Examining Changes in Parenting Behaviors Among a Diverse Sample of Marriage Education Participants

by

Alexandra M. Calligas

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Approved by

Francesca Adler-Baeder, Chair, Associate Professor of
Human Development and Family Studies
Thomas Smith, Associate Professor of Human Development and Family Studies
Margaret Keiley, Professor of Human Development and Family Studies

Abstract

Research has shown that the quality of the couple relationship is a critical factor in the environment in which children develop, in that it affects parent involvement and parenting practices. This spillover process suggests that conflict in parent-child relationships is associated with conflict in the couple relationship. Therefore, it appears that educational efforts to strengthen the couple relationship may positively affect the co-parenting relationship and dimensions of parenting.

The current study utilizes a spillover framework and the linkages between couple functioning and parenting to determine the extent to which several parenting dimensions (co-parenting conflict, parental involvement, and positive parenting practices) change after participation in relationship/marriage education (MRE), whether these changes are related to changes in dimensions of couple functioning, and whether these changes differ by gender, race, and marital status.

Based on a sample of 582 adult parents, diverse in gender, race, and marital status, positive changes were found in the parenting dimensions over time. However, the lack of a comparison or control group prevents the ability to assert that positive improvements in the parenting dimensions are due to program participation.

Using structural equation modelling, changes in the couple domain were found to be associated with the amount of changes in the parenting domain over the same period of time. For the whole sample, a pattern of stronger links was found between

conceptually similar dimensions of couple functioning and parenting. The strongest predictor of positive parenting behaviors and parent involvement post-program, accounting for baseline levels, is positive couple behaviors. The strongest predictor of co-parenting conflict is negative/conflictual couple behaviors.

Lastly, examinations were conducted of whether changes in parenting, relative to changes in dimensions of couple functioning, differ by gender, race, and marital status. Differences were found based on gender for the link between change in negative couple interactions and change in co-parenting conflict: fathers had a negative relationship between the two; mothers indicated a strong positive relationship. Differences were found based on race for the link between change in negative couple behavior and change in parent involvement: European Americans had a negative relationship between the two variables; African Americans did not have a significant path. Delta-chi square tests did not reveal significant differences between married and non-married adult parents.

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I. INTRODUCTION

Educational efforts to build healthy relationships and marriages are receiving support through the federal Healthy Marriage Initiative (HMI) coordinated by the Administration for Children and Families, U.S. Department of Health and Human Services (ACF/DHHS). The HMI is described as a child-centered initiative and includes the assumption, based on empirical research, that efforts to strengthen relationships and marriages, enhance partner stability, and reduce divorce will directly and indirectly benefit child well-being (www.acf.hhs.gov/healthymarriage/pdf/accomplishments.pdf).

The quality of the couple relationship is a critical factor in the environment in which children develop (e.g., Cowan & Cowan, 2002). Research has shown that the marital relationship serves as the foundation for family cohesion and contributes to the overall quality of family life (Erel & Burman, 1995). Marital relationship processes, particularly marital conflict, have been shown to affect children's and adolescent's well-being and adjustment (Cummings and Davies, 1994). The relationship between marital conflict and child and adolescent maladjustment has been examined utilizing both direct and indirect pathways (Cummings & Davies, 2002).

Some research using a direct effects model suggests that child maladjustment (e.g., effects on cognitive, social, and academic functioning) results from a child's direct exposure to and emotional reaction and cognitive appraisal concerning overt marital conflict (Cummings and Davies, 2002). Social learning theory guides the assumption that children develop cognitive models of social relationships and learn dysfunctional

behavioral patterns as a result of observing and imitating negative behaviors of their parents (Bandura, 1973; 1977). In 1990, Reid and Crisafulli found a small mean effect size (.16) for the direct relationship between marital discord (conflict, disharmony, and lack of agreement between currently married parents) and child behavioral problems (conduct problems). In Fincham's (1994) overview of the literature, correlations for the relationship between marital conflict and child adjustment were found to be modest for most studies (rs = .25-.40). Recently, more attention has been given to the pathway from marital conflict to child outcomes through mediating variables.

In addition to examinations of parental conflict and children's social and emotional outcomes, there is growing literature looking at the exposure to parental conflict and effects on children's health with the quality of sleep as a possible mediator. El-Sheikh and colleagues (2007) found that increased levels of marital conflict are associated with greater emotional insecurity in children which is then related to decreased sleep quality and duration. Poor levels of sleep quality and duration are linked with increased levels of children's behavioral and emotional problems. Follow-up to the finding that emotional insecurity relates to child adjustment through the mediator of sleep, El-Sheikh et al. (2007) utilize this indirect relationship to assess the outcome of child academic achievement. Results show that children's sense of insecurity about the marital relationship is related to greater child-reported sleep problems, which then is associated with lower academic achievement scores (i.e., Language, Math, Verbal, and Nonverbal scores). In addition, a pathway was found for the relationship between mother-child attachment security and child achievement; higher perceived attachment was associated with better achievement scores.

The meditational or indirect relationship given the most research attention, however, has been examinations of the link between couple conflict and parent involvement and parenting practices (Grych & Fincham, 2001). Results indicate that negative changes in parent-child relationships occur as a result of a "spillover" phenomenon from interparental conflict (Zimet & Jacob, 2001). Thus indirect or "spillover" models propose that conflict, problem behaviors, and affective nature of the parenting relationship help explain the link between marital conflict and child adjustment (Fincham, Grych, & Osborne, 1994).

Using a systems perspective, scholars assert that "the marital relationship impacts parental sensitivity, investment in the child, and overall quality of parenting" (Glade et al., 2005). Based on a review of the literature, Hawkins, Gilliland, Christiaens, and Carroll (2002) describe parenting quality as an important mediator of the relationship between marital conflict and children's well-being. Negativity from the marital relationship (e.g., distress and hostility) transfers into the parenting relationships and interactions and subsequently compromises children's adjustment and development (Gerard et al., 2006; Kaczynski, Lindahl, & Malik, 2006). Specifically, marital conflict can negatively affect child development through such negative behaviors as, harsh discipline, lack of parental involvement, and parent-child conflict (Gerard et al., 2006). On the other hand, positive marital/parental relationships can spillover and positively affect the quality, behaviors, and interactions within the parent-child relationship (Erel & Burman, 1995).

Overall, evidence of the link between couple relationship quality and parenting is overwhelming, and the findings are quite robust. In their meta-analyses of sixty-eight

studies, Erel and Burman (1995) found a composite weighted mean effect size equal to 0.46 for the spillover relationship. This finding reflects the consistent evidence that more negative parent-child relationships are found among families where there are more negative marital relationships, and vice versa; more positive parent-child relationships are found in families where there are more positive marital relationships. In a more recent meta-analysis of thirty-nine studies, Krishnakumar and Buehler (2000) find a moderate effect size of d = -0.62 for the spillover from interparental conflict to parenting behaviors, such that, high levels of marital/couple conflict were associated with poor parenting behaviors.

