

TESTING A MODEL OF HEALTHY MARRIAGE/HEALTHY RELATIONSHIPS:
THE PREDICTION OF PARENTING AND CHILD WELL-BEING

By

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ABSTRACT

TESTING A MODEL OF HEALTHY MARRIAGE/HEALTHY RELATIONSHIPS: THE PREDICTION OF PARENTING AND CHILD WELL-BEING

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Federally funded Healthy Marriage Initiative (HMI) programs provide marriage education as well as other services to low-income diverse individuals and couples at many points along the marital continuum with improving children's well-being as the overarching purpose. These programs need appropriate measures of healthy marriage for couples with children that relate to well-being. Purposes of this research were to examine the factor structure of a healthy marriage measurement developed by Manpower Demonstration Research Corporation (MDRC) and how it varied across (a) gender, (b) race (African American and Caucasian), and (c) marital status (married and unmarried). An additional purpose was to test a measurement model, developed by Child Trends, Inc., in which healthy marriage is hypothesized to predict parenting and child well-being.

This cross-sectional quantitative survey research included 343 Head Start parents (151 males and 189 females) involved in a marriage/relationship. Overall, the unidimensional healthy marriage measurement fit for both males and females and the addition of two marital virtues, namely forgiveness and teamwork, also loaded well on this measurement. The factor loadings were significant for both males and females and results of chi-square difference tests indicated that the factor loadings for the great majority of variables were invariant across gender. However, the factor loading for relationship stability (one's assessment that their relationship is not in trouble) was larger for males whereas child commitment (one's assessment of their spouse/partner's commitment to their child) was larger for females.

Path analysis demonstrated that the Child Trends, Inc. healthy marriage measurement model fit differed by gender and this was supported by further SEM analysis. The effect size for the direct path between risk and healthy marriage was significantly larger for females than for males. The effect size of this path tended to be greater for African American women and unmarried women. Results using fit indices showed that the fit of the measurement model was appropriate for the diverse sample. Mediation results revealed that for both males and females, healthy marriage partially mediates the effect that depression and stress have on parenting. For females, parenting partially mediates the effect between risk and children's social competence as well as between healthy marriage/healthy relationships and children's social competence. Findings demonstrate support for the Child Trends, Inc. measurement model that healthy marriage/healthy relationships may enhance children's social competence through positive parenting. Study results may inform federal and state healthy marriage and family initiatives as well as marriage and relationship education in terms of program delivery and evaluation.

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DEDICATION

To the loves of my life, Monty, Brandon, and the little baby on the way.

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CHAPTER 1: INTRODUCTION

The transformations in American marriage and family structure since the 1960s have decreased the average level of adult and child well-being, increased child poverty, and have left a sizeable financial burden on our society (Amato, 2008). Set out to address these changes, efforts to strengthen marriage and increase the percentage of children raised in healthy two-parent families has become an important public policy goal. Federally funded “healthy marriage” initiatives have the ultimate purpose of improving child well-being. The Healthy Marriage Initiative was launched by the Administration for Children and Families (ACF) in 2002 “to help couples who have chosen marriage gain greater access to marriage education services, on a voluntary basis, where they can acquire the skills and knowledge necessary to form and sustain a healthy marriage” (ACF- HMI mission statement). The plan for the initiative was not solely to produce more marriages or longer-lasting marriages, but rather to promote healthier marriages. Local Healthy Marriage Initiatives extend to singles, unmarried couples and married couples by encouraging the health of the individual, the health of relationships for those in marriages and or other types of partnerships, the strength of parenting, and the well-being of children. The understanding is that children’s well-being is enhanced when their parents are healthy and if they are married or in a relationship, that these relationships are also healthy (National Healthy Marriage Resource Center, 2010).

Low-income couples with diverse backgrounds are likely the focus of these initiatives (Moore et al., 2007). Accordingly, it is important to develop constructs and measures appropriate for these populations (Moore et al., 2007). Federal marriage initiative programs most often utilize marriage education interventions initially created for and tested with white, middleclass, well-educated engaged or already married couples (Dion, 2005). There is some

question whether these standard programs can address the needs, interests, and circumstances of low-income couples (McClintock-Comeaux, Anderson, & Kuvalanka, 2004). Low-income couples indeed have special challenges along the marital continuum including high marital instability rates (Fein, 2004; Garfield & McLanahan, 2000; McGinnis, 2003), increases in nonmarital childbearing (Ellwood & Jencks 2002), children by multiple partners (Mincy, 2002), lower levels of education and employment, and marital quality (Fein, 2004) as well as the associated risks for children. Research on the relationship dynamics of low-income couples suggests that particular issues make healthy marriage more difficult (Cherlin et al., 2004; Fein, 2004; Gibson-Davis, Edin, & McLanahan, 2005; Karney, Garvan, & Thomas, 2003; Mincy, 2002; Mincy, Pouncy, Reichert, & Richardson, 2004). These differences have implications for the content and delivery of marriage and relationship skills education for lower-income couples (Dion, 2005) as well as implications for measuring the impacts of these projects. The evaluation of marriage initiatives serving low-income couples must include appropriate measures (Bronte-Tinkew et al., 2003; Moore et al., 2007).

In their commentary on measurement issues in family research, Hofferth and Casper (2007) note that to date, data collection systems have not been adequately modified to reflect changes in U.S. families. This is problematic as, “effective economic and social policy depends in part on the ability to understand and address the changing shapes and needs of American families. This in turn requires valid and reliable data on marriage, divorce, remarriage, cohabitation, and the family situations of children over time at the national, state and local levels” (Hofferth & Casper, 2007, pp. ix – x).

Additional measures of healthy marriage designed and validated specifically for a low-income diverse population are needed for therapists, educators, researchers and policy-makers.

In addition, the realities and successes of local marriage programs must be revealed as well as how they impact children's development in order for continuous quality improvement and sustainability. Although The Office of Planning, Research and Evaluation at ACF is funding respected evaluation projects for healthy marriage initiatives, evaluation at the local level is also necessary. Local programs are committed to meeting their grant objectives related to healthier relationships and stronger family functioning and must rely on easy to use measurements.

Statement of the Problem

Low-income individuals place a high value on marriage but face many barriers and disincentives to marriage (Edin 2000; Gibson-Davis, Edin, & McLanahan, 2005; Smock, Manning & Porter, 2005) and their marriages are less likely to survive (Roberts, 2007). Low-income couples are likely to experience external stressors such as poverty, isolation and lack of social support, unemployment, and poor health. Coping with setbacks is made even more difficult with fewer economic and personal resources. They also experience higher rates of personal problems and have greater difficulty receiving help for these problems. All these factors place great stress on couple relationships and on child well-being (Ooms, 2007).

Complimentary to this contextual perspective, marital interaction researchers share the belief that high levels of marital instability mostly stem from quality of the relationship. Understanding healthy marriage for low-income couples and developing effective intervention strategies requires consideration of the interactional processes, individual strengths and vulnerabilities, along with the stressful events and contexts of the poor (Bradbury & Karney, 2004).

Adaptations to healthy marriage curricula are underway to adjust the content for the needs of diverse low-income couples (e.g., the Survival Skills for Healthy Families/Family

Wellness, Relationship Enhancement (RE), and Prevention and Relationship Enhancement Program (PREP)) and researchers frequently point to this need (Ooms, 2007); however, the measurement tools used must also be proven reliable and valid for low-income couples. Comprehensive measures to assess healthy marriage for low-income couples enrolled in these initiatives are limited. Research on the marital quality of couples with children typically has two purposes: (a) to study the influence of marital quality on children's well-being and (b) to examine associations between family processes and marital quality. The relationship between parental conflict and child well being is well-documented; however, relationships between other aspects of marital quality and child well being are limited (Bronte-Tinkew et al., 2003). The topic of marriage and couple relationships remains a strong interest of researchers and policy makers. Efforts to measure aspects of the quality of marital relationships began more than 50 years ago, and instruments continue to be developed and refined. However, there are many conceptual issues regarding the measurement of relationship quality (ACF: OPRE, retrieved 2009).

Low-income couples have unique needs and circumstances that effect quality of marriage. Healthy Marriage Initiatives (HMIs) can help provide support with marriage education and other services to unmarried and married couples as well as to singles. Local HMIs targeting low-income diverse populations lack available brief, easy to use, appropriate measures of healthy marriage for couples with children that relate to children's well-being. This type of measure is a necessary piece to the evaluation of such initiatives even at the local level. Specifically, there is a need to use a comprehensive measurement tool for the following purposes in local evaluation: to understand the individuals being served, to design and plan appropriate interventions, to assess quality and effectiveness of services, to inform decisions for continuous

quality improvement, to measure grant objectives, to understand healthy marriage for low-income couples, to capture program successes and importantly, to relate results to the ultimate goal of children's well-being.

Significance of the Study

The Child Trends, Inc.' (2003) project to extensively review the "state of the art" in measuring couple relationships has yielded important results that point to the gaps in the literature on marriage as well as the needed areas for measuring healthy marriage. They found few studies that singly examine psychometric issues among lower-income or low-education married couples. The report suggests that research on measures of relationship quality among couples with children would benefit from:

- Development and validation of constructs such as 'commitment,' 'intimacy' and 'communication' patterns among couples with children, and in particular, **testing whether these constructs are linked to child well-being;**
- Development of measures that can be used for **unmarried as well as married couples;**
- Testing the applicability of measures for **race and ethnic subgroups;** and
- Testing the applicability of measures for **low-income and low-education** sub-populations.

In addition, the Child Trends, Inc. literature review (Bronte-Tinkew et al., 2003) recommends that concepts predicting marital outcomes should be included in marriage studies. For instance, positive attitudes about marriage and marital expectations (or plans) are associated with higher relationship stability among cohabiting couples (Axinn & Thornton, 1993; Clarkberg, Stolzenberg, & Waite, 1995; McGinnis, 2003).

Creating an index might be more appropriate given the challenge of developing measures for non-traditional family forms. In addition, little attention in the literature is given toward examining brief versions of existing scales and comparing different approaches for assessing a particular construct. This project explores how the aggregation of constructs into a summary measure of healthy marriage applies to low-income couples with children.

The Abt Associates Guide to Data Sources on the Determinants of Marriage and Cohabitation (2003) also highlight several research issues to the study of marriage and cohabitation. One issue is the need to understand the effects of personal characteristics (antecedents) on couple interaction within social and economic environments. Relatively stable background characteristics (i.e. education, ethnicity, and early childhood experiences) affect marital outcomes indirectly through expectations, values, and appraisals and, ultimately, on couple interaction. Personality characteristics such as depression and stress can also hinder positive interaction. Understanding the role of such factors is essential in preventing and treating relationship distress. Researchers have begun to study the direct and moderating effects of personal characteristics among middle -class married couples but there is little research on low-income couples or informal unions. Low-income couples deserve special attention because their lower levels of education and higher levels of depression, mental illness, and substance abuse suggest major challenges to sustaining healthy relationships.

Another issue that is addressed in the Abt Associates guide is in regards to the contextual influences on interaction. Most environmental factors including demographic, economic, and socio-cultural can influence couple interaction and moderate the effects of interaction on union outcomes. Understanding these linkages is critical to identifying strategies for helping couples function better in challenging environments. For example, approaches to conflict resolution may

vary by the norms and values that are shaped by culture. In addition, the contextual influence of financial stress has been found to have strong negative effects on marital quality and stability. Both chronic and acute stresses (i.e. job loss, car breakdown, or eviction) can be destructive to couple interaction, especially for low income people.

Purposes of this research were to examine the factor structure of a healthy marriage measurement developed by Manpower Demonstration Research Corporation (MDRC) and how it varied across (a) gender, (b) race (African American and Caucasian), and (c) marital status (married and unmarried). An additional purpose was to test a measurement model, developed by Child Trends, Inc., in which healthy marriage is hypothesized to predict parenting and child well-being for a diverse group of low-income couples with children along the marital continuum.

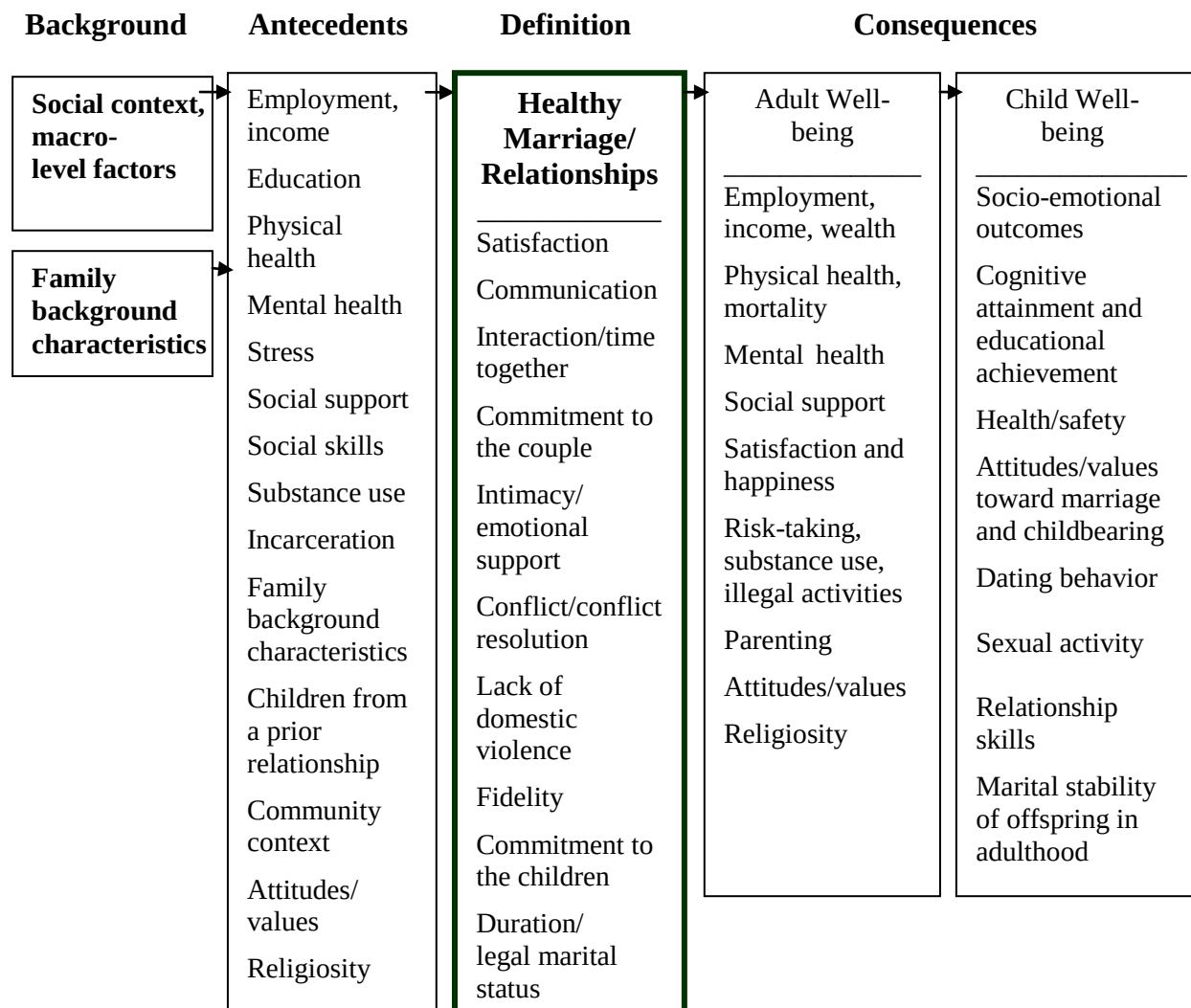
Conceptual Framework

The conceptual framework chosen for this study is a product of the Child Trends, Inc. work group of scholars who reviewed decades of marriage research and analyzed approximately 50 journal articles pertaining in some way to marital strengths (Moore et al., 2004). This model was chosen because it is used by Healthy Marriage Initiatives. The model considers a person's background down to two levels of ecological strata, which are society and family. The five-component model includes a *background* into which both individuals are born (i.e., family and social context) and possible personal *antecedents*, that can affect or influence marriage. The presence (i.e. unemployment) or absence (i.e. religiosity) of antecedents does not necessarily mean that a couple by definition has an unhealthy marriage. Both the background and antecedents contribute to the ten *characteristics* of healthy marriages that they identified from the literature review. These include: (a) commitment of the couple, (b) satisfaction, (c) communication, (d) conflict resolution, (e) lack of domestic violence (f) fidelity (understood as

sexual), (g) interaction and time together, (h) intimacy and emotional support, (i) commitment to the children, and (j) duration and legality of marital status. These will be explored in greater detail later with a look at how each is conceptualized. The characteristics, in turn, are linked to certain *consequences* or outcomes with regard to adult and child well-being (see Figure 1). The framework posits that improvements in marital interaction will have a positive net effect on adult and child well-being.

Moore et al. (2004) recognize the causes and effects of healthy marriage as complex with some factors appearing to be both causes and consequences of marriage. They also consistently report that an evaluation of healthy marriage must be sensitive to the context and issues unique to couples. They suggest a next step to the conceptual model, “to develop concrete measures to bring the model to reality especially developed for and tested among low-income couples” (Moore et al., 2004, p. 5).

Figure 1. *Measurement framework for conceptualizing and defining healthy marriage.*



Assumptions Regarding Marriage

The assumptions regarding marriage for this study are those shared by Child Trends, Inc. (Moore et al., 2004) and were chosen because they set the groundwork for evaluation.

1. Healthy marriage is a continuum. **It is not a yes/no construct that couples have or do not have, but a scale or index with varying degrees.**
2. The elements of a healthy marriage can be learned. **Thus, healthy marriage**

constructs can be affected by interventions of marriage education.

3. Healthy relationships should be assessed differently for different populations. **This study focuses on low-income couples with children- a different population than those without children. But even low-income couples with children vary in terms of their family structure and living arrangements. Measures are needed that will work for various family subgroups: two-resident, biological parents; married or cohabiting couples; (re)married or cohabiting couples with stepchildren; nonresident, estranged couples with children in common; and visiting couples who are parents.**
4. Healthy marriage has multiple elements. **This study takes a comprehensive view of healthy marriage, encompassing ten related yet distinct domains that will be discussed in detail below.**

Ecological Systems Theory

The Child Trends, Inc. measurement framework of healthy marriage provides an ecological basis because it considers a child's well-being within environmental contexts. However, because it is a rather linear model, it may be critiqued for its limited consideration to bi-directional processes especially how children may influence adult well-being and healthy marriage. The focus of the Child Trends, Inc. measurement model is on the definition of "healthy marriage": a concept that defines marriages as healthy when it promotes the individual well-being of both partners and their children (Halford, Kelly, and Markman's, 1997). The measurement model predicts children's development by proximal and distal environmental effects including parenting, marriage, as well as a set of antecedents (i.e. parent mental health). This dissertation tests the model as a measurement of healthy marriage and one that predicts

well-being. This dissertation does not test a model of ecological theory, but does consider some aspects of ecological theory including aspects of several principals. The ecology of human development includes several principals. Principal number 4 as stated in Bronfenbrenner's (2005) article, "Ecological Systems Theory" is:

No characteristic of the person exists or exerts influence on development in isolation. Every human quality is inextricably embedded, and find both its meaning and fullest expression, in particular environmental settings, of which the family is a prime example. As a result, there is always an interplay between the psychological characteristics of the person and of a specific environment; the one cannot be defined without reference to the other (p. 146).

Principal number 11 extends this fundamental concept:

Each member of a microsystem influences every other member. In terms of research design, it is therefore important to take into consideration the influence of each relationship on other relationships: for example, within the family the effect of the husband-wife relationship on the parent-child relationship, the effect of the mother-child relationship on the father-child relationship, and vice versa. The appropriate design for this purpose is a process-person-context model in which each relationship is treated as a context for processes taking place in the others (p. 161).

As applied in this study, children's well-being is examined in the context of marriage/partnership as well as the parent-child relationship. However, the measurement model is limiting in that is

does not specifically include effects of child characteristics on parenting and marriage nor the effect of the parent-child relationship on marriage. The purpose of the measurement model instead is prediction of well-being from healthy marriage/healthy relationships.

The healthy marriage model does place great consideration on examining the many influences on child well-being of the characteristics of significant others (parents) in the child's life. The assumption is that a parent's background influences their marriage/partnership and their behavior as parents. The developmentally relevant characteristics of parents who participate in children's home environment are important to ecological systems theory (Bronfenbrenner, 2005).

This study permits analysis of variations in a child's developmental processes and outcomes as a joint function of the characteristics of the environment and of the person. This is an assessment not only of children's well-being but also of the effectiveness of their parent(s)' marriage/intimate partnership and parenting that produce this outcome. The design reveals how both child well-being and processes vary as a joint function of the characteristics of the child and of the environment (i.e. antecedents, healthy marriage, parent well-being), thus permitting the detection of synergetic effects (effects of joint forces that are greater than the sum of the individual effects). (Bronfenbrenner, 1992; 2005). Thus, the combination of child characteristics and parent(s)' marriage/partnership quality with parent mental health may have a greater impact than separate effects of each. Allowing for the analysis of processes considers possible differences in child development.

This study focuses primarily on the **microsystem**, "a pattern of activities, roles and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical and material features and containing other persons with distinctive

characteristics of temperament, personality and systems of belief” (Bronfenbrenner, 2005, p. 148). Of particular interest in this study is the home environment. Parent(s)’ marriage/partnerships and parenting are examined as to how they predict child well-being. This study does not examine the **mesosytem** because the linkages and processes taking place between home and *other settings* (i.e. preschool) containing the child are not directly analyzed. Although the **exosystem** is recognized, it is not a major focus in this study because it encompasses the linkages and processes between two or more settings, at least one of which does not ordinarily contain the child, but in which events occur that influence processes within the home.

The **macrosytem** is not a focus in this study although macrosystemic domains in which processes are apt to function differentially can be identified in the study by proxy variables in the form of, for example, ethnicity and family structure (i.e. married parents, cohabitating unmarried partners, stepparents). Note the special importance of these variables as being characteristics of, not necessarily the developing child, but of the significant persons (parents) in the child’s life. Thus, a child’s well-being can vary substantially as a function of the personal attributes of their parents. “The scientific power of a microsystem model is therefore further increased to the extent that such characteristics are assessed” (Bronfenbrenner, 2005, p. 160).

Finally, the degree of stability, consistency, and predictability are critical for the effective operation of the system. Results from research conducted in the last two decades demonstrate growing evidence that children who grow up with two parents who are in a stable relationship are more likely to receive the parenting and financial supports that promote their well-being (Amato, 2000; McLanahan & Sandefur, 1996). However, questions remain about the particular influences that are most significant, the optimal role for public policy, and whether and why

marital relationships may be especially beneficial for children (Acs, 2007; Kamp Dush, 2009; Sweeney, Hongbo, & Videon, 2009).

Research Questions

The following questions are those that guide this research and are divided into three major study parts. Please note that terms “healthy marriage” and “healthy relationship” (HM/HR) are used interchangeably in discussing relationship quality of both married and unmarried couples with children.

Study One

1. What is the factor structure for the HM/HR measure?
2. How do antecedents (i.e. depression and stress) relate with the HM/HR measure?

Study Two

3. Does the HM/HR factor structure vary across groups (a) gender, (b) race (African American and Caucasian), and (c) marital status (married and unmarried)?

Study Three

4. How are responses on the HM/HR measure related to parenting and child outcomes?

CHAPTER 2: LITERATURE REVIEW

This review begins with a critique of existing healthy marriage measures. Next, a description of Healthy Marriage Initiatives (HMIs) is given in order to provide a context and purpose for the measurement of healthy marriage/healthy relationships. It then focuses on low-income couples, for whom the measurement is intended. The review outlines the study's accepted assumptions regarding marriage and recognizes different definitions of healthy marriage while selecting one particular conceptual model by Child Trends, Inc. Finally, a review of the literature related to each of the ten healthy marriage constructs is provided and how these domains relate to parenting and children's well-being.

Critique of “Healthy Marriage” and “Marital Quality” Measures

To demonstrate the limitations with existing healthy marriage measures and to build a case for a more comprehensive measure, the following critique is provided. The measure of healthy marriage/healthy relationships is a multi-dimensional construct and a simple measure on a single dimension (i.e. satisfaction) does not fully consider the actual complexity. Communication, satisfaction, and a lack of conflict are commonly mentioned elements of a healthy couple relationship; however, a diversity of other constructs is also important. For example, commitment is often left out of measures on healthy marriage.

In a comprehensive, empirical study of the marital research literature, for example, Fowers, Buckner, Calbeck, and Harrigan (2003) found that concepts and measures of marital quality seldom went beyond individual benefits such as satisfaction, intimacy, and sexual satisfaction and couple communication. Moreover, satisfaction is discussed and measured 12-26 times as frequently as “commitment”. The study demonstrated that scholarship on marriage is

dominated by a communication-satisfaction model of relationships in which initial attraction plus high quality communication leads to intimacy and satisfaction, which form the basis for relationship commitment. This type of model excludes other crucial aspects of healthy marriage/healthy relationships. Fowers (2003) argues for a more multi-dimensional model of healthy marriage beyond the individualistic communication-satisfaction model. She explains how the communication-satisfaction model uses “personal satisfaction” as the definition of marital quality and represents commitment as individual fulfillment by the relationship. She writes, “in the absence of satisfaction, commitment can only be seen as a less than legitimate constraint on the individual’s freedom to pursue a more satisfying bond” (p. 93).

Stanley (2007) explains that whereas marital satisfaction dominated the early days of marital research, the focus shifted in the mid-1970s to a more concentrated focus on communication and conflict. Today the trend is toward fuller constructs of couple formation and function which “have the potential to uncover deeper values and beliefs that affect marriages and how people behave in them” (p. 88). This shift in marriage conceptualization and evaluation is in part influenced by a newer direction of “healthy” marriage in public policy (e.g., Ooms, 2007; Stanley, 2004). Set out to understand and conceptualize “healthy marriage”, Child Trends, Inc. identified ten constructs: commitment of the couple; satisfaction; communication; conflict resolution; lack of domestic violence; fidelity; interaction/time together; intimacy/emotional support; commitment to the children; and duration/legal marital status. The next step after the conceptual model development is to test the model using a comprehensive measure, which is just now beginning to be accomplished. There are only two measures that can be found utilizing the Child Trends, Inc. (CTI) model. The first is one developed for CTI by MDRC for the Supporting Healthy Marriage Evaluation project, which is the one being used in this study. The second is a

measure of marital quality incorporated in the Marital and Relationship Survey (MARS) constructed by Lichter and colleagues (2005). Even with these very notable endeavors there are some missing pieces to the measures.

Marital and Relationship Survey (MARS)

In the recent Lichter and Carmalt (2009) study on religion as a source of marital strength and stability for low-income couples, marital quality is measured using the CTI “healthy marriage” model via the MARS survey. Specifically, seven of these healthy marriage dimensions are measured including: (1) commitment of the couple; (2) overall satisfaction; (3) communication; (4) intimacy/emotional support; (5) commitment to the children; (6) positive conflict resolution processes; and (7) positive conflict behaviors. The dimension of “positive conflict behaviors” is the inverse of three items that measure the presence of emotional abuse (i.e. yelling, treating like an inferior, blaming). However, other aspects of domestic violence, for example physical abuse, are not included in this “marital quality” MARS measure.

