background and the school sub-contexts of office discipline referrals: A critical race theory analysis. *Race Ethnicity and Education*, 21(3), 390-406. <https://doi.org/10.1080/13613324.2017.1328594>
- Archuleta, K. L. (2013). Couples, money, and expectations: Negotiating financial management roles to increase relationship satisfaction. *Marriage & Family Review*, 49(5), 391-411. <https://doi.org/10.1080/01494929.2013.766296>
- Archuleta, K. L., Britt, S. L., Tonn, T. J., & Grable, J. E. (2011). Financial satisfaction and financial stressors in marital satisfaction. *Psychological Reports*, 108(2), 563–576. <https://doi-org.ezproxy.lib.uh.edu/10.2466/07.21.PR0.108.2.563-576>.
- Arriaga, X. B. (2001). The ups and downs of dating: Fluctuations in satisfaction in newly formed romantic relationships. *Journal of Personality and Social Psychology*. 80(5), 754–765. <https://doi.org/10.1037/0022-3514.80.5.754>
- Asante-Muhammed, D., Collins, C., Hoxie, J., & Nieves, E. (2016). *The ever-growing gap: Without change, African American and Latino families won't match White wealth for*

- centuries. CFED and Institute for Policy Studies. https://ips-dc.org/wp-content/uploads/2016/08/The-Ever-Growing-Gap-CFED_IPS-Final-1.pdf
- Balestrino A., & Ciardi, C. (2008). Social norms, cognitive dissonance and the timing of marriage. *Journal of SocioEconomics*, 37, 2399–2410.
<https://doi.org/10.1016/J.SOCEC.2008.05.002>
- Barreto, M., Ellemers, N., Scholten, W., & Smith, H. (2010). To be or not to be: the impact of implicit versus explicit inappropriate social categorizations on the self. *British Journal of Social Psychology*, 49, 43–67. <https://doi.org/10.1348/014466608X400830>
- Baucom, D. H., Whisman, M. A. and Paprocki, C. (2012) Couple-based interventions for psychotherapy. *Journal of Family Therapy*, 34: 250–270. doi: 10.1111/j.1467-6427.2012.00600.x.
- Bauer A. M., Chen, C.-N., & Alegria, M. (2010). English language proficiency and mental health service use among Latino and Asian Americans with mental disorders. *Medical Care*, 48(12), 1097–1104. <https://doi.org/10.1097/mlr.0b013e3181f80749>
- Beach, S. R. H., Katz, J., Kim, S., & Brody, G. H. (2003). Prospective effects of marital satisfaction on depressive symptoms in established marriages: A dyadic model. *Journal of Social and Personal Relationships*, 20(3), 355–371.
<https://doi.org/10.1177/0265407503020003005>
- Beach, S. R. H., & O’Leary, K. D. (1993). Marital discord and dysphoria: For whom does the marital relationship predict depressive symptomatology? *Journal of Social and Personal Relationships*, 10(3), 405–420. <https://doi.org/10.1177/0265407593103007>
- Beach S. R. H., Sandeen, E. E., & O’Leary K. D. (1990). *Depression in marriage: A model for etiology and treatment*. Guilford Press, 1990.

- Bespinar, F. U. (2010). Questioning agency and empowerment: Women's work-related strategies and social class in urban Turkey. *Women's Studies International Forum*, 33(6), 523–532. <https://doi.org/10.1016/j.wsif.2010.09.003>
- Bhutta, Neil, Andrew C. Chang, Lisa J. Dettling, and Joanne W. Hsu (2020). "Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, September 28, 2020, <https://doi.org/10.17016/2380-7172.2797>.
- Billari, F., & Liefbroer, A. (2010). Towards a new pattern of transition to adulthood? *Advances in Life Course Research*, 15(2-3), 59-75. <https://doi.org/10.1016/j.alcr.2010.10.003>
- Blackman, L., Clayton, O., Glenn, N., Malone-Colon, L., & Roberts, A. (2005). *The consequences of marriage for African Americans: A comprehensive literature review*. Institute for American Values.
- Boushey, H., & Gundersen, B. (2001, 1 June). *When work just isn't enough: Measuring hardships faced by families after moving from welfare to work*. Economic Policy Institute. https://www.epi.org/publication/briefingpapers_hardships/
- Bowlby, J. (1969). *Attachment and loss: Attachment* (Vol. 1): Basic Books.
- Boyd, H. (2007). It's hard out here for a Black man! *The Black Scholar*, 37(3), 2-9. <https://doi.org/10.1080/00064246.2007.11413403>
- Bradford, A. B., Hawkins, A. J., & Acker, J. (2015). If we build it, they will come: Exploring policy and practice implications of public support for couple and relationship education for lower income and relationally distressed couples. *Family Process*, 54, 639–654. <https://doi.org/10.1111/famp.12151>
- Braithwaite, S., Delevi, R., & Fincham, F. (2010). Romantic relationships and the physical and mental health of college students. *Personal Relationships*, 17(1), 1–12. <https://doi.org/10.1111/j.1475-6811.2010.01248.x>

- Britt, S. L., & Huston, S. J. (2012). The role of money arguments in marriage. *Journal of Family and Economic Issues*, 33(4), 464-476. <https://doi.org/10.1007/s10834-012-9304-5>
- Brotherson, S. E., & Duncan, D. C. (2004). Rebinding the ties that bind: Government efforts to preserve and promote marriage. *Family Relations*, 53(5), 459-468. <https://doi.org/10.1111/j.0197-6664.2004.00054.x>
- Brown, E. R., Ojeda, V. D., Wyn, R., & Levan, R. (2000). *Racial and ethnic disparities in access to health insurance and health care*. Kaiser Family Foundation. <https://www.kff.org/wp-content/uploads/2013/01/racial-and-ethnic-disparities-in-access-to-health-insurance-and-health-care-report.pdf>
- Bumpass L., & Lu. H.-H. (2000). Trends in cohabitation and implications for children's family contexts in the United States. *Population Studies*, 54(1), 29-41. <https://doi.org/10.1080/713779060>
- Cabassa, L. J., Zayas, L. H., & Hansen, M. C. (2006). Latino adults' access to mental health care: A review of epidemiological studies. *Administration and Policy in Mental Health and Mental Health Services Research*, 33(3), 316-330. <https://doi.org/10.1007/s10488-006-0040-8>
- Caraley, D. J. (2001). Ending welfare as we know it: A reform still in progress. *Political Science Quarterly*, 116(4), 525-545. <https://doi.org/10.2307/798220>
- Carlson, R. G., Wheeler, N. J., & Adams, J. (2018). The influence of individual-oriented relationship education on equality and conflict-related behaviors. *Journal of Counseling & Development*, 96, 144-154. <https://doi.org/10.1002/jcad.12188>
- Case, A., & Deaton, A. (2015). Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of*