The influences of interparental conflict have been shown to be a critical family process variable regardless of family structure. The family conflict perspective states that children in families of high interparental conflict will have the same low levels of well-being despite the family structure. "According to this perspective, children living in single-parent families due to divorce with low conflict between parents may, in fact, be better adjusted than children in high conflict families who have never been divorced" (Amato & Keith, 1991; Vandewater & Lansford, 1998). The link between couple relationship quality and parenting has been found not only among studies of married couples (Kitzman, 2000), but among non-married couples and post-divorce couples (e.g., Carlson & McLanahan, 2006; Fauber et al., 1990).

Consideration of parent demographics also exists in the extant literature. Studies of low-income couples and ethnic minority couples find evidence of these links as well (Gonzales et al., 2000). In addition, couple functioning is found to affect both mothers' parenting and fathers' parenting (Belsky & Kelly 1994; Brody, Neubaum, & Forehand

1988). There is some indication that these links may be stronger for fathers than mothers (e.g., Coiro & Emery, 1998). Evidence also shows the connection from this spillover to a variety of outcomes for young children, for school-age children, and for adolescents (Buehler & Gerard 2002).

Suggestions are that as parents learn ways to communicate, use empathy, show appreciation for their partner, and utilize effective conflict management skills, they will employ more favorable childrearing attitudes and utilize more nurturing parenting techniques with their children (Cowan & Cowan, 2005). Cummings, Goeke-Morey, and Graham (2002) assert that marital functioning should be included as a parenting dimension.

In examinations of the spillover process, "co-parenting" is viewed as a distinct dimension of the couple relationship and has recently received the attention of researchers. Co-parenting refers to the level of support and cooperation between parents in regard to their parenting. Co-parenting is the relationship between parents in negotiating their respective roles, responsibilities, and contributions to their children and is characterized by the degree to which parents support or work against each other's parenting abilities and efforts (Gable, Crnic, & Belsky, 1994; Margolin, Gordis, & John, 2001; McHale & Rasmussen, 1998).

Feelings toward one's spouse or partner are likely to affect the co-parenting relationship, in that, higher quality marital relationships reflect positive co-parenting and vice versa. In turn, the co-parenting relationship has been shown to impact parenting behaviors and the parent-child relationship. Co-parenting has been discussed in research

on post-divorce and non-married families, but more emphasis is now being given to this dynamic in married families as well (Doherty & Beaton, 2004).

Considering this spillover evidence, it appears that educational efforts to strengthen the couple relationship may positively affect the co-parenting relationship and dimensions of parenting and in turn, can promote child well-being. Krishnakumar and Buehler (2000) note that since there are findings suggesting a spillover effect, it may prove beneficial to parenting practices to have interventions that teach parents how to effectively problem solve and address couple differences. As an applied research question; however, this has been given minimal attention. In studies of couple relationship and marriage education, co-parenting and parenting practices have not been assessed as outcomes (e.g., Carroll & Doherty, 2003).

In studies of parenting programs, only a handful exist that have examined the value of addressing the couple relationships in programs targeting parenting practices. Two early published studies showed that addressing marital and co-parenting issues along with parenting issues resulted in greater reduction of children's problem behaviors than parenting skills training alone (Brody and Forehand 1985; Dadds 1987). Similarly, Webster-Stratton (1994) conducted an intervention study which showed that offering a parenting intervention alone had positive effects on child aggression. But parents who also received marital therapy showed improvements in parental communication, problem-solving skills, parenting satisfaction, and children's knowledge about pro-social solutions to social problems that were significantly greater than the improvements of those who received the parenting intervention alone.

More recently, Cowan and Cowan (2000) demonstrated that first-time expecting couples who received couples and parenting education (n = 24) had a reduced decline in marital satisfaction for both partners in comparison to the steady normative decline in marital satisfaction for the control group (n = 24) and a comparable childless group (n = 16). Follow-ups found that the couple's education participants had comparatively higher marital satisfaction and family adjustment, higher parent well-being, and their children had higher levels of adjustment to kindergarten compared to other groups.

In a separate study, Cowan et al. (2005) compared a marriage-focused program and a parenting-focused program offered to married parents (N = 100) at the transition of their child from pre-school to kindergarten. Parents of the parenting-focused intervention showed parenting improvements across time, but no improvements in marital satisfaction. Participation in the marriage-focused program resulted in more positive parenting practices and parent-child relationships, as well as increases in their marital satisfaction. Follow-up studies showed greater academic competence and fewer behavior problems in 4th grade for the children whose parents were in the marriage-focused program.

Regarding evidence of the effects on parenting following interventions that address couple relationship skills, much has yet to be learned. No published studies of marriage and relationship education (MRE) programs have included assessments of parenting dimensions or co-parenting relationships. Measures are limited to assessments of couple functioning and quality (Hawkins et al., 2009). While there is some information on the potential value of MRE for promoting positive parenting relationships and practices from evaluations of parenting programs, the few studies that have examined this spillover link have utilized small samples and have not explored how change in

parenting relationships and practices following MRE may differ based on parent characteristics (e.g., gender, race, marital status, etc.). In addition, these previous studies have focused on white, married couples.

The current study utilizes a spillover framework and the empirically established linkages between couple functioning and parenting and extends the intervention research that has demonstrated evidence of positive child outcomes when parents are exposed to couple-focused programs. Examinations were conducted on the extent to which several dimensions of parenting (co-parenting conflict, parental involvement, and positive parenting practices) change after participation in relationship/marriage education, whether these changes are related to changes in dimensions of couple functioning, and whether these changes differ by gender, race, and marital status. The MRE programs provide no lessons specifically on parenting; the spillover effect of enhanced couple relationship skills and quality on parenting can be explored.

(H1) It is hypothesized that *parents in a MRE program will show positive changes in co-parenting conflict, positive parenting, and parental involvement.*

(RQ1) Because no information on which to base hypotheses regarding the impact of gender, race and marital status, the following research question will be explored: *How does change over time in the different parenting dimensions differ by gender, race, and marital status?*

(H2) It is hypothesized that *parents in a MRE program will show positive changes in co-parenting conflict, positive parenting, and parental involvement in relation to the amount of change demonstrated in couple behavioral dimensions and couple quality assessments.*

(RQ2) Because this is a new area of study and research, the following research question will be explored: *Which dimensions of couple functioning changes account for more of the variance in co-parenting conflict, parental involvement, and positive parenting practices changes?*

(H3) Further, because some evidence exists that indicates that fathers' parenting is more likely to be prone to spillover effects, while mothers may be able to compartmentalize comparatively better, it is hypothesized that *parent gender will serve as a moderator of the links between change in couple functioning and change in parenting dimensions.*

(RQ3) Because no information exists on which to base hypotheses regarding the impact of race and marital status, the following research question will be explored: *How do participant characteristics, specifically, race and marital status, affect the links between changes in couple functioning and changes in parenting?*

II. REVIEW OF THE LITERATURE

Educational efforts to build healthy relationships and marriages are receiving support through the federal Healthy Marriage Initiative (HMI) coordinated by the Administration for Children and Families, U.S. Department of Health and Human Services (ACF/DHHS). The health of the couple relationship has been shown to affect adult well-being, family functioning, family stability, and thus the well-being of children. The HMI is described as a child-centered initiative and includes the assumption that efforts to strengthen relationships and marriages, enhance couple stability, and reduce divorce will directly and indirectly, through various mediators, benefit child well-being (www.acf.hhs.gov/healthymarriage/pdf/accomplishments.pdf).