The CTI healthy marriage model is clear that the two elements that pose obvious threats to healthy marriage are violence and infidelity. Therefore, more dangerous forms of violence must be clearly identified because any presence of emotional or physical abuse would innately reveal an unhealthy relationship. The other “deal-breaker construct left out of this measure, but specified in the CTI “healthy marriage model” is a measure of couple fidelity. A simple item like the one used on the SHM measure is thought to address this measurement need: *“I worry about my spouse/partner cheating on me”*. Finally, although the dimension of “time together” is used to separate religious participation from other secular behaviors, “quality interaction/time together” is not included as a dimension of marital quality. Having positive interactions and enjoying time together is a key component to the model of healthy marriage. In reverse, if

marriage/couple relationships are characterized by negative interactions there is risk of divorce or break-up (Gottman & Notarius, 2000).

Although the MARS measure is missing some constructs, there are several commendable advantages. First, it views marriage as a multi-dimensional concept, using only 25 items to measure seven dimensions. Short-form measures are preferred over lengthy measures because of time constraints and participant motivation to return completed forms. Second, all items except for the satisfaction item correspond to a single 4-point Likert scale (1 = strongly disagree, 4 = strongly agree). Items can be easily combined to form subscales as well as an overall measure of marital quality. Third, the measure is intended for low-income couples. Testing the applicability of measures for low-income and low-education sub-populations continues to be a goal. In addition, the measure is used independently by both partners, rather than depending on proxy reports from one partner: “This allows us to gain background information for both partners, to evaluate the extent of differences in spousal perceptions of relationship quality, and to identify key factors that can account for divergent views of relationship quality” (Lichter & Carmalt, 2009, p. 171-172). Fourth, the measure was developed to be used as a web-based survey wherein participants are recruited at random. Finally and importantly, the use of this measure is used to test the CTI model where “healthy marriage” is conceptualized as mediating the relationship between a variety of “antecedents,” including religiosity, and individual and family outcomes (e.g., mental health, achievement of children, etc.). For example, some additional analyses were completed to examine whether religion buffered the deleterious effects of poor mental and physical health (an adult well-being outcome).

Supporting Healthy Marriage (SHM)

The Supporting Healthy Marriage (SHM) measure does at least consider all of the healthy marriage constructs outlined within the CTI model. However, it does not address the important role that “marital virtues” play. Hawkins, Fowers, Carroll, and Yang (2007) argue that measures of marital quality stress individualism (i.e. happiness and fulfillment) whereby the benefits individuals derive from marriage are emphasized over what partners contribute to the quality of the relationship in terms of virtues (i.e. generosity). Addressed above as the communication-satisfaction model, the individualistic view is not sufficient enough in describing marriage and should only be considered as “one framework among many” (p. 69). In addition, they argue for a conceptualization of marriage that emphasizes the corporate aspects of marriage defined by some as “we-ness” (Buehlman, Gottman, & Katz, 1992; Carrere, Buehlman, Gottman, Coan, & Ruckstuhl, 2000; Hargrave, 2000) or “partnership” (Fowers, 2000). They propose that the personal strengths and virtues that individuals offer to the relationship may be strongly related to both parenting and child well-being and may be an even stronger predictor of parenting behavior than other measures of marital/relationship quality. For these reasons, both “forgiveness” and “teamwork” are included in this study.

The concept of “forgiveness” in marriage research is gaining some attention, although the integration of forgiveness into more comprehensive theories of marriage is limited. Forgiveness has been associated with higher levels of dyadic adjustment (e.g., Gordon & Baucom, 2003; Paleari, Regalia, & Fincham, 2005), more constructive communication and lower levels of psychological aggression (Fincham & Beach, 2002), more positive cognitions regarding self and partner, as well as greater intimacy and closeness in the relationship (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Gordon & Baucom, 2003). Similarly, lower levels of forgiveness

are associated with poorer relational adjustment, intimacy, and closeness, and higher levels of psychological aggression (Fincham & Beach, 2002; Finkel et al., 2002; Gordon & Baucom, 2003). More recent findings from Gordon, Hughes, Tomcik, Dixon, and Litzinger (2009) suggest that forgiveness of a marital betrayal (i.e. infidelities, major lies, drastic unilateral financial decisions, and other similar humiliations and betrayals) is significantly associated with marital satisfaction, the parenting alliance, and children's perceptions of parental marital functioning.

Whereas the concept of "forgiveness" is gaining momentum in marital research, the concept of "teamwork" is nearly missing (Fowers et al., 2003). Teamwork, however, is a critical component because it captures the relationship itself: the elements of the relationship that are distinct from the partners and that transcend interactions. This view of the relationship as a third entity is important because it is not reduced to the individuals' personal experiences and ways of relating. Rather, this mutual concept of the relationship provides the context for the couple's interactions, as well as definitions of appropriateness, expectations, and rules of engagement. Further, this concept is the foundation for the other subjective evaluations of the relationship (i.e. marital satisfaction, happiness, intimacy). Satisfaction, for example, is a function of how well the relationship fits with the individual and joint definitions (Fowers et al., 2003).

In addition to some missing features, the SHM measure of healthy marriage is suited only for married couples. Realistically, measures are needed that will work for various family subgroups: two-resident, biological parents; married or cohabiting couples; (re)married or cohabiting couples with stepchildren; nonresident, estranged couples with children in common; as well as visiting couples who are parents. This research makes adjustments to the SHM measure so that it is appropriate for these other types of couples with children.

Finally, to date there are no multi-dimensional measures of healthy marriage that are being used to fully test the Child Trends, Inc. “healthy marriage” model of predicting parenting and child well-being. Although there is a great deal of research that relates specific aspects of marriage with parenting and child development, this research adds to the field by studying the association between a *comprehensive* measure of healthy marriage/relationships, parenting and child well-being.

Much research relates marital conflict with outcomes. For example, Kitzmann (2000) found a causal link between conflict and disrupted parenting. In particular, fathers showed significantly less support/engagement toward their children (study included sons only) after a conflictual discussion with their spouse (mothers) ($M = 3.56$ on the 5-point scale, $SD = 0.99$) than after a nonconflictual discussion ($M = 3.95$, $SD = 0.75$), $r(39) = 2.34$, $p < .05$. In addition, the level of expressed negativity between couples during an observed marital discussion (regardless of topic) was significantly correlated ($p < .05$, one-tailed) with numerous qualities of a subsequent family interaction with the child: specifically, lower family cohesion, $r(80) = -.31$; lower support/engagement by fathers, $r(80) = -.25$; lower support/engagement by mothers, $r(80) = -.49$; more family negativity, $r(80) = .27$; lower family warmth, $r(80) = -.27$; and less democratic parenting, point-biserial $r(80) = -.28$. Furthermore, family cohesion after an enjoyable topic was discussed was significantly higher when mothers reported high marital satisfaction ($M = 4.20$, $SD = 0.70$) than when mothers reported low marital satisfaction ($M = 3.25$, $SD = 0.72$). Also, family warmth after the pleasant discussion was significantly higher when mothers reported high marital satisfaction ($M = 4.00$, $SD = 0.79$) than when mothers reported low marital satisfaction ($M = 3.40$, $SD = 0.75$). In addition to testing specific domains of healthy marriage/healthy relationships (i.e. marital conflict), measures of “marital quality”

(Morrill, Hines, Mahmood, & Cordova, 2010) are still not comprehensive enough and do not necessarily consider multiple contexts.

Healthy Marriage Initiatives (HMIs)

Healthy marriage promotion is on the public policy agenda as a result of the reauthorized welfare reform bill. Specifically, the purposes of the Temporary Assistance for Needy Families (TANF) include the promotion of marriage, prevention and reduction of out-of-wedlock pregnancies, and the encouragement of two-parent families. The TANF program was renewed in the Deficit Reduction Act (DRA) of 2005 (S. 1932), and signed into law in February 2006 by the President. Developed under the Administration for Children and Families (ACF), the Healthy Marriage Initiative (HMI) is sponsoring a variety of demonstrations to examine the effectiveness in strengthening marriage in the United States (Dion, 2005).

Federally funded HMI programs serve individuals and couples at many points along the marital continuum. They include unmarried parents who may have plans to marry and who may be cohabitating. They also include single custodial and non-custodial parents, as well as increasing numbers of high school youth and other individuals and couples who are “interested in marriage.” This expansion of the target population means that HMI programs are often not marketed as “promoting marriage” per se but rather as providing education regarding the general relationship skills important to many types of couples (Ooms, 2007- CLASP Policy).

Improving children’s well-being is the overarching purpose of welfare reform, and its marriage initiative is one of many vehicles for achieving this goal. While there are many questions about the causal effects of marriage on well-being, the changes in family behavior should be considered. The strategy focuses on improving the skills of individuals to communicate and resolve conflicts effectively with partners and spouses, to parent well as a

couple, to handle financial conflicts and financial management, and to understand the lasting benefits of marriage. Research demonstrates strong associations between stable marriages and a range of positive outcomes for adults and children (Amato, 2005; Carlson & McLanahan, 2006; McLanahan, 2002; Waite & Gallagher, 2000). Besides the well-being of children, adults, and families, the promotion of marriage also recognizes the desire of many couples to want healthy marriages, the disincentives to marry built into the nation's tax and transfer programs (Carasso & Steuerle, 2005), alternatives to welfare dependence (Lichter, Graefe, & Brown, 2003; Rector, Pardue, & Noyes, 2003; Thomas & Sawhill, 2005), and the call to respond to the decline of marriage, especially in the African American and low-income communities (Lerman, Acs, & Bir, 2007). In order to strengthen marriage for the entire population, policies and services tailored to the needs and circumstances of low-income families are required (Ooms, 2002).

Limited Research on Low-Income Couples

Federal healthy marriage initiatives have increased the need for improved information on low-income married couples (Fein, 2004). Few empirical studies have examined the etiology of marriage among low-income populations (Carlson, McLanahan, England, 2004; Lichter, Graefe, Brown, 2003). Although there is an emergent body of literature about couple relationships and marriage among blacks there is little data about poor whites, Native Americans, or Latinos, or about the differences between urban and rural poor families (Ooms, 2002).

The Focus on Low-Income Couples

The Office of Head Start Healthy Marriage Initiatives serve low-income individuals and couples who have unique needs. An assessment of a healthy marriage model must begin with an understanding for whom the model is conceptualized. A large percentage of single low-income mothers would like to be married at some time and seek healthy marriages. However, many

barriers to marriage exist for low-income individuals, such as, low-quality and unsafe housing, lack of quality education, joblessness, and poor health care that present challenges to stable and healthy home environments for children as well as place stress on couples who choose to marry. There are however, many couples with children who do not choose to marry (cohabitators and nonresidential unmarried couples). The decline in marriage among the poor and near-poor is influenced by a more unique and complex array of factors than in the rest of the population (Ooms, 2002). Low-income individuals and those of disadvantaged minority groups are more likely to live in fragile families (unmarried households with children). Since 1970, there have been large increases in nonmarital childbearing among women in the bottom two-thirds of the educational distribution, whereas women in the top one-third have experienced virtually no increase (Ellwood & Jencks, 2002). Similarly, merely 22% of white children were born to unmarried parents in 1999, compared to 69 and 42% for African American and Hispanic children, respectively (Ventura & Bachrach, 2000).

Certain issues may stand in the way of a healthy marriage for low-income couples. First, some unmarried parents set an “economic bar” as a precondition to marriage that could be unrealistic, and many have trust, fidelity, and commitment issues (Gibson, Edin, & McLanahan, 2005). Second, the prevalence of childhood sexual abuse may be higher among disadvantaged individuals making it more difficult to form healthy adult relationships (Cherlin, et al., 2003). Third, couples who conceive a child soon after beginning to date need more time to form a relationship (Mincy, et al., 2003). Fourth, both unmarried and married low-income couples often struggle with issues related to having children by multiple partners (Mincy, 2002). Fifth, compared with the general population, lower income couples tend to be less well educated and to have had less success in school, to have lower literacy levels, and to be members of minorities

and come from diverse cultural backgrounds (Fein, 2004; Karney, Garvan, & Thomas, 2004). The model of healthy marriage must be inclusive of background characteristics and possible risk factors, as well as the demographics of those who are served by Healthy Marriage Initiatives.

Current Trends for Low-Income Individuals along the Marriage Continuum

Healthy Marriage Initiatives serving low-income couples must be cognizant of current marriage trends. For example, most low-income unmarried couples with children would like to marry but are restricted by barriers (Edin & Reed, 2005). Some couples choose to cohabitate with intentions to marry, and for others cohabitation is an alternative to marriage. Because of this trend, any model of healthy marriage for low-income populations must extend this view to unmarried couples. For those married with children, relationships may be unstable and include children prior to the marriage. A model predicting child well-being from healthy marriage and healthy relationships must understand the different trajectories that are at play. The following trends offer a description of who is realistically being served by Healthy Marriage Initiatives: both unmarried and married couples.

The Married Poor

David Fein (2004) offers a fundamental profile of economically disadvantaged married couples with his review of results from published reports, as well as tabulations of data from the Current Population Survey (CPS) and two surveys of married couples. The CPS is a large, high-quality survey conducted by the Bureau of the Census for the Bureau of Labor Statistics that offers rich detail on demographic and economic characteristics. Seventy thousand married adults aged 18-59, representing 89 million married adults nationwide were included in the March 2003 CPS sample. Low-income married couples participating in Healthy Marriage Initiatives may have the following descriptions according to Fein's review (2004) of the married poor:

- People with economic disadvantages are just as likely to marry as other people, but their marriages are substantially **more unstable**.
- Whereas the vast bulk of first transitions to parenthood among upper middle class couples follow first marriages, **first births** among disadvantaged newlyweds are far more likely to **precede marriage**.
- Disadvantaged married couples are comparatively **young and disproportionately Latino**. African Americans constitute a relatively small share of this population.
- Low-income married couples have substantially **lower levels of education and employment** than higher-income couples.
- Millions of married couples use a wide variety of **government assistance programs**.
- The **characteristics** of major racial and ethnic groups within the low-income married population **vary** by age, age of youngest child, education, region of the U.S., and urban-rural residence.
- There is a **marital quality gap** between low-income and other couples, but it is not as large as might be expected based on differences in marital disruption rates.

Marital Attitudes of Low-Income Women

Cherlin, Cross-Barnet, Burton, and Garrett-Peters (2008) tested three propositions regarding mothers' attitudes toward childbearing, marriage, and divorce using data on low-income mothers in Boston, Chicago, and San Antonio. They found that *having children outside of marriage* carries little stigma among low-income women. This finding was supported with earlier research by (Edin & Kefalas, 2005). In addition, there was little cultural support in low-income neighborhoods for the idea that the best *ages to have children* is during the teenage years. Finally, *divorce* was not found to be stigmatizing or embarrassing for the large majorities

of low-income mothers in the study. There was a lack of support for the idea that most low-income women have a fear of divorce leading them to avoid marriage. See Table 1 for detailed results of this study.

Table 1

Cherlin et al., 2008 Study Results

Stigma of children outside of marriage:	Best ages to have children and marry:	Fear of divorce:
About 80% of the mothers disagreed that out-of-wedlock childbearing is embarrassing and hurts a women's potential for future marriage. About 80% agreed that a woman should have children if she wants, even if unmarried and about 83% agreed that marriage does not need to precede child bearing.	Most women in the sample viewed childbearing and marriage as <i>both</i> starting during one's 20's. A majority of the mothers thought the best ages to start childbearing and to marry are within 5 years of each other.	Almost two thirds of the sample agreed that "Most people do not care if a woman gets a divorce," and only about one fourth agreed that "Getting divorced is embarrassing for a woman."

These attitudes may explain the reasons for why Healthy Marriage Initiatives recruit not only married couples, but also many unmarried individuals and couples with children.

The Non-Married Poor and Unwed Child-Bearing

Larger percentages of poor women have not married by age 35 than women who are near poor or not poor among all race and ethnic groups aged 35-44, but especially true for poor non-Hispanic black women (53% of poor non-Hispanic black women compared with 19% of poor Hispanic and non-Hispanic white women). In addition, larger percentages of poor non-Hispanic black men aged 35-44 years have not married by age 35 than not-poor non-Hispanic black men (200% or more above poverty) (Goodwin, McGill, & Chandra, 2009).

Besides the married poor, there is current research on non-married low-income individuals including those who cohabitate. For example, qualitative work by Furstenberg

(2001) and Edin and Reed (2005) suggest that low-income women face many barriers to marriage, including gender mistrust, abuse, infidelity, and multiple-partner fertility. Over five years, Edin and Reed (2005) interviewed 162 low-income mothers living in eight poor neighborhoods and found that poor women may have personal characteristics (e.g., low education, mental health problems, or out-of-wedlock births) that reduce their opportunities for marriage or make it difficult to maintain healthy relationships. (Graefe & Lichter 2002; Qian, Lichter, & Mellott 2005). This implies that Healthy Marriage Initiatives and healthy marriage models need to consider the personal characteristics of participants, including for example, areas of mental health (i.e. depression, stress).

Low-income women, especially African-American women are more willing to hold off on marriage than on child bearing. (Edin & Kefalas, 2005; Cherlin, Cross-Barnet, Burton, & Garrett-Peters, 2008). Edin and Kefalas (2005) claimed that although finding a suitable partner to marry remains difficult, young women do not hold off on childbearing because they place such a high value on children and may have children when they are still teenagers. In addition, many low-income women prefer to marry when they are older, for example, in their thirties. While Edin and Kefalas (2005) argue that women are hesitant to marry because of the stigma of possible divorce, Cherlin, Cross-Barnet, Burton, Garrett-Peters, (2008) found that *divorce* was not found to be stigmatizing or embarrassing for the large majorities of low-income mothers in their study. In their study on the marriage patterns among unwed mothers before and after PRWORA, Graefe and Lichter (2008) found that unwed childbearing *is associated with lower marriage rates and marital quality*. In addition, nonmarital birth mothers were less likely to marry "economically attractive" men in the post-welfare reform period compared to other women. Many low-income children live primarily in environments with a single parent, or with

their unmarried biological parents, or with one biological parent and that parent's intimate partner.

Low-Income Cohabitation

In recent years, researchers have had much interest in cohabitation; however, patterns of cohabitation in the general population and in low-income populations in particular is less understood (Ooms, 2002). Research shows that some cohabitating unions end and others remain as an alternative to marriage.

Cohabiting unions among the poor are not sustained. About one-half end within one year, and over 90% end by the fifth year. Break through research by Lichter, Qian, & Mellott (2006) found that most cohabiting unions **end by dissolution** of the relationship rather than by marriage. The higher dissolution fits with other research showing that cohabiting couples have lower quality relationships than currently married couples (Brown, 2000).

In addition, poor women are less likely to marry, especially minority women; less than one-third marry within five years. Poor women are also more likely than nonpoor women to choose cohabitation as a **long-term alternative** or substitute for traditional marriage (Lichter, Qian, & Mellott, 2006). Despite the low rates of marriage for cohabitating couples among African Americans found in prior research (Manning & Smock, 1995), it appears that Black men and women have higher odds of beginning their cohabitation with "marital intentions" than White men and women, with odds of 1.48 and 1.23, respectively (Guzzo, 2009). Guzzo (2009) suggests that African Americans may hold the intention to marry as a sufficient level of commitment, and may even display this with an engagement ring. Edin and Kefalas (2005) observed a new trend in poor urban communities where individuals become engaged as a way of making a public commitment but without actually marrying and having the risk of divorce. In

addition, some African Americans may continue to believe in marriage but a committed cohabitating relationship may be an acceptable “budget” alternative (Furstenberg, 1996) until other social requisites for marriage are met (Edin, 2000). If this is true, then cohabitation will be an alternative to marriage among African Americans and especially Hispanics. In a disproportionately poor and minority sample from the Fragile Families and Child Wellbeing Study, a mere 15% of cohabiting couples became married over the following year (Carlson, McLanahan, & England, 2004).

Most unmarried parents have positive attitudes towards marriage, although not as positive as those of married parents (Waller & McLanahan, 2005). Half of cohabiting mothers ‘strongly agree’ that it is better for children if their parents are married and 90% report that their chances of marriage are “fifty-fifty or better.” Non-cohabiting parents also hold positive views toward marriage although they rate their chances of marriage much lower. Research suggests that many want to marry but face barriers in doing so (Guzzo, 2009; Edin, 2000; Edin & Kefalas, 2005).

Some believe that cohabitation has become a normal “stepping-stone to marriage”. About half of all first unions before age 25 are cohabitations (Bumpass & Lu, 2000). However, because of findings by Lichter, Qian, and Mellott (2006) that most cohabiting relationships end through dissolution instead of marriage, serial cohabitation may become standard as cohabiting unions develop and break up several times before marriage. Cohabitation may then be an intense form of dating where couples are quick to live together but not necessarily to marry (Sassler, 2004). These trends and needs of cohabitating couples must be a consideration of Healthy Marriage Initiatives serving these couples and may be an area of focus for policy interventions and implications for children.

Rhoades, Stanley, and Markman (2009) found that the degree to which individuals report cohabiting to “test their relationships” is associated with more negative couple **communication** and more **physical aggression** as well as **lower relationship adjustment, confidence, and dedication**. Putting the relationship to a test is also related to higher levels of **attachment insecurity** and more signs of **depression and anxiety**. Men are more likely than women to support testing their relationships and less likely to support “convenience” as a reason for cohabiting. Couples who cohabit because they have doubts about a successful marriage may be most at risk for divorce, if they marry. Besides “testing the relationship”, men deciding to cohabitate must weigh the possible economic costs of caring for their partner's coresidential children from a prior relationship (Lichter & Graefe, 2001). Cohabiting women whose partners have children must share their partner's time and finances with children from another woman residing somewhere else. Garfield & McLanahan (2000) caution that instable cohabitating relationships may be more detrimental to children than being raised by a stable single parent.

A large percentage of women, both welfare recipients and non-recipients, believe that parents should marry, but also that single parents can raise children as well as married couples (Mauldon, London, Fein, & Bliss, 2002). Pickhardt (2003) notes that single parents have many strengths including but not limiting to being highly committed (dedicated to the welfare of their children); being able to manage diverse family functions (relinquishing sex role stereotypes); creating networks of support; and maintaining family values (attention on children).

Marital Dissolution Among The Poor

Low-income individuals have become increasingly likely to have children before marriage, and divorce for low-income married couples remains very high while declining for more affluent couples (Ellwood & Jencks, 2004; Martin, 2006; Raley & Bumpass, 2003).

Particularly, low educated married couples are more likely split (Fein, 2004; Martin, 2006). A couple of explanations have been offered by Martin (2006) including age at marriage, premarital births, and race and ethnicity. First, higher educated women are delaying marriage more than lower educated women and delaying marriage is a predictor of lower marital dissolution rates. A second explanation is that first marriages are likely to follow a non-marital birth among lower educated women (Upchurch, Lillard, & Panis, 2001). A third explanation is that without statistical controls, racial trends in marital dissolution rates may be conflated with educational trends (Sweeney & Phillips, 2004). The increasing class differences in divorce rates intensify the effects of socioeconomic inequality which transmits inequality across generations effecting adult and child outcomes (Amato, 2000).

Many low-income couples despite their race or ethnic background do not follow conventional stages of courtship (cohabitation), marriage, and childbearing. Instead family formation often begins with the (typically unplanned) birth of a child (Ooms, 2002). Many times if there is marriage, divorce follows. Families formed in this way are more complicated with joint decision-making, co-parenting, and divisions of labor. In addition, relationships between the couple and the child's non-residential parent are challenging (Ooms, 2002). An understanding of these stages is important to Healthy Marriage Initiatives as well as models of healthy marriage/healthy relationships that predict child well-being.

Risk Factors among Low-Income Couples

Couple relationships cannot be understood fully without including other influencing factors. Rather than addressing healthy marriage/healthy relationships, parenting and child well-being in isolation, risks are often interrelated, occur within the context of economic disadvantage, and may require a comprehensive approach for supporting families. For example,

Bratter and Eschbach (2005) found that family income and employment are negatively associated with levels of psychological distress, whereas status as unmarried is positively related to distress scores. Distress scores are more likely to be higher among women, the least economically stable, the unmarried, and those with a chronic illness. In addition, low SES pertains to less distress for African Americans compared to whites, which was similar to previous studies (Williams, Takeuchi, & Adair, 1992). Bratter and Eschbach (2005) suggest that intergroup dynamics, such as racial discrimination and acculturation, as well as structural issues, such as wealth inequality, may explain differences in health and psychological well-being in more meaningful ways than individual indicators of SES (Williams & Collins, 1995). Lasting effects of perceived discrimination and inability to translate high education into higher net worth may influence the ability of African Americans to handle stressful life events at higher ends of the socioeconomic continuum. Addressing extrinsic factors is especially important in marriage and relationship education programs for low-income couples, because these factors likely produce greater difficulties in preserving healthy relationships.

Parenting and Child Well-Being

It is important to note the dynamic conceptions of individuals in poverty such as permanent and transitory income, cumulative and persistent poverty, and the number and length of poverty spells. However, even these measures fail to portray key aspects of a child's history of exposure to economic deprivation; for example, there is no distinguishing between families with improving economic circumstances and those with deteriorating or stable economic circumstances. This study does not examine the effect of poverty on children; rather its aim is to study effects of healthy marriage/healthy relationships and effects of parenting on children in poverty, as defined by their enrollment in the Head Start program.

Healthy Marriage Initiatives have the ultimate goal of positively influencing the well-being of children in poverty. McLoyd's (1990) family stress model is helpful to consider because it describes how poverty places stress on the psychological well-being of parents. McLoyd (1990) argues that "psychological distress" is a significant mediator between economic hardship and parenting. This distress derives from negative life events, undesirable chronic conditions, and the absence and disruption of marital bonds. Other assumptions of the model are: (a) poverty and economic loss reduce the ability for supportive, consistent, and involved parenting; (b) economic loss and poverty indirectly affect children through their influence on the parent's behavior toward the child; and (c) under the conditions of economic hardship, father-child relations depend on the quality of relations between the mother and father.

In a more recent study, Raver, Gershoff, and Aber (2007) also found clear evidence for the family stress model. Namely, lower income was associated with increased hardship, higher stress, lower parenting behavior, and lower social skills in kindergarten teachers' ratings. Interestingly, they compared White, Black, and Hispanic 6-year-olds, using the Early Childhood Longitudinal Study – Kindergarten Cohort (ECLS – K). Negative associations between material hardship, parents' stress, and parenting behavior differed in magnitude across the three ethnic groups. While pathways from income to material hardship fit similarly across all three groups, higher material hardship was more strongly associated with higher levels of parents' stress for Black families ($\beta = .33$) than for Hispanic families ($\beta = .19$) and White families ($\beta = .24$). Higher stress, in turn, was more strongly related to lower levels of positive parenting behavior for Black and Hispanic families ($\beta = -.77$ and $\beta = -.82$ respectively) than for White families ($\beta = -.64$). Lastly, coefficients for paths between positive parenting behavior and child social competence

were larger for White families (e.g., $\beta = 1.93$) than for families of color ($\beta = 1.31$ for Black families and $\beta = .99$ for Hispanic families).

Unresponsive and harsher, more punitive parenting occurs more often among low-income families, beginning as early as infancy (Magnusson & Duncan, 2002; McLoyd, 1998). In a national study, 85% of American parents above the poverty line were responsive to their young children (from newborns to three-year olds), compared with 74% of parents in low-income homes (Bradley, Corwyn, McAdoo, & Coll, 2001). Furthermore, a meta-analysis demonstrated a strong and consistent negative relation ($d \pm = .48, .55$, for cross-sectional and longitudinal studies, respectively) between socioeconomic disadvantage and harsh, less responsive parenting (Grant, et al., 2003).