- Sciences of the United States of America [112\(49\), 15078-15083](#).
<https://doi.org/10.1073/pnas.1518393112>
- Chambers, A. L., & Kravitz, A. (2011). Understanding the disproportionately low marriage rate among African Americans: An amalgam of sociological and psychological constraints. *Family Relations*, *60*(5), 648–660. <https://doi.org/10.1111/j.1741-3729.2011.00673.x>
- Chang, J., Natsuaki, M. N., & Chen, C. N. (2013). The importance of family factors and generation status: Mental health service use among Latino and Asian Americans. *Cultural Diversity and Ethnic Minority Psychology*, *19*(3), 236-247.
<https://doi.org/10.1037/a0032901>
- Charles, P., Orthner, D. K., Jones, A., & Mancini, D. (2006). Poverty and couple relationships: Implications for welfare policy. *Marriage and Family Review*, *39*(1), 27–52.
https://doi.org/10.1300/J002v39n01_03
- Chavkin, W., Romero, D., & Wise, P. H. (2000). State welfare reform policies and declines in health insurance. *American Journal of Public Health*, *90*(6), 900-908.
<https://doi.org/10.2105/AJPH.90.6.900>
- Cherlin, A. J. (2005). American marriage in the early twenty-first century. *The Future of Children*, *15*(2), 33-55.
- Cherlin, A. J. (2009). *The marriage-go-round: The state of marriage and the family in America today*. Alfred A. Knopf.
- Child Trends. (2003a). *Conceptualizing and measuring “healthy marriages” for empirical research and evaluation studies: A compendium of measures—Part I*.

<https://www.childtrends.org/wp-content/uploads/2013/09/Healthy-Marriages-Part-One-FINAL.pdf>

Child Trends Databank. Births to Unmarried Women: Indicators on Children and Youth. *Technical report* 2015

Choi, H., & Marks, N. F. (2008). Marital conflict, depressive symptoms, and functional impairment. *Journal of Marriage and Family*, 70(2), 377–390.
<https://doi.org/10.1111/j.1741-3737.2008.00488.x>

Christens, B. D. (2012). Toward relational empowerment. *American Journal of Community Psychology*, 50(1-2), 114–128. <https://doi.org/10.1007/s10464-011-9483-5>

Christens, B. D., Peterson, N. A., & Speer, P. W. (2011a). Community participation and psychological empowerment: Testing reciprocal causality using a cross-lagged panel design and latent constructs. *Health Education & Behavior*, 38(4), 339–347.
<https://doi.org/10.1177/1090198110372880>

Christens, B. D., Speer, P. W., & Peterson, N. A. (2011b). Social class as moderator of the relationship between (dis)empowering processes and psychological empowerment. *Journal of Community Psychology*, 39(2), 170–182. <https://doi.org/10.1002/jcop.20425>

Coan JA, Allen JJB, McKnight PE. A capability model of individual differences in frontal EEG asymmetry. *Biological Psychology*. 2006;72(2):198–207. doi:10.1016/j.biopsycho.2005.10.003.

- Cochrane, M. (1992). Parent empowerment. Developing a conceptual framework. *Family Science Review*, 5, 81-92.
- Cohen, P. M. (1985). Family measurement techniques. *American Journal of Family Therapy*, 13(4), 66–70.
- Cohn, D., Passel, J. S., Wang, W., & Livingston, G. (2011, 14 December). *Barely half of U.S. adults are married--a record low*. Pew Research Center.
<https://www.pewresearch.org/social-trends/2011/12/14/barely-half-of-u-s-adults-are-married-a-record-low/>
- Coleman, M., Ganong, L., & Fine, M. (2000). Reinvestigating remarriage: Another decade of progress. *Journal of Marriage and Family*, 62(4), 1288-1307.
<https://doi.org/10.1111/j.1741-3737.2000.01288.x>
- Conger, R.D., Conger, K.J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*, 72(3), 685–704.
<https://doi.org/10.1111/j.1741-3737.2010.00725.x>
- Conger, R. D., Rueter, M. A., & Elder, G. J. (1999). Couple resilience to economic pressure. *Journal of Personality and Social Psychology*, 76(1), 54–71.
<https://doi.org/10.1037/0022-3514.76.1.54>
- Cooper LA, Gonzales JJ, Gallo JJ, Rost KM, Meredith LS, Rubenstein LV, Ford DE. The acceptability of treatment for depression among African American, Hispanic, and white primary care patients. *Medical Care*. 2003;41(4):479–489.
- Davila, J., Karney, B. R., Hall, T. W., & Bradbury, T. N. (2003). Depressive symptoms and marital satisfaction: Within-subject associations and the moderating effects of gender and

- neuroticism. *Journal of Family Psychology*, 17(4), 537–570.
<https://doi.org/10.1037/0893-3200.17.4.557>
- DeCarlo Santiago, C., Wadsworth, M. E., & Stump, J. (2011). Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of Economic Psychology*, 32(2), 218–230. <https://doi.org/10.1016/j.joep.2009.10.008>
- DeNavas-Walt, C., Proctor, B., & Smith, J. (2013). *Income, poverty, and health insurance coverage in the United States: 2012*. U.S. Census Bureau.
- deVaus, D., Gray, M., Qu, L., & Stanton, D. (2014). The economic consequences of divorce in Australia. *International Journal of Law, Policy and the Family*, 28(1), 26–47.
<https://doi.org/10.1093/lawfam/ebt014>.
- Dew, J. (2008). Debt change and marital satisfaction change in recently married couples. *Family Relations: Interdisciplinary Journal of Applied Family Studies*, 57(1), 60–71.
<https://doi.org/10.1111/j.1741-3729.2007.00483.x>
- Dew, J. (2009). The gendered meanings of assets for divorce. *Journal of Family and Economic Issues*, 30(1), 20–31. <https://doi.org/10.1007/s10834-008-9138-3>
- Dew, J. (2011). The association between consumer debt and the likelihood of divorce. *Journal of Family and Economic Issues*, 32(4), 554–565. <https://doi.org/10.1007/s10834-011-9274-z>
- Dew, J., Britt, S., & Huston, S. (2012). Examining the relationship between financial issues and divorce. *Family Relations*, 61(4), 615–628. <https://doi.org/10.1111/j.1741-3729.2012.00715.x>.
- Dillaway, H. and Broman, C. (2001) Race, class, and gender differences in marital satisfaction