The following review of the literature will provide information on (1) studies of couple relationships and child outcomes, (2) information on the links between couple functioning and parenting, (3) information on studies of the "co-parenting" relationship, and (4) evidence of the "spillover" relationship between couple functioning and parenting found in intervention studies.

Couple Relationships and Child Outcomes

While much has been written concerning the negative effects of divorce and the assertion that two parent families establish a healthier environment than single-parent families (e.g., Amato & Keith, 1991), others refute this perspective because of the lack of emphasis on family processes that influence children's well-being in two-parent, as well as single parent families (e.g., Demo & Acock, 1988; Emery, 1982; Scanzoni, Polonko,

Teachman, & Thompson, 1989). Interparental conflict has been shown to be a critical family process variable related to child well-being. Rather than the divorce event itself, the adverse effects can in fact be attributed to the inter-parental conflict that precedes and follows marital dissolution (Emery, 1999; Hetherington, Bridges, & Insabella, 1998). The family conflict perspective states that children in families of high interparental conflict will have similar lower levels of well-being and adjustment regardless of the family structure. Scholars argue that intact families in which interparental conflict is high puts children at higher risk for maladjustment than a single parent family in which conflict between adults is low or non-existent (Amato & Keith, 1991; Vandewater & Lansford, 1998, p. 323).

Vandewater and Lunsford (1998) examine the influence of family structure and interparental conflict on three behavioral qualities in adolescents between the ages of ten and seventeen (internalizing behavior, externalizing behavior, and trouble with peers) by including children from married-never divorced families and divorced-not remarried families. Utilizing a randomly selected nationally representative sample of 618 parent-child dyads, the researchers found that children of high interparental conflict families showed higher levels of internalizing and externalizing behaviors and had more difficulties with peers than children in low conflict families. Also the lack of a significant interaction effect between family structure and interparental conflict (high vs. low) on children's well-being indicates that family structure groups were not significantly different from one another in relation to the child well-being measures. Therefore, the researchers state that it is not so much the case that parents should stay together for the sake of the children's well-being but rather it is more important that parents lower

conflict and hostility between each other. Thus, if separation is the only way that parents can reduce the conflict between them, then it may prove beneficial to the child's well-being. The researchers suggest that it may be more important to discover ways for parents (regardless of family structure) to refrain from conflicting interactions.

Amato and Booth (1996) examined the relationship between pre-divorce marital quality, pre-divorce parent-child relationship problems, parental divorce, and post-divorce parental affection toward children. The researchers used a longitudinal design with a large sample of married parents (some later divorced between 1980 and 1992) initially interviewed in 1980 and re-interviewed in 1983, 1988, and 1992. First, the results showed that couples who eventually divorced had elevated parent-child problems and poor marital quality before the divorce occurred. In further analyses using path models, it was found that pre-divorce marital happiness in 1980 predicted parent-child problems in 1980, divorce between 1980 and 1988, and parent affection toward their child in 1988. It was found that both mothers' and fathers' relationships with their children are influenced by the quality of the parents' marriage before divorce. Although the study found that divorce affects fathers' affection but not mothers' affection toward their children, the researchers state that divorce reduces the relationship between children and non-custodial parents (typically fathers) more than custodial parents (typically mothers). The researchers propose that some of the negative effects of divorce reported in previous research may actually be present before divorce.

Therefore, regardless of family structure, couple relationship quality, satisfaction, and processes, particularly couple conflict, affect children's and adolescents' development and well-being (Cowan & Cowan, 2002; Cummings & Davies, 1994; Erel

& Burman, 1995; Lindahl, Clements, & Markman, 1997). High levels of marital conflict, particularly conflict containing physical aggression, predict children's emotional problems (Davies & Cummings, 1994), social skill impaiMREnt (Wolfe, Jaffe, Wilson, & Zac, 1985), and behavioral problems (Cummings, Vogel, Cummings, & El-Sheikh, 1989; Johnston, Gonzalex, & Campbell, 1987). In a meta-analysis of thirty-three studies exploring the direct relationship between marital functioning and child adjustment, Reid and Crisafulli (1990) found a mean effect size of d = .16 (considered small). In another review, Jouriles, Farris, and McDonald (1991) found that of 481 correlations between marital conflict and child adjustment in twenty-six studies, the majority (77%) had correlations less than .30. Also, in Zimet and Jacob's (2001) more recent review of the literature, the direct relationship between marital conflict and child maladjustment appears to be quite modest.

Direct effects models (direct pathway from marital conflict to child responses and maladjustment) tend to rely on social learning theory and carry the assumption that children develop cognitive models of social relationships and learn dysfunctional behavioral patterns as a result of observing and imitating the behaviors of their parents (Bandura, 1973; 1977). Krishnakumar and Buehler (2000) indicate that the social learning perspective proposes that because of parents' lack of interpersonal skills, negative outcomes in marital and parent-child relationships will result. Children who witness interparental conflict and hostility may utilize these same negative behaviors with the understanding that they are appropriate for social interaction (Grych & Fincham, 1990; Stocker & Youngblade, 1999).

Given the modest strength of the direct relationship between marital conflict and child outcomes, others who study couple conflict and child outcomes invoke a cognitive-contextual framework (Grych & Fincham, 1990) and emotional security hypothesis (Davies & Cummings, 1994; 2002), focusing on children's subjective appraisals and responses to direct exposure of marital conflict. "The cognitive-contextual framework proposed by Grych and Fincham (1990) places special emphasis on the effects of marital conflict on children's cognitive processes and the role of cognitive processes in affecting children's emotions and behaviors" (p. 40, Cummings & Davies, 2002). Children who witness well managed interparental conflict are more likely to learn constructive problem solving and coping strategies for other relationship interactions (Cummings, 1994; Grych & Fincham, 1990).

"According to the emotional security hypothesis, the meaning of marital conflict is assessed by children based on their appraisals of the emotional security implications of the conflicts" (p. 36, Cummings & Davies, 2002). Researchers have established various dimensions within interparental conflict that affect children's perceptions of the situation and thus influence their emotional reactions and behavioral responses and overall development: frequency, resolution, verbal intensity, content, and explanation. Experiencing continuous, destructive marital conflict is expected to enhance children's negative emotional arousal and insecure feelings concerning family stability and attachments (Zimet & Jacob, 2002). When parental conflict revolves around child-related topics, children tend to have feelings of helplessness, fear, and negative self-evaluation (Gable, Belsky, & Crnic, 1992), elevated levels of shame, self-blame, belief in their ability to resolve their parent's conflict, and actual fear of being brought into the conflict

(Buchanan, Maccoby, & Downbusch, 1991). When conflict remains unresolved, children show signs of distress and anger and consider the situation as more negative than when the situation has resolution (Cummings, Pellegrini, Notarious, & Cummings, 1989).