Research on how parenting influences the development of children in poverty is extensive (McGroder, 2000; Yeung, Linver, & Brooks-Gunn, 2002). The search for explanatory processes of poverty's impacts on children is commendable. Popular interventions for children in poverty include targeting the child's early childhood environments including home and school. Owens and Shaw (2003) have identified several child and family factors associated with the positive adjustment of impoverished children. For example, they found that positive adjustment at age 8 was associated with secure attachment manifested at 18 months, low maternal aggressive personality at 1.5 to 3.5 years, and positive mother-child relationships at 5 to 6 years. This finding suggests that a critical intervention to children in poverty would include concentrated attention on promoting positive mother-child relationships, especially for those children experiencing chronic poverty (Owens & Shaw, 2003). This dissertation study appreciates father involvement by including males (both married and unmarried men as well as biological and non-biological fathers who may play a role in the child's life) to appraise their

own marriage/partnerships as well as on their parenting. Current research by Johnson, Shears, and Perry (in press) shows that African American fathers in the Fragile Families Study are actively engaged in cognitive, physical play, socialization and cognitive activities with their children. Multivariate analysis reveal that a variety of fathering activities were significantly correlated ranging from .43 - .66, suggesting various forms of participation with their children. In addition, there was a significant correlation between cognitive activities and Bayley scores ($r = .33, p < .01$). The results support father involvement by African American males and validate benefits for children.

Healthy Marriage Initiatives attend to building healthy marriage/healthy relationships as a source of social support system for families in poverty, and use educational approaches to encourage healthy family functioning and positive parenting. These initiatives are not in any way considered an immediate solution to lifting all families out of poverty. Definitions and evaluations of healthy marriage for low-income couples need to consider the complexity of family relationships while including possible risk factors that may influence these relationships.

Defining Healthy Marriage

The first step toward operationalizing outcomes is to define “healthy marriage.” This project recognizes various definitions but chooses the definition and conceptual model from Child Trends, Inc. as a guide for this research. ACF’s definition of “healthy marriage” is a good start as it provides a framework for the purpose and design of federally funded HMIs. This definition highlights two common characteristic that healthy marriages share: “First, they are **mutually enriching**, and second, both spouses have a deep **respect** for each other. It is a **mutually satisfying** relationship that is **beneficial** to the husband, wife and children (if present). It is a relationship that is committed to **ongoing growth**, the use of effective **communication**

skills and the use of successful **conflict management skills**” (ACF-HMI homepage retrieved November 2009). Furthermore, ACF’s Community Healthy Marriage Initiative uses a concept of healthy marriage guided by Lewis and Gossett (1999), who define eight essential characteristics of a “healthy marriage”:

- Both partners participate in the definition of the relationship
- There is a strong marital bond characterized by levels of both closeness and autonomy
- The spouses are interested in each other’s thoughts and feeling
- The expression of feelings is encouraged
- The inevitable conflicts that do occur do not escalate or lead to despair
- Problem-solving skills are well developed
- Most basic values are shared
- The ability to deal with change and stress is well developed.

A noteworthy definition by Stanley and Markman (Stanley, 2004; 2007) proposes three dimensions to “healthy marriage” extending from two types of safety found in successful relationships and marriages (Stanley, Markman, & Whitton, 2002). The three essential elements of healthy marriage are defined as:

- 1). Interaction safety- Being able to talk openly and well (enough) about key issues without repeated negative interactions (escalation of conflict, criticism, put-downs, withdrawal, contempt, and so forth).
- 2). Personal safety- Mutual respect and understanding, and freedom from fear of physical or emotional harm and intimidation
- 3). Commitment safety- Security of mutual support both now and in the future.

Table 2 below includes additional definitions featured in the memos to Child Trends, Inc. (Jekielek et al., 2003) gathered from professionals to provide insight on the conceptualization and measurement of “Healthy Marriages”:

Table 2

Healthy Marriage Definitions

Researcher(s)	HM Definition
Cowan & Cowan (2003)	Definition of a healthy couple relationship: • Partners have and foster positive perceptions of the relationship and the self in relationship. • Partners have and foster interactions that promote the development of family members and reduce the risks of both individual and relationship psychopathology. In a healthy couple relationship, the partners have reasonably good mental health, they communicate clearly, they are connected with their families of origin and people and institutions outside the family, and, if they are parents, they function reasonably effectively in rearing their children.
Fagan (2003)	A healthy marriage is one where the couple always belongs to each other and to their children, no matter how difficult this belonging may be at times. At minimum that means they never reject each other. In the positive, the central dynamic of a healthy, stable marriage is that each spouse serves the other. This dynamic and the capacity to live in this way needs to be assessed, both behaviorally and cognitively.
Fowers (2003)	Fowers proposes a six-dimension model to capture the multidimensional nature of long-term romantic relationships: • Individual Benefits, such as satisfaction, and experiences of emotional and physical intimacy • Individual Contributions, such as commitment and personal investment into a relationship • Couple Interaction, as indicated by specific communicative behaviors • Relationship Entity, such as a sense of the relationship as a team, or a sense of “we” • Family Functioning, the degree to which the relationship

Table 2 (cont'd).

	enables fulfillment of family roles • Relationship Context, such as social, legal, extended family and friendship networks which might offer support for the relationship.
Heyman (2003)	A healthy relationship is one that safeguards partners' physical integrity, minimizes their risk of preventable physical and mental disorders, and promotes their physical and mental well-being. Similarly, when partners are parents, a healthy relationship safeguards children's physical integrity, minimizes their risk of preventable physical and mental disorders, and promotes their physical and mental development and well-being.
Nock (2003)	A healthy marriage (or relationship) is one in which partners are sufficiently committed to their union to sustain the relationship in those times when love and affection cannot.
Olson & Knutson (2003)	A healthy marriage can be conceptualized as a loving, committed relationship where both partners are satisfied with their relationship. Two cornerstones of a happy marriage are strong communication and conflict resolution skills. This definition is based on the "National Survey of Marital Strengths" of 21,501 married couples who took the ENRICH Couple Inventory.

These definitions share commonalities, each with a slightly different focus. Combined, these definitions of healthy marriage most generally refer to a mutually committed relationship in which partners participate and interact (i.e. with positive communication and conflict resolution) to promote safety, development, sustainability, and well-being for the family.

The healthy marriage definition written for Child Trends, Inc. by Moore et al. (2004) that was outlined in Chapter 1 is the chosen definition which includes ten healthy marriage constructs.

Healthy Marriage Constructs and Associations to Child Well-being

This section more specifically describes the ten constructs of healthy marriage identified by Moore et al. (2004) that are used in framing this study and describes how the constructs relate to other aspects of relationship quality and child well-being.

Couple Commitment

This construct refers to viewing one's relationship with a future in mind, planning to pull through difficulties, and staying committed to caring for the other person- a sense of "us" or "we-ness" (Levinger, 1979; Fowers, 2003). Commitment is an important aspect of relationship quality for adults (Amato & Rogers, 1999) as well important for child well-being (Amato & Booth, 1997; McLanahan & Sandefur, 1996). Moreover, an essential type of safety characteristic of healthy relationships and marriages is the security of a mutual supportive relationship both now and in the future (Stanley, Markman, & Whitton, 2002).

Stanley, Whitton, and Markman (2004) noted that literature on commitment primarily focused on the institution of marriage rather than on dedication between partners (e.g., Ciabattari, 2004). Partners with stronger dedication (interpersonal commitment) tend to have a stronger sense of couple identity and to report a stronger desire for a future together. Committed couples place high priority on the needs of their partners and the relationship and are willing to make sacrifices for one another (Stanley & Markman, 1992; Whitton, Stanley, & Markman, 2002). Rather, constraints refer to those things that keep individuals together despite personal dedication and help to explain why some individuals stay in unhappy relationships (Stanley & Markman, 1992). In his response to Child Trends, Inc. (Jekielek, Moore, Carrano, & Matthews, 2004) on the *Conceptualization and Measurement of Healthy Marriages and Positive Relationships*, Steve Nock writes that for both parties, the imagined commitment of one's partner

is by far the most important factor in producing commitment and an indication of obligation to that person.

Commitment is accepted as vital to healthy relationships and is directly related to marital satisfaction and survival, although researchers differ as to the precise definition and nature of the construct (Stanley, Markman, & Whitton, 2002). Stanley noted in the findings of a survey of 2,300 divorced residents in Oklahoma that 85% believed “lack of commitment” was the major reason for divorce (2002). Those who report higher levels of commitment were less likely to report having serious thoughts about alternative partners, were less likely to report feeling trapped, and were more likely to report relationship satisfaction (Stanley, Markman, & Whitton, 2002).

Marital Satisfaction

This construct is defined as the individual happiness regarding various aspects of the marriage and with the overall marriage. Marital satisfaction significantly influences the broader family context of children. Analyses of data from 1,101 participants in the National Survey of Families and Households indicated that mothers’ and fathers’ reports of marital satisfaction were negatively associated with child symptomatology (Fishman & Meyers, 2000). Moreover, dissatisfied wives were less involved with their children, which sequentially was associated with greater child psychological distress. This finding is compatible with the spillover hypothesis, which predicts that mothers who deal with problematic marital relationships are unable to give as much time to their children.

Participation with various relationship education classes can improve couples satisfaction for a while (Carroll & Doherty, 2003). Involvement in premarital education was associated with higher levels of satisfaction and commitment in marriage and lower levels of conflict, in addition

to reduced chances of divorce. These projected effects were robust across race, income (including among the poor), and education levels, suggesting the great benefit of premarital education (Stanley, Amato, Johnson, & Markman, 2006). Satisfaction is the most frequently studied component of marriage, followed by couple communication (Fowers, 2003; Fowers, Buckner, Calbeck, & Harrigan, 2003).

Communication

A popular area of study and a focus for marital interventions (Ragan, Einhorn, Rhoades, Markman, & Stanley, 2009), communication is another element of healthy marriage that some view as the substance of relationships (Dindia & Timmerman, 2003). Communication and relationship quality are related (Kelly, Fincham, & Beach, 2003; Weigle, 2003). Most importantly is the quality and nature of communication. Marriage education produces positive effects on relationship quality and marital communication (Carroll & Doherty, 2003; Hawkins et al., 2008) which is maintained beyond 6 months (Blanchard, Hawkins, Baldwin, & Fawcett, 2009). Marriage educators may promote teaching communication techniques to prevent the erosion of marital satisfaction (Laurenceau, Stanley, Olmos-Gallo, Baucom, & Markman, 2004).

Conflict Resolution

A prominent topic in public policy (Stanley, 2004- testimony on healthy marriage to the US Senate), conflict resolution reflects the ability to handle disagreements and problems that can weaken a relationship. This involves successful problem solving and may involve a respectful agreement to tolerate the opposing position or the mutual recognition of outside sources to the conflict. Conflict is a risk factor for marital distress and divorce (Clements, Stanley, & Markman, 2004) and poorer child adjustment (Grych & Fincham, 2001; Bradbury, Fincham, & Beach, 2000). Conflict resolution skills can be changed (Fagan, 2003) and is thus a goal for

marriage education. Fincham, Stanley & Beach (2007) demonstrate how the study of conflict has been center stage in psychological research on marriage and propose a shift to include a more comprehensive view of marriage.

Lack of Domestic Violence

This incorporates both physical assaults and psychological abuse (Strauss, 1992; Strauss & Gelles, 1990) with distinctions between various types of violence on the basis of the control contexts (Johnson, 2003) against a partner or child. Johnson (2006) describes four major types of intimate partner violence: (a) situational couple violence, (b) intimate terrorism, (c) violent resistance, and (d) mutual violent control. These types are conceptualized by the control motives of the perpetrator that indicate an attempt to use general control over one's partner (Johnson, 2006). He has demonstrated, using a variety of data sets, the different causes, different developmental trajectories, and different consequences of these types of violence (Johnson, 1999, 2001, 2006; Johnson, Conklin, & Menon, 2002; Johnson & Leone, 2005; Leone, Johnson, & Cohan, 2003; Leone, Johnson, Cohan, & Lloyd, 2001).

Couple violence and child abuse are obvious indicators of an unhealthy relationship. Intimate partner violence is recognized as a serious public health problem (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). Although declining rates of partner violence have been suggested (Hitt, 2001), the prevalence of domestic violence is extremely high. In the United States, nearly one in four women reports experiencing violence by a current or former spouse/partner at some time in her life (Center for Disease Control and Prevention, 2008). Over 15 million children in the United States live in families in which partner violence occurred at least once within the year, and seven million children live in families with severe partner

violence (Whitfield, Anda, Dube, & Felittle, 2003). A true understanding of healthy marriage must consider the prevalence and nature of violence.

A violent relationship is inherently unhealthy. In addition, relationship violence is associated with a variety of other relationship health indicators, such as marital satisfaction and marital stability (Arias, Lyons, & Street, 1997; Fincham, Bradbury, Arias, Byrne, & Karney, 1997; Lawrence & Bradbury, 2001; Marshall, Weston, & Honeycutt, 2000; Rogge & Bradbury, 1999; Testa & Leonard, 2001). A recent study by Afifi et al., (2009) found an association between male and female victims of interpersonal violence (IPV) and past child abuse. Also, IPV was strongly associated with some psychiatric disorders, with females experiencing a wider range of poor mental health outcomes compared to males.

Most nonfatal intimate partner victimizations of women (two-thirds) in the United States occur in the home environment (Catalano, 2007). Young children under age 12 live in households with intimate partner violence (IPV) in 38 percent of incidents involving female victims (Catalano, 2007). The effects of IPV on children's adjustment have also been well documented (Bancroft & Silverman, 2004; Graham-Bermann & Edleson, 2001; Jaffe, Baker, & Cunningham, 2004; Attala, Bauza, Pratt, & Vieira, 1995; Brandwein, 1998; Campbell & Lewandowski, 1997; Kolbo, Blakely, & Engleman, 1996; Widom, 1989; Wolak & Finkelhor, 1998). Violence has an independent effect on children's adjustment and is significantly more harmful than high levels of marital conflict (McNeal & Amato, 1998).

Fidelity

Being faithful to one's spouse continues to be a key element in conceptualizing healthy marriage. Infidelity, defined as "a secret sexual, romantic, or emotional involvement that violates the commitment to an exclusive relationship" (Glass, 2002, p. 489) can have many

negative effects on the individuals and relationship as a whole. Infidelity is the number one cause of divorce (Amato & Previti, 2003), and many times leads to depression (Cano & O'Leary, 2000) among partners of unfaithful individuals. Qualitative work by Smock and Manning (2003) indicates that infidelity is a “deal breaker.” In other words, the betrayal of trust caused from infidelity most often ends relationships.

Sexual mistrust and infidelity combined are the most common relationship problems and are often associated with breakups among unmarried parents (Reed, 2005). Mistrust and infidelity are among the top marriage barriers for low-income women (Edin & Reed, 2005). Sexual mistrust and infidelity fears result from real knowledge of previous infidelity, women's general distrust of men (Edin et al., 2003), and sustained social contact with the parent of a partner's children from a prior relationship. Even the presence of a former intimate partner may put the current romantic relationship in danger (Johnson, 2003). Ongoing co-parenting with an ex-partner can challenge trust and fidelity in one's current relationship especially for unmarried persons, whose relationship did not end in divorce (a common pattern among low-income couples), and yet that couple maintains contact on behalf of the children.

Hall and Fincham (2006) place importance on the role of forgiveness (not necessarily reconciliation) as the best possible outcome for couples affected by infidelity. Forgiveness can have significant emotional and physical health benefits even for couples who split (Toussaint & Webb, 2005; Toussaint, Williams, Musick, & Everson, 2001; Witvliet, Ludwig, & Vander Laan, 2001).

Interaction and Time Together

This applies especially to quality of the interaction and enjoyment of time together, but also to the amount of time together and what couples do jointly. Marriage education programs

focus on improving the quality of marital interaction — behavioral exchanges and associated thoughts, feelings, and physiological responses (Knox & Fein, 2008). Marital interaction includes day-to-day activities and social activities (Booth, Amato, Johnson, & Rogers, 2003). The *amount* of time couples enjoy spending together also contributes to marital success (Aron, Norman, McKenna, & Heyman, 2000; Presser, 2000).

Alternatively, negative interaction between partners (more expressions of negative affect) is negatively associated with every aspect of relationship quality, positively associated with considerations and talk of divorce (Stanley, Markman, & Whitton, 2002), related to lower relationship satisfaction and higher rates of divorce or break-up (Gottman & Notarius, 2000).

Intimacy and Emotional Support

This includes feelings of trust, caring, love, and physical affection. Emotional intimacy, a feeling of closeness supported by trust and mutual feelings of vulnerability, is another form of positive interaction (Cordova, Gee & Warren, 2005). High levels of intimacy is associated with improved psychological, physical, and relational well-being (Hassebrauck & Fehr, 2002), greater marital satisfaction (Laurenceau, Feldman Barrett, & Rovine, 2005), and reduced divorce risk (Firestone & Firestone, 2004; Schneller & Arditti, 2004). Some research implies that trust is dependent on intimacy and necessary for a successful relationship (Larson, Hammond, & Harper, 1998). Romantic love performs a commitment role through intimacy, connection, and a mutual planning for the future (Diamond, 2003; Ellis & Malamuth, 2000). Wilcox and Nock (2006) conclude that the “functions, character, and stability of contemporary marriages are intimately tied to their emotional well-being” (p. 1340).

Feelings of intimacy may be different for men and women (Laurenceau, Feldman Barrett, & Rovine, 2005). Compared with husbands, wives’ increases in intimacy are more powerfully

dependent on feeling understood, validated, accepted, and cared for while husbands' felt intimacy is dependent on self-revealing disclosure. One important action identified in the qualitative study on male's perception of intimacy by Patrick & Beckenbach (2009) was that of *sharing*. Intimacy involved several levels of sharing, including emotions, thoughts, words, and physical expressions. In addition, *sharing* produces feeling of safety, and in turn, honesty. Participants indicated that intimacy, as it relates to *sharing*, is a "place to be yourself, and accepted by the other in an atmosphere of trust" (p. 52). In an atmosphere of intimacy, physical affection was also seen as an intensely emotional, connecting experience. Demonstrations of affection and positive emotion predict stability and satisfaction (Gottman, Coan, Swanson, & Carrerre, 1998).

Commitment to Children

Commitment to children is part of the "healthy marriage" definition, given the focus of children's well-being. A high-quality couple relationship is linked to better co-parenting (Carlson & Högnäs, 2009). Cowan and Cowan (2003) indicate that an important dimension of healthy relationships for couples regarding caring for children is: (a) the ability to co-parent effectively; (b) joint decision making; (c) satisfaction with the division of labor; (d) and supportive parenting. Healthy marriage initiatives should include co-parenting as a topic, considering the positive effects on child development and well-being (an important topic for future research). Such interventions show potential for strengthening family ties among low-income couples (Cowan et al., 2009). Bearing in mind the influence of children on marriage, Anderson (2003) emphasizes the fulfillment of paternal responsibilities.

For couples who have and live with only their biological children, commitment to children encompasses financial, social, and emotional support over time. Among co-resident

households, co-parenting is related to both marital behavior (Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004) and child wellbeing (Schoppe, Mangelsdorf, & Frosch, 2001) and may mediate between the former and the latter (Katz & Low, 2004; Margolin, Gordis & John, 2001). Within two-parent families, cooperative co-parenting has been linked to mother and father's increased responsive parenting with infant and school-age children (Caldera & Lindsey, 2006; Floyd, Gilliom, & Costigan, 1998; Margolin et al., 2001).

For divorced or split-up couples, or for visiting couples (those who are romantically involved and have a child together, but who do not share a common residence), the quality of their commitment to their children, is more complex. There has been limited attention to co-parenting among cohabiting unmarried parents with children. Carlson & Högnäs (2009) address this limitation with their recent research on co-parenting among unmarried parents. They found that parent depression diminishes positive co-parenting, as does fathers' prior incarceration, whereas having a high-quality couple relationship is linked to better co-parenting. Further they suggest that individual mental health and more positive relationship health between parents may increase co-parenting among unmarried parents, a potentially important goal for social policy.

Duration and Legal Marital Status

These constructs originated in research on family structure and child development. Compared to children residing with married parents, children with unmarried cohabiting parents have been found to have more behavior problems, poorer school performance, and higher levels of psychological distress (Artis, 2007; Brown, 2004; Dunifon & Kowaleski-Jones, 2002; Manning & Lamb, 2003).

As mentioned earlier, Osborne & McLanahan (2007) found that partnership instability is very common among children born to unmarried parents, especially those born to mothers who

are not living with their child's father. By age 3, between 25% and 30% of children born to noncohabiting mothers go through three or more partnership transitions. Partnership instability is positively associated with aggressive and anxious/depressive behavior in children at age 3. One partnership change has a moderate effect on child outcomes, while multiple transitions yield large effects for children (Osborne & McLanahan, 2007). Furthermore, Carlson & Högnäs (2009) report that under two-fifths of unmarried couples are together five years following the birth of their child. Their summary of factors that encourage union stability among unmarried parents with children is listed in Table 3 below:

Table 3

Factors Encouraging Union Stability

Findings	Sources
Essential elements for marriage after a nonmarital birth include men's earnings, wages, and employment.	Carlson, McLanahan, & England, 2004; Gibson-Davis, 2009; Harknett, 2008; Harknett & McLanahan, 2004
The key economic factor for women is education, increasing the likelihood of marriage.	Carlson et al., 2004; Harknett, 2008
Aspects of culture (widely shared beliefs and practices) affect decisions and behavior around family formation.	Axinn & Thornton, 2000; Clarkberg, Stolzenberg, & Waite, 1995; Nock, 1995
Positive attitudes toward and expectations about marriage, and religiosity play a role in union stability.	Carlson et al., 2004; Waller & McLanahan, 2005; Wilcox & Wolfinger, 2007
Gender distrust and sexual jealousy (especially by women toward men), along with multi-partnered fertility, are key marriage barriers.	Carlson et al., 2004; Edin & Kefalas, 2005; Hill, 2007; Monte, 2007
Partners' perceptions of the emotional quality of their marriage affects whether they stay together or part.	Cowan, Cowan, Schulz, & Heming, 1994; Gottman, 1994; Karney & Bradbury, 1995 Among unmarried couples with children- Carlson et al., 2004

Federally funded HMI programs serve low-income diverse individuals and couples at many points along the marital continuum with improving children's well-being as the overarching purpose. These programs have increased need for improved information on low-income couples, to better serve the population and for a better understanding of healthy marriage among the poor. HMIs utilize education as a vehicle to enhance marriages by helping to identify unhealthy aspects of marriages and promote many elements of a healthy marriage that can be learned and practiced. Unhealthy aspects of marriages have negative influences on children's well-being including but not limited to child psychological distress, behavior problems including aggressive and anxious/depressive behavior, and poorer school performance. With a family process perspective in mind, it is important to evaluate how healthy marriage programs influence the well-being of adults and how this in turn relates to children's outcomes.

CHAPTER 3: METHODS

In this chapter I describe the participants, research procedure, and instruments used in the present study. The first purpose of this research was to examine the factor structure of a newly developed healthy marriage/healthy relationships measure (HM/HR) by Manpower Demonstration Research Corporation (MDRC) and other measures of personal characteristics, parenting, and child well-being for a group of low-income couples with children. The second purpose was to examine how the factor structure of the HM/HR measure varied across (a) gender, (b) racial group (White and African American) and (c) marital status (married and unmarried). The third purpose was to test a measurement model of healthy marriage developed by Child Trends, Inc. that predicts child well-being. This model is used by Federal Healthy Marriage Initiative Demonstration Projects.

The primary variables in the healthy marriage/healthy relationships measure were couple commitment, commitment to children, relationship happiness, quality time together, conflict frequency, lack of domestic violence, communication, stability, emotional intimacy, as well as the two added marital virtues of forgiveness and teamwork. Primary variables included in the Structural Equation Model (SEM) were: Risk (stress and depression), Healthy Marriage/Healthy Relationships (inclusive of the 11 variables stated above), Parenting Behavior, and Preschoolers Social Competence.

Participants

Adults

The full sample ($n = 343$) consisted of 151 men (44%), 189 women (55%), and 3 (1%) not reporting their gender. There were 168 (49%) African American participants, 131 Caucasian participants (38%), and 35 (10%) participants who identified themselves as either Hispanic ($n =$

9), Arab American ($n = 21$), American Indian ($n=1$), or other ($n = 4$). Nine participants did not report on their race. Of the participants, 142 (42%) were unmarried and 196 (58%) were married. Unmarried persons include those who are single (never married) ($n = 42$), cohabiting ($n = 72$), separated ($n = 2$), common law marriage ($n = 17$), and divorced ($n = 9$). Married persons are those who are experiencing either a first marriage ($n = 172$) or remarriage ($n = 24$). Five participants did not report on marital status. Table 4 displays demographics for gender by the two dominant racial groups (African American and Caucasian) and marital status (unmarried and married).

The participants ranged in age from 20 to 62 years, with a mean age of 33.3 ($SD = 7.3$) and a median age of 32 years. Eighteen participants did not report their age. Additional demographic information such as education levels, income, children from a previous relationship (multiple fertility), residence with the Head Start child, and marital status length is shown in Table 5. The dataset was split by gender instead of using couple data as a unit of analysis. The purposes of this study were to establish the factor structure and model fit for males and females. After this initial work on factor structure, future research might examine the data from a dyadic perspective.

Children

Participants who were parents to the Head Start child were asked to complete questions regarding their parenting behaviors and their child's social competence. Those who were not parents to the Head Start child were asked to skip these questions. In some cases, for example, a biological residential mother had a non-residential boyfriend who did not participate in the raising of the child and therefore, did not complete the parenting and child portions of the

questionnaires. Instead, the mother was asked to complete the parenting and child information. There were 334 participants who completed the parenting scales (97%).

Participants reported on their children which collectively reflected 156 boys (45%) and 167 girls (49%); 20 (6%) children had no gender reported. Ages ranged from 3 to 6 years, with a mean age of 4.5 years ($SD = .70$). Participants identified 36 children (11%) as having a physical, mental, or emotional condition or behaving in ways that demand extra attention. In addition, 13 children (4%) were identified by their parents as having a condition or behaving in ways that put severe stress on their marriage/relationship.

Table 4

Racial and Marital Status Demographics by Parent Gender

	<i>N</i>	<i>%</i>
<i>Males</i>		
<i>Race</i>		
African American	72	55%
Caucasian	59	45%
<i>Marital Status</i>		
Unmarried	60	40%
Married	90	60%
<i>Females</i>		
<i>Race</i>		
African American	96	57.8%
Caucasian	70	42.2%
<i>Marital Status</i>		
Unmarried	81	43.5%
Married	105	56.5%

Table 5

Other Demographics by Parent Gender

	<i>N</i>	<i>%</i>
<i>Males</i>		
<i>Education</i>		
Not yet completed HS/GED	16	10.6%
Completed high school/GED	44	29.1%
Some College or VoTech Degree	70	46.4%
College: 4 year degree	12	7.9%
Completed graduate degree	4	2.6%
Not reported	5	3.3%
<i>Females</i>		
<i>Education</i>		
Not yet completed HS/GED	12	6.3%
Completed high school/GED	52	27.5%
Some College or VoTech Degree	100	52.9%
College: 4 year degree	15	7.9%
Completed graduate degree	7	3.7%
Not reported	3	1.6%
<i>Males</i>		
<i>Income</i>		
No Income	9	6.0%
Under \$4,999	16	10.6%
\$5,000 - \$9,999	22	14.6%
\$10,000 - \$14,999	21	13.9%
\$15,000 - \$19,999	16	10.6%
\$20,000 - \$29,999	34	22.5%
\$30,000 - \$39,999	16	10.6%
\$40,000 - \$49,999	5	3.3%
More than \$49,999	6	4.0%
Not reported	6	4.0%
<i>Females</i>		
<i>Income</i>		
No Income	26	13.8%
Under \$4,999	40	21.2%
\$5,000 - \$9,999	33	17.5%
\$10,000 - \$14,999	32	16.9%

Table 5 (cont'd).