- and divisions of household labor among dual-earner couples: a case for intersectional analysis. *Journal of Family Issues*, 22: 309–327.
- Dion, M. R. (2005). Healthy marriage programs: Learning what works. *The Future of Children*, 15(2), 139–156. <https://doi.org/10.1353/foc.2005.0016>
- Dixon, P. (2009.) Marriage among African Americans: What does the research reveal? *Journal of African American Studies*, 13, 29–46. <https://doi.org/10.1007/s12111-008-9062-5>
- Dunst, C. J., Trivette, C. M., & Deal, A. G. (Eds.). (1994). *Supporting & strengthening families: Methods, strategies, and practices*. Brookline.
- Ellwood, D. T., & Jenks, C. (2004). The uneven spread of single-parent families: What do we know? Where do we look for answers? In K. Neckerman (Ed.), *Social Inequality* (pp. 3-77). Russell Sage.
- Fay, B. (1987). *Critical social science: Liberation and its limits*. Cornell University Press.
- Fincham, F. D., & Bradbury, T. N. (1987). The assessment of marital quality: A reevaluation. *Journal of Marriage and Family*;49(4), 797–809. <https://doi.org/10.2307/351973>
- Fondacaro, M. R., & Weinberg, D. (2002). Concepts of social justice in community psychology: Toward a social ecological epistemology. *American Journal of Community Psychology*, 30(4), 473–492. <https://doi.org/10.1023/A:1015803817117>
- Fortuna, L., Alegria, M., & Gao, S. (2010). Retention in depression treatment among ethnic and racial minority groups in the United States. *Depression and Anxiety*, 27(5), 485–494. <https://doi.org/10.1002/da.20685>

- Freire, P. (1970). The adult literacy process as cultural action for freedom, *Harvard Educational Review*, 40(2), 205-225. <https://doi.org/10.17763/haer.40.2.q7n227021n148p26>
- Freire, P. (1973). *Education for a critical consciousness*. Seabury Press.
- Gadalla, T. M. (2008). Gender differences in poverty rates after marital dissolution: A longitudinal study. *Journal of Divorce and Remarriage*, 49(3-4), 225–238.
<https://doi.org/10.1080/10502550802222493>
- Ganong, L., Coleman, M., & Hans, J. (2006). Divorce as Prelude to Stepfamily Living and the Consequences of Redivorce. In M. A. Fine & J. H. Harvey (Eds.), *Handbook of divorce and relationship dissolution* (pp. 409–434). Lawrence Erlbaum Associates Publishers.
- Ganong, L., Coleman, M., & Chapman, A. (2016). Gatekeeping after separation and divorce. In L. Drozd, M. Saini, & N. Oleson (Eds.), *Parenting plan evaluations: Applied research for the family court* (2nd Ed.), (pp. 308-345). Oxford, UK: Oxford University Press.
- Gibson-Davis, G. (2018). “His” and “hers”: Meeting the economic bar to marriage. *Demography*, 55(6), 2321–2343. <https://doi.org/10.1007/s13524-018-0726-z>
- González, H. M., Tarraf, W., Whitfield, K. E., & Vega, W. A. (2010). The epidemiology of major depression and ethnicity in the United States. *Journal of Psychiatric Research*, 44(15):1043–51. <https://doi.org/10.1016/j.jpsychires.2010.03.017>
- Goodman, W. B., O'Donnell, K., Murphy, R. A., & Dodge, K. A. (2019). Moving beyond program to population impact: Toward a universal early childhood system of care. *Journal of Family Theory & Review* 11(1), 112–26. <https://doi.org/10.1111/jftr.12302>
- Gordon, L. (1994). *Pitied but not entitled: Single mothers and the history of welfare*. Free Press.

- Gottman, J. M. (1999). *The marriage clinic: A scientifically based marital therapy*. W. W. Norton & Company.
- Grabe, S. (2012). An empirical examination of women's empowerment and transformative change in the context of international development. *American Journal of Community Psychology*, 49(1-2), 233–245. <http://doi.org/10.1007/s10464-011-9453-y>
- Grable, J. E., Britt, S., & Cantrell, J. (2007). An exploratory study of the role financial satisfaction has on the thought of subsequent divorce. *Family and Consumer Sciences Research Journal*, 36(2), 130-150. <https://doi.org/10.1177/1077727X07309284>
- Graham, J. M., Diebels, K. J., & Barnow, Z. B. (2011). The reliability of relationship satisfaction: A reliability generalization meta-analysis. *Journal of Family Psychology*, 25(1), 39-48. <https://doi.org/10.1037/a0022441>
- Graham, J. M., Liu, Y. J., & Jeziorski, J. L. (2006). The dyadic adjustment scale: A reliability generalization meta-analysis. *Journal of Marriage and Family*, 68(3), 701–717. <https://doi.org/10.1111/j.1741-3737.2006.00284.x>
- Gresenz, C., Sturm, R., & Tang, L. (2001). Income and mental health: Unraveling community and individual level relationships. *Journal of Mental Health Policy and Economics*, 4(4), 197–203.
- Grover, S., & Helliwell, J.F. (2019). How's life at home? New evidence on marriage and the set point for happiness. *Journal of Happiness Studies* 20, 373–390. <https://doi.org/10.1007/s10902-017-9941-3>
- Gudmunson, C. G., Beutler, I. F., Israelsen, C. L., McCoy, J. K., & Hill, E. J. (2007). Linking financial strain to marital instability: Examining the roles of emotional distress and

- marital interaction. *Journal of Family and Economic Issues*, 28(3), 357–376.
<https://doi.org/10.1007/s10834-007-9074-7>
- Gustavson, K., Roysamb, E., Soest, T., Helland, M. J., Karevold, E., & Mathiesen, K. S. (2012). Reciprocal longitudinal associations between depressive symptoms and romantic partners' synchronized view of relationship quality. *Journal of Social and Personal Relationships*, 29(6), 776–794. <http://doi.org/10.1177/0265407512448264>
- Gutierrez, L. M. (1990) Working with women of color: An empowerment perspective. *Social Work*, 35(2), 1499–1553. <https://doi.org/10.1093/sw/35.2.149>
- Gutierrez, E., & Lewis, E. (1999). *Empowering women of color*. Columbia University Press.
- Hardie, J. H., & Lucas, A. (2010). Economic factors and relationship quality among young couples: Comparing cohabitation and marriage. *Journal of Marriage and the Family*, 72, 1141–1154. <https://doi.org/10.1111/j.1741-3737.2010.00755.x>.
- Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: A meta-analysis. *American Journal Epidemiology*, 157, 98–112. <https://doi.org/10.1093/aje/kwf182>.
- Lundquist, E., Hsueh, J., Lowenstein, A., Faucetta, K., Gubits, D., Michalopoulos, C., & Knox, V. (2014). *A family-strengthening program for low-income families: Final impacts from the supporting healthy marriage evaluation*. U. S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation.
https://www.mdrc.org/sites/default/files/shm2013_30_month_impact_reportrev2.pdf
- Halford, W., Sanders, M.R., & Behrens, B. C. (2001). Can skills training prevent relationship problems in at-risk couples? Four-year effects of a behavioral relationship education