In addition to studies of children's emotional responses to parental conflict, there is a growing literature examining the effects of parental conflict on child sleep patterns and child health. El-Sheikh et al. (2007) studied sleep disruptions and emotional insecurity as risk factors for children's adjustment and academic achievement, utilizing a sample of 166 children (n = 74 boys; n = 92 girls) of predominantly married, biological parents (77%). The researchers found no significant direct relation between marital conflict and child adjustment and academic functioning, suggesting that the relation between marital conflict and child functioning is indirect through emotional insecurity and sleep disruptions. "Greater marital conflict was related to greater emotional insecurity, and greater emotional insecurity was related to decreased sleep quality and duration. Lower sleep quality and duration were associated with greater parent-report of children's behavior problems and emotional problems" (p. 93; El-Sheikh et al., 2007). In addition, emotional insecurity was directly related to children's emotional and behavioral problems; therefore, it appears that sleep and emotional insecurity operate as mediators of the relationship between marital conflict and child adjustment.

As a follow-up to the findings that emotional insecurity relates to child behaviors and emotional problems through the mediator of sleep, El-Sheikh et al. (2007) assessed the link to child academic achievement as the outcome of focus. The researchers used the same sample as the previous study and found that, "children's insecurity about the marital relationship was linked to greater child-reported sleep problems, which in turn were

related to lower academic achievement scores (i.e., Language, Math, Verbal, and Nonverbal scores)" (p. 32; El-Sheikh et al., 2007). Also, mother-child attachment security was directly related to child achievement; higher perceived attachment was associated with better achievement scores.

It is clear that other factors are involved in the link between conflict and child outcomes. Thus, Fincham and Osborne (1993) suggested that further research should address the construct of marital conflict more specifically and also look at various pathways linking marital conflict and child adjustment.

Linking Couple Functioning and Parenting

Based on a review of the literature, Hawkins, Gilliland, Christiaens, and Carroll (2002) describe parenting quality as an important mediator of the relationship between marital conflict and children's well-being. Indications are that, interparental conflict influences child adjustment and well-being indirectly by affecting the parent-child relationship (i.e., affect, parenting behaviors, and the overall quality of parenting) (Cox et al., 2001; Davies & Cummings, 1994; Erel and Burman, 1995; Fauber, Forehand, Thomas, & Wierson, 1990; Krishnakumar & Buehler, 2000). The "spillover" hypothesis is derived from the family systems theory, which suggests that individual family members are involved in an interdependent, hierarchically organized social system defined by rules of interaction and boundaries (Kacsynski, Lindahl, & Malik, 2006). Based upon this systems perspective, scholars assert that "the marital relationship impacts parental sensitivity, investment in the child, and overall quality of parenting" (Cummings & O'Reilly, 1997; Glade et al., 2005, p. 322; Lewis, Owen, & Cox; 1988). Researchers explain this "spillover" effect as affect and behavioral disturbances established in one

relational setting, the marital relationship, reflected and expressed in another relational setting, the parent-child relationship, which then ultimately affects child adjustment and development (Coiro & Emery, 1998; Gerard et al., 2006; Kaczynski, Lindahl, & Malik, 2006).

Marital/couple relationship quality (health and satisfaction) influences various parenting and practices behaviors, styles, and interactions, such as parental involvement (Biller & Solomon, 1986; Burman, John, & Margolin, 1987; Fauber et al. 1990), parent disciplinary practices (Holden & Ritchie, 1998; Jouriles & LeCompte, 1991) and consistent parenting behaviors (Block, Block, & Morrison, 1981; Stoneman, Brody, & Burke, 1989); and thus is indirectly predictive of child adjustment problems (Grych, Seid, & Fincham, 1992; Jouriles, Murphy, & O'Leary, 1989). Specifically, tension, distress, hostility, negativity, and coercive behavior patterns from the partner relationship spill over into the parent-child dyad through lowered parental warmth (Vandewater & Lansford, 1998), increased rejection and hostility (Harold & Conger, 1997; Harold, Fincham, Osborne, & Conger, 1997; Mann & MacKenzie, 1996), less sensitive and engaged parenting (Owen & Cox, 1997), ineffective discipline (Jouriles & Farris, 1992; Jouriles, Pfiffner, & O'Leary, 1988; Stoneman, Brody, & Burke, 1989), more control (Belsky, Youngblade, Rovine, & Volling, 1991; O'Brien & Bahadur, 1998), and lack of effective problem solving (Capaldi, Forgatch, & Crosby, 1994).

Researchers have discovered that healthy, stable marriages and high marital quality and satisfaction levels are more likely to result in more sensitive, responsive, and supportive parenting, which then leads to more favorable child outcomes (attachment and interpersonal competence) (Belsky et al., 1991; Howes & Markman, 1989, 1991). On the

other hand, conflicted marriages and low marital quality levels tend to be associated with less effective, less sensitive, inconsistent, less supportive parenting and thus contribute to maladjusted child behavior (Fauber et al., 1990; Kerig, Cowan, & Cowan, 1993). Thus, evidence indicates that the spillover potentially puts young children and adolescents at risk for negative outcomes (Buehler & Gerard, 2002).

Examinations of these couple conflict/parenting/child outcomes linkages are quite extensive, and inclusive of diverse samples (i.e., married/nonmarried, mothers/fathers, high income/low income, and White/Hispanic/African American).. In addition, couple functioning is found to affect both mothers' parenting and fathers' parenting (Belsky & Kelly, 1994; Brody, Neubaum, & Forehand, 1988). Mothers' and fathers' parenting have been shown to mediate the relationship between marital conflict and increased levels of both internalizing and externalizing behaviors in children (Kaczynski, Lindahl, & Malik, 2006).

For example, Kitzmann's (2000) study on marital conflict's effects on triadic family interaction and mothers' and fathers' parenting, utilizing an observational, cross-sectional experimental design of forty, married, European American, middle-class families, found that negativity within the marital relationship during a lab-induced conflictual discussion was followed by less family cohesion, decreased support and engagement by mothers and fathers towards their sons, an increase in family negativity, a decrease in family warmth, and more disrupted parenting in the triadic relationship. Findings support a spillover effect of interactions within one subsystem of the family being reflected within other subsystems. Also, the study found that negative marital interactions were not related to more parental rejection and coercion in triadic (parent-

parent-child) relationships but rather influenced less support and engagement by the parent during interactions with the child.