\$15,000 - \$19,999	13	6.9%			
\$20,000 - \$29,999	17	9.0%			
\$30,000 - \$39,999	11	5.8%			
\$40,000 - \$49,999	5	2.6%			
More than \$49,999	4	2.1%			
Not reported	8	4.2%			
<i>Males</i>					
<i>Children from a previous relationship</i>					
Yes	56	37.1%			
No	95	62.9%			
Not reported	0	0%			
<i>Females</i>					
<i>Children from a previous relationship</i>					
Yes	84	44.5%			
No	104	55.0%			
Not reported	1	.5%			
<i>Males</i>					
<i>Residing with Head Start Child</i>					
Yes	127	82%			
No	14	9%			
Not reported	14	9%			
<i>Females</i>					
<i>Residing with Head Start Child</i>					
Yes	185	97.9%			
No	0	0%			
Not reported	4	2.1%			
	<i>N</i>	<i>%</i>	<i>Range</i>	<i>M</i>	<i>SD</i>
<i>Males</i>					
<i>Marital length</i>	85	55%	1 - 33 years	7.1	5.8
<i>Females</i>					
<i>Marital length</i>	101	53%	1 - 33 years	7.4	5.5

Procedures

Parent and child participants were drawn from Wayne County Health and Family Services (WCHFS) Head Start. WCHFS Head Start enrolls 3,723 children within 29 sites across five delegate agencies in out-Wayne County, Michigan. Wayne County Health and Family Services Head Start received a Healthy Marriage Initiative (HMI) 5-year grant through the Office of Head Start and serves singles, unmarried couples as well as married couples. Data collection was planned to be conducted at one or two sites per delegate agency to get a wide spread across the County. In addition to collection at Head Start site locations, data collection was also scheduled to take place at Healthy Marriage/Healthy Relationship (HM/HR) conferences for Head Start parents. During the project's proposal stage, the investigator sought approval of the research by the grantee administrative team, delegate directors, Policy Council, and education team of grantee and delegate specialists. Specifically, a presentation was made to the grantee administrative team on April 7, 2010 to education specialists on April 15, 2010, followed by a presentation at the directors' meeting on May 4, 2010 and to Policy Council on May 5, 2010. The project investigator explained the purpose of the research and methods of data collection as well as answered questions that were raised. Unanimous support of the research was received by all parties through formal voting procedures.

Site Data Collection

Following IRB approval of the project with an "exempt" status on May 10, 2010, the investigator began contacting delegate directors to select participating sites. Seven sites were chosen (one site each for three delegates and two sites each for the other two delegates). Sites that had many ELL families were not considered because of potential literacy challenges with completing the questionnaire. Data collection was grouped into two waves based on the last day

of school. The first wave included those sites with a last day of school in May and the second wave included sites with a last day of school in June.

The investigator met individually with each of the Head Start site leaders. At this meeting, data collection procedures were discussed as well as plans for communicating with teachers. A letter from the researcher to teachers was written to explain the project. The letter was delivered to every teacher by either placing the letter in their site mailbox or by giving the teachers the letter at a site staff meeting. After letter distribution, the researcher met individually with every teacher to answer any questions before data collection began.

Data collection at the site began with hanging research announcement flyers around the school building. The flyer included the research project eligibility criteria: (1) involvement in an intimate relationship (marriage/romantic partnership) during the past 12 months (to ensure the study of relatively stable relationships); (2) parent (biological/step) of a Head Start enrolled child for at least one partner in the intimate relationship; (3) at least one of the Head Start parents must live with the Head Start child and must not have lived apart from the child for four months or more, and (4) participation of willing partner- individual questionnaire completion by *both* partners.

Data collection procedures for the site continued with the placement of two bundled questionnaire packets (one per person in the couple relationship) in each of the parent mailboxes by the researcher. The questionnaire packets were accompanied with the written instruction that if parents were eligible, interested, and willing to participate they were to individually complete the questionnaire at home in private and return it to the classroom in the marked “questionnaire drop-box”. Parents who decided not to participate were asked to return their incomplete packets in the marked drop-box as well so that the questionnaire could be used for a different potential

participant. The intention was that incomplete packets returned during wave 1 would be potentially recycled and used for wave 2. However, the majority of parents did not return incomplete packets and additional production of packets for wave 2 was required.

After packets were placed in site parent mailboxes, the researcher was available to parents who may have needed additional clarification regarding the project. This was performed by being present in the halls during child drop-off/pick-up times, attending a parent meeting, or attending a parent end-of the year celebration. The entire site data collection method produced 141 completed questionnaire packets collectively across sites.

HM/HR Conference Data Collection

In addition to the site data collection method, data was also collected at two Head Start sponsored HM/HR events held on May 22, 2010 and August 21, 2010. Time was reserved for the researcher to collect data at the event. All parents attending the event were gathered together in one location where the researcher distributed questionnaire packets, described the research as well as the consent process and invited those who were eligible, interested and willing to complete the questionnaire packet on-site during the allotted time. Participants were encouraged to sit separately from their partner to prevent the sharing of responses. Questionnaire completion ranged from 20-25 minutes. The researcher was present in the room while participants completed the questionnaires. All questionnaires, whether completed or not-completed, were returned to the stationed “questionnaire drop-boxes”. The first larger training event produced completed questionnaires by 170 participants and the second smaller training event yielded 32 complete questionnaires.

With site data (141 packets) and event data (202 packets), a grand total of 343 questionnaires were received. Although parents were asked to participate with a willing partner,

41 of the 343 people submitted questionnaires without their partner's questionnaire fulfillment. This occurred with both site and event data collection methods. These questionnaires were retained when it was decided that analyses for the project would not rely on couple-based data (mean scores of couple reports) as a unit of analysis because of the independence of partner scores on some of the healthy marriage/healthy relationship measures.

Incentives

Respondents were informed through the announcement flyer, within the invite attached to the questionnaire packet, on the questionnaire and on the consent form that by returning the enclosed raffle ticket, they would be entered into a drawing to win one of ten \$50 gift cards. Per IRB guidelines, participation in the study was not necessary for entry in the drawing. The raffle ticket, containing the person's name and contact information was returned in a separate raffle ticket drop-off envelope to ensure anonymity of questionnaire data. Separate drawings were made for those who entered the drawing at the sites and for those who entered the drawing at the parent events. Winners were randomly selected. Raffle ticket winners from the sites were contacted using information they provided on the ticket and arrangements were made to receive the gift cards. The drawings for the parent events took place on location and winners received their gift cards immediately following the drawing since they were present at that time.

Questionnaire Packet

The entire questionnaire packet included:

- (a) Consent Form for respondent retention
- (b) Set of three Questionnaires:

Self-Administered Questionnaire- SAQ

Background Information Form- BIF

Child Information Form- CIF

(c) Raffle Ticket

(c) Resource List (i.e. domestic violence, substance abuse)

Measures

Background Information Form

Participants completed an investigator-created demographic form which asked about the participant's age, gender, race, employment, income, family and household composition and marital/relationship status.

Self Administered Questionnaire

The primary measure utilized in this research was an instrument developed by MDRC for the federal "Supporting Healthy Marriage" (SHM) Project. This measure included the risk scales and healthy marriage scales. In addition to this main measurement, an additional parenting scale was included.

Risk measures. The two risk variables that ended up in the main analyses were depression and stress. However, additional risk variables were used for exploratory analysis.

Depression. To measure depression, the Kessler K6 Nonspecific Psychological Distress Scale was used (Kessler, et al., 2002). This scale has demonstrated excellent internal consistency and reliability ($\alpha = .89$). It also has consistent psychometric properties across major socio-demographic sub samples. The K6 scale was developed with support from the U.S. government's National Center for Health Statistics for use in the redesigned U.S. National Health Interview Survey (NHIS). Respondents are asked, "During the past 30 days, how often did you feel . . . (so sad that nothing could cheer you up?, nervous?, restless or fidgety?, hopeless?, that everything was an effort?, worthless?). These 6-items were scored on a 5 point Likert scale

ranging from “none of the time” (scored as zero) to “all of the time” (scored as four). The mean of the 6-items was used with higher scores representing greater nonspecific psychological distress.

Perceived stress. Two items from the Perceived Stress Scale (PSS) were used to measure stress. The Perceived Stress Scale is the only empirically established index of general stress appraisal. It measures the degree to which situations in one’s life are appraised as stressful (Cohen, et al., 1983; p. 385). The scale has demonstrated internal reliability ($\alpha = .78$). The two items from the four-item scale were: In the past 30 days, “how often have you felt that you were unable to control the important things in your life?” and “how often have you felt difficulties were piling up so high that you could not overcome them?” Responses on a 4-point Likert scale range from “never” (scored as zero) to “always” (scored as three). The two items are averaged with higher scores representing greater perceived stress.

Childhood happiness. Childhood happiness was measured with a single item: “On a scale from 1 to 7, where 1 is “completely unhappy” and 7 is “completely happy”, while you were growing up, how happy was the relationship between the parents or parent figures you reported in Question 14?” Responses ranged from 1 = completely unhappy to 7 = completely happy. After reverse coding, higher scores represent less happiness.

General health. General health was measured with a single item: “Would you say your health in general is... (excellent = 5, very good = 4, good = 3, fair = 2, poor = 1). After reverse coding, higher score indicated worse general health.

Religiosity. Religiosity was measured with two items: (a) “In the past 12 months, about how often have you attended a religious service?” and (b) “ In the past 12 months, about how often have you attended a religious service with your spouse/partner?” Responses ranged from

1 = never to 4 = once a week or more = 4). After reverse coding, the two items were averaged with higher scores representing less religious attendance.

Health condition. Health condition was measured with one dichotomous item: “Do you have a physical or mental health problem now that limits the amount or kind of work or activities that you can do in or outside the household? (yes = 1, no = 0).

Child stress on relationship. Child stress on the relationship was measured with a single dichotomous question: “Do any of your children have a condition or behave in ways that put severe stress on your marriage or relationship?” (yes = 1, no = 0)

Alcohol dependency. Three questions from the CAGE questionnaire (Ewing, 1984) were used to measure alcohol dependency: (a) “Have you felt you should cut down on your drinking?” (b) “Have people annoyed you by complaining about your drinking?” and (c) “Have you ever felt bad or guilty about your drinking?” Responses were 1 = yes, 0 = no, or 0 = don’t drink. The three items were averaged with higher scores indicating higher probability of alcohol dependence.

Drug dependency. The three above questions that were used to measure alcohol dependency were adapted to measure drug dependency: (a) “Have you felt you should cut down on your drug use?” (b) “Have people annoyed you by complaining about your drug use?” and (c) “Have you ever felt bad or guilty about your drug use?” Responses were 1 = yes, 0 = no, or 0 = don’t use drugs. The three items were averaged with higher scores indicating higher probability of drug dependence.

Social support. Two items were used to measure social support: (a) “Have you and your current spouse/partner ever attended a marriage education class, workshop, or counseling?

Please fill in all the boxes that apply: Yes, before we got married = 1, Yes, since we got

married = 1, No = 0” and (b) “Of the following, who could you turn to if you had an emergency and needed help? *Please fill in all the boxes that apply:* My spouse = 1, My partner = 1 Someone else = 1, No one, = 0”. After reverse coding, higher scores indicated less social support.

Healthy marriage/healthy relationship measures. Healthy marriage/healthy relationships was measured using the following eleven constructs from the measurement tool provided by MDRC: couple commitment, commitment to children, communication, conflict frequency, conflict resolution process, emotional intimacy, lack of domestic violence, quality time, relationship happiness, relationship quality, and relationship stability.

Child commitment. Two questions were used to construct the measure of commitment to children: (a) “My spouse/partner is the type of parent I want for my child(ren)” and (b) “My spouse/partner is completely committed to being there for our child(ren).” Response options ranged from 1 = strongly disagree to 4 = strongly agree. Responses were averaged with higher scores indicating greater commitment of one’s spouse/partner to children.

Communication. Communication was measured using the following two questions: (a) “It is hard for me to talk with my spouse/partner about the important things in our life” (*reverse coded*), with a rating from 1 = strongly agree to 4 = strongly agree and (b) “My spouse/partner listens to me when I need someone to talk to;” with a rating from 1 = none of the time to 4 = all of the time. Responses were averaged with higher scores indicating better communication.

Conflict frequency. Conflict frequency was measured with nine items: “How often do you and your spouse/partner have arguments about. . .” (i.e. Household chores? Sex? Spending time together? Managing money, bills and debt?). Responses to these items were on a 4-point

scale from 0 = never to 3 = often. Responses were averaged with higher scores representing higher conflict frequency.

Conflict resolution process. Conflict resolution processes were measured with the following two statements: (a) “Our arguments get very heated (*reverse coded*);” and (b) “I am satisfied with the way we handle our problems and disagreements”. Responses to these statements ranged from 1 = none of the time to 4 = all of the time. Responses were averaged with higher scores indicating more positive conflict resolution processing.

Couple commitment. Two questions were used to construct the measure of commitment: (a) “I view our relationship as lifelong;” and (b) “I believe this relationship can stay strong even through the hard times”. Response options for each item ranged from 1 = strongly disagree to 4 = strongly agree. Responses were averaged with higher scores indicating higher commitment to the relationship.

Emotional intimacy. Emotional intimacy in the relationship was measured using the following three questions: (a) “I can count on my spouse/partner to be there for me”, with ratings from 1 = strongly disagree to 4 = strongly agree; (b) “My spouse/partner and I have similar views about what is important in life” (c) and “My spouse/partner expresses love and affection toward me”, both using response options that ranged from 1 = none of the time to 4 = all of the time. Responses were averaged with higher scores representing greater emotional intimacy.

Fidelity. Fidelity was measured by a single item: “I worry about my spouse/partner cheating on me” with responses ranging from 1 = strongly disagree to 4 = strongly agree. After reverse coding this item, higher scores reflect greater perceived fidelity.

Lack of domestic violence. The lack of domestic was measured with three questions: “In the past year, how often has your spouse/partner... (a) Yelled or screamed at you? (b) Blamed

you for his/her problems? (c) and How often have your arguments become physical?”

Responses ranged from 0 = never to 3 = often. After reverse coding, responses were averaged with higher scores reflecting less negative behaviors.

Quality time. Quality time was measured with two questions: (a) “My spouse/partner and I get along well together” and (b) “We enjoy doing even ordinary, day-to-day things together”. Responses to these questions ranged from 0 = none of the time to 4 = all of the time. Responses were averaged with higher scores representing more quality time together.

Relationship satisfaction. Relationship satisfaction was measured in two ways: first, by a measure of relationship happiness; and second, by a measure of relationship quality.

Relationship happiness was measured with one question: “How happy are you with your marriage/relationship?” Response options ranged from 1 = completely unhappy to 7 = completely happy with higher scores representing greater couple relationship happiness.

Relationship quality was measured with two questions: (a) “How would you rate the good side of your marriage/relationship?”, with ratings from 1 = not at all good to 5 = completely good and (b) “How would you rate the bad side of your marriage/relationship?”, with ratings from 1 = completely bad to 5 = not at all bad. Responses for these two relationship quality items were averaged with higher scores representing greater perceived quality.

Relationship stability. Relationship stability was measured with a single dichotomous item instead of using marital status and duration as proxies for stability: “In the past year, have you ever thought your marriage/relationship was in trouble?” Response options were 1 = yes or 0 = no. After reverse coding, a “1” represented greater relationship stability.

Healthy marriage measures added to the HM/HR measure. In addition to the eleven

healthy marriage/healthy relationships constructs from the MDRC measurement tool, two additional measures of marital virtues were included.

Marital virtues. Two virtues (two subscales) from the “Marital Virtues Profile” (Hawkins, Fowers, Carroll, & Yang, 2007) were added to the healthy marriage measure: forgiveness (3 “forgiveness” items of the 7-item generosity subscale: My partner is forgiving of my mistakes) and teamwork (entire 3-item subscale: Our relationship is based on a deep sense of teamwork). The MVP was developed to capture a profile of individual and relationship virtues that contributes to marital quality and stability. Items for the forgiveness subscale were scored on a 6-point Likert scale ranging from “almost never” to “almost always”. Items for the teamwork subscale were scored on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. Higher scores represent greater presence of the relationship virtue. Alpha reliability coefficients for the teamwork subscale are .82 for wives and .80 for husbands. Alpha reliability coefficients for the forgiveness items range from .77 to .88 for wives and .74 to .79 for husbands.

Parenting behavior measure added to the HM/HR measure. The PBI: Parent Behavior Inventory (20-item) was used to measure parenting behaviors. The PBI (Lovejoy, Weis, O’Hare, & Rubin, 1999) is a 20-item parent report of parent child-interaction and common disciplinary practices used with preschool to school-aged children. This measure was used by Head Start parents in this study. The scale consisted of two factors: Hostile/Coercive (10 items: “I grab or handle my child roughly”, “When I’m disappointed in my child’s behavior, I remind him/her about how much I’ve done for him/her”) and Supportive/ Engaged (10 items: “My child and I hug and /or kiss each other”, “I thank or praise my child”). Items were scored on a 6-point Likert-type scale ranging from 0 (not at all true) to 6 (very true). The supportive/engaged

parenting construct reflects parental warmth whereas the hostile/coercive parenting construct reflects hostility as well as certain maladaptive control techniques (Lovejoy, Weis, O'Hare, & Rubin, 1999). The PBI has demonstrated strong reliability and validity. The initial validation test of the PBI (Lovejoy, Weis, O'Hare, & Rubin, 1999) demonstrated a Cronbach's alpha at .81 for the Hostile/Coercive scale and .83 for the Supportive/Engaged scale. The average interitem correlation was .32 for the Hostile/Coercive scale, with a range of .09 to .52; the average interitem correlation was .36 for the Supportive/Engaged scale, with a range of .13 to .58. In addition, the PBI has shown moderate relationship with measures of parental affect, parental stress, and child behavior problems. Items on the Hostile/Coercive subscale were reverse scored. Items from both subscales were averaged with higher scores indicating greater positive (i.e. supportive, engaged, loving) parenting behaviors. This scale was chosen because of its usefulness in predicting child outcomes.

Child Information Form

Social emotional development. The Social Competence Scale (SCS) -parent version (Conduct Problem Prevention Research Group [CPPRG], 1995) was used as an assessment of child well-being. The measure consisted of 12 items that assess children's positive social behaviors, including emotion regulation, prosocial behaviors, and communication skills. Parents were asked to rate how well 12 statements describe their child on a five-point scale from 0 (not at all) to 4 (very well). Internal consistency for the total measure is high with $\alpha = .92$ for the community sample, and .88 for the high-risk sample. The total measure was used by taking the average of all scale items: prosocial/communication and emotion regulation.

CHAPTER 4: RESULTS

Preliminary Analyses

Missing Data Analysis

The missing value analysis procedure for PASW18.0 was used to identify the percentage of missing data for the risk, healthy marriage, parenting, and social competence items. All items had missing data less than 4%. Specifically, missing data was less than 1.25% for the risk items (i.e. depression and stress), less than 2.5% for the healthy marriage items, less than 1.2% for the parenting items and less than 4% for the social competence items. Participants who were not Head Start parents (i.e. partner of a Head Start parent) were asked to skip the parenting and social competence items if they considered themselves a non-participant in the parenting of the Head Start child. These parents were removed from analyses that use the parenting measures. Data that was missing at random were imputed using Expectation Maximization (EM) algorithm, a maximum likelihood approach, prior to final analyses (Dempster, Laird, & Rubin, 1977).

Normality

One of the key assumptions of CFA is that the data follow a multivariate normal distribution. Therefore, item distributions were assessed for normality. Statistical tests of skewness, kurtosis, and multivariate normality were employed in combination with visual screening of the variable item histograms. Variable items were considered to be within a normal range of distribution (per Tabachnick & Fidell, 1996). The data were also screened for outliers by using graphical methods applied to histograms as recommended by Tabachnick and Fidell (1996). Because no outliers were identified, all cases were analyzed.

Differences in Responses by Data Collection Method

In order to check for possible differences in data that were collected from the sites and that which was collected at the parenting events, independent t-tests were calculated for the risk (stress and depression), healthy marriage (11 variables), social competence, and parenting behavior scores. There were no statistically significant differences between site and event data on any of the variables. Because “relationship stability” is a healthy marriage dichotomous variable, it was tested using a Pearson chi-square statistic. Stability did not differ by data collection method, $X^2(4, N = 343) = 7.85, p = .10$.

Assessing the Degree of Non-Independence

Correlations were calculated to find the degree of nonindependence between partner scores on the HM/HR measure and to determine the confidence interval (see Table 6). Correlations of .50 and higher indicate that the variables measure one concept and can be taken together (Briggs & Cheek, 1986). First, to assess partner correlations for each of the healthy marriage variables, the data set was structured in a pairwise fashion so that each individual's scores were associated with his or her partner's scores. Although all of the variables between partner scores were statistically correlated at $p = .00$, only seven of the eleven HM/HR variables had correlations of .50 and higher. These nonindependent variables were: emotional intimacy, communication, quality time, teamwork, conflict frequency, stability and lack of domestic violence (DV). Those variables with correlations less than .50 were: couple commitment, child commitment, forgiveness, and relationship happiness. Although analyzing the couple is favored, the HM/HR variable measures were not taken together because not all eleven variables were found to be nonindependent. Also, the factor structure needed to be analyzed prior to analyzing the data dyadically.

Table 6

Correlations Between Partner Scores on HM/HR Measure

	<i>R</i>
Emotional Intimacy	.494
Couple Commitment	.273
Child Commitment	.313
Communication	.557
Quality Time	.586
Forgiveness	.496
Teamwork	.546
Conflict Frequency	.483
Relationship Happiness	.437
Stability	.620
Lack of DV	.569

Scale Analysis

Scales were calculated from items to measure the components outlined in the conceptual model. Cronbach's alphas were computed, along with inter-item and item-total correlations to evaluate the internal consistency of the measurement scales.

Reliability Analyses for Exogenous Variables

The risk and healthy marriage items were all explored for inclusion in this study.

Risk subscales. To assess the reliability of each of the subscales Cronbach's alpha was computed for the religiosity, perceived stress, depression, alcohol dependence, drug dependence, and stressful life events subscales. All subscales demonstrated acceptable reliability (the cutoff value being .70) with coefficient alphas ranging from .70 (alcohol dependency) to .89 (religiosity) except for stressful life events ($\alpha = .37$). Therefore, the stressful life events subscale was removed from further analyses.

Healthy marriage subscales. To assess the reliability of each of the subscales Cronbach's alpha was computed for the couple commitment, commitment to children, communication, conflict frequency, conflict resolution process, emotional intimacy, forgiveness, lack of domestic violence, quality time, relationship happiness, relationship quality, and teamwork. All subscales had acceptable reliability (over the cutoff value of .70) except for the three item emotional intimacy measure ($\alpha = .67$), conflict resolution process ($\alpha = .53$) and relationship quality ($\alpha = .51$). A decision was made to retain the three-item emotional intimacy measure because no other measure could be used as a proxy for this valuable variable and because deleting any of the three items would not improve reliability. However, conflict resolution process and relationships quality were dropped from further analysis. Because the *conflict frequency* subscale had satisfactory reliability ($\alpha = .79$) this subscale was used as a measure of the conflict construct instead of the conflict resolution process subscale. Because the *satisfaction* construct was being tested by MDRC with the relationship quality and relationship happiness subscale measures, the one –item relationship happiness measure was used instead of the relationship quality subscale. Finally, although the three-item forgiveness subscale had a reliability coefficient alpha score of .77, the third reverse scored item was deleted to increase reliability ($\alpha = .84$).

Reliability Analyses for Endogenous Variables

Parenting behavior scale. The coefficient for the parenting scale was .79 for the overall sample indicating internal consistency reliability. However, there was concern regarding the supportive/engaged item, “I hold or touch my child in an affectionate way.” This concern came from questions that were asked by respondents during their completion of the questionnaire on how to interpret the term “affectionate”. In addition, there was inconsistency with how

respondents answered this item with the item “My child and I hug and /or kiss each other.” A decision was made to delete the item of concern, thus slightly increasing alpha for this scale to .80 for the overall sample, .72 for males and .83 for females.

Social competence scale. Cronbach’s coefficient alpha was computed to examine the internal consistency of the social competence scale. The scale demonstrated high internal consistency ($\alpha = .92$ for the overall sample, $\alpha = .93$ for males and $\alpha = .91$ for females).

Ranges, Means, and Standard Deviations

Scale means, standard deviations, ranges, frequencies and percentages were examined for the risk variables, HM/HR constructs, parenting and child well-being measures and are presented in Table 7 and Table 8. In addition, Table 9 and Table 10 summarize means and standard deviations for males and females. Table 11 and Table 12 summarize these same statistics for the female subgroup by race and marital status and finally Table 13 and Table 14 display results for the male subgroup by race and marital status. The n’s noted in the tables do not include the full sample, rather, they reflect individuals who were parenting the child and therefore were asked to complete the parenting measures.