- program. *Journal of Family Psychology*, 15(4), 750–768. <https://doi.org/10.1037/0893-3200.15.4.750>
- Halford, W. K., Markman, H. J., & Stanley, S. (2008). Strengthening couples' relationships with education: Social policy and public health perspectives. *Journal of Family Psychology*, 22(4)497–505. <https://doi.org/10.1037/a0012789>
- Hawkins, A. (2019). *Are federally supported relationship education programs for lower-income individuals and couples working? A review of evaluation research*. American Enterprise Institute.
- Hawkins, Alan J. 2013. *The forever initiative: A feasible public policy agenda to help couples form and sustain healthy marriages and relationships*. North Charleston: CreateSpace.
- Hawkins, A. J., Blanchard, V. L., Baldwin, S. A., & Fawcett, E. B. (2008). Does marriage and relationship education work? A meta- analytic study. *Journal of Counseling & Clinical Psychology*, 76(5), 723–734. <https://doi.org/10.1037/a0012584>.
- Hays, K. (2015). Black churches' capacity to respond to the mental health needs of African Americans. *Social Work & Christianity*, 42(3), 292–312.
- Hays, K., & Gilreath, T. (2017). Profiles of depression help seeking among Black Americans: A latent class approach. *The Journal of Nervous and Mental Disease*, 205(8), 627–633. <https://doi.org/10.1097/NMD.0000000000000575>
- Heath, Melanie. 2012. *One marriage under God: The campaign to promote marriage in America*. New York: New York University Press.
- Heene, E., Buysse, A., & Oost, R. V. (2005). Indirect pathways between depression symptoms and marital distress: The role of conflict communication, attributions, and attachment

- style. *Family Process*, 44(4): 413–440. <https://doi.org/10.1111/j.1545-5300.2005.00070.x>.
- Heyman, R. E., Sayers, S. L., & Bellack, A. S. (1994). Global marital satisfaction versus marital adjustment: An empirical comparison of three measures. *Journal of Family Psychology*, 8(4), 432–446. <https://doi.org/10.1037/0893-3200.8.4.432>
- Hipolito-Delgado, C. P., & Lee, C. C. (2007). Empowerment theory for the professional school counselor: A manifesto for what really matters. *Professional School Counseling*, 10(4), 327–332. <https://doi.org/10.5330/prsc.10.4.fm1547261m80x744>
- Holland, J. (2016, August 9). The average black family would need 228 years to build the wealth of a white family today. *The Nation*. <https://www.thenation.com/article/archive/the-average-black-family-would-need-228-years-to-build-the-wealth-of-a-white-family-today/>
- Hraba, J., Lorenz, F. O., & Pechacova, Z. (2000). Family stress during the Czech transformation. *Journal of Marriage and Family*, 62(2), 520–531. <https://doi.org/10.1111/j.1741-3737.2000.00520.x>.
- Jackson, G. L., Krull, J. L., Bradbury, T. N., & Karney, B. R. (2017). Household income and trajectories of marital satisfaction in early marriage. *Journal of Marriage and Family*, 79(3), 690–704. <https://doi.org/10.1111/jomf.12394>
- Jackson, G. L., Trail, T. E., Kennedy, D. P., Williamson, H. C., Bradbury, T., & Karney B. R. (2016). The salience and severity of relationship problems among low-income couples. *Journal of Family Psychology*, 30(1), 2–11. <https://doi.org/10.1037/fam0000158>
- Jennings, B.K., & Rosenbaum, D. (2015). SNAP Benefit Boost in 2009 Recovery Act Provided Economic Stimulus and Reduced Hardship. *Center on Budget and Policy Priorities*.

<https://www.cbpp.org/sites/default/files/atoms/files/3-31-15fa.pdf>

- Johnson, M. D., Bradbury, T. N. (2015). Contributions of social learning theory to the promotion of healthy relationships: Asset or liability? *Journal of Family Theory & Review*, 7(1), 13-27. <https://doi.org/10.1111/jftr.12057>
- Jones, E., & Asen, E. (2000). *Systemic couple therapy and depression*. Karnac Books.
- Jones-Webb, R. J., & Snowden, L. R. (1993). Symptoms of depression among Blacks and Whites. *American Journal of Public Health*, 83(2), 240–244.
<https://doi.org/10.2105/AJPH.83.2.240>
- Karney, B. R., Garvan, C. W., & Thomas, M. S. (2003). *Family formation in Florida: 2003 baseline survey of attitudes, beliefs, and demographics relating to marriage and family formation*. University of Florida.
- Kefalas, M. J., & Carr, P. J. (2012). Conclusion. In M. C. Waters, P. J. Carr, M. J. Kefalas, & J. Holdaway (Eds.), *Coming of age in America: The transition to adulthood in the twenty-first century* (pp. 191-204). University of California Press.
- Kennedy, S., & Ruggles, S. (2014). Breaking up is hard to count: The rise of divorce in the United States, 1980–2010. *Demography*, 51(2), 587–598. <https://doi.org/10.1007/s13524-013-0270-9>
- Kerkmann, B. C., Lee, T. R., Lown, J. M., & Allgood, S. M. (2000). Financial management, financial problems and marital satisfaction among recently married university students. *Financial Counseling and Planning*, 11, 55–65.
- Kessler, R., Berglund, P., Demler, O., Jin, R., Merikangas, K., & Walters, E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national