Frosch and Mangelsdorf (2001) studied the mediation of parenting behavior in the relationship between marital behavior and preschooler's behavior problems, using an observational and quantitative cross-sectional study of 78 predominantly white married, mothers, fathers, and their children (38 girls, 40 boys). The results found that increased levels of marital conflict and less positive marital engagement/involvement were associated with lower levels of parental warmth and support and higher levels of hostility and intrusiveness for both mothers and fathers. While the researchers did find support for the spillover framework, they failed to find mediating effects from the spillover to child adjustment problems. Despite this, the researchers suggest that over time and with more exposure to conflict, parenting behaviors may have a stronger mediating influence on the relationship between marital quality and child adjustment problems (see Cummings & Davies, 1994; Frosch & Mangelsdorf, 2001).

Buehler and Gerard (2002), in their cross-sectional study of young children (unweighted n = 586; weighted n = 623), preadolescent children (unweighted n = 815; weighted n = 974), and adolescent children (unweighted n = 684; weighted n = 944) of mostly above poverty European American married parents, hypothesize a hybrid of the spillover model and direct effects model in order to explain the manner in which ineffective parenting partially mediates the link between marital conflict and child maladjustment. They found that marital conflict was positively related to parent's utilization of harsh discipline, positively related to levels of parent-adolescent conflict, and negatively related to parental involvement; and in turn, these negative parenting

behaviors were associated with higher levels of child and adolescent maladjustment. The use of harsh behaviors and lower levels of parental involvement covary with children's and adolescents maladjustment. Additionally, the study indicated that in families with the target child between the age of 2 and 11, parenting was found to only partially explain the link between marital conflict and child maladjustment. Based upon these results, researchers conclude that the spillover model adequately explains the interrelationship between marital conflict, ineffective parenting, and child maladjustment. It appears that the majority of the time the explanation of the link between marital conflict and child adjustment is through ineffective parenting behaviors and these spillover links may be stronger the older the child.

Utilizing a longitudinal investigation of spillover effects, Gerard et al. (2006) similarly examined the pathway from marital conflict to harsh discipline, lack of parental involvement, and conflict between parent and child and from the parenting dimensions to child adjustment. Based on a sample of 551 married participants (267 fathers, 284 mothers), the researchers found child maladjustment levels are influenced by marital conflict through both direct and indirect pathways. They demonstrate the impact of spillover from marital conflict to harsh disciplinary parenting techniques to child externalizing problems, such as bullying, negativity to others, and disobedience. Additionally, they document a direct effect of marital conflict on internalizing problems. Children withdraw from parental conflict or experience emotional distress if they lack ability to remove themselves from the conflicting situation. In addition to these findings, their study shows that when family patterns are developed, they tend to become stable;

marital conflict, parent-child dyadic relationship quality, and child maladjustment remain fairly stable from middle childhood to adolescence.

Fauber et al. (1990) compared levels of marital conflict and parental rejection and withdrawal in both intact and divorced samples. The researchers hypothesized that marital conflict is related to parenting behaviors through lower consistent and effective discipline strategies, higher parental withdrawal and rejection of the child, and higher psychological and emotional control. Utilizing a cross-sectional design and a sample of ninety-seven adolescents (51 from divorced families, 46 from intact families) and their mothers, and assessing measures of conflict, parenting, and child adjustment, results show parenting behavior mediated the relationship between marital conflict and adolescent adjustment (rated by both mothers and teachers) in both intact and divorced families, but showed greater significance for parental rejection and withdrawal. Findings indicate that the relationship between marital conflict and parental rejection and withdrawal was relatively stronger within the divorced sample. The researchers propose that this relation means that high levels of couple/marital conflict between divorced parents is associated with a higher likelihood of maternal rejection or withdrawal from children. They explain that those experiencing increased conflict with their ex-partner are already significantly distressed and thus the conflict contributes to comparatively more distress than mothers in intact relationship, which then affects parenting abilities to a greater extent.

Utilizing a longitudinal design, Kline, Johnston, Tschann (1991) investigated marital conflict and children's post-divorce adjustment with a sample of 178 divorcing families – mostly European American, college-educated participants with an oldest child

between the ages of 2 and 19. The results found both direct and indirect pathways for marital conflict's effect on child adjustment two years after divorce, yet the direct pathway was only marginally significant. Marital conflict was indirectly related to child adjustment through poor mother-child relationships and interparental conflict during the year after the divorce. Parents who engaged in intense conflict levels during marriage were more conflictual a year after divorce; therefore, marital conflict levels influence interparental relationships, parent-child relationships, and problematic behaviors post-divorce.

Focus on fathering. Father sensitivity, warmth, and involvement have been shown to affect children's cognitive and social adjustment independent of the mothering relationship (Black, Dubowitz, & Starr, 1999; Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004). Yet in order to determine and understand father involvement, certain factors come into play, such as, relationship quality between parents and individual characteristics (financial means and race/ethnicity) (Gee, McNerney, Reiter, & Leaman, 2006). Also, regardless of a father's marital status, other risk factors (drug/alcohol abuse and incarceration) may directly or indirectly (through weakening the relationship with the mother) influence their involvement with their child (Waller & Swisher, 2006).

Research has shown that fathering, especially the quality of their parenting and the level of involvement, is influenced by the status and quality of the marital relationship (Carlson & McLanahan, 2004; Johnson, 2001). Previous research has shown the importance of the mother-father relationship to father involvement in all relationship types, married, cohabiting, divorced, and never-married fathers (Marsiglio, Roy, & Fox, 2005). A close partner relationship is associated with increased father involvement with

their children (Carlson & McLanahan, 2004; Coley & Chase-Lansdale, 1999); whereas, declines in closeness levels or disruptions in marital quality between the mother and father relationship results in decreased father-child involvement (Cabrera et al., 2004; McLanahan & Carlson, 2004). Men typically have been found to respond to marital conflict by withdrawing from their wives (Gottman & Levenson, 1988; Christensen & Heavey, 1990), but conflicting marital situations are also more likely to result in fathers withdrawing from their children (Howes & Markman, 1989). Studies on divorced fathers suggest that fathers disengage from their children when dissolution of the partner relationship with the mother occurs (Fustenberg & Cherlin, 1991), mostly owing to physical separation from their children. These are consistent with studies of parental involvement of both mothers and fathers (e.g., Buehler & Gerard, 2002; Gerard et al., 2006).

In Fagan and Palkovitz's (2007) study on unmarried, nonresident fathers' involvement with their infants, the quality of the mother-father relationship was expected to serve as a risk or resilience factor in determining father involvement. The study sample consisted of 652 predominantly African American unmarried, non-cohabiting fathers. They found that the closer the relationship quality between the mother and father of a child is, the higher the level of father involvement, especially those in romantic and friendship relationships as opposed to acquaintance relationships. Therefore, it is important that the relationship between the father and mother maintains so that there will be continuous father involvement in the child's life. Also, the researchers found that the more risk variables a father has (such as, legal issues), the greater likelihood in decreased paternal involvement. In conclusion, it is suggested that interventions should emphasize

the importance of meaningful relationships among mother and father in order to promote father involvement.