Table 7

Ranges, Means, and Standard Deviations for the Total Sample (n = 334)

	Range	Minimum	Maximum	<i>M</i>	<i>SD</i>
TOTAL Social Competence	3.50	0.50	4	2.23	0.77
SC- prosocial/communication	3.83	0.17	4	2.43	0.82
SC- emotion regulation	3.83	0.17	4	2.04	0.83
TOTAL Parenting Behavior	3.28	1.67	4.95	3.95	0.55
Parenting- hostile/coercive (reversed)	4.30	0.70	5	3.46	0.71
Parenting- supportive/engaged	5	0	5	4.44	0.72
Childhood happiness (RISK)	6	0	6	2.13	1.88
General health (RISK)	4	0	4	1.58	0.98
Religiosity (RISK)	3	0	3	1.76	1.08
Depression (RISK)	4	0	4	0.94	0.84
Perceived stress (RISK)	3	0	3	0.90	0.76
Alcohol Dependency (RISK)	1	0	1	0.07	0.20
Drug Dependency (RISK)	1	0	1	0.04	0.17
Social Support (RISK)	1	0	1	0.02	0.12
Intimacy (HM/HR)	3	1	4	3.08	0.64
Couple commitment (HM/HR)	2.50	1.50	4	3.42	0.62
Child commitment (HM/HR)	3	1	4	3.48	0.58
Communication (HM/HR)	3	1	4	2.94	0.82
Quality time (HM/HR)	3	1	4	3	0.68
Forgiveness (HM/HR)	5	0	5	3.50	1.32
Teamwork (HM/HR)	4	1	5	3.88	0.92
Conflict frequency (HM/HR)	3	0	3	1.88	0.62
Relationship happiness (HM/HR)	6	1	7	5.66	1.50
Fidelity (HM/HR)	3	1	4	3.12	0.94
Lack of DV (HM/HR)	3	0	3	1.94	0.80

Table 8

Frequencies and Percentages of Dichotomous Risk Variables for the Total Sample

	<i>f</i>	%
Health condition (RISK)	68	20.4%
Child stress on relationship (RISK)	59	17.7%
Relationship stability (HM/HR)	159	47.6%

n = 334

Table 9

Means and Standard Deviations by Parent Gender

	Males (<i>n</i> = 143)		Females (<i>n</i> = 188)	
	Means	<i>SD</i>	Means	<i>SD</i>
TOTAL Social Competence	2.24	0.75	2.25	0.77
SC- prosocial/communication	2.43	0.80	2.46	0.82
SC- emotion regulation	2.04	0.81	2.04	0.83
TOTAL Parenting Behavior	3.85	0.49	4.05	0.56
Parenting- hostile/coercive (reversed)	3.39	0.71	3.52	0.70
Parenting- supportive/engaged	4.32	0.67	4.57	0.65
Childhood happiness (RISK)	2.03	1.70	2.20	2.01
General health (RISK)	1.59	1.00	1.57	0.98
Religiosity (RISK)	1.81	1.12	1.71	1.04
Depression (RISK)	0.81	0.79	1.03	0.87
Perceived stress (RISK)	0.82	0.73	0.20	0.40
Alcohol Dependency (RISK)	.10	.25	.04	.14
Drug Dependency (RISK)	.07	.21	.02	.13
Social Support (RISK)	0.01	0.09	0.02	0.12
Intimacy (HM/HR)	3.10	0.56	3.08	0.68
Couple commitment (HM/HR)	3.49	0.54	3.38	0.66
Child commitment (HM/HR)	3.58	0.50	3.42	0.62
Communication (HM/HR)	2.96	0.71	2.93	0.89
Quality time (HM/HR)	2.99	0.63	3.01	0.71
Forgiveness (HM/HR)	3.42	1.24	3.56	1.38
Teamwork (HM/HR)	3.89	0.86	3.87	0.96
Conflict frequency (HM/HR)	1.90	0.60	1.87	0.63
Relationship happiness (HM/HR)	5.98	1.17	5.43	1.65
Fidelity (HM/HR)	3.14	0.92	3.11	0.95
Lack of DV (HM/HR)	1.96	0.73	1.90	0.84

Table 10

Frequencies and Percentages of Dichotomous Risk Variables by Gender

	Males (<i>n</i> = 143)		Females (<i>n</i> =188)	
	<i>F</i>	%	<i>f</i>	%
Health condition (RISK)	33	23.1%	34	18.1%
Child stress on relationship (RISK)	22	15.4%	37	19.7%
Relationship stability (HM/HR)	75	52.4%	83	44.1%

Table 11

Means and Standard Deviations by Race and Marital Status Within Gender: Female Subgroup

	African American (<i>n</i> = 95)		Caucasian (<i>n</i> = 70)		Married (<i>n</i> = 105)		Unmarried (<i>n</i> = 80)	
	Means	SD	Means	SD	Means	SD	Means	SD
TOTAL Social Competence	2.27	0.79	2.17	0.77	2.40	0.76	2.02	0.70
SC- prosocial/communication	2.45	0.84	2.42	0.86	2.57	0.82	2.28	0.79
SC- emotion regulation	2.09	0.87	1.91	0.78	2.23	0.83	1.75	0.73
TOTAL Parenting Behavior	4.07	0.54	4.04	0.57	4.08	0.56	4.03	0.54
Parenting- hostile/coercive*	3.51	0.69	3.49	0.78	3.55	0.75	3.51	0.63
Parenting- supportive/engaged	4.63	0.63	4.60	0.55	4.60	0.57	4.55	0.73
Childhood happiness (RISK)	1.94	1.87	2.69	2.14	2.13	2.02	2.24	2.01
General health (RISK)	1.42	0.95	1.90	0.97	1.50	1.03	1.66	0.87
Religiosity (RISK)	1.47	1.04	2.02	0.98	1.54	1.15	1.94	0.82
Depression (RISK)	0.93	0.83	1.19	0.88	0.90	0.78	1.18	0.94
Perceived stress (RISK)	0.15	0.36	0.30	0.46	0.22	0.42	0.18	0.38
Alcohol Dependency (RISK)	.07	.18	.00	.04	.03	.11	.06	.18
Drug Dependency (RISK)	.02	.12	.03	.17	.01	.10	.04	.17
Social Support (RISK)	0.03	0.13	0.03	0.12	0.01	0.08	0.04	0.15
Intimacy (HM/HR)	3.10	0.73	3.01	0.65	3.10	0.66	3.05	0.72
Couple commitment (HM/HR)	3.32	0.72	3.38	0.61	3.45	0.62	3.27	0.69
Child commitment (HM/HR)	3.39	0.64	3.41	0.61	3.53	0.58	3.26	0.64
Communication (HM/HR)	2.93	0.91	2.93	0.91	2.96	0.87	2.89	0.92
Quality time (HM/HR)	3.00	0.75	2.96	0.65	3.04	0.66	2.95	0.78
Forgiveness (HM/HR)	3.38	1.50	3.70	1.18	3.73	1.26	3.36	1.51
Teamwork (HM/HR)	3.84	0.99	3.84	0.95	3.96	0.93	3.74	1.01
Conflict frequency (HM/HR)	1.91	0.70	1.81	0.53	1.88	0.58	1.86	0.70
Relationship happiness (HM/HR)	5.34	1.70	5.30	1.75	5.62	1.62	5.15	1.69
Fidelity (HM/HR)	2.93	1.04	3.30	0.81	3.13	0.91	3.10	1.00
Lack of DV (HM/HR)	1.91	0.89	1.82	0.81	2.00	0.80	1.79	0.88

*reversed

Table 12

Frequencies and Percentages of Dichotomous Risk Variables by Race and Marital Status Within Gender: Female Subgroup

	African American (n =95)		Caucasian (n =70)		Married (n = 105)		Unmarried (n =80)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Health condition	18	18.9%	14	20%	13	12.4%	20	25.0%
Child stress on relationship	14	14.7%	21	30%	23	21.9%	14	17.5%
Relationship stability	41	43.2%	29	41.4%	51	48.6%	31	38.8%

Table 13

Means and Standard Deviations by Race and Marital Status Within Gender: Male Subgroup

	African American (<i>n</i> = 68)		Caucasian (<i>n</i> = 56)		Married (<i>n</i> = 89)		Unmarried (<i>n</i> = 53)	
	Means	SD	Means	SD	Means	SD	Means	SD
TOTAL Social Competence	2.26	0.73	2.19	0.76	2.40	0.73	1.96	0.70
SC- prosocial/communication	2.45	0.78	2.40	0.83	2.57	0.81	2.20	0.75
SC- emotion regulation	2.07	0.79	1.98	0.79	2.23	0.78	1.73	0.77
TOTAL Parenting Behavior	3.86	0.53	3.90	0.43	3.84	0.50	3.89	0.47
Parenting- hostile/coercive*	3.36	0.75	3.45	0.68	3.40	0.70	3.38	0.74
Parenting- supportive/engaged	4.35	0.74	4.34	0.55	4.29	0.71	4.40	0.57
Childhood happiness (RISK)	1.86	1.60	2.19	1.81	1.90	1.61	2.19	1.83
General health (RISK)	1.44	0.97	1.73	0.98	1.75	1.01	1.32	0.92
Religiosity (RISK)	1.57	1.19	2.06	1.02	1.66	1.18	2.08	0.99
Depression (RISK)	0.65	0.69	0.85	0.68	0.79	0.81	0.78	0.61
Perceived stress (RISK)	0.09	0.29	0.25	0.44	0.17	0.38	0.11	0.32
Alcohol Dependency (RISK)	0.14	0.27	0.06	0.21	0.11	0.27	0.08	0.21
Drug Dependency (RISK)	0.07	0.20	0.07	0.23	0.04	0.20	0.12	0.24
Social Support (RISK)	0.01	0.12	0.01	0.07	0.01	0.05	0.02	0.14
Intimacy (HM/HR)	3.07	0.57	3.16	0.53	3.07	0.56	3.16	0.55
Couple commitment (HM/HR)	3.46	0.61	3.57	0.42	3.52	0.52	3.43	0.56
Child commitment (HM/HR)	3.58	0.51	3.64	0.45	3.55	0.48	3.62	0.55
Communication (HM/HR)	2.99	0.70	3.00	0.70	2.94	0.69	3.01	0.76
Quality time (HM/HR)	3.03	0.62	2.99	0.59	2.94	0.61	3.08	0.65
Forgiveness (HM/HR)	3.32	1.31	3.56	1.09	3.45	1.20	3.42	1.24
Teamwork (HM/HR)	3.83	0.98	3.94	0.74	3.86	0.86	3.96	0.87
Conflict frequency (HM/HR)	1.92	0.63	1.87	0.55	1.81	0.59	2.06	0.59
Relationship happiness (HM/HR)	5.94	1.16	6.12	1.02	6.06	1.13	5.84	1.25
Fidelity (HM/HR)	3.12	0.94	3.14	0.92	3.25	0.88	2.96	0.96
Lack of DV (HM/HR)	2.05	0.73	1.85	0.73	1.92	0.77	2.05	0.64

**reversed*

Table 14

Frequencies and Percentages of Dichotomous Risk Variables by Race and Marital Status Within Gender: Male Subgroup

	African American (n = 68)		Caucasian (n = 56)		Married (n = 89)		Unmarried (n = 53)	
	f	%	f	%	f	%	f	%
Health condition	17	25%	12	21.4%	22	24.7%	10	18.9%
Child stress on relationship	6	8.8%	14	25%	15	16.9%	6	11.3%
Relationship stability	34	50%	32	57.1%	48	53.89%	27	50.9%

Mean Differences

To analyze mean differences between gender as well as within gender between race and marital status, several independent sample t-test were calculated for the following main variables: total preschoolers' social competence; social competence- prosocial/communication; social competence- emotion regulation; total parenting behavior; parenting behavior- supportive engaged; parenting behavior- hostile coercive; depression; stress; and the HM/HR composite. Females' scores were significantly higher than males' scores on total parenting behavior $t(329) = -3.29, p = .001$, parenting behavior- supportive engaged $t(329) = -3.51, p = .001$, and on depression $t(329) = -2.37, p < .05$. Please see means and standard deviations in Table 9.

Females. Within the female dataset, no significant differences were found between African American females and Caucasian females. Significant differences were, however, found between married and unmarried females. Married females had significantly higher scores than unmarried females on total preschoolers' social competence $t(183) = 3.52, p = .001$, social competence- prosocial/communication $t(183) = 2.44, p < .05$, and social competence- emotion regulation $t(183) = 4.10, p < .001$. Unmarried females scored significantly higher than married

females on depression $t(183) = -2.18, p < .05$. Please see means and standard deviations in Table 11.

Males. Within the male dataset, no significant differences were found between African American males and Caucasian males. Married males scored their children's social competence significantly higher than unmarried males. Specifically, significantly higher scores were reported by married males on total preschoolers' social competence $t(140) = 3.50, p = .001$, social competence- prosocial/communication $t(140) = 2.76, p < .01$, and social competence- emotion regulation $t(140) = 3.70, p < .001$. See means and standard deviations in Table 13.

Control Variables

Preschoolers' social competence scores as reported by their parents were examined for differences by gender and age. An independent t-test was used to test for gender differences for social competence. There were no differences on the total social competence score ($t = -.042, p = .966$) between boys ($M = 2.25, SD = .81$) and girls ($M = 2.25, SD = .73$). In addition, a one-way ANOVA was used to test for differences among the four age groups (3, 4, 5, and 6 year olds). Preschoolers' social competence differed significantly across the ages, $F(3, 303) = 4.02, p < .01$. Tukey post-hoc comparisons of the four groups indicate that the three year-old group ($M = 1.57, 95\% \text{ CI } [1.30, 1.83]$) had significantly lower total social competence scores than the five year old group ($M = 2.32, 95\% \text{ CI } [2.20, 2.44]$), $p < .05$ as well as the six year old group ($M = 2.40, 95\% \text{ CI } [2.04, 2.76]$), $p < .05$. Comparisons between all the other age groups were not statistically significant at $p < .05$. Because child age was missing from 36 respondents, it was not used as a control variable to preserve sample size.

Exploratory Factor Analyses

Exploratory Factor Analysis of the Risk Measures

The SAQ measure provided by MDRC included several risk measures. Decisions about which risk variables to include in subsequent model testing needed to be explored as well as whether the variables measured a latent risk variable. These risk variables were religiosity, childhood happiness, general health, health condition, relationship stress from a child condition, depression, stress, alcohol dependency, and drug dependency. The first step was to enter all of the items for each variable into a factor analysis using SPSS 18.0. Principal axis factoring with direct oblimin rotation was performed to determine how the selected pool of items clustered together. The factor analysis demonstrated that items loaded onto their associated variables. This produced six factors with the first factor contributing 25.71% of the variance with an eigenvalue of 5.14. This first factor included all six of the depression items as well as the two perceived stress items. The second extracted factor included the three drug dependency items, contributing 11.33% of the variance with an eigenvalue of 2.27. The third extracted factor included the three alcohol dependency items, contributing 9.57% of the variance with an eigenvalue of 1.91. The fourth, fifth, and sixth extracted factors were religiosity (8.70% variance, eigenvalue = 1.74), general health and health condition (5.72%, eigenvalue = 1.14), as well as childhood happiness and relationship stress from a child condition (5.53% variance, eigenvalue = 1.11). An examination of the scree plot suggested one dominant factor.

In addition, each of the nine risk variables were examined using factor analysis. Several well-recognized criteria for factorability were used. First, only 4 of the nine risk variables correlated at least .3 with at least one other variable, suggesting possible issues with factorability. Specifically, general health correlated with health condition ($r = .337, p < .001$) and depression

correlated with perceived stress ($r = .646, p < .001$). Second, the Kaiser-Meyer-Olkin measure of sampling adequacy was .64, only slightly above the recommended value of .6, although Bartlett's test of sphericity was significant ($\chi^2(36) = 332.20, p = .000$). Principal axis factoring with direct oblimin rotation was performed to determine how the selected pool of variables clustered together. Four factors were extracted. The initial eigen values showed that the first "depression ad stress" factor explained 24.33% of the variance while the second (childhood happiness, having a child with a condition that puts stress on the marriage/relationship, religiosity), third (alcohol and drug dependency) and fourth factors (general health and health condition) explained 13.66%, 12.21%, and 11.21% of the variance. The second factor did not make theoretical sense and was dismissed as a factor. Because of the smaller sample size and after an examination of the scree plot, a decision was made to choose the first risk factor (depression and stress) for subsequent CFA and SEM analysis.

Results for Study One

The research questions for study one were: (1) What is the factor structure for the Healthy Marriage/Healthy Relationships (HM/HR) measure? and (2) How do respondent antecedents (risk factors) relate with the HM/HR measure? This section of the results describes the exploratory factor analysis and confirmatory factor analysis of the Healthy Marriage Measure.

Exploratory Factor Analysis of the HM/HR measure

An initial step in exploring the HM/HR measure was to examine inter-item correlations from responses to all of the Healthy Marriage measures subscales. In addition, correlations were generated between the HM/HR measure subscales, risk factor scales (depression and stress), parenting scales and social competence scales (Table 15). Because the HM/HR measure

revealed moderate to strong intercorrelations among a majority of items, it was suspected that the variance would also be shared rather than unique. The one-item fidelity measure was removed from further analyses given its lower correlation with the other HM/HR subscale items as well as lower non-significant correlations with the parenting and social competence subscales.

Table 15

Correlations between Social Competence, Parenting, Healthy Marriage, and Risk for Total Sample (n = 334)

	1	2	3	4	5	6	7	8
1 Social Comp-PC	1							
2 Social Comp-ER	.754**	1						
3 TOTAL Social Comp	.936**	.937**	1					
4 Parenting-SE	.221**	.209**	.230**	1				
5 Parenting-HC	.095	.182**	.148**	.176**	1			
6 TOTAL Parenting	.207**	.255**	.247**	.768**	.765**	1		
7 Emotional Intimacy	.044	.083	.068	.183**	.247**	.280**	1	
8 Couple Commitment	.111*	.148**	.138*	.185**	.175**	.235**	.612**	1
9 Child Commitment	.060	.134*	.104	.206**	.135*	.223**	.600**	.708**
10 Communication	.096	.072	.090	.207**	.299**	.330**	.763**	.522**
11 Quality Time	.027	.104	.070	.177**	.266**	.289**	.712**	.536**
12 Forgiveness	.128*	.151**	.149**	.163**	.224**	.252**	.576**	.425**
13 Teamwork	.146**	.188**	.178**	.183**	.253**	.285**	.691**	.566**
14 Conflict Frequency	.044	.119*	.087	.157**	.239**	.258**	.550**	.385**
15 Rel. Happiness	.121*	.124*	.131*	.171**	.144**	.206**	.594**	.553**
16 Fidelity	-.005	.030	.013	.042	.103	.094	.135*	.136*
17 Stability	.087	.130*	.116*	.059	.133*	.126*	.427**	.366**
18 Lack of DV	.033	.067	.054	.086	.235**	.209**	.528**	.346**
19 TOTAL HM/HR	.109*	.162**	.144**	.217**	.287**	.329**	.853**	.725**
20 Depression	-.054	-.130*	-.098	-.119*	-.235**	-.231**	-.296**	-.251**
21 Stress	.001	-.118*	-.063	-.067	-.164**	-.151**	-.280**	-.224**
22 TOTAL RISK	-.029	-.136*	-.089	-.103	-.220**	-.210**	-.317**	-.262**

Table 15 (cont'd).

	9	10	11	12	13	14	15
9 Child Commitment	1						
10 Communication	.502**	1					
11 Quality Time	.491**	.626**	1				
12 Forgiveness	.387**	.563**	.601**	1			
13 Teamwork	.518**	.630**	.683**	.618**	1		
14 Conflict Frequency	.379**	.521**	.539**	.386**	.482**	1	
15 Rel. Happiness	.511**	.571**	.580**	.424**	.543**	.414**	1
16 Fidelity	.123*	.173**	.167**	.149**	.117*	.145**	.076
17 Stability	.320**	.452**	.435**	.403**	.464**	.441**	.480**
18 Lack of DV	.372**	.555**	.532**	.550**	.499**	.597**	.433**
19 TOTAL HM/HR	.699**	.815**	.816**	.707**	.808**	.699**	.742**
20 Depression	-.260**	-.353**	-.335**	-.276**	-.327**	-.373**	-.323**
21 Stress	-.184**	-.311**	-.336**	-.232**	-.261**	-.335**	-.348**
22 TOTAL RISK	-.245**	-.366**	-.370**	-.280**	-.324**	-.390**	-.370**

Table 15 (cont'd).

	16	17	18	19	20	21	22
16 Fidelity	1						
17 Stability	.179**	1					
18 Lack of DV	.129*	.465**	1				
19 TOTAL HM/HR	.184**	.644**	.719**	1			
20 Depression	-.041	-.252**	-.389**	-.421**	1		
21 Stress	-.083	-.294**	-.371**	-.389**	.649**	1	
22 TOTAL RISK	-.068	-.301**	-.418**	-.446**	.908**	.908**	1

*Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Total HM/HR and Total Risk are composite scores

With the Kaiser–Meyer– Olkin (KMO) measure of sampling adequacy at 0.926 and Bartlett's test of Sphericity being significant ($\chi^2 = 2178.738$, $p < .001$), the appropriateness of the ensuing factor model was ensured. Using the principal axis factoring method of extraction and

direct oblimin, the 11 HM/HR subscales were subjected to exploratory factor analyses (EFA) using PASW 18 for Windows.

The EFA of the HM/HR subscales revealed a dominant first factor. This factor explained 56.5% of the variance in responses to the 11 subscale items in the HM/HR measure. This first factor had an eigen value of 6.2. The other factors had eigen values less than 1. Only one factor was extracted and all variables loaded well on this single factor (see Table 16). In addition Table 17 displays the factor matrix for males by race and marital status and Table 18 displays the factor matrix for females by race and marital status.

Table 16

Factor Matrix of the Healthy Marriage Measure

Factor 1	Total
Emotional Intimacy	.862
Couple Commitment	.695
Child Commitment*	.662
Communication	.804
Quality Time	.809
Forgiveness**	.685
Teamwork	.801
Conflict Frequency	.643
Relationship Happiness	.706
Stability	.576
Lack of DV	.668

*Child commitment is a measure of one's appraisal of their *partner's* commitment to the child

**Forgiveness is a measure of one's appraisal of their *partner's* acts of forgiveness

Table 17

Factor Matrix of the Healthy Marriage Measure for Males by Race and Marital Status

Factor 1	Males	African American	Caucasian	Married	Unmarried
Emotional Intimacy	.814	.741	.876	.790	.846
Couple Commitment	.616	.629	.646	.637	.645
Child Commitment*	.507	.474	.588	.599	.399
Communication	.783	.699	.818	.819	.724
Quality Time	.767	.725	.800	.778	.743
Forgiveness**	.724	.789	.681	.713	.761
Teamwork	.766	.771	.788	.747	.797
Conflict Frequency	.535	.615	.535	.596	.426
Relationship Happiness	.681	.596	.783	.763	.594
Stability	.630	.583	.678	.614	.666
Lack of DV	.648	.676	.669	.688	.562

*Child commitment is a measure of one's appraisal of their *partner's* commitment to the child

**Forgiveness is a measure of one's appraisal of their *partner's* acts of forgiveness

Table 18

Factor Matrix of the Healthy Marriage Measure for Females by Race and Marital Status

Factor 1	Females	African American	Caucasian	Married	Unmarried
Emotional Intimacy	.886	.918	.815	.866	.920
Couple Commitment	.721	.715	.714	.723	.707
Child Commitment*	.729	.741	.688	.751	.699
Communication	.811	.814	.821	.775	.856
Quality Time	.838	.852	.839	.851	.841
Forgiveness**	.682	.680	.741	.676	.695
Teamwork	.819	.808	.834	.804	.834
Conflict Frequency	.705	.788	.683	.653	.769
Relationship Happiness	.723	.744	.709	.725	.713
Stability	.543	.550	.586	.634	.423
Lack of DV	.714	.725	.699	.706	.727

*Child commitment is a measure of one's appraisal of their *partner's* commitment to the child

**Forgiveness is a measure of one's appraisal of their *partner's* acts of forgiveness

Because relationship stability was measured as dichotomous variable, while the other ten were measured as scale variables, the factor structure was further examined to ensure its' appropriate inclusion. After removing this dichotomous variable and performing another EFA with the ten scale variables, results once again supported a unidimensional measure with a dominant first factor. This factor explained 58.7% of the variance in responses to the ten subscale items in the HM/HR measure. This factor had an eigen value of 5.9. Whereas utilizing EFA with a great number of dichotomous variables could be deemed inappropriate (Shapiro, Lasarev, & McCauleym, 2002), results for this study showed that inclusion of a single dichotomous variable amongst many other scale variables could still contribute to the factor. It was important to include a measure of stability to help define the healthy marriage/healthy relationships construct because of its value to couple relations and influence on children (as explained in the literature review).

In order to find how respondent antecedents (risk factors) were related with the HM/HR measure, a multiple regression was performed whereby scores on depression and stress were used to predict the HM/HR composite score. A composite score was used because it was found that the eleven HM/HR variables could be combined into a single measure. Specifically, a composite score for the healthy marriage measure was formed with unit-weighted z scores of constituent tests (Ackerman & Cianciolo, 2000) because each variable was scored using different scales. This composite was determined reliable ($\alpha = .92$ for the overall sample, $\alpha = .90$ for males and $\alpha = .93$ for females). Depression ($\beta = -.29, p < .001$) and stress ($\beta = -.20, p = .002$) were both significantly related to the HM/HR composite, $F(2, 331) = 41.50, p < .001, R = .45$. Multiple regressions were also performed separately for males and females. For males, depression ($\beta = -.10, p = .322$) was not significantly related to the HM/HR composite but stress

($\beta = -.24, p = .022$) was significantly related, $F(2, 140) = 7.791, p = .001, R = .32$. For females, depression ($\beta = -.41, p < .001$) was significantly related to the HM/HR composite where stress ($\beta = -.16, p = .06$) approached significance, $F(2, 185) = 34.66, p < .001, R = .52$.

Results for Study Two

The research question for study 2 was: does the HM/HR factor structure vary across groups (a) gender, (b) race (African American and Caucasian), and (c) marital status (married and unmarried)? This section describes the results from multiple group confirmatory factor analysis (CFA) as well as nested model comparisons. Multiple group CFA could not be reasonably used to test for variation by race or marital status given that the dataset was split by gender, and subdividing this further produced small sample sizes.

Multiple Group Confirmatory Factor Analysis (CFA) of the HM/HR Measure

Next, AMOS 18.0 was used to perform a multiple group CFA on the Healthy Marriage/Healthy Relationships (HM/HR) measure simultaneously for males ($n = 143$) and females ($n = 188$). Multiple group CFAs were not used to compare fit by race or marital status due to small sample sizes within these subgroups. Maximum likelihood estimation was chosen because the data were normally distributed. The rationale for splitting the dataset by gender was to reduce an increase in Type 1 error in the interpretation of these individual level variables since both males and females appraised their couple relationship individually. In addition, a multiple group analysis was appropriate to test the equal factor structure of the healthy marriage construct (or measurement invariance) for the effect indicator model, further implying the equivalent construct validity across gender. Each item was constrained to load on to the healthy marriage latent variable identified by the EFA. No cross-loadings were specified. One parameter estimate of the latent variable was constrained to one to identify the model (Kline, 1998). First, an

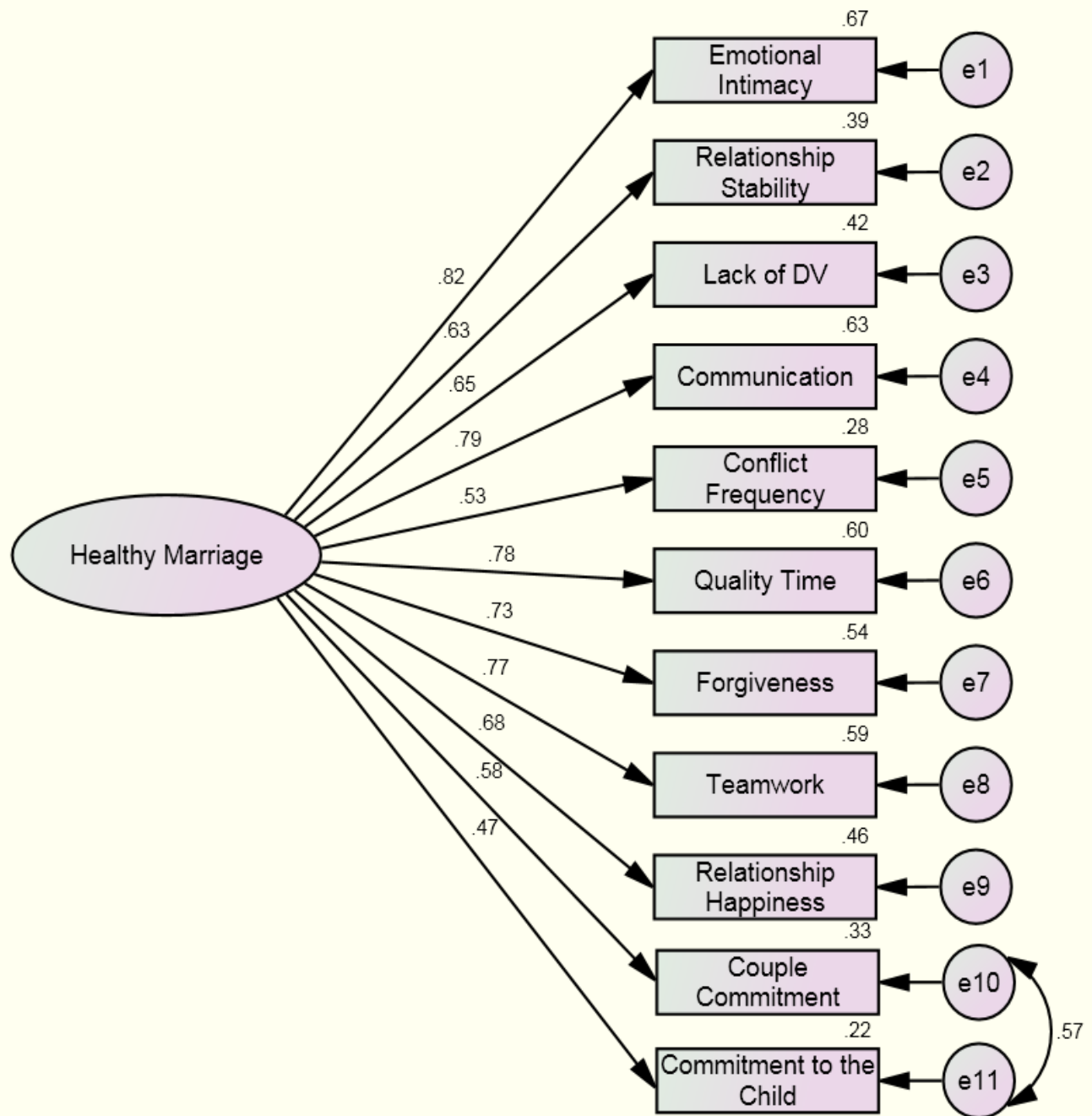
unconstrained baseline model was tested. Then, models were fit with constraints across gender specified for measurement weights (factor loadings) and next by measurement residuals (fixing the covariances and variances of the errors to be the same). This process of model fitting yielded a nested hierarchy of models and a chi-square difference test was used to test whether the equality constraints were upheld.