- comorbidity survey replication. *Archives of General Psychiatry*, 62(6), 593–602.
<https://doi.org/10.1001/archpsyc.62.6.593>
- Kieffer, C. (1984). Citizen empowerment: A developmental perspective. In J. Rappaport, C. Swift, & R. Hess (Eds.), *Studies in empowerment: Steps toward understanding and action* (pp. 9-36). Hayworth Press.
- Kohn R, Ali A, Puac-Polanco V, Figueroa C, López-Soto V, Morgan K, et al. Mental health in the Americas: an overview of the treatment gap. *Rev Panam Salud Publica*. 2018;42:e165. <https://doi.org/10.26633/RPSP.2018.165>
- Kouros, C. D., & Cummings, E. M. (2011) Transactional relations between marital functioning and depressive symptoms. *American Journal of Orthopsychiatry*, 81(1): 128–138.
<https://doi.org/10.1111/j.1939-0025.2010.01080.x>
- Kristenson, M., Eriksen, H. R., Sluiter, J. K., Starke, D., & Ursin, H. (2004). Psychobiological mechanisms of socioeconomic differences in health. *Social Science & Medicine*, 58(8), 1511–1522. [https://doi.org/10.1016/S0277-9536\(03\)00353-8](https://doi.org/10.1016/S0277-9536(03)00353-8)
- Kroeker, C. J. (1995). Individual, organizational, and societal empowerment: A study of the processes in a Nicaraguan agricultural cooperative. *American Journal of Community Psychology*, 23(5), 749-764. <https://doi.org/10.1007/BF02506990>
- Lawrence, F. C., Thomasson, R. H., Wozniak, P. J., & Prawitz, A. D. (1993). Factors relating to spousal financial arguments. *Journal of Financial Counseling and Planning*, 4, 85- 94.
- Lewis Tené T., Cogburn Courtney D. and Williams David R. 2015. “Self-Reported Experiences of Discrimination and Health: Scientific Advances, Ongoing Controversies, and Emerging Issues.” *Annual review of clinical psychology* 11:407–40. doi:

10.1146/annurev-clinpsy-032814-112728.

Liang, W., & Chikritzhs, T. (2012). Brief report: Marital status and alcohol consumption behaviours. *Journal of Substance Use*, 17(1), 84–90.

<https://doi.org/10.3109/14659891.2010.538463>

Lincoln, C. E., & Mamiya, L. H. (1990). The religious dimension: Toward a sociology of Black churches. In C. E. Lincoln & L. H. Mamiya (Eds.), *The Black church in the African American experience* (pp. 1–19). Duke University Press.

Loeppke, R., Taitel, M., Haufle, V., Parry, T., Kessler, R. C., & Jin- nell, K. (2009). Health and productivity as a business strategy: A multiemployer study. *Journal of Occupational and Environmental Medicine*, 51(4), 411–

428.<https://doi.org/10.1097/JOM.0b013e3181a39180>

Lopez-Class, M., Castro, F. G., & Ramirez, A. G. (2011). Conceptions of acculturation: A review and statement of critical issues. *Social Science & Medicine*, 72(9), 1555–

1562.<https://doi.org/10.1016/j.socscimed.2011.03.011>

Loprest, P., Schmidt, S., & Dryden Witte, A. (2000). Welfare Reform under PRWORA: Aid to Children with Working Families? *Tax Policy and the Economy*, 14(1), 157–203.

<https://doi.org/10.1162/089286401750212050>

Lowenstein, A.E., Altman, N., Chou, P.M., Faucetta, K., Greeney, A., Gubits, D. & Nguyen, V.Q. (2014). *A family-strengthening program for low-income families: Final impacts from the Supporting Healthy Marriage Evaluation, technical supplement. OPRE Report 2014- 09B*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

<https://www.acf.hhs.gov/opre/report/supporting-healthy-marriage-evaluation-family-strengthening-program-low-income-families>

Lundberg, P. (2016). Family inequality: Diverging patterns in marriage, cohabitation, and childbearing. *Journal of Economic Perspectives*, 30(2), 79–102.

<https://doi.org/10.1257/jep.30.2.79>

Lundquist, E., Hsueh, J., Lowenstein, A. E., Faucetta, K., Gubits, D., Michalopoulos, C., & Knox, V. (2014). *A family-strengthening program for low-income families: Final impacts from the supporting healthy marriage evaluation (OPRE Report 2014-09A)*. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

<https://www.acf.hhs.gov/opre/report/supporting-healthy-marriage-evaluation-family-strengthening-program-low-income-families>

MacDonald, H. (1997) “Welfare Reform Discoveries”, *The City Journal* Winter

[http://www.city-journal.org/html/7_1_welfare.html]

MacDonald, H. (1998, Winter) The real welfare problem is illegitimacy. *City Journal*

<https://www.city-journal.org/html/real-welfare-problem-illegitimacy-12161.html>

Manning, W. D. (2013). Trends in cohabitation: Over twenty years of change, 1987–2010.

Family Profile-13-12, National Center for Family & Marriage Research.

<https://www.bgsu.edu/content/dam/BGSU/college-of-arts-and-sciences/NCFMR/documents/FP/FP-13-12.pdf>

Marchand, J. F., & Hock, E. (2000). Avoidance and attacking conflict-resolution strategies among married couples: Relations to depressive symptoms and marital satisfaction. *Family Relations*, 49(2), 201–206. <https://doi.org/10.1111/j.1741-3729.2000.00201.x>

- Marcussen, K. (2005). Explaining differences in mental health between married and cohabiting individuals. *Social Psychology Quarterly*, 68(3), 239–257.
<https://doi.org/10.1177/019027250506800304>
- Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Matthews, T. J. (2017). Births: Final data for 2015. *National Vital Statistics Report*, Volume 66, Number 1. National Center for Health Statistics.
- Masarik, A. S., Martin, M. J., Ferrer, E., Lorenz, F. O., Conger, K. J., & Conger, R. D. (2016). Couple resilience to economic pressure over time and across generations. *Journal of Marriage and the Family*, 78, 326–345. <http://dx.doi.org/10.1111/jomf.12284>
- Mathematica Policy Research. (2013a, March). *Parents and Children Together (PACT) healthy marriage baseline survey*. Mathematica Policy Research.
- Mathematica Policy Research. (2013b, July). *Parents and Children Together (PACT) responsible fatherhood baseline survey*. Mathematica Policy Research.
- Mays, V. M., Cochran, S. D., & Barnes, N. W. (2007). Race, race-based discrimination, and health outcomes among African Americans. *Annual Review of Psychology*, 58, 201–225.
<https://doi.org/10.1146/annurev.psych.57.102904.190212>
- McAdoo, H. P. (2007). African American demographic images. In H. P. McAdoo (Ed.), *Black families* (pp. 157–171, 4th ed.). Sage.
- McCann, S. (2011). Emotional health and the Big Five personality factors at the American state level. *Journal of Happiness Studies*, 12(4), 547–560. <https://doi.org/10.1007/s10902-010-9215-9>