Utilizing data from 2850 young mothers and 2215 fathers of their children from the Fragile Families and Child Wellbeing Study (Reichman et al., 1998), Gee, McNerney, Reiter, and Leaman (2006) found that mother and father reported relationship quality initially and three-years after childbirth significantly relates to father involvement, such that higher reported levels of relationship quality are positively associated with father involvement. Also, father cohabitation with his child was found to be the strongest predictor in determining father involvement, in that greater accessibility to their child enables more involvement in parenting behaviors. When there was a positive relationship (i.e. lack of disagreements) between the partners around the time of the child's birth, fathers showed a greater likelihood to be involved, yet postnatal involvement was not associated with later father involvement (Gee, McNerney, Retier, & Leaman, 2006).

Coiro and Emery (1998) review empirical studies to address the issue of whether marital conflict affects fathering more than mothering in intact marriages. In their summary of eight studies concerning the links between marital conflict and mother-child and father-child relationship quality, they find that two (Amato, 1986; Stoneman et al., 1989) reveal statistically significant results that marital conflict negatively influences parenting behaviors more so for fathers than mothers. Two additional studies (Brody et al., 1986; Jouriles & Farris, 1992) found that marital conflict has more of an influence on parenting behaviors and subsequently, on parent-child relationship quality more so for fathers than mothers.

In their longitudinal study on marital disruptions and parent-child relationships, Orbuch et al. (2000) examined mothers' marital quality in relation to parent-child quality as well as the relation between divorce and parent-child quality with a sample of 801 mothers and children. The researchers interviewed the participants in 1962, 1963, 1966, 1977 and followed-up three times between 1980 and 1993. Their results found that mothers' marital quality when the child was 18 was significantly and positively associated with mothers' perceptions of the parent-child relationship quality at that age, yet as children and mothers aged, marital quality was not significantly related to the mother-child relationship. Divorce and non-remarrying, from the mother's perspective, decreased the quality of mother-child relationships for sons but increased the mother-daughter relationship. When mothers divorced and remarried at the time when children are young adults, both mothers and children reported lower levels in mother-child relationship quality. Adult children's reports on their relationships with their fathers were significantly associated with mothers' reported marital quality. Marital quality had more of a significant spillover into the father-child relationship compared to the mother-child relationship, even when the child was thirty-one years of age; therefore, when marital problems exist the likelihood of fathers maintaining close relationships and being involved with their children is reduced. Divorce was found to have an even greater negative effect on father-daughter relationships than father-son relationships. In addition, children with divorced mothers (non-remarried) were more likely to report lower quality relationships with their fathers compared to children in continuously intact families; this family structure difference was not found for children's reports of relationship quality with their mothers. Other studies indicate that children from divorced families report

poorer relationships with their fathers rather than mothers (Zill, Morrison, & Coio, 1993; Aquilino, 1994) and also that there is a higher level of noninvolvement of fathers with their children after divorce than for mothers (Furstenberg, Peterson, Nord, & Zill, 1983; Seltzer & Bianchi, 1988).

Focus on diverse samples. Studies of low-income couples and ethnic minority couples find evidence of the links among interparental conflict, parenting, and child outcomes as well (Gonzales et al., 2000). Gonzales, Pitts, Hill, & Roosa (2000) explored the indirect model of interparental conflict on child adjustment in a multiethnic (81% Mexican American; 8% African American), low-income sample of children (n = 97) living with two parents (whether biological and married, stepfamily, or cohabiting). Previous research indicates there are traditional values for many ethnic groups of strong emotional attachments in the parent-child relationship (Garcia-Coll et al., 1995) which may in turn prevent the child from facing the problems related to the spillover effect. Using a cross-sectional, meditational model, the researchers found that interparental conflict is indirectly related to child outcomes through negative associations with children's perceptions of parental acceptance and positive relations to their perceptions of inconsistent discipline and control. These results indicate the spillover effect can occur in minority families, including Hispanics and African Americans, such that those children, who reported more frequent, intense, and unresolved conflict between their parents and who perceived the parent-child relationship less favorably, were more likely to report depression and conduct problems. The researchers did not find support for hostile control as a mediator of the relationship between marital conflict and children maladjustment.

Possible explanations, include, a greater acceptance and reduced negative outcomes of hostile control within their primarily Mexican American sample.

In Kacsynski, Lindahl, and Malik's (2006) cross-sectional study of 226 ethnically diverse children (61% having one Hispanic parent, 34% having one Black parent, and 24% having two European American parents) and their married or cohabiting (for at least 3 years) parents, results indicate that marital conflict was consistently associated with higher levels of ineffective parenting among mothers and fathers; parenting behavior was found to fully mediate the link from marital conflict to child maladjustment. As marital conflict heightened, parents tended to become less responsive, more rejecting of their children, and more likely to utilize coercive disciplinary parenting practices. Children tend to react to the coercive behavior through the use of "oppositionality" and aggression (Kacsynski, Lindahl, & Malik, 2006). On the other hand, children tend to display internalizing behavior in response to parental rejection and lack of parental emotional accessibility that result from interparental conflict (Kacsynski, Lindahl, & Malik, 2006).

Meta-analyses of interparental conflict and parenting linkages. Overall, research identifying the link between couple relationship quality and parenting is vast with findings that are quite consistent. In their meta-analysis of 68 studies, Erel and Burman (1995) find robust evidence that more negative parent-child relationships are found among families where there are more negative marital relationships, and vice versa; more positive parent-child relationships are found in families where there are more positive marital relationships. In this meta-analysis, the researchers conclude that highly conflictual marital relationships make it difficult for positive parent-child relationships to exist; therefore, there is a negative relationship between marital conflict and parent-child

relations (Lindahl, Clements, & Markman, 1997; Margolin, Burman, & John, 1989; Metzler, Biglan, Ary, & Li, 1998; Owen & Cox, 1997; Shuntich, Loh, & Katz, 1998).

In a more recent meta-analytic review of 138 effect sizes from 39 studies, Krishnakumar and Buehler's (2000) find a moderate effect size d = -.62 for the relationship between interparental conflict and parenting behaviors, such that, high levels of marital/couple conflict were associated with poor parenting. Again, the negative relationship between marital conflict and parenting behaviors supports the spillover hypothesis, but the effect size in the more recent study is stronger than that found by Erel and Burman (1995; -.44)

Co-parenting

"Co-parenting" is a distinct dimension of the couple relationship that also has received the attention of researchers. There is growing evidence that the quality of the couple relationship impacts the co-parenting relationship in married and non-married families alike. Co-parenting refers to the level of support and cooperation between parents in regard to their parenting abilities and efforts, including, negotiating their respective roles, responsibilities, and contributions to their children (Gable, Crnic, & Belsky, 1994; Margolin, Gordis, & John, 2001; McHale & Rasmussen, 1998). The co-parenting relationship has been shown to influence parenting behaviors and the quality of the parent-child relationship through the parent's self-efficacy (Feinberg & Kan, 2008; Teti, O'Connell, & Reiner, 1996). Co-parenting has been discussed in research on post-divorce and non-married families, but more emphasis is now being given to this dynamic in married families as well (Doherty & Beaton, 2004). Feelings toward one's spouse are

likely to affect the co-parenting relationship, in that higher quality marital relationships reflect positive co-parenting and vice versa.