In order to determine if the hypothesized model should be accepted or rejected, the following goodness of fit tests were used: the chi-square statistic (Jöreskog & Sörbom, 1984), the Comparative Fit Index, (CFI; Bentler, 1990), the Tucker-Lewis Index (TLI; Bentler & Bonett, 1980), the Root-Mean-Square Error of Approximation (RMSEA; Browne & Cudeck, 1993) and the Standardized Root-Mean-Square Residual (SRMR; Bentler, 1995). Generally, a lower chi-square statistic indicates a better fitting model. According to Hu and Bentler (1998), the chi-square statistic is particularly sensitive to sample size and thus should be examined with the additional fit indices listed above. This is especially important given the smaller sample size in this dissertation research. The CFI compares the fit for the model of interest with the null model (i.e. a model that assumes the latent variables are uncorrelated). The TLI measures the proportion by which the hypothesized model improves the fit of the null model. Scores for the CFI are “normed” so that their values cannot be below 0 or above 1 and scores for the TLI are considered “nonnormed” because, on occasion, they may be larger than 1 or slightly below 0. The RMSEA is an index of lack of fit. Adequate fit was designated as CFI and TLI values of $\geq .90$ (Bentler, 1992) and RMSEA values of $\leq .10$, whereas excellent fit was designated as CFI and TLI values close to .95, and RMSEA values close to .06 (Hu & Bentler, 1999). The SRMR is a measure of the standardized difference between the observed and predicted covariance.

Values of .06 or lower suggest a good fitting model (Hu & Bentler, 1998). Modifications to the model (i.e. correlating error terms) were only made for substantive reasons (Jöreskog, 1993).

Unconstrained model. This initial unconstrained Healthy Marriage model showed adequate fit of the data $\chi^2(88) = 286.326, p = .000, CFI = .91, TLI = .88, RMSEA = .08, SRMR = .07$. Modification indices suggested eight ways by which fit could be improved with covariances, and one of these changes was made. Treating the covariance between child commitment and couple commitment as a free parameter, would reduce the discrepancy by at least 45.42. Allowing these two error terms to covary improved fit, $\chi^2(86) = 199.328, p = .000, CFI = .95, TLI = .93, RMSEA = .06, SRMR = .06$. The rationale for correlating the two commitment items is that couple commitment increases when partners share children (Stanley & Markman, 1992) and healthy marriage is often defined as involving the unconditional commitment to both one's partner and children (Fagan, 2002; Waldo, 2002). Figure 2 shows the final CFA with standardized parameter estimates for males and Figure 3 shows the final CFA with standardized parameter estimates for females. Using standardized coefficients allows different variables to be directly compared when they have different scales (Klein, 2005). Standardized and unstandardized coefficients for males and females are shown in Table 19. All factor loadings were significant for males and females. The squared multiple correlation (SMC) values indicating the reliability of the Healthy Marriage measure are also provided in Figures 2 and 3. For example, in the male model, emotional intimacy (.67) and commitment to the child (.22) have the highest and lowest SMC respectively. In the female model, emotional intimacy (.80) and relationship stability (.28) have the highest and lowest, respectively.

Figure 2. *Unconstrained CFA healthy marriage model for males.*



For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this dissertation.

Figure 3. *Unconstrained CFA healthy marriage model for females*

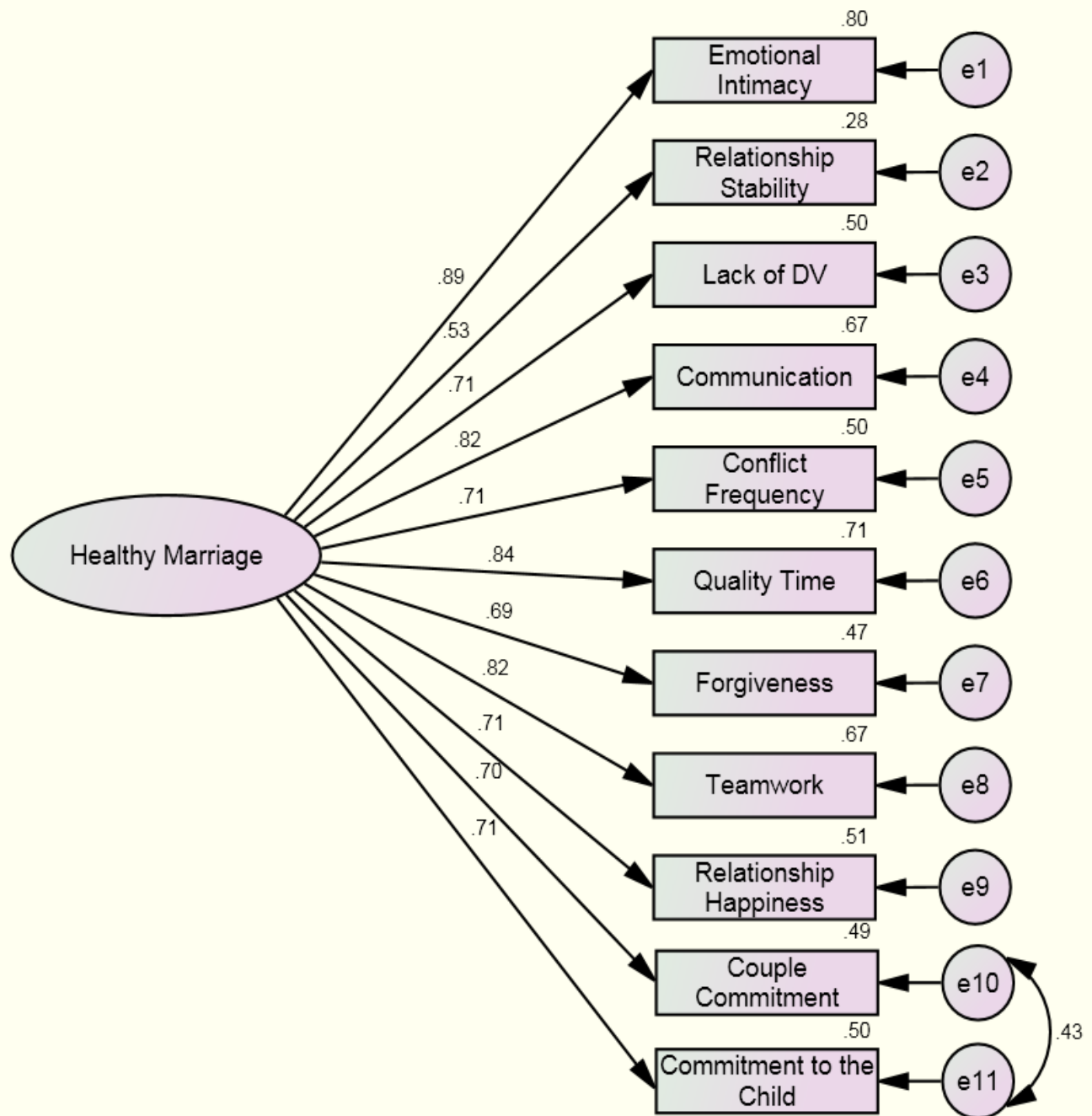


Table 19

Standardized and Unstandardized Coefficients for Males and Females on HM/HR Model

Variable	Males			Females		
	β	B	SE	β	B	SE
Emotional Intimacy	.819	.458	.039	.893	.608	.039
Relationship Stability	.625	.309	.039	.527	.260	.034
Lack of DV	.649	.463	.056	.701	.590	.055
Communication	.794	.566	.051	.814	.720	.054
Conflict Frequency	.532	.314	.048	.703	.444	.041
Quality Time	.775	.480	.045	.844	.601	.042
Forgiveness	.734	.900	.092	.685	.940	.090
Teamwork	.767	.652	.062	.821	.786	.058
Relationship Happiness	.677	.793	.089	.717	1.183	.106
Couple Commitment	.577	.323	.042	.723	.473	.042
Child Commitment	.468	.252	.041	.728	.448	.039

*All factor loadings were significant for males and females.

Nested model comparisons. Table 20 presents summary fit indices of the three nested models for the multiple group (males and females) confirmatory factor analysis. The unconstrained model was the baseline model, which relaxed all equality constraints. As mentioned above, this model tested the factorial structure of the instrument across gender simultaneously with no cross-group constraints imposed. The fit indices for the baseline model indicated that the model of the healthy marriage measure exhibited acceptable fit across gender. The measurement weights model tested the invariance of factor loadings across gender by placing equality constraints on these parameters. The fit indices for this measurement weight model were $\chi^2(97) = 224.698$, $p = .000$, CFI = .94, TLI = .93, RMSEA = .06, SRMR = .10. A cut off of .10 for the SRMR statistic was used. When the measurement weight model was compared to the baseline model, a significant difference was noted, $\Delta\chi^2(11) = 25.533$, $p = .008$. This suggests that the factor loadings vary across gender groups. A detailed exploration of which loadings were different across gender is provided below (see partial measurement

invariance below). In the measurement residual model, all parameters were specified equally across gender. The chi-square difference test again yielded a statistically significant value of 49.16 with 22 degrees of freedom at the .001 level. These findings suggested that the equality constraints of factor loadings, covariances, and error covariances were not upheld across gender. That is, the assumption of an equivalent factor structure was not supported across gender.

Table 20

Fit Indices of Three Nested Models of Multi-group Confirmatory Factor Analysis (n=151)

Model	χ^2 (df)	χ^2/df	CFI	TLI	RMSEA	SRMR
Unconstrained Model	199.328(86)*	2.318	.947	.932	.083	.055
Measurement Weight	224.698(97)*	2.316	.940	.932	.081	.100
Measurement Residual	247.879(108)*	2.295	.934	.933	.079	.093

* $p < .001$

Partial measurement invariance. The results of the measurement weights model analysis above indicated that some equality constraints of factor loadings did not hold across gender. In an effort to identify factor loadings of which items were equivalent and which were nonequivalent across gender, chi-square difference tests were conducted on an indicator-by-indicator basis in the context of partial measurement invariance where equality constraints were imposed on some but not all of the factor loadings (Byrne, Shavelson, & Muthen, 1989). In the context of the partial measurement model, a model was fit first by placing equality constraints on all the factor loadings (see measurement weights model in Table 27); then, a less restrictive model was fit by relaxing the equality constraint of the regression weights (factor loadings) of the item of interest. A chi-square difference test was conducted between the less restrictive model and the measurement weights model to investigate whether the factor loading of that item was invariant across gender. A non-significant chi-square difference test indicated that the factor loading of that item was not statistically different across gender. This process was repeated item

by item until all of the nonequivalent items were identified. Results of chi-square difference tests indicated that the factor loadings of two variables were nonequivalent: relationship stability and child commitment and the factor loadings of other variables were invariant across gender. Table 21 displays the results of chi-square difference tests for equivalent factor loadings and nonequivalent factor loadings of variables across gender.

Table 21

Equivalent and Nonequivalent Factor Loadings of Variables across Gender

Variable	$\Delta\chi^2$ (df =1)	<i>p</i>
Emotional Intimacy	1.232	.267
Relationship Stability	5.416	.020*
Lack of DV	.123	.726
Communication	.196	.658
Conflict Frequency	.924	.336
Quality Time	.018	.892
Forgiveness	1.991	.158
Teamwork	.073	.787
Relationship Happiness	2.853	.091
Couple Commitment	.001	.981
Child Commitment	4.420	.036*

* $p < .05$

The results suggested that although factor loadings were significant for both males and females, the healthy marriage measure was a partially invariant measurement across gender. Specifically, the factor loading for relationship stability was larger for males and the factor loading for child commitment was larger for females. However, the great majority of variables were invariant.

Results for Study Three

Path Analyses

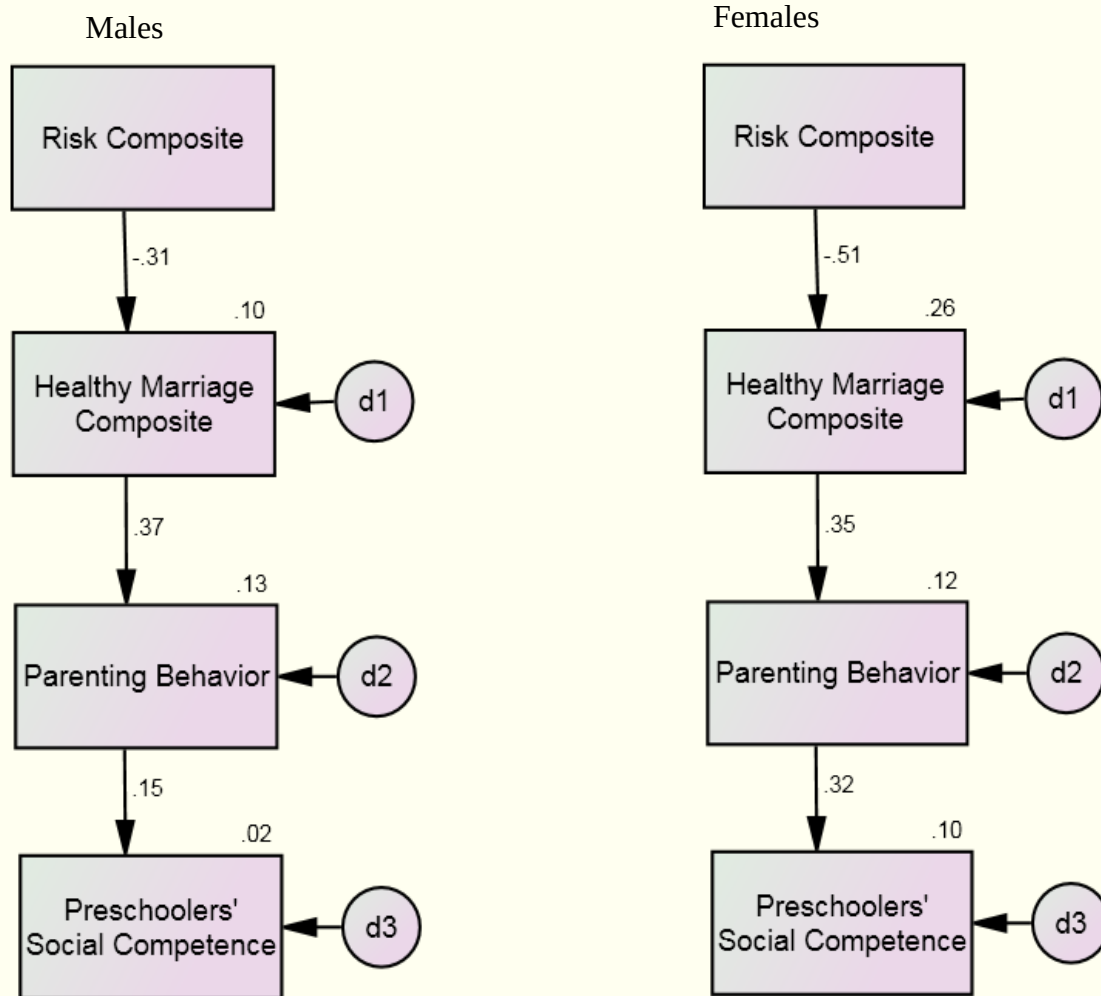
The final purpose of this research was to test a model of healthy marriage developed by Child Trends, Inc. that predicts adult and child well-being. The last part of the results section focuses on the research question: How are responses on the HM/HR measure related to parenting and child outcomes? In order to test the relationship between responses on the HM/HR measure to parenting and child outcomes across gender, race and marital status, several path analyses were modeled in AMOS version 18.0. Path analyses were chosen so that the model could be tested for variations in race and marital status within gender (both with small sample sizes). This is a confirmatory technique for testing theoretical causal relationships between variables and was chosen for the analysis because 1) it is one of the only approaches that allows for concurrent tests of all relationships in a complex model including multiple dependent variables, 2) it allows for the incorporation of mediating variables, 3) and it is more rigorous for parsimonious model testing than multiple regression analysis (Tabachnick & Fidell, 2001). Maximum likelihood estimation was used in all analyses. In all figures showing path models, standardized path coefficients (β s) are displayed because these coefficients serve as effect sizes for each path within the context of the model.

First, observed variables for risk and healthy marriage were developed by calculating composite scores. Although results from study two revealed that the healthy marriage measure was a partially invariant measurement across gender, a composite score was still used because the focus was on examining the structural model. Specifically, to provide more stable measures of the underlying abilities, composites of risk and healthy marriage were formed with unit-weighted z scores of constituent tests (Ackerman & Cianciolo, 2000). Both the risk composite

($\alpha = .79$ for the overall sample, $\alpha = .78$ for males and $\alpha = .79$ for females) and the healthy marriage composite ($\alpha = .92$ for the overall sample, $\alpha = .90$ for males and $\alpha = .93$ for females) scales were determined reliable.

Parent gender differences in the Child Trends, Inc. model. In order to test for equivalence of the Child Trends, Inc. measurement model across parent gender, a path analysis was conducted separately for both genders (see Figure 4), and these models were compared to investigate possible gender differences. This linear model was tested because it is the conceptual model as outlined by Child Trends, Inc. Specifically, the analysis contrasted the fit of the models with the weights unconstrained by gender to models where the beta weights were constrained to be equal for both genders. Chi-square tests were then used to compare the models. Results showed that the overall unconstrained fit of the model was good, $\chi^2 = 9.912$, $df = 6$, $p = .128$, CFI = .97, TLI = .94, RMSEA = .05, and SRMR = .06. This unconstrained model differed significantly from the model with constrained beta weights $\chi^2 = 21.191$, $df = 9$, $p = .012$, CFI = .91, TLI = .88, RMSEA = .06, SRMR = .08, $\Delta\chi^2 = 11.279$, $\Delta df = 3$, $p = .010$ indicating that path coefficients significantly varied by gender. Because the unconstrained model provided a significantly better fit, the relationships between the variables differed between males and females. All relationships were in the hypothesized directions for males and females but the effect sizes for the path between risk and healthy marriage was significantly larger for females than for males (see Figure 4). In addition, the path estimates from risk to healthy marriage were especially larger for unmarried females and for African American females. Standardized and unstandardized coefficients for males and females are shown in Table 22.

Figure 4. *Unconstrained standardized estimates for males and females.*



Racial differences in the Child Trends, Inc. model. Next, equivalence of the Child Trends, Inc. measurement model across race was examined. Two multiple group path analyses were performed. The first path analysis compared the model for African American males ($n = 68$) and Caucasian males ($n = 56$) while the second path analysis compared the model for African American females ($n = 95$), and Caucasian females ($n = 70$).

Male by race. Results for the male group showed that the overall unconstrained fit of the model was adequate, $\chi^2 = 3.319$, $df = 6$, $p = .768$, CFI = 1.00, TLI = 1.18, RMSEA = .00 and SRMR = .08. This unconstrained model did not differ significantly from the model with constrained beta weights $\chi^2 = 4.234$, $df = 9$, $p = .895$, CFI = 1.00, TLI = 1.18, RMSEA = .00, SRMR = .09, $\Delta\chi^2 = .915$, $\Delta df = 3$, $p = .822$ indicating that path coefficients did not significantly vary for males by race.

Female by race. Results for the female group also showed that the overall unconstrained fit of the model was adequate, $\chi^2 = 3.691$, $df = 6$, $p = .718$, CFI = 1.00, TLI = 1.06, RMSEA = .00 and SRMR = .07. This unconstrained model also did not differ significantly from the model with constrained beta weights $\chi^2 = 5.450$, $df = 9$, $p = .793$, CFI = 1.00, TLI = 1.06, RMSEA = .00, SRMR = .07, $\Delta\chi^2 = 1.759$, $\Delta df = 3$, $p = .624$ indicating that path coefficients did not significantly vary for females by race. Standardized and unstandardized coefficients for males and females by race are shown in Table 22.

Marital status differences in the Child Trends, Inc. model. A final set of multiple group path analyses was performed to examine the model by marital status. Two multiple group path analyses were performed. The first path analysis compared the model for Married males ($n = 89$) and Unmarried males ($n = 53$) while the second path analysis compared the model for Married females ($n = 105$), and Unmarried females ($n = 80$).

Male by marital status. Results for the male group showed that the overall unconstrained fit of the model was good, $\chi^2 = 6.361$, $df = 6$, $p = .384$, CFI = .99, TLI = .98, RMSEA = .02 and SRMR = .08. This unconstrained model did not differ significantly from the model with constrained beta weights $\chi^2 = 8.954$, $df = 9$, $p = .442$, CFI = 1.00, TLI = 1.00, RMSEA = .00, SRMR = .09, $\Delta\chi^2 = 2.593$, $\Delta df = 3$, $p = .459$ indicating that path coefficients did not significantly vary for males by marital status.

Female by marital status. Results for the female group also showed that the overall unconstrained fit of the model was good, $\chi^2 = 8.645$, $df = 6$, $p = .195$, CFI = .97, TLI = .95, RMSEA = .05 and SRMR = .05. This unconstrained model also did not differ significantly from the model with constrained beta weights $\chi^2 = 9.442$, $df = 9$, $p = .397$, CFI = .995, TLI = .99, RMSEA = .02, SRMR = .04, $\Delta\chi^2 = .798$, $\Delta df = 3$, $p = .850$ indicating that path coefficients did not significantly vary for females by marital status. Standardized and unstandardized coefficients for males and females by marital status are shown in Table 22.

Table 22

Unstandardized, Standardized, and Significance Levels for Child Tends Model for Males and Females by Race and Marital Status (Standard Errors in Parentheses)

Structural Model Estimates	Males			Females		
<i>Direct Effects</i>	B	β	<i>p</i>	B	β	<i>p</i>
<i>Full Sample</i>						
Risk Composite → HM Composite	-1.201(.308)	-.311	***	-2.520(.309)	-.512	***
HM Composite → Parenting	.025(.005)	.365	***	.022(.004)	.347	***
Parenting → Social Competence	.220(.126)	.145	.081	.440(.095)	.320	***
<i>African American Sample</i>						
Risk Composite → HM Composite	-1.495(.513)	-.336	.004	-2.888(.435)	-.565	***
HM Composite → Parenting	.026(.008)	.357	.002	.020(.005)	.355	***
Parenting → Social Competence	.355(.164)	.256	.030	.492(.142)	.337	***
<i>Caucasian Sample</i>						
Risk Composite → HM Composite	-1.802(.527)	-.419	***	-2.056(.522)	-.428	***
HM Composite → Parenting	.016(.008)	.263	.043	.022(.007)	.337	.003
Parenting → Social Competence	.310(.236)	.174	.188	.394(.156)	.290	.012
<i>Married Sample</i>						
Risk Composite → HM Composite	-1.260(.374)	-.338	***	-2.375(.425)	-.481	***
HM Composite → Parenting	.028(.007)	.403	***	.021(.006)	.322	***
Parenting → Social Competence	.132(.155)	.091	.394	.396(.127)	.292	.002
<i>Unmarried Sample</i>						
Risk Composite → HM Composite	-1.029(.658)	-.211	.118	-2.558(.478)	-.515	***
HM Composite → Parenting	.018(.009)	.264	.048	.022(.006)	.379	***
Parenting → Social Competence	.465(.198)	.309	.019	.551(.132)	.425	***

* significantly different from zero at the .001 level (two-tailed)

Mediation Analysis

Mediation was tested by assessing the significance of the cross product of the coefficients for the IV to mediator relation (the a path), and the mediator to DV relation controlling for IV (the b path). The a paths tested in the model were: (a) risk(X) – healthy marriage(M); (b) risk(X) – parenting(M); (c) and healthy marriage(X) – parenting(M). The b paths tested in the model were: (a) healthy marriage(M) – parenting(Y) controlling for risk(X); (b) healthy marriage(M) – social competence(Y) controlling for risk(X); (c) parenting(M) – social competence(Y) controlling for risk(X); and (d) parenting(M) – social competence(Y) controlling for healthy

marriage(X). An ab cross product test is a well recognized method to test mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) because it tests the statistical significance of the difference between the total effect (c path), and the direct effect (c' path), which is the impact of the IV on the outcome controlling for the effect of the mediator. The c paths tested in the model were: (a) risk(X) – parenting(Y); (b) risk(X) – social competence(Y); (c) healthy marriage(X) to social competence(Y). The c' paths tested in the model were: (a) risk(X) – parenting(Y) controlling for healthy marriage(M); (b) risk(X) – social competence(Y) controlling for healthy marriage(M); (c) risk(X) – social competence(Y) controlling for parenting(M); and (d) healthy marriage(X) to social competence(Y) controlling for parenting(M). MacKinnon, Warsi, and Dwyer (1995) demonstrated that in normal least squares models, ab is algebraically equivalent to $c - c'$. Therefore, the significance of the cross product of coefficients directly tests mediation. This is different from inferences made using the causal steps approach by Baron and Kenny (1986).

The non-parametric method used in the current study (Preacher & Hayes, 2008a; Preacher & Hayes, 2008b) is through bootstrapping, in which 1,000 samples of the original size are taken from the obtained data and mediational effects are calculated in each sample. The point estimate of the indirect cross product (Table 23) is the mean for these 1,000 samples, ensuring stability of the analyses; the bias corrected and accelerated 95% confidence intervals are comparable to the 2.5 and 97.5 percentile scores of the acquired distribution over the samples, but with z-score based corrections for bias due to the original distribution (Preacher & Hayes, 2008a; Preacher & Hayes, 2008b). If the confidence intervals do not contain zero, the point estimate is significant at the level indicated.

In the present analysis, bias-corrected 95% confidence intervals showed that for males, the only significant mediation effect was healthy marriage mediated the relationship between risk and parenting (see Table 23). The *a*, *b*, and *c* paths were significant; and *c'* paths were not significant indicating a partial mediation rather than complete mediation ($z = -2.84, p = .005$). See Table 24 for the *t* values and significance of the *a*, *b*, *c*, and *c'* paths as well as the *z* scores which represent significance of the indirect effects using Sobel tests (defined as the effect divided by its standard error). There were no significant effects for males from risk to social competence or from healthy marriage to social competence that could be mediated.