- McKernan, S.-M., Ratcliffe, C., Eugene, S., & Zhang, S. (2013). *Less than equal: Racial disparities in wealth accumulation*. Urban Institute.
- McLeod, J. D., & Kessler, R. C. (1990). Socioeconomic status differences in vulnerability to undesirable life events. *Journal of Health and Social Behavior* 31(2), 162–172.
<https://doi.org/10.2307/2137170>
- Mead, L. (1992) *The new politics of poverty*. Basic Books
- Mertler, C. A., & Vannatta, R. A. (2002). *Advanced and multivariate statistical methods: Practical application and interpretation* (2nd ed.). Pyrczak.
- Millstein, R. A., Yeh, H.-C., Brancati, F. L., Batts-Turner, M., & Gary, T. L. (2009). Food availability, neighborhood socioeconomic status, and dietary patterns among Blacks with type 2 diabetes mellitus. *The Medscape Journal of Medicine*, 11(1).
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2654697/>
- Mizell, A. C. (1999). Life course influences on African American men's depression: Adolescent parental composition, self-concept, and adult earnings. *Journal of Black Studies*, 29(4), 467-490.
- Mojtabai, R., Olfson, M., & Han, B. (2016). National trends in the prevalence and treatment of depression in adolescents and young adults. *Pediatrics*, 138(6).
<https://doi.org/10.1542/peds.2016-1878>
- Moore, Q., Wood, R.G., Clarkwest, A., Killewald, A., & Monahan, S. (2012). *The long-term effects of building strong families: A relationship skills education program for unmarried parents, technical supplement*. OPRE Report #2012-28C. Administration for Children and Families, U.S. Department of Health and Human Services.
https://www.mdrc.org/sites/default/files/BSF_36month_impact_fnlrpt_0.pdf

- Muntaner C., Ng E., Vanroelen C., Christ S., Eaton W.W. 2013 Social stratification, social closure, and social class as determinants of mental health disparities In: C.S. Aneshensel, J.C. Phelan and A. Bierman (eds.) *Handbook of the Sociology of Mental Health* 2nd edn. Dordrecht, the Netherlands: Springer; 205–227.
- Murray, C. (1984). *Losing ground: American social policy 1950–1984*. New York.
- Nyatanga, L., & Dann, K. L. (2002). Empowerment in nursing: The role of philosophical and psychological factors. *Nursing Philosophy*, 3(3), 234–239. <https://doi.org/10.1046/j.1466-769X.2002.00107.x>
- Oliver, M., & Shapiro, T. M. (2006). *Black wealth/white wealth: A new perspective on racial inequality* (2nd edition).. Routledge.
- Ooms, T., & Wilson, P. (2004). The challenges of offering relationship and marriage education to low-income populations. *Family Relations*, 53(5), 440–447. <https://doi.org/10.1111/j.0197-6664.2004.00052.x>
- Papp, L. M. (2010). The course and quality of intimate relationships among psychologically distressed mothers. *American Journal of Orthopsychiatry*, 80(1), 71–79. <https://doi.org/10.1111/j.1939-0025.2010.01008.x>
- Paradies Yin and Cunningham Joan 2009. “Experiences of Racism among Urban Indigenous Australians: Findings from the Druid Study.” *Ethnic and Racial Studies* 32(3):548–73.
- Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., & Widaman, K. F. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development*, 75(6), 1632–1656. <https://doi.org/10.1111/j.1467-8624.2004.00807.x>

Parker, M. L., Tambling, R. B., & Campbell, K. (2013). Dyadic adjustment and depressive symptoms: The mediating role of attachment. *Family Journal*, 21(1), 28–34.

<https://doi.org/10.1177/1066480712456674>

Pei-Fen Li, & Johnson, L.N. (2018). Couples' depression and relationship satisfaction: examining the moderating effects of demand/withdraw communication patterns. *Journal of Family Therapy*, 40, S63 – S85. <https://doi-org.ezproxy.lib.uh.edu/10.1111/1467-62427.12124>

Payne, K. K. (2018). First marriage rate in the U.S., 2016. *Family Profiles, FP-18-14*. National Center for Family & Marriage Research. <https://doi.org/10.25035/ncfmr/fp-18-14>

Pew Research Center, October 2021, “Rising Share of U.S. Adults Are Living Without a Spouse or Partner”

Pew Research Center, June 27, 2016. “On Views of Race and Inequality, Blacks and Whites Are Worlds Apart.”

Pew Charitable Trust. (2015, November 18). *Pew Finds American Families Ill-Equipped for Financial Emergencies*. [Press Release].

<https://www.pewtrusts.org/en/about/news-room/press-releases-and-statements/2015/11/18/pew-finds-american-families-ill-equipped-for-financial-emergencies>

Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). Social conditions as fundamental causes of health inequalities: Theory, evidence, and policy implications. *Journal of Health and Social Behavior*, 51(1_suppl), S28–S40. <https://doi.org/10.1177/0022146510383498>

Plagnol, A. C. (2011). Financial satisfaction over the life course: The influence of assets and

- liabilities. *Journal of Economic Psychology*, 32, 45–64.
<http://dx.doi.org/10.1016/j.joep.2010.10.006>
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385–401.
- Raley, S. (2015). The growing racial and ethnic divide in U.S. marriage patterns. *The Future of Children*, 25(2), 89–109. <https://doi.org/10.1353/foc.2015.0014>
- Randles, Jennifer M. 2017. *Proposing prosperity: Marriage education policy and inequality in America*. New York: Columbia University Press.
- Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*, 9(1), 1-25.
<https://doi.org/10.1007/BF00896357>
- Rappaport, J. (1987). Terms of empowerment / exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology*, 15(2), 121-148.
<https://doi.org/10.1007/BF00919275>
- Rea, J. K., Mendenhall, T. J., & Zuiker, V. S. (2016). Money and emerging adults: A glimpse into the lives of college couples' financial management practices. *Journal of Financial Therapy*, 7(2). <https://doi.org/10.4148/1944-9771.1110>
- Rindfuss, R. R. (1991). The young adult years: Diversity, structural change, and fertility. *Demography*, 28(4), 493–512. <https://doi.org/10.2307/2061419>
- Robbins, S., Chatterjee, P., & Canda, E. (2012). *Contemporary human behavior theory: A critical perspective for social work* (3rd edition). Allyn & Bacon.
- Roderick A. Rose, MS, Mark W. Fraser, PhD, A Simplified Framework for Using Multiple Imputation in Social Work Research, *Social Work Research*, Volume 32, Issue 3,