Kitzmann (2000) found that higher levels of negativity within the couple relationship spill over into triadic processes, causing negative, less supportive co-parenting. Schoppe-Sullivan, Mangelsdorf, Frosch, and McHale (2004) found evidence that co-parenting and marital quality may be independent processes in early family formation but become more closely related as children reach the preschool age. This supports previous findings (Belsky & Hsih, 1998; O'Brien & Peyton, 2002) that couples who experience declines in marital satisfaction over time also experience more disagreements in co-parenting. "The coparenting relationship, therefore, can serve as an arena in which spouses act on their similar or dissimilar child-rearing beliefs and can also provide a context for distressed couples to divert their own problems onto child-related matters" (Gable, Crnic, & Belsky, 1994).

In Margolin, Gordis, and John's (2001) study, the researchers hypothesize that the co-parenting alliance serves as a mediator between marital conflict and parent-child relationships. It is believed that feelings towards one's partner relates to the co-parenting relationship such that healthy marital relations are associated with positive co-parenting whereas unhealthy, unstable marital relations relate to negative co-parenting (Margolin, Gordis, & John, 2001). In their study of three community samples of two-parent families (pilot mothers sample n = 220, 146 girls, 74 boys; preadolescent parent sample n = 75 families, 40 girls, 35 boys; preschool parent sample n = 172 families, 92 girls, 80 boys), the researchers find that coparenting serves to link the relationship between marital conflict and parenting. Having shown reductions in the magnitude for the relationship

between marital conflict and parenting when controlling for co-parenting, the researchers suggest that the co-parenting relationship may serve as a mechanism through which marital relations affect parenting relationships. In addition, the researchers emphasize three aspects of co-parenting – the frequency and level of conflict between parents around parenting issues, cooperation, and triangulation.

Intervention research invoking the couple functioning and parenting link

Considering this empirical spillover evidence, it appears that education on strengthening the couple relationship quality and managing inter-parental conflict can be beneficial to co-parenting and dimensions of parenting and in turn, can promote child well-being (Krishnakumar & Buehler, 2000; Grych, 2005). Grych (2005) suggests that focusing on parenting alone without addressing couple conflict may not effectively target the family processes. Therefore, evaluations of programs can inform basic research concerning whether changes in parenting or changes in inter-parental conflict are predictive of enhanced child adjustment and well-being. Cowan and Cowan (2002) indicate that if the intervention reduces the negative interactions within family relationships (conflict) and if declines in the negativity of these relationship dynamics are associated with positive adaptation and development for children, the intervention will prove to be effective. This evidence will indicate that marital and parent-child relationships possibly play a causal role in influencing children's adaptation and dysfunction.

As an applied research question; however, this has been given minimal attention. A handful of early studies have shown that addressing marital and co-parenting issues with parenting issues results in greater reduction of children's problem behaviors than

parenting skills training alone (Dadds, 1987; Brody and Forehand, 1985). Webster-Stratton (1994) conducted an intervention study which showed that offering a parenting intervention alone had a positive impact on child aggression. But parents who also received marital therapy showed improvements in parental communication, problem-solving skills, parenting satisfaction, and children's knowledge about pro-social solutions to social problems that were significantly greater than the improvements of those who received the parenting intervention alone.

Cowan and Cowan (2000) also examined this "added value" hypothesis and demonstrated that first-time expecting couples who received couples plus parenting education (n = 24) had a reduced decline in marital satisfaction for both partners in comparison to the steady normative decline in marital satisfaction for the control group (n = 24) and a comparable childless group (n = 16). At three years post-partum, no divorces had occurred in the couple intervention treatment group versus fifteen percent in the comparison group. At three and a half to four years post-partum, those who had participated in couple's education had comparatively higher parent well-being and their children had higher levels of adjustment to kindergarten. At six years post-partum, higher marital satisfaction and family adjustment for the couple intervention group was documented.

In a separate study, Cowan et al. (2005) compared the relative impact of a marriage focused program and a parenting-focused program offered to married parents at the transition to kindergarten. Parents who received a parenting focused intervention before the transition showed parenting improvements across time, but no improvements in marital satisfaction and interaction. Participation in the marriage-focused program

resulted in more positive parenting practices and parent-child relationships, as well as increases in their marital satisfaction. Follow-up studies show that children whose parents were in the marriage-focused groups had higher achievement scores in kindergarten as well as fewer behavioral problems in first grade. Later follow-up studies continue to show that children with parents in the marriage-focused groups have greater academic competence and fewer behavior problems in 4th grade when compared to children whose parents had participated in the parenting-focused program. In order to enhance children's emotional, social, and academic adaptation and development, the results of recent intervention research suggest that it may prove more beneficial to help parents with their couple relationship as opposed to education on parenting strategies alone (Cowan & Cowan, 2005).

In a more recent study, Cummings et al. (2008) evaluated a brief 4-session psychoeducational program that included information on marital communication and the importance of constructive rather than destructive skills/behaviors for improving marital conflict in community families. Utilizing the link between marital conflict and other family domains (parent-child relationship and child adjustment), the researchers expected that through improving marital conflict, there would also be eventual positive improvements in the other family system processes. With a mostly married, predominantly white sample, comparing a parent-only group (treatment group) who participated in the 4-session psychoeducational program, a parent-child group (treatment group) who also participated in the 4-session psychoeducational program but their children too were taught ways to cope in response to interparental conflict, and a self-study group (control), the changes in knowledge from the psychoeducational program

were associated with significant improvements in conflict behaviors, such as being more supportive of one another, more emotionally positive, more likely to resolve issues, and more constructive in discussions. These positive changes in marital conflict were associated with positive changes in marital satisfaction, parenting, and child adjustment. Overall, improvements were shown to be far more prevalent in treatment groups in comparison to the control group, suggesting the greater efficacy of research-based treatment education opposed to self-help knowledge.

In addition, recent studies have found that couple interventions not only improve overall relationship quality and functioning in the couple but they can also modestly increase father involvement (Cowan & Cowan, 2000; Schulz, Cowan, & Cowan, 2006; Hawkins, Roberts, Chistiansen, & Marshall, 1994; Shapiro & Gottman, 2005). For example, utilizing the Marriage Moments couples-focused intervention program, Hawkins et al. (2008) studied intervention effects using a sample of 115, mostly white couples (39 receiving couples-focused education, 37 in a Welcome Baby program for first time-parenting education, and 39 in a control group). From this sample, the researchers found that those in the Marriage Moments program strengthening couple relationships increased father involvement in child care to a greater extent than those in the Welcome Baby and control groups. Having a program effect size of d=.48, the researchers discovered that rather than engaging with children only a few times a month, fathers in the couples-focused group increased their involvement to a few times a week.

Current Study

Numerous studies indicate that marital and parental subsystems are intertwined and thus provide implications for practical application. In addition to enhanced couple

functioning, MRE programs may prove beneficial for a much broader range of positive outcomes. Interventions improving the couple relationship can influence parenting behaviors and parental involvement, and a handful of studies using married, ethnically homogenous small samples have demonstrated these links.