The mediation analysis for females did demonstrate significant effects from risk to parenting, from risk to social competence, and from healthy marriage to social competence. Healthy marriage was found to partially mediate the relationship between risk and parenting ($z = -3.20, p = .001$), parenting partially mediated the relationship between risk and social competence ($z = -2.89, p = .004$), and parenting partially mediated the relationship between healthy marriage and social competence ($z = 3.14, p = .002$). However, healthy marriage did not mediate the relationship between risk and social competence ($z = -1.50, p = .133$). This was because healthy marriage did not have a significant effect on social competence when controlling for risk ($t = 1.52, p = .130$).

Table 23

Bootstrapped Point Estimates and Confidence Intervals (CIs) for Indirect Effects of Mediators by Gender

Effect	Point Estimate	SE	Bootstrapping 95%	
			Lower CI	Upper CI
<i>Male Indirect Effects</i>				
Risk → HM → Parenting	-.028	.010	-.052	-.011
Risk → HM → Social Comp.	-.009	.012	-.040	.014
Risk → Parenting → Social Comp.	-.014	.010	-.038	-.001
HM → Parenting → Social Comp.	.006	.004	-.001	.015
<i>Female Indirect Effects</i>				
Risk → HM → Parenting	-.043	.015	-.080	-.016
Risk → HM → Social Comp.	.029	.018	-.063	.008
Risk → Parenting → Social Comp.	-.036	.013	-.070	-.014
HM → Parenting → Social Comp.	.009	.003	.004	.017

Level of Confidence for Confidence Intervals: 95; Number of Bootstrap Resamples: 1000

Table 24

t and z Values for Normal Theory Mediation Tests by Gender

	X-M (a path)	M(X)-Y (b path)	X-Y (c path)	X(M)Y (c' path)	Indirect Effect (normal test z score)
<i>Male Indirect Effects</i>					
Risk → HM → Parenting	-3.88***	4.10***	-2.32*	-1.05	-2.84**
Risk → HM → Social Comp.	-3.88***	0.88	1.70	1.89	-0.87
Risk → Parenting → Social Comp.	-2.32*	2.13*	1.70	2.10*	-1.58
HM → Parenting → Social Comp.	4.66***	1.74	0.31	-.3473	1.64
<i>Female Indirect Effects</i>					
Risk → HM → Parenting	-8.13***	3.46***	-4.00***	-1.76	-3.20**
Risk → HM → Social Comp.	-8.13***	1.52	-2.13*	-1.06	-1.50
Risk → Parenting → Social Comp.	-4.00***	4.15***	-2.13*	-0.96	-2.89**
HM → Parenting → Social Comp.	5.05***	3.98***	2.40*	0.95	3.14**

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

Structural Equation Modeling

Metric invariance. First, structural equation modeling was used to examine a metric invariant model (measurement weights) against an unconstrained model using AMOS 18.0. Maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, asymptotically distribution- free [ADF]) because the data were distributed normally (Kline, 2005). In the first, unconstrained multiple group analysis, no measurement weights nor structural paths were fixed for either gender. In the second, more restrictive multiple group analysis, the measurement weights were fixed to be equal for males and females. This comparison demonstrated that difference in fit approached significance between the unconstrained and measurement model ($\Delta\chi^2(11) = 18.15, p = .08$).

Structural invariance. A structural equation model (SEM) was used to assess the relationships among the exogenous latent variable (Risk) with the endogenous latent variable (Healthy Marriage) and the two endogenous observed variables (Parenting and Social Competence). The hypothesized SEM is described graphically in Figure 5. A multiple group SEM analysis based on data from males ($n = 143$) and females ($n = 188$) with AMOS 18.0 statistical package was performed. Circles represent the two latent variables (risk and healthy marriage) and the rectangles represent the measured variables. Maximum likelihood parameter estimation was chosen over other estimation methods (weighted least squares, two-stage least squares, asymptotically distribution- free [ADF]) because the data were distributed normally (Kline, 2005). The hypothesized model appeared to be an adequate fit with the data ($\chi^2 = 331.280, df = 176, p = .000, CFI = 0.94, TLI = .93, RMSEA = .05, SRMR = .06$). Post-hoc modifications were not conducted because of the good fit of the data to the model.

Multiple group analysis. A multiple group analysis of model invariance compared the fit of the model factor structure across the two genders; thereby garnering evidence as to whether the three structural pathways illustrated in Figure 5 differed significantly between males and females. In the less restrictive multiple group analysis, the values of the measurement weights for the healthy marriage latent variable and the two measurement weights for the risk latent variable were fixed to be equivalent so as to potentially suggest an invariant measurement model for the two groups. In the second, more restrictive multiple group analysis, all of the measurement weights for the healthy marriage latent variable, the two measurement weights for the risk latent variable as well as all structural main paths were constrained to be invariant, thus fixed to be equal for both groups. During both analyses, factor loadings were held invariant between the two groups so that constructs would be measured similarly for male and female groups. This comparison revealed a significant difference in fit between the measurement and structural models ($\Delta\chi^2(3) = 9.423, p = .024$), indicating that the main path structural coefficients significantly differ between males and females (see Table 26 for coefficients of the SEM model). This structural model fit the data adequately well ($\chi^2 = 358.857, df = 190, p = .000, CFI = 0.93, TLI = .92, RMSEA = .05, SRMR = .08$).

To determine which of the three structural paths were significantly different between males and females, chi-square difference tests were conducted on an item by- item basis where equality constraints were imposed on some but not all of the paths. A model was fit first by placing equality constraints on all measurement and structural weights, and then a less restrictive model was fit by relaxing the equality constraint of the examined path. A chi-square difference test (Table 25) was conducted between the less restrictive model and the structural weights

model to investigate whether the path was invariant across parental gender. This process was repeated item by item until all of the nonequivalent items were identified. Results of chi-square difference tests indicated that risk to healthy marriage was nonequivalent while healthy marriage to parenting as well as parenting to social competence were equivalent across parental gender.

Table 25

Equivalent and Nonequivalent Factor Loadings of Structural Paths across Parental Gender

Path	$\Delta\chi^2$ (df =1)	<i>p</i>
Risk→HM	7.222	.007**
HM→Parenting	.242	.622
Parenting→SC	1.944	.163

***p* < .01

Direct effects. Risk was related negatively to Healthy Marriage/Healthy Relationships (HM/HR) for males (standardized coefficient = -.33) and for females (standardized coefficient = -.59). Healthy Marriage was related positively to Parenting Behavior for males (standardized coefficient = .37) and for females (standardized coefficient = .36). Parenting Behavior was positively related to Social Competence for males (standardized coefficient = .15) and females (standardized coefficient = .32). Please see Table 26 for direct effect coefficients.

Table 26

Standardized and Unstandardized Coefficients for Males and Females on SEM Model

Unconstrained Model	Males				Females			
	β	B(SE)	<i>p</i>	R^2	β	B(SE)	<i>p</i>	R^2
<i>Direct Effects</i>								
Risk →HM	-.334	-.271(.081)	***	.112	-.588	.462(.072)	***	.346
HM →Parenting	.368	.399(.092)	***	.136	.363	.334(.066)	***	.132
Parenting →Social Comp.	.145	.220(.126)	.081	.021	.320	.440(.095)	***	.102

****p* < .001

Summary of Results

Preliminary results showed that females had significantly higher scores than males on parenting behaviors (especially supportive/engaged behaviors) as well as on depression. Both married males and married females had significantly higher scores on children's social competence scores than their unmarried counterparts. In addition, unmarried females scored significantly higher on depression than married females. There were no significant differences between African Americans and Caucasians within gender. Results from the EFA in study one, showed that the measure used to assess healthy marriage was unidimensional. In addition, depression was significantly related to the HM/HR composite for females but not for males whereas stress was significantly related to the HM/HR composite for males and approached significance for females. Study two results demonstrated support for the factorial validity of the healthy marriage measure. Overall, the healthy marriage measurement fit for both males and females. The factor loadings were significant for both males and females although results of the chi-square difference tests indicated that the factor loadings of two variables were nonequivalent across gender: *relationship stability* (larger for males) and *child commitment* (larger for females). This difference was only in the strength of the loading as both loaded significantly on the healthy marriage latent construct. The factor loadings of the majority of variables were invariant across gender. Study two results demonstrated convergent validity. The healthy marriage variables for both males and females were specified to measure a common underlying healthy marriage factor.

Study three results demonstrated that the Child Trends, Inc. healthy marriage measurement model can be appropriately used for diverse groups. There was a significant effect of risk (depression and stress) on healthy marriage for both males and females. The strongest path between risk and healthy marriage was for African American women and unmarried

women. In addition to the direct effect of risk (depression and stress) on healthy marriage for males and females, risk had a significant direct effect on parenting and healthy marriage had a significant direct effect on parenting. Results showed that for both males and females, healthy marriage is part of the mechanism through which risk (depression and stress) influences parenting (Baron & Kenny, 1986). For females, risk had an indirect effect on children's social competence through parenting and healthy marriage had an indirect effect on children's social competence through positive parenting. This study found that for males, healthy marriage had a significant influence on parenting; however, healthy marriage did not significantly influence the ratings of children's social competence.

CHAPTER 5: DISCUSSION

Overview

Although there have been major contributions in defining “healthy marriage” there is still much to be learned about how healthy marriage as a construct is measured as well as how the model of healthy marriage predicts adult and child well being. The need for measuring healthy marriage is a practical one given the many (about 300) federal and state healthy marriage initiative demonstration projects that exist and the empirical evidence needed to guide future directions. There is great interest in evaluating the effects of these federal and state marriage and relationship education programs with the ultimate goal being children’s well-being.

The first generation of marriage and relationship evaluation (MRE) research, from 1975 through the mid-2000s showed success in improving relationship quality, improving couple communication as well as increasing stability (Hawkins & Ooms, 2010). However, these studies were essentially void of examining improvements in parenting or child well-being and certainly did not focus on lower-income, less educated, more distressed couples (Ooms & Wilson, 2004). Beginning in 2002, during the second generation of MRE research, programs and evaluation began to more specifically target low-income, less educated couples and evaluation of these programs is ongoing. Hawkins and Fackrell (2010) completed a meta-analysis searching for MRE program outcomes evaluation studies targeted primarily to low-income couples. They found that these studies demonstrated positive outcomes for participants in regard to relationship quality, commitment, relationship stability, and communication skills. However, parenting and child outcomes have been less of a focus. The forthcoming large-scale rigorous Supporting Healthy Marriage study by Manpower Demonstration Research Corporation (MDRC) expected in 2012 will include direct assessments of child health and well-being.

MDRC provided the baseline tool that they are using for the Supporting Healthy Marriages study for this dissertation research so that the measure of healthy marriage and its associated antecedents could be studied together with child well-being at the local level. Whereas the SHM study includes married couples only, this research extends to unmarried couples. In addition, local healthy marriage programs have an evaluation need to demonstrate child outcomes in a feasible way, and quite possibly through parent self-reporting methods. This research tested two simple short-form parent report questionnaires to assess parenting behaviors and child well being, specifically children's social competence. Because the goal of federal healthy marriage interventions is to enhance outcomes for children, it is helpful to measure all of these constructs in the same survey and prospectively examine their individual and cumulative association with parenting and child outcomes. The benefit of using the SHM measure of healthy marriage is that it encompassed all ten of the Child Trends, Inc. "healthy marriage" constructs with about 30 items. This was the only measurement of healthy marriage that the researcher found appropriate for use because its brevity did not compensate for measuring healthy marriage as an all-encompassing concept.

The present dissertation research is not one of program evaluation; rather it set out to initially establish a measure and structural model of healthy marriage and to examine structural fit across gender, race, and marital status. The research examined how each healthy marriage construct contributed to the measure of healthy marriage and tested additional constructs for inclusion. Once the measurement was tested, the next step was to test the Child Trends, Inc. healthy marriage measurement model of predicting adult and child well-being. Testing the healthy marriage measure in this context provided results on mediation to further explore how

risk (depression and stress), healthy marriage, and parenting play a role in predicting children's social competence.

Measurement of Healthy Marriage

Healthy Marriage Measured Variables

Each healthy marriage variable was analyzed for reliability as well as for its relationship to the other healthy marriage, parenting and preschooler social competence variables.

Preliminary analysis demonstrated that the two-item conflict resolution process variable and the two-item relationship quality variable had poor reliability ($\alpha = .53$ and $.51$ respectively) for this sample. Because of this, these two variables were dropped from further analysis. The one-item fidelity variable was also dropped because it did not correlate well with the other healthy marriage, parenting, and social competence measures. The nine-item conflict frequency variable and three-item domestic violence variable replaced the conflict resolution process variable for a measure of conflict. The two conflict resolution items asked participants to rate how often (using a 4-point Likert scale) the following happened: "Our arguments get very heated" (reverse-coded) and "I am satisfied with the way we handle our problems and disagreements". Lichter and Carmalt (2009) utilized these same two items in their research on marital quality with an additional third item, "When we are having a problem, my spouse often gives me the silent treatment." Besides adding the third item to the conflict resolution scale, responses were on a 4-item Likert agreement scale instead of the 4-item frequency scale used in that research. The scale used by Lichter and Carmalt (2009) had better reliability ($\alpha = 0.60$ for husbands and 0.66 for wives) than this study ($\alpha = .53$).

The conflict resolution variable was dropped with the confidence that the domestic violence variable captured the negative resolution of conflicts. Specifically, the domestic

violence variable was able to capture conflict resolution process with its three items. Participants reported how often in the past year their spouse/partner: yelled or screamed; blamed them for his/her problems; and how often their arguments became physical. This domestic violence measure demonstrated satisfactory reliability ($\alpha = .76$). This study considers both conflict frequency and conflict resolution as valuable measures of healthy marriage especially in terms of possible negative spillover from interparental negativity to parent-child negativity. The conflict frequency scale and complimentary domestic violence scale were both used for this research.

In addition, the one-item relationship happiness variable replaced the two-item relationship quality variable as a measure of “satisfaction”. Relationship satisfaction is the most common measure of marital quality yet it remains a problematic construct to measure (Fincham & Beach, 2010). It may be measured by overall happiness with marriage such as the one item measure used in this study which asks respondents on a scale from 1 (completely unhappy) to 7 (completely happy) how happy they are with their marriage/relationship. At the time that the questionnaire was offered to the researcher, MDRC was testing both the happiness and relationship quality measures for satisfaction. The research findings for this study suggested that the one-item relationship happiness measure is superior to the two-item relationship quality measure which asks respondents to rate the good side of their marriage (from 1 “not at all good” to 5 “completely good”) and then to rate the bad side of their marriage (from 1 “completely bad” to 5 “not at all bad”). Quite possibly the lack of reliability for this measure may be understood with an explanation by Reis and Gable (2003) who argue that “happiness [is] not simply the absence of distress and distress [is] not simply the absence of happiness” (p. 131). The use of this scale was not found in the literature and combining these two items did not prove to be a satisfactory measure of satisfaction. There is confidence in using the one-item relationship

happiness measure as Goodwin (1992) has shown that a single-item assessment of marital happiness correlates highly with total marital adjustment and differentiates between adjusted and distressed couples. The item used in this current study is much like the first item from the Marital Adjustment Test (MAT) (Locke & Wallace, 1959) to assess satisfaction and captures a great deal of information about individuals' relationship satisfaction (Funk & Rogge, 2007). This item was recently used by Doss, Rhoades, Stanley, & Markman (2009). Single item indicators of marital satisfaction are relatively common in research on marital satisfaction, happiness, and quality (e.g., Schoen, Rogers, & Amato, 2006).

Unfortunately, the measure of fidelity could not be used in this research due to its low correlations with the other variables. Fidelity is an important construct of healthy marriage and infidelity is positively related to divorce (Atkins et al., 2001; Previti & Amato, 2004). The one-item measure in this study asked participants to rate how strongly they agree (1 "strongly disagree" to 4 "strongly agree") with the statement "I worry about my spouse/partner cheating on me". An alternative item offered in the Child Trends, Inc. Summary Report on Cognitive Interviews for Healthy Marriage Item Development is "I trust my partner to be faithful to me." The single-item measure used in the 1998 General Social Survey conducted by the National Opinion Research Center at the University of Chicago asks respondents, "have you ever had sex with someone other than your spouse while you were married?" However, this item would need to be revised if used with unmarried couples, reports on one's own infidelity behaviors, and is specific to sexual faithfulness while not considering other forms of infidelity (i.e. online infidelity and cybersex). In addition, the sensitive nature of fidelity as a self-report item may also present some methodological challenges (Schroder, Carey & Venable, 2003).

Discussion for Study One

Results from the EFA, showed that the measure used to assess healthy marriage was unidimensional with emotional intimacy, communication, teamwork, and quality time loading best on the healthy marriage measure. The healthy marriage measure encompassed eleven important domains and was still able to be used as a unitary construct. Healthy marriage, as a general construct may be measured using a single composite score ($\alpha = .923$). This implies that researchers and evaluators could compute and interpret an overall healthy marriage score. This was consistent with results reported to the researcher verbally by a representative of MDRC. In Holman's memo to Child Trends, Inc. (2003) regarding the conceptual, measurement and method issues of healthy marriage, he offers a description of the RELATionship Evaluation (RELATE) project. Like the measure used in this current study, The RELATE approach is to measure a large number of concepts with scales that generally have 3-5 items with an effort to be comprehensive but not exhaustive. He relays the message that one of the drawbacks with many surveys is having a long list of items, and thus not being able to measure enough concepts before respondents become fatigued. He poignantly remarks that the RELATE measure "is a reflection of our interest in looking at the tip of many icebergs, assuming the tip will give us adequate information on the whole, rather than understanding all the dimensionality of a very few icebergs" (p. 171). Although the healthy marriage variables assessed in this current study can be used individually, as confirmed by satisfactory reliability of each, they may also be used together in a reliable composite to represent the latent variable of healthy marriage. This is especially helpful when assessing, overall, how healthy marriage/healthy relationships is modeled with other background characteristics, antecedents, and consequences. The advantage of utilizing the unidimensional measure is that all of the healthy marriage constructs outlined by Child Trends,

Inc. can be taken together to give a full picture of healthy marriage. A potential disadvantage of the unidimensional measure is that, for example, the one variable measuring relationship stability is a single dichotomous variable and may lack variability. This variable was used as a proxy for marital duration or marital status as it was able to capture instability in even long-lasting marital relationships.

Results from multiple regressions showed that depression and stress are related to the HM/HR composite differently for males and females. A discussion of this finding is presented further under study three.

Discussion for Study Two

Study two results demonstrated support for the factorial validity of the healthy marriage measure. Overall, the healthy marriage measurement fit for both males and females. The factor loadings were significant for both males and females yet results of chi-square difference tests indicated that the factor loadings of two variables were nonequivalent across gender: *relationship stability* (larger for males) and *child commitment* (larger for females). This difference was only in the strength of the loading as they both were significant to the measure of healthy marriage. However, the factor loadings of the majority of variables were invariant across gender. Relationship stability was measured with the reverse of a single dichotomous item: In the past year, have you ever thought your marriage/relationship was in trouble. Child commitment was comprised of two items: my spouse/partner is the type of parent I want for my child(ren) and my spouse/partner is completely committed to being there for our children. Males and females can both relate to these two concepts, however, the level of importance may vary. Research has shown that males tend to report that no changes are needed in their relationships, (Christensen & Miller, 2006; Henry et al., 2005), thus having fewer perceptions of relationship problems

compared to their wives. For females, the level of importance placed on “father involvement” is evident by stronger ratings of their partner’s commitment to the child. A 2005 report of the *Motherhood Study*, surveying a nationally representative sample of more than 2,000 mothers revealed that low-income mothers with fewer years of education are more likely to report that they want greater father involvement. They are more likely to be unmarried and have added responsibility for daily care of the children as well as the financial support of the family. This may explain a possible different level of importance women place on their partner’s commitment to children.

The measurement model provided a powerful tool for explicating some gender differences. Relationship stability and child commitment may not be equated across gender and may have different meanings for males and females, however, these non-equivalent items constituted only a small portion of the model. Even though the two healthy marriage variables were not equivalent across gender, individuals can still be assessed on a common healthy marriage measurement scale. One might choose to scale the invariant variables with common weights, but with different weights for “relationship stability” and “child commitment”.

Study two results demonstrated convergent validity. The healthy marriage variables for both males and females were specified to measure a common underlying healthy marriage factor. For both males and females, emotional intimacy had the greatest association with the latent healthy marriage measure. The significance of emotional intimacy to the concept of healthy marriage is supported theoretically as well. Emotional intimacy in this research includes counting on your partner, having similar views and expressing love/affection. Conventional definitions of intimacy encompass factors related to closeness, disclosure, activity sharing, sexuality, and affection (Clark, 1998; Heller & Wood, 1998; Patrick et al., 2007). Previous

research examining the association between intimacy and relationship satisfaction has found that there is a strong correlation shared between the two constructs (Patrick, Sells, Giordano, & Tollerud, 2007). In another study of variables that can be used to predict marital satisfaction, Eckstein and Goldman (2001) found that intimacy significantly predicts marital stability. Failure to obtain satisfactory levels of intimacy in a marriage was the most frequent reason given by couples for their divorce (Moss & Barry, 1993; Waring, 1988). However, emotional intimacy is given less weight in therapy and education. Fowers (2001) argues that marital researchers and therapists believe that improvements in communication skills are best for improving and maintaining marriages. While teaching communication skills and even conflict resolution skills certainly does help couples improve satisfaction and stability, this great deal of emphasis on technique seems to overshadow other aspects of marital quality, such as emotional intimacy. It is through intimacy that secure bonds and attachments are strengthened (Johnson, 1996). This current research demonstrates that the definition, promotion, and measurement of healthy marriage for both males and females must include emotional intimacy.

Discussion for Study Three

This study found that the healthy marriage constructs most significantly related to children's social competence were: couple commitment, child commitment, forgiveness, teamwork, relationship happiness, and stability. Although these correlations were low ($r < .20$) the findings shed some light on the healthy marriage construct in the context of child outcomes. Conflict resolution and communication processes have received most attention in marriage research and is the focus of marriage and relationship education curriculum. However, these other constructs may facilitate a direction that results in more positive attributions for a partner's behavior (McCall, 1995). Fincham, Stanley, and Beach (2007) suggest that these types of

healthy marriage constructs (i.e. commitment, forgiveness) function as self-repair or self-regulatory processes in healthy relationships. For example, two satisfied spouses may have a heated disagreement that could potentially harm their relationship. Afterward, these spouses may forgive one another (or engage in other positive processes) and repair the damage, thus bringing the marriage back to harmony. Likewise, committed couples often make self-sacrifices for the sake of the marriage. Greater commitment is associated with more constructive, accommodative responses to negative partner behavior (Rusbult et al., 1991, Rusbult et al., 1998), and may provide a more positive and stable environment for children. What this dissertation research suggests is that when couples believe in the future of their relationship, view problems as solvable, are committed to their children, let go of negative feelings toward each other, and work together as a team, their children, for example, are better able to work out problems, understand other peoples' feelings, and control their tempers during a disagreement.

Important to this research was the examination of two marital virtues, namely forgiveness and teamwork, that are not included the Child Trends, Inc. measurement model of healthy marriage. Consequently, these two healthy marriage constructs correlated (although correlations were small) the most with children's social competence thus demonstrating that they may be stronger predictors of child well-being than other measures of marital/relationship quality. Adding marital virtues to the definition of healthy marriage are important because the factors that contribute to positive relationship adjustment can help professionals develop more effective interventions for couples who may be experiencing marital distress, and more effective marriage education programs. Marital virtues may be further explored in studies on marriage and relationships to gain a better understanding of their role in relationship adjustment. In their work on Affective Reconstruction (2002), Snyder and Schneider hypothesize that what might mainly

set healthy and unhealthy relationships apart is the degree to which partners are self-aware while being aware of their partner. They also suggest that another important factor in relationship health is the ability and willingness to set aside one's own gratification for the sake of the other. The importance of other-centeredness and generosity is worth including in a definition of healthy marriage/healthy relationships.

The healthy marriage constructs correlated slightly more with the parenting behavior outcomes (reverse of hostile/coercive parenting behaviors as well as supportive/engaged behaviors) than the social competence outcomes (prosocial/communication and emotion regulation). In fact, all of the healthy marriage constructs (especially communication) correlated with parenting behavior. For example, conflict frequency was correlated more with parenting behaviors than children's social competence. This may be due to the simultaneous role that marital partners and parents play. Parents with high conflict may, for example, lose their tempers more with their children and may even use physical punishment.

A description for marital influences on parenting is the "spillover" hypothesis, the direct transfer of mood, affect, or behavior from one setting to another that explains the interrelatedness of the marital/partner relationship to the parent-child relationship. Erel and Burman (1995) found a positive association between marital quality and parenting (the composite mean effect size was .46). Overall, healthy marriages tend to be associated with more positive parenting behaviors (i.e. supportive/engaged). Brody, Arias, and Fincham (1996) demonstrated this association from infancy through adolescence. On the other hand, a marriage characterized by high marital discord may result in parents' being less involved with their children and implementing harsh, less consistent and less communicative disciplinary practices in comparison with couples in healthier marriages (Cummings & Davies, 2002). These studies suggest that the

emotional support parents gain from their spouses and the overall quality of their marital relationship can be expressed in the parent-child relationship. Thus, the behaviors and feelings generated in a stressed marriage/relationship can "spill over" and negatively affect both parenting and child development. The stronger association of healthy marriage to parenting may be a reflection of how partner behaviors first and more directly influence a parent's ability to parent, thereby affecting children's development. For example, a meta analytic review found that marital conflict was associated with harsh parenting (with an overall average weighted effect size of -.62), demonstrating support for the spillover hypothesis (Krishnakumar & Buehler, 2000). The implication is for marriage and relationship education to be inclusive of parenting training components, especially with the ultimate goal being child well-being.

Overall, the Child Trends, Inc. healthy marriage measurement model showed support for the appropriate use with the diverse sample. There was a significant effect of risk (depression and stress) on healthy marriage for both males and females. Depression and stress place a burden on healthy marriage/healthy relationships for both genders, and this is especially true for females compared to males. To note, depression was significantly higher ($t = -2.55, p = .011$) for females ($M = 1.03, SD = .86$) than for males ($M = .80, SD = .77$), thus contributing greater to the effect on healthy marriage/healthy relationships. Koball, Moiduddin, Henderson, Goesling & Besculide (2010) suggest that healthier individuals may be better able, for example, to communicate and enjoy greater interactions with their partners, leading to better marital quality. On the other hand, a partner with poor health may strain a marriage to the point of divorce. Path analysis demonstrated that the Child Trends, Inc. healthy marriage measurement model differed by gender and this was supported by further SEM analysis. Specifically, the path between risk (depression and stress) and healthy marriage is nonequivalent for males and females.

A recent study by Heidemarie, Hyoun, and Capaldi (2009) found that women's depressive symptoms were more closely linked to couple interactions (i.e. positive engagement, psychological aggression, withdrawal) through various pathways, whereas the association between men's depressive symptoms and couples' behavior was more limiting. Specifically, women's use of positive conflict resolution skills was a protective factor for both themselves and their partners against depression, and served as a powerful indicator of the couple's resilience. They suggest that especially for women, helping to improve overall relationship quality as well as to build a positive sense of self within the relationship could prevent depressive problems in the future.