- September 2008, Pages 171–178, <https://doi.org/10.1093/swr/32.3.171>
- Rodriguez, L. M., Neighbors, C., & Knee, C. R. (2014). Problematic alcohol use and marital distress: An interdependence theory perspective. *Addiction Research and Theory*, 22(4), 294–312. <https://doi.org/10.3109/16066359.2013.841890>
- Rogers, R. G., Rosenblatt, R., Hummer, R. A., & Krueger, P. M. (2001). Black-white differentials in adult homicide mortality in the United States. *Social Science Quarterly*, 82(3), 435–452. <https://doi.org/10.1111/0038-4941.00034>
- Rosales, R., & Calvo, R. (2017). “Si Dios Quiere”: Fatalismo and use of mental health services among Latinos with a history of depression. *Social Work in Health Care*, 56(8), 748–764. <https://doi.org/10.1080/00981389.2017.1339760>
- Rosand, G.-M. B., Slinning, K., Eberhard-Gran, M., Roysamb, E., & Tambs, K. (2012). The buffering effect of relationship satisfaction on emotional distress in couples. *BMC Public Health*, 12, 66. <https://doi.org/10.1186/1471-2458-12-66>
- Rosand, G. M., Slinning, K., Roysamb, E., & Tambs, Randles, J. (2017). *Proposing prosperity? Marriage education policy and inequality in America*. Columbia University Press.
- Rotz, D. (2016). Why have divorce rates fallen?: The role of women’s age at marriage. *The Journal of Human Resources*, 51(4), 961–1002. <https://doi.org/10.3368/jhr.51.4.0214-6224R>
- Rubin, A., & Babbie, E. R. (2014). *Research methods for social work* (8th ed.). Brooks/Cole.
- Sacks, D.W., Stevenson, B., & Wolfers, J. (2013). *Growth in income and subjective well-being over time*. Mimeo.
- Salari, S. M., & Baldwin, B. M. (2002). Verbal, physical, and injurious aggression among intimate couples over time. *Journal of Family Issues*, 23(4), 523–550. <https://doi.org/10.1177/0192513X02023004004>

- Saleh, M., & Hilton, J. (2011). A comparison of the paternal involvement of low-income fathers in four developmental stages: Adolescence, young adult, adult, and midlife. *The Family Journal*, 19(1), 47–55. <https://doi.org/10.1177/1066480710387496>
- Sales, E. Lichtenwalter, S. and Fevola, A. (2006), Secondary data analysis in social work research education: Past, present, and future promise, *Journal of Social Work Education*, 42(3), 543 – 558.
- Sassler, S. (2010). Partnering across the life course: Sex, relationships, and mate selection. *Journal of Marriage and Family*, 72, 557–575. <https://doi.org/10.1111/j.17413737.2010.00718.x>
- Schafer, J. L. (1997). Analysis of incomplete multivariate data. Boca Raton, FL: Chapman Hall/CRC.
- Schinasi, G. (2004). *Defining financial stability*. International Monetary Fund.
- Schmitt, M. T., Branscombe, N. R., Postmes, T., Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being: A meta-analytic review. *Psychological Bulletin*. 140(4), 921–48. <https://doi.org/10.1037/a0035754>
- Schulz, A. J., Israel, B. A., Zimmerman, M. A., & Checkoway, B. N. (1995). Empowerment as a multi-level construct: Perceived control at the individual, 99 organizational and community levels. *Health Education Research*, 10(3), 309-327. <https://doi.org/10.1093/her/10.3.309>
- Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death*. W H Freeman/Times Books/Henry Holt & Co.
- Settersten, R. A., Jr., & Ray, B. (2010). What’s going on with young people today? The long and twisting path to adulthood. *The Future of Children*, 20(1), 19–41.

- Shanahan, M. (2000). Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology*, 26(1), 667–692.
<https://doi.org/10.1146/annurev.soc.26.1.667>
- Shimkowski, J. R., & Ledbetter, A. M. (2018). Parental divorce disclosures, young adults' emotion regulation strategies, and feeling caught. *Journal of Family Communication*, 18(3), 185-201. <https://doi.org/10.1080/15267431.2018.1457033>
- Siatkowski, A. A. (2007). Hispanic acculturation: A concept analysis. *Journal of Transcultural Nursing*, 18(4), 316-323. <https://doi.org/10.1177/1043659607305193>
- Simon, B. L. (1994). *The empowerment tradition in American social work: A history*. Columbia University Press.
- Simon, R. W. (2002). Revisiting the relationships among gender, marital status, and mental health. *American Journal of Sociology*, 107(4), 1065–1096. <https://doi.org/10.1086/339225>
- Solomon, B. B. (1976). *Black empowerment: Social work in oppressed communities*. Columbia University.
- Speer, P. W., & Hughey, J. (1995). Community organizing: An ecological route to empowerment and power. *American Journal of Community Psychology*, 23(5), 729-748.
<https://doi.org/10.1007/BF02506989>
- Stanley, S. M., Markman, H. J., & Whitton, S. (2002). Communication, conflict, and commitment: Insights on the foundations of relationship success from a national survey. *Family Process*, 41(4), 659–675. <https://doi.org/10.1111/j.1545-5300.2002.00659.x>
- Staples, L. H. (1990). Powerful ideas about empowerment. *Administration in Social Work*, 14(2), 29-42. https://doi.org/10.1300/J147v14n02_03

Tennen, H., Hall, J. A., & Affleck, G. (1995). Depression research methodologies in the Journal of Personality and Social Psychology: A review and critique. *Journal of Personality and Social Psychology*, 68, 870–884. <https://doi.org/10.1037/0022-3514.68.5.870>.

Terman, L. M. (1938). *Psychological factors of marital happiness*. McGraw-Hill.

The Temporary Assistance for Needy Families (TANF) Block Grant: A Legislative History. CRS Report. (2021).

Thomas, A. L., Caughy, M. O., Anderson, L. A., & Owen, M. T. (2019). Longitudinal associations between relationship quality and maternal depression among low-income African American and Hispanic mothers. *Journal of family psychology*, 33(6), 722–729. <https://doi.org/10.1037/fam0000548>

Tolan, P., Lovegrove, P., & Clark, E. (2013). Stress mitigation to promote development of prosocial values and school engagement of inner-city urban African American and Latino youth. *American Journal of Orthopsychiatry*, 83(2-3), 289-298. <https://doi.org/10.1111/ajop.12038>

Trail, T. E., & Karney, B. R. (2012). What's (not) wrong with low-income marriages. *Journal of Marriage and Family*, 74(3), 413–427. <https://doi.org/10.1111/j.1741-3737.2012.00977.x>.

Unger, J. M., Hershman, D. L., Albain, K. S., Moinpour, C. M., Petersen, J. A., Burg, K. et al. (2013). Patient income level and cancer clinical trial participation. *Journal of Clinical Oncology*, 31, 536–542. <https://doi.org/10.1200/JCO.2012.45.4553>.

U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, 2000 to 2017.

United States Census Bureau, *Current population survey, 2018 and 2019 annual social and economic supplements*. <https://www.census.gov/programs-surveys/saipe/guidance/model-input-data/cpsasec.html>

U.S. Census Bureau, Current Population Survey Annual Social and Economic Supplements, 1968-2018). <https://www.census.gov/programs-surveys/saipe/guidance/model-input-data/cpsasec.html>

2017 National Population Projections and Vintage 2017 Population Estimates

www.census.gov/popest and www.census.gov/programs-surveys/popproj.html

United States Congress. (2003). Personal Responsibility and Work Opportunity Reconciliation Act of 1996, 104th Cong. 2nd Sess. In G. Mink and R. Solinger (Eds.), *Welfare: A documentary history of U. S. policy and politics* (pp. 64754). New York University Press. (Original work published 1996.)

Vaughn, B. (1999). Reliability and validity of the relationship assessment scale. *The American Journal of Family Therapy*, 27(2), 137–147. <https://doi.org/10.1080/019261899262023>

Wang, E. A., Aminawung, J. A., Wildeman, C., Ross, J. S., & Krumholz, H. M. (2014). High incarceration rates among black men enrolled in clinical studies may compromise ability to identify disparities. *Health Affairs*, 33(5), 848-855. <https://doi.org/10.1377/hlthaff.2013.1325>

Watson T., & McLanahan, S. (2011). Marriage meets the Joneses: Relative income, identity, and marital status. *Journal of Human Resources* 46(3), 482–517. <https://doi.org/10.1353/jhr.2011.0021>

- Weaver, J. M., & Schofield, T. J. (2015). Mediation and moderation of divorce effects on children's behavior problems. *Journal of Family Psychology*, 29(1), 39–48.
<https://doi.org/10.1037/fam0000043>
- Whaley, A. L. (2001). Cultural mistrust and mental health services for African Americans: A review and meta-analysis. *The Counseling Psychologist*, 29(4), 513–531.
<https://doi.org/10.1177/0011000001294003>
- Whisman, M. A., & Kaiser, R. (2008). Marriage and relationship issues. In K. S. Dobson & D. J. A. Dozois (Eds.), *Risk factors in depression* (pp. 363–384). Academic Press.
- Whisman, M. A., Uebelacker, L. A., & Settles, T. D. (2010). Marital distress and the metabolic syndrome: Linking social functioning with physical health. *Journal of Family Psychology* 24(3), 367–370. <https://doi.org/10.1037/a0019547>
- Whisman, M. A., Uebelacker, L. A., & Weinstock, L. M. (2004). Psychopathology and marital satisfaction: The importance of evaluating both partners. *Journal of Consulting and Clinical Psychology*, 72(5), 830–838. <https://doi.org/10.1037/0022-006X.72.5.830>
- Whitton, S. W., Olmos-Gallo, P. A., Stanley, S. M., Prado, L. M., Kline, G. H., St. Peters, M., & Markman, H. J.. (2007). Depressive symptoms in early marriage: Predictions from relationship confidence and negative marital interaction. *Journal of Family Psychology*, 21(2), 297–306. <https://doi.org/10.1037/0893-3200.21.2.297>
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32(1), 20–47.
<https://doi.org/10.1007/s10865-008-9185-0>
- Williamson, H., Altman, N., Hsueh, J., & Bradbury, T. (2016). Effects of relationship education on couple communication and satisfaction: A randomized controlled trial with low-

- income couples. *Journal of Consulting and Clinical Psychology*, 84(2), 156–166.
<https://doi.org/10.1037/ccp0000056>
- Wilson, W. J. (1987). *The truly disadvantaged: the inner city, the underclass, and public policy*. Chicago, IL: University of Chicago Press.
- Wood, R. G., McConnell, S., Moore, Q., Clarkwest, A., & Hsueh, J. (2012). The effects of building strong families: A healthy marriage and relationship skills education program for unmarried parents. *Journal of Policy Analysis and Management*, 31(2), 228-252.
<https://doi.org/10.1002/pam.21608>
- Wood, R. G., Moore, Q., Clarkwest, A., & Killewald, A. (2014). The long-term effects of building strong families: A program for unmarried parents. *Journal of Marriage and Family*, 76(2), 446-463. <https://doi.org/10.1111/jomf.12094>
- Xu, J., Murphy, S. L., Kochanek, K. D., & Arias, E. (2016, December). Mortality in the United States, 2015. *NCHS Data Brief*, 267, 1-8. <https://pubmed.ncbi.nlm.nih.gov/27930283/>
- Yu, S., Clemens, R. Yang, H., Li, X., Stanton, B., Deveaux, L., Lunn, S., Cottrell, L., & Harris, C. (2006). Youth and parental perceptions of parental monitoring and parent-adolescent communication, youth depression, and youth risk behaviors. *Social Behavior and Personality*, 34(10), 1297-1310. <https://doi.org/10.2224/sbp.2006.34.10.1297>
- Zhang, J., & Oldenburg, B. F. (2014). Socioeconomic inequalities in utilization of preventive health services in relation to cardiovascular disease and diabetes. *Journal of Behavioral Health*, 3(2), 87–94. <https://doi.org/10.5455/jbh.20140310053242>
- Zimmerman, M. A. (1990). Toward a theory of learned hopefulness: A structural model analysis of participation and empowerment. *Journal of Research in Personality*, 24(1), 71–86.
[https://doi.org/10.1016/0092-6566\(90\)90007-S](https://doi.org/10.1016/0092-6566(90)90007-S)

- Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, 23(5), 581-599. <https://doi.org/10.1007/BF02506983>
- Zimmerman, M. A. (2000). Empowerment theory: Psychological, organizational and community levels of analysis. In J. Rappaport & E. Seidman (Eds.), *Handbook of community psychology* (pp 43-63). Kluwer/Plenum Publishers.
- Zimmerman, M. A., & Rappaport, J. (1988). Citizen participation, perceived control, and psychological empowerment. *American Journal of Community Psychology*, 16(5), 725-750. <http://doi.org/10.1007/BF00930023>
- Zimmerman, M. A., & Zahniser, J. H. (1991). Refinements of sphere-specific measures of perceived control: Development of a sociopolitical control scale. *Journal of Community Psychology*, 19(2), 189-204. [https://doi.org/10.1002/1520-6629\(199104\)19:2<189::AID-JCOP2290190210>3.0.CO;2-6](https://doi.org/10.1002/1520-6629(199104)19:2<189::AID-JCOP2290190210>3.0.CO;2-6)