The effect size between risk and HM/HR tended to be larger among unmarried females ($\beta = -.52$) and unmarried females were also more likely to have significantly higher scores on depression than married females. This is consistent with hundreds of other studies indicating that married individuals have better mental and physical health than the unmarried (see Waite & Gallagher, 2000 for a review). Explanations point to greater social support, lower economic strain and the lower likelihood to engage in risky health behaviors for married compared to unmarried individuals (Waite & Gallagher, 2000). However, understanding the mechanisms through which depression and stress effect marriage is challenging. Teitler and Reichman (2008) explain with their research that although the hypothesized mediators (human capital, relationship quality, partner selection, and substance abuse) explain some of the mental illness effect on marriage, most of the effect remains unexplained.

DeKlyen, Brooks-Gunn, McLanahan, and Knab (2006) used data from the Fragile Families and Child Wellbeing Study to examine mental health across marital status (married, cohabiting, not cohabiting but romantically involved, and not romantically involved). After

controlling for ages, education, race, immigrant status, multiple fertility, and Medicaid support, they found that overall, unmarried parents (particularly women) had more mental health and behavior problems than married parents. However, fathers who were not romantically involved with their child's mother reported the greatest prevalence of depression and anxiety, a subgroup not analyzed in this dissertation research. Children of unmarried parents may be more at risk for poor parenting and poor developmental outcomes. The married fathers in their study reported the lowest prevalence of depression and anxiety. The implication of their research supports the results of this dissertation research pointing to the need for government initiatives, including the Healthy Marriage Initiative, to consider the mental health of parents, especially for unmarried women.

Although, African American female depression/stress scores were not significantly different than Caucasian depression/stress scores, the strongest path between risk and healthy marriage was for African American women. These results suggest that although depression may not be particularly higher for African American females, the process in which depression/stress affects their marriage may be quite unique. This particular nuance deserves greater exploration. Koball, Moiduddin, Henderson, Goesling & Besculide (2010) point out that until recently, most research on the link between marriage and health aggregates data across racial groups instead of examining this relationship for African Americans in particular (Wood et al., 2007) due to possible small samples of African Americans in many data sets. While controlling for race, the unique relationships between marriage and health among African Americans cannot be investigated. Therefore, little is known about how marriage and health are linked for African Americans, let alone for African American women (Wood et al., 2007). What this dissertation

research suggests is that the mechanism by which mental health may affect the healthy marriage/healthy relationships may differ for African American women.

Bender (2005) explains the particular vulnerability of depression and stress for African American women and calls for an understanding of societal, environmental, and biological factors (such as stress related to racial discrimination). Koball, Moiduddin, Henderson, Goesling & Besculide's (2010) highlight several recent articles produced as a response to a request for proposals by HHS through Mathematica to study links between marriage and health in African American communities. One study in particular by Lincoln and Chae (2010), highlights the importance of high-quality marriages for managing stressors that many African Americans face. Their analysis of cross-sectional National Survey of American Life data show that financial strain and unfair treatment, for example racial discrimination, result in lower levels of marital satisfaction as well as higher levels of psychological distress (measured with the same Kessler K-6 as used in this dissertation research). Specifically, greater reports of unfair treatment were associated with lower levels of marital satisfaction ($b = -.08$, $SE = .04$, $p = .04$) as well as financial strain ($b = -.06$, $SE = .02$, $p = .003$) with a significant covariate in the model being gender. In both models, women reported lower levels of marital satisfaction compared with men. When including both unfair treatment and financial strain in the model, unfair treatment was no longer significant ($b = -.06$, $SE = .04$, $p = .10$), whereas financial strain remained significant ($b = -.05$, $SE = .02$, $p = .007$) in predicting marital satisfaction. They suggested that economic strain may be a "master stressor" in the lives of married African Americans beyond the influence of unfair treatment. Interestingly, high levels of marital satisfaction protected couples from experiencing distress in the context of these stressors. Specifically, the interaction between unfair treatment and marital satisfaction ($b = -.05$, $SE = .03$, $p = .07$) and the interaction between financial strain

and marital satisfaction ($b = .22$, $SE = .11$, $p = .04$) were both significant. This protective effect was lessened among those with high levels of financial strain compared to those with low levels of financial strain.

Bryant, Wickrama, Bolland, Bryant, Cutrona, and Stanik (2010) propose a model for understanding marital relationships of African Americans and suggest studies should examine multiple factors including stressors, individual characteristics, psychosocial resources, and couple interaction simultaneously as well as examining their interaction. Their literature review points to research showing that African Americans' fewer socioeconomic opportunities lead to lower levels of socioeconomic status; thus leading to greater exposure of a massive amount of stressors (Duncan & Magnuson, 2005; Mills & Combs, 2002). The review describes significant sources of stress for African Americans including economic stress, adverse work conditions, family obligations (including children), racial discrimination, and minority stress (Bryant & Wickrama, 2005; Cutrona, Russell et al., 2003; Murry, Brown, Brody, Cutrona, & Simons, 2001). In terms of emotional distress, Bryant et al., (2010) use the frustration–aggression hypothesis (Berkowitz, 1989), to explain how stressful experiences have psychological consequences. Specifically, when couples' experience financial strain, they may become depressed and pessimistic (Vinokur, Price, & Caplan, 1996) and this distress may be a factor leading to marital instability and poor marital quality (Bryant et al., 2010).

In addition to the significant direct effect of risk (depression and stress) on healthy marriage for males and females, risk had a direct effect on parenting, and healthy marriage had a significant direct effect on parenting. Poverty's influence on the psychological well-being of parents may explain the effect of depression and stress on parenting (see McLoyd, 1990). There is a need for greater consideration of risk within models of healthy marriage and parenting. In

addition, models, policies, and interventions of healthy marriage can highlight the influences of healthy marriage on parenting. Whereas a significant direct effect of parenting on social competence was present for females, this effect only approached significance for males. Possible reasons are explained below.

Discussion on Mediation

Further, mediation analysis was conducted to allow for a better understanding of the healthy marriage/healthy relationships model. In Kenny's (2008) "Reflection on Mediation" he emphasizes the importance of mediation by explaining how it provides the investigator with a "story" about a sequence of events. For this research, mediation analysis tells part of the story of the influences of risk (depression and stress), healthy marriage, and parenting and how they play a role in predicting children's social competence. Results showed that for both males and females, healthy marriage is part of the mechanism through which risk (depression and stress) influences parenting (Baron & Kenny, 1986). Healthy marriage, as a mediator can cause variation in parenting itself and is caused to vary by risk (Last, 1988). This implies that when marriages/relationships are weighed down by possible stress and depression, positive parenting can be made more difficult. The effects of risk on parenting can partly be explained through healthy marriage. Father-child interactions (Lamb, 2004) as well as mother-child interactions are embedded in a larger ecology including the mother-father relationship as well as family human and economic resources (Lamb, 2004). Social support, in this case taking the form of a healthy marriage/healthy relationship, is important in facilitating positive parenting especially when depression and stress are present. The social support that exists in a healthy marriage/healthy relationship offers benefits to parenting. Interventions focusing on improving healthy marriage/healthy relationships consequently may be helping to improve parenting even

for parents in distress. Interventions aimed at increasing positive parenting behaviors for couples in distress, would benefit by focusing attention on strengthening healthy marriage/relationships.

Risk-parenting-social competence. The next question is how does this translate to effects on children? For females, risk had an indirect effect on children's social competence through parenting. Therefore, parenting is an important mediator between the potentially harmful effects of depression and stress on children. These results are not different from previous well established links between stressed parents and poor child functioning (Crnic & Low, 2002), although the more popular hypothesis is that parenting behaviors likely mediate this association between stress and child functioning. Belsky (1984) is well known for theoretical processes of competent parental functioning. The Belsky model focuses on factors affecting parental behavior and how such factors affect child-rearing, which in turn influences child development. At the family level, concentration, like Bronfenbrenner's, is primarily on parent and child interactions. Belsky found that parental personality and psychological well-being were the most influential of the determinants in supporting parental functioning. This dissertation research demonstrates that it is through parenting that depression and stress effects children's social competence and not through healthy marriage/healthy relationships alone. The effect of risk on social competence through parenting is plausible given that mother's behaviors are more proximal to the child's experiences. Supportive and engaged rather than hostile and coercive parents are likely to model positive ways to manage stress including their regulation of emotional responses to stress (Power, 2004) and inappropriate behavior (Halberstadt, Crisp, & Eaton, 1999). Moreover, they may facilitate children's social emotional development by providing a more stable environment (Brody & Ge, 2001) and by protecting children from exposure to potentially stressful events (Power, 2004).

Healthy marriage-parenting-social competence. For females, healthy marriage may also enhance children's social competence through positive parenting as results from this study demonstrated this indirect effect. While healthier marriages/relationships may boost children's social competence through positive parenting, less healthy marriage/relationships may harm children's social competence through negative parenting behaviors. A supportive spouse/partner and a healthy marriage/relationship likely support the parenting process, enabling better and more competent parenting, thus influencing children's social competence. On the other hand, a less healthy marriage/relationship may harm children's social competence through negative parenting behaviors. In an examination of the data from the 1998 National Survey of Families and Households for children ages 2–11, revealed that parental harsh discipline helped to explain the relation between marital conflict and child outcomes (Buehler & Gerard, 2002). Women in healthy marriages/relationships would likely have more resources to focus on consistent discipline practices, and would possibly reduce negative spillover from stress to parent–child negativity. Therefore, if Healthy Marriage Initiatives want to ultimately influence child well-being, they must including a parenting component because, especially for women, it is through parenting that healthy marriage/healthy relationships influence children's social competence. For example, mothers may interact with their children in more supportive and engaged ways when they have a stronger sense of teamwork and commitment with their spouse/partner. In summary, the process by which maternal stress and depression effects children is not by healthy marriage/healthy relationships alone. Rather the process explained by the Child Trends, Inc. measurement model receives support: healthy marriage/healthy relationships work through parenting to influence children's social competence.

It is important to note however, that parenting processes vary across ethnicity and culture. The parenting behavior measure used in this study included both components of supportive/engaged behaviors (i.e. hugging/kissing; thanking/praising; comforting) as well as hostile/coercive behaviors (i.e. grabbing roughly; using physical punishment; threatening). Research by Le, Ceballo, Chao, Hill, Murry, and Pinderhughes (2008) highlights the importance of placing parenting in context by disentangling ethnic differences in parenting behaviors from their cultural influences, for a richer understanding of parenting processes in diverse families. Although preliminary results from this current study did not show significant differences in parenting behaviors between African Americans and Caucasians, other research finds differences across SES and ethnicity. For example, parents from lower socioeconomic backgrounds or who are ethnic minorities have been found to express less warmth toward their children than do parents from higher SES and ethnic majority backgrounds (Hoff-Ginsberg, Laursen, & Tardif, 2002; McLoyd, 1990; Pinderhughes et al., 2000). However, more recent research shows that while African American and Asian American mothers scored lower on parental warmth than did European American mothers (Chao & Kanatsu, 2008), low income African American mothers reported higher displays of warmth toward their children than African Americans mothers with higher SES (Pinderhughes et al., 2008). In addition, families living in less safe neighborhoods, despite their ethnic background, have been shown to express less warmth than other families (Furstenburg et al., 1993). While qualitative research shows that ethnically and socioeconomically diverse families love and care for their children (e.g., Lareau, 2003), the expression of these behaviors may differ (e.g., Hill, Bush et al., 2003; Mason et al., 2004).

Differences between males and females. This study found that for males, healthy marriage had a significant influence on parenting; however, healthy marriage and parenting did

not have significant influences on ratings of children's social competence. To examine why both risk and healthy marriage did not have an indirect effect through parenting on children's social competence for males, their involvement with the Head Start child was further explored. First, the direct effect of parenting on children's social competence had only approached significance for males. Although appraisals of children's social competence were not significantly different between mothers and fathers, ($t = -.29, p = .77$), mothers' appraisals of their positive parenting behavior ($M = 4.05$) was significantly higher ($t = -3.34, p = .001$) than fathers' appraisals ($M = 3.85$). A further look into parenting behaviors between males and females shows a significant difference ($t = -3.5, p = .001$) for "supportive/engaged parenting" between mothers ($M = 4.57$) and fathers ($M = 4.32$), and no significant difference ($t = -1.65, p = .10$) for "hostile/coercive" parenting (reversed) between mothers ($M = 3.52$) and fathers ($M = 3.39$). Thus, the significant effect of parenting on children's social competence for mothers can be due to higher appraisals of their positive parenting behaviors, namely supportive/engaged parenting behaviors. Another explanation may be that mothers use different parenting strategies than fathers to influence children's social emotional development.

Fathers in this dataset were quite involved in the parenting of Head Start children, as fathers are involved in childrearing in numerous ways (Lamb, 2004; Pleck & Masciadrelli, 2004). Fathers who interact with their children in positive ways have significant effects on their social and emotional development at 2 and 3 years and at pre-kindergarten (Cabrera, Tarkow, & Shannon, 2006). Although this study did not demonstrate a direct effect of male parenting on children's social competence, other studies have reported similar results (Cabrera, Shannon, West, & Brooks-Gunn, 2006). First, estimating fathers parenting behaviors and ratings of children's social competence scores may not be appropriate for studying a direct main effect.

Second, it is less likely to find an association between fathers' reports of parenting behaviors than when the qualities of fathers' parenting behaviors are observed (Ryan, Martin, & Brooks-Gunn, 2006). Third, it is possible that fathers have different effects on children's development across time (Cabrera et al., 2006). In addition, fathers' education and income have been found to be key predictors of positive father engagement (Cabrera, Shannon, & Tamis-LeMonda, 2007) and was not included in this current study.

Summary

Although it is quite difficult to disentangle marital and parenting processes and the effects of one on another because of simultaneous roles fulfilled by both marital and parenting partners (Fincham & Hall, 2005), this research made several contributions to what is known about measuring and modeling healthy marriage as well as healthy relationships. This research demonstrated that the healthy marriage/healthy relationship (HM/HR) constructs were linked to parenting and child well-being. The measurement fit for low-income subpopulations including males and females, African Americans and Caucasians, and for married and unmarried couples. The research compared different approaches for assessing particular constructs. For example, relationship satisfaction could be measured with a single item of relationship happiness. The HM/HR measurement consists of several short version scales and the aggregation of constructs into a summary measure of healthy marriage applies to low-income couples with children. The unidimensional healthy marriage measurement fit for both males and females and the addition of two marital virtues, namely forgiveness and teamwork, also loaded well on this measurement. The factor loadings were significant for both males and females and results of chi-square difference tests indicated that the factor loadings for the great majority of variables were invariant across gender. However, the factor loading for relationship stability (one's assessment

that their relationship is not in trouble) was larger for males where the child commitment (one's assessment of their spouse/partner's commitment to their child) was larger for females.

The healthy marriage/healthy relationships measure used in this study can be used to predict parenting for both mothers and fathers and can be used to predict mothers' ratings of children's social competence. Path analysis demonstrated that the Child Trends, Inc. healthy marriage measurement model fit differed by gender and this was supported by further SEM analysis. The effect size for the direct path between risk and healthy marriage was significantly larger for females than for males. The effect size was larger for African American females and unmarried females. Results using fit indices showed that the fit of the model was good for the diverse sample. Mediation results showed that for both males and females, healthy marriage is an important part of the mechanism through which depression and stress effect parenting. For females, parenting is a mediator between the potentially harmful effects of depression and stress on their children. In addition, healthy marriage may enhance their children's social competence through positive parenting. Study results may inform marriage and relationship education in terms of program delivery and evaluation.

Implications

This study demonstrated appropriate use of the healthy marriage/healthy relationships (HM/HR) measure for diverse low-income couples with children. This short-form measurement would be helpful to local HMI programs and other marriage relationship education programs for project evaluation. Specifically, the measure could be used as a baseline at the beginning of the program as well as a posttest or follow-up survey at the end of the program to analyze outcomes and report on program impacts related to couple relationships, parenting, and children's social competence. This type of measurement extends the measure of objectives beyond the acquisition

of knowledge/skills, changed attitudes, behavioral intentions, and satisfaction with training and has the potential to demonstrate program impacts more powerfully. An evaluation using this measurement could also identify areas needed for quality improvement by pinpointing the HM/HR constructs that do not seem to significantly change after training. This measurement could help researchers and evaluators understand the effects of personal characteristics (antecedents) on couple interaction within social and economic environments. As this research demonstrated, personality characteristics such as depression and stress can hinder positive couple interaction. Considering the role of such factors is essential in the prevention and treatment of relationship distress. Understanding the linkages between risk factors and couple interaction is critical to identifying strategies for helping low-income couples function better in real-life challenging environments. For example, the contextual influence of stress has strong effects on marital quality. Both chronic and acute stresses (i.e. job loss, car breakdown, or eviction) can be destructive to couple interaction, especially for low income people. The inclusion of risk and even protective factors as antecedents to healthy marriage/healthy relationships is essential when identifying targets for intervention.

In addition, marital virtues, like forgiveness and teamwork are important in defining and measuring HM/HR. Marriage and relationship education curriculum would benefit from the inclusion of lessons on marital virtues. Attention towards marital virtues can help explain not only effective communication skills, but more so what needs to be communicated. This type of information can be incorporated into marital therapy and marriage education by helping couples consider not only their concerns and desires but also the needs of their partners.

The study illustrated the importance of viewing healthy marriage and parenting behavior together, as they play a role in children's development. This is especially applicable when

marriages/relationships are weighed down by possible stress and depression because being able to parent well is made more difficult. Healthy marriage curriculum delivered to low-income couples with children should most certainly be adapted to include information about parenting. In addition, because the effects of depression and stress on parenting can partly be explained through healthy marriage/healthy relationships, the strong parent involvement component of the Head Start program would benefit from continued inclusion of marriage relationship education and other supportive services. Especially at a time when HHS, OHS Healthy Marriage Initiative demonstration programs are approaching a 5-year term limit, it is important to consider sustainability. The Administration for Children and Families (ACF) is proposing that in 2011, Congress establish a sizeable fund to competitive three-year grants to states for: (a) responsible fatherhood initiatives, including those with a marriage component, that rely on strong partnerships with community-based organizations and for (b) comprehensive family self-sufficiency demonstrations that seek to improve child and family outcomes by addressing the employment and self-sufficiency needs of parents with serious barriers to self sufficiency. These efforts will encourage implementation of proven and promising strategies to help fathers and mothers succeed as working parents. Because of the indirect effect of fathers' risk factors (depression and stress) on fathering through healthy marriage, responsible fatherhood initiatives would benefit with an emphasis on healthy marriage/healthy relationships.

Limitations

Several limitations of this study should be acknowledged. First, the measurement tool that was used included healthy marriage construct items that were measured using different scales. For example, the emotional intimacy variable was constructed by taking the mean from one item measured on a 4-point Likert *agreement scale* and the mean from two items measured

on a 4-point *frequency scale*. It would be better for all items measuring the same construct to be measured using the same scale although the testing of these scale combinations established satisfactory reliability. Second, the smaller sample size presented limitations on what could be accomplished using SEM. Instead path analyses used composite scores to test the HM/HR model by race and marital status. In addition, the smaller sample size restricted the analysis of healthy marriage antecedents to depression and stress instead of utilizing additional antecedents in the same model like general health, alcohol and drug dependency, and religiosity. To preserve sample size, other demographic variables like income were not used because missing values could not be estimated and those with missing information on income would have to be removed from analysis. Third, the unfortunate removal of the one-item fidelity variable did not allow for the true comprehensive definition of healthy marriage. This measured fidelity variable did fit well in the context of the other variables. Fourth, although this study used an ecological model as a basis, it was not able to be fully tested. The Child Trends, Inc. measurement model of healthy marriage is a linear model whereby antecedents lead to healthy marriage which leads to adult well-being and adult well-being influences child well-being. In the model, marriage is healthy when it promotes the individual well-being of parents and their children. The purpose of this research was to test this model. This limited the consideration of bi-directional paths, for example, how children's well-being may influence parenting or healthy marriages. As hypothesized by Belsky, however, the influence of contextual subsystems of social support (i.e. healthy marriage/healthy relationship) is greater than the influence of child characteristics on parental functioning. According to Belsky's model, risk characteristics in the child are relatively easy to overcome, given that either healthy marriage or parenting is not at risk (Belsky, 1984).

Finally, depression and stress were chosen as two risk factors influencing healthy marriage and this association was quite strong for both genders, but especially for females. Other risks that may play a different role for males were not considered. Waller and Swisher (2006) examined how risk factors (i.e. physical abuse, substance abuse, and incarceration) are related to father involvement and relationship status among unmarried couples using data from the Fragile Families and Child Wellbeing Study. They found that fathers with risk factors are less likely to have romantic relationships with mothers. Specifically, there are lower odds of being married or cohabitating versus having no relationship (controlling for other variables in the model) with the following associations: **physical abuse** (51.4% lower odds of being married and 60.6% lower odds of cohabitating verses having no relationship); **substance use** (66.1% lower odds of being married and 56.6% lower odds of cohabitating verses having no relationship); and **incarceration** (78.3 percent lower odds of being married and 73.5% lower odds of cohabitating verses having no relationship). Fathers who have been physically abusive and fathers who have been incarcerated since the child's birth were significantly less involved with their children than fathers without such risk factors. They also found that parent relationships mediate associations between risk factors and fathers' involvement. For example, analysis of qualitative data showed that one reason why physically abusive fathers are not more involved with their children is that they are no longer in relationships with the mother and that mothers' distrust of physically abusive fathers mediates fathers' daily activities with children. Although this current study assessed only depression and stress as risk factors, it did demonstrate that these two risk factors have significant effects on healthy marriage and parenting for both males and females.

Even with these limitations, this study represents a starting point in testing the healthy marriage model and identifies future directions of research.

Future Research

This research focused on children's social development within the Child Trends, Inc. HM/HR measurement model, but future research can certainly study this model as to how HM/HR predicts other areas of children's well-being like cognitive attainment and academic achievement. Future studies may also consider how negative marital interactions may influence children indirectly by decreasing the effectiveness of specific parenting skills, like emotion coaching. In addition, other risk factors like substance dependency, incarceration, and children from a previous marriage, can be added when testing the model.

Research on bi-directional family processes is advantageous: the bi-directional relationship between parent-child and between parenting-marriage/relationships. The influence of child characteristics on parenting and healthy marriage/healthy relationships, the influence of parenting behaviors on marriage, and the influence of marital relations on health and mental health were not considered in this present study but is a direction for future research because this study focused on the prediction of children's well-being. There is support for the influence of a couple's relationship on mental (i.e. Heidemarie, Hyoun, and Capaldi (2009) and physical health (i.e. Kiecolt-Glaser & Newton, 2001) this dissertation research highlights the influence of mental health on marital/partner relations. The bi-directional testing of mental health and couple interaction exist (i.e. Pruchno, Wilson-Genderson, & Cartwright, 2009) and is supported by the Child Trends, Inc. measurement model. The field would benefit from additional studies using a bi-directional approach especially for low-income diverse populations.

Studies looking to replicate this dissertation research could further distinguish marital status into subcategories (i.e. married, remarried, cohabitating, romantic nonresidential, married but separated). This would allow for an examination of differences in how couple relationship

dynamics influence children's well-being among parents in different relationship categories. The dissertation research assessed the HM/HR model between race and between marital status within gender. Further research may want to explore these demographics across gender. For example, unmarried women may have different trajectories than married men.

Future research may also want to further analyze healthy marriage measure at the indicator level to find greater dimensionality for grouping indicators into subsets. This could also assist with gaining insight into which particular subsets may have greatest impact on parenting and child well-being for establishing measurement weights.

Research Using Dyadic Datasets

The research results provide some insight into which healthy marriage variables may be considered "shared" between couples and thus, nonindependent of each other. The seven HM/HR variables that had correlations of .50 and therefore determined as nonindependent variables were: emotional intimacy, communication, quality time, teamwork, conflict frequency, stability and lack of domestic violence (DV). Testing a variety of healthy marriage constructs for non-independence is a benefit because future research may utilize this information to design measurements for dyadic analysis. Data were not treated dyadically in this dissertation research because the focus was on identifying factor structure and the relationships between the constructs and child outcomes. Future work, though, would likely yield interesting insights as to the ways in which mothers' and fathers' own perceptions and their perceptions of the other's beliefs about marriage and parenting are related to child outcomes.

Pursuant to such differences in perceptions, it is interesting to note that some of the healthy marriage constructs for males and females were independent of each other (in that were not highly correlated). Interestingly, those variables deemed independent of each other (with

correlations less than .50) were couple commitment, child commitment, forgiveness, and relationship happiness. Specifically, men tended to have slightly more positive ideas about the future of their relationship than women, were more inclined to rate their partner more positively in terms of commitment to the Head Start child, and reported higher scores of relationship happiness than women. These findings are consistent with Lichter and Carmalt (2009).

Although, they compared means across gender and not necessarily within the couple dyad, they found that the mean scores for husbands on couple commitment was significantly higher than for their wives, that husbands were significantly more satisfied with their spouse's commitment to the children than were wives and that husbands marital satisfaction score was significantly higher than for wives. Like this dissertation research, Lichter and Carmalt (2009) did not find significant differences between males and females on communication, emotional intimacy, nor domestic violence (they used two of the same DV items as this study and reversed both for a measure of "positive marital conflict"). They did not include quality time, teamwork, conflict frequency, stability, or forgiveness in their research.

Results from this research showed that women tended to rate men as more "forgiving". Males' higher scores on commitment and relationship happiness may be related to their higher ratings of forgiveness. Cross-sectional and longitudinal studies have demonstrated that forgiveness is positively associated with marital longevity, relationship satisfaction and relationship commitment (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Paleari, Regalia, & Fincham, 2005; Tsang, McCullough & Fincham, 2006). Although, most studies have found that gender does not have an effect on forgiveness (Macaskill, Maltby & Day 2002; Toussaint & Webb, 2005; Friesen, Fletcher, & Overall, 2005), there are a few studies that found gender differences related to forgiveness (i.e. Orathinkal, Vansteenwegen & Burggraeve, 2008,

Kachadourian, Fincham & Davilla, 2004, Shackelford, Buss & Bennett, 2002). For example, a cross-sectional study found that married women were significantly more likely to forgive than married men ($p < .005$, one-tailed, $d = .20$; Orathinkal, Vansteenwegen, & Burggraeve, 2008). Further, Kachadourian, and colleagues (2004) explored the effects that the tendency to forgive and transgression severity have on forgiveness for married couples. Their research found that wives, who had a greater tendency to forgive, did so regardless of the severity of the offense. In comparison, husbands, who had a greater tendency to forgive, did so for only severe transgressions and not minor wrongdoings (Kachadourian et al., 2004). This finding suggests that the perceived severity of an offense has a greater influence on forgiveness for males than for females.

Conclusion

In Bronfenbrenner's (1978, 1992) ecological model, marital relations are part of a child's microsystem. Healthy marriage/relationships directly effect children as well as indirectly effect children through parenting (second-order effects). Healthy marriage/relationships can act as a social support system for parenting. This is especially true in the context of stress. This study reinforced the importance of measuring children's well-being in the context of marriage/partnership as well as the parent-child relationship. In addition, it supported the definition of marriages/intimate relationships as "healthy" because of the established paths leading to positive parenting and child well-being. Furthermore, the MDRC measure of healthy marriage was developed for use by married couples. This research made adjustments to the measure so that it would be inclusive of unmarried couples. In addition, this research made contributions by studying the association between a *comprehensive* measure of healthy marriage/relationships, parenting and child well-being for a diverse sampling of low-income

Head Start mothers and fathers at the local level. Interventions, like HMIs, are commendable for their focus on strengthening family well-being and the new funding with an additional focus on addressing the employment and self-sufficiency needs of parents will also help to address families in poverty. Being hopeful for the developing child in poverty requires recognition of poverty as a national social problem that affects us all and to which we are all collectively called to respond.

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