While this research provides some evidence of the effects on parenting following interventions that address couple relationship skills, much has yet to be learned. There are no published studies of previous or currently federally-funded marriage and relationship education (MRE) programs that have included assessments of parenting dimensions or co-parenting relationships. Measures are instead focused on individual functioning and overall couple functioning and quality. While there is some information on the potential value of MRE for promoting positive parenting relationships and practices from evaluations of parenting programs that have addressed couple relationship skills, the few studies that have examined this spillover link have utilized small samples and have provided no information on how change in parenting relationships and practices following MRE may vary and differ based on parent characteristics (e.g., gender, race, marital status, etc.).

The current study utilizes the empirically established spillover linkages between couple functioning and parenting and extends the intervention research that has demonstrated evidence of positive child outcomes when parents are exposed to couple focused programs. The current study uses a large, ethnically and economically diverse sample of married and unmarried parents who participated in MRE programs to examine the extent to which several dimensions of parenting change after participation in a MRE program and whether these changes differ by gender, race, or marital status. The

educational program includes lessons on improving couple relationship skills and provides no lessons specifically on parenting; therefore a test of the spillover effect can be examined among mothers and fathers participating in a relationship education program. It is hypothesized that parents in a MRE program will show improvements in in co-parenting quality and dimensions of parenting (positive parenting and parental involvement). In addition to examining changes in the parenting dimensions across time, the study examines whether and how the difference in reported scores in couple functioning from Time 1 to Time 2 is predictive of the changes in the parenting dimensions across time. The following hypotheses and research questions will be analyzed in the study:

(H1) It is hypothesized that *parents in a MRE program will show positive changes in co-parenting conflict, positive parenting, and parental involvement.*

(RQ1) Because no information on which to base hypotheses regarding the impact of gender, race, and marital status, the following research question will be explored: *How does change over time in the different parenting dimensions differ by gender, race, and marital status?*

(H2) It is hypothesized that *parents in a MRE program will show positive changes in co-parenting conflict, positive parenting, and parental involvement in relation to the amount of change demonstrated in couple behavioral dimensions and couple quality assessments.*

(RQ2) Because this is a new area of study and research, the following research question will be explored: *Which dimensions of couple functioning change*

account for more of the variance in co-parenting conflict, parental involvement, and positive parenting practices changes?

(H3) Further, because some evidence exists that indicates that fathers' parenting is more likely to be prone to spillover effects, while mothers may be able to compartmentalize comparatively better, it is hypothesized that *parent gender will serve as a moderator of the links between change in couple functioning and change in parenting dimensions.*

(RQ3) Because no information exists on which to base hypotheses regarding the impact of race and marital status, the following research question will be explored: *How do participant characteristics, specifically, race and marital status, affect the links between changes in couple functioning and changes in parenting?*

III. METHODS

Sample and Procedure

For the current study, secondary analyses were conducted using a dataset from the Alabama Community Healthy Marriage Initiative (ACHMI) evaluation study. The original data were collected from participants who were part of the project during the first (2006-2007) and second (2007-2008) years targeting a broad population of married and unmarried adults (*N*=1221). The data used for the current study were collected both prior to and after implementation of the intervention and were matched by participant code.

Family Resource Centers located in eight Alabama counties were chosen for the implementation of the program. Three of those counties are considered rural (Chambers, Escambia, and Talledega), while the others are considered urban (Etowah, Houston, Montgomery, Morgan, and Tuscaloosa). Each county was responsible for recruiting adults to participate in the relationship education classes. The classes and surveys were administered by a male/female team of relationship/marriage educators in the state of Alabama, all trained together in the curricula implementation and data collection methods. A site coordinator visits routinely to ensure implementation fidelity.

Adults participated in a minimum of 6 group educational sessions focused on building knowledge and skills for healthy couple relationships and marriages. Adults were exposed to the relationship education curriculum that best fit their needs; however, the core content areas/skills were the same across curricula. Four curricula were used to target different characteristics; these were *Mastering the Magic of Love*, *Together We*

Can, *Smart Steps for Stepfamilies*, and *Basic Training: Black Marriage Education*. Each curriculum contains research supported content and is highly interactive. Self-report questionnaires were completed before the first program class and after the last class. Prior to participation in the study, adult participants were infoMREd of the purposes of the questionnaires, and each signed infoMREd consent letters indicating their agreement to participate and releasing their information for research purposes. Participants were not compensated for providing data.

The initial inclusion criteria for the current study required that the adults attend the class singly, in order to overcome dependency of couple data, and were parents. Since no question indicated whether the participant was a parent, participants were coded as a parent if they had a pre-test response to, "How often do you and your child(ren)'s other parent argue about child rearing?" Due to extremely small numbers, minorities other than African American were excluded from the analytic sample.

The final sample used for this study consisted of 582 adults. The average age of participants was 35 (Median = 34; Range = 15-72, SD = 10.76). Gender composition is 81.3% female (n = 491) and 15.5% male (n = 90). The sample consists of 53.1% African American adults (n = 309) and 46.9% European American adults (n = 273). Relationship status of the sample consists of 35.6% married adults and 60.6% non-married adults (15.5% adults in cohabitating relationships, 25.7% adults in dating/not living together relationships, and 19.4% single adults). Total household income reported ranges from below $7,000 to above $100,000; 52.3% report an income level less than $24,999 ($n$ = 304), 27% report an income between $25,000 and $74,999 ($n$ = 157), and 6.2% report an income greater than $75,000 ($n$ = 36).

Measures

Demographic variables. Race/ethnicity was coded as (European American = 1, African American = 2); age was reported in years; gender was coded as (male = 0, female = 1); marital status was coded as (married = 1, engaged and living together = 2, engaged and not living together = 3, dating someone and living together = 4, dating someone and not living together = 5, and single, no current relationship = 6) and was collapsed into married and non-married categories (1 and 0, respectively); income level was coded as (<$7,000 = 1, $7,000-$13,999 = 2, $14,000-$24,999 = 3, $25,000-$39,999 = 4, $40,000 - $74,999 = 5, $75,000-$100,000 = 6, and $100,00+ = 7).

Dependent Variables: Parenting Measures.

Co-parenting Conflict. The initial reliability of this scale as created was low (i.e.,α=.22 at T1 and α=.39 at T2). PCA of the six-itemed Co-parenting scale (adapted from Ahrons & Wallisch, 1987) revealed the presence of two components with eigenvalues exceeding 1, explaining 43.6% and 21.6% of the variance respectively. To aid in the interpretation of these two components, rotation was perfoMREd. The interpretation of the two components was consistent with a Supportive Co-parenting Scale, containing co-parent support items (degree to which parents supportive to each other, agree on childrearing and agree on time spent with the child) and a distinct Co-parent Conflict Scale with items indicating the degree to which parents argue about childrearing, argue about time spent with child, and the child hears negative/bad remarks. The support items were removed and the reliability for the resulting 3-item Co-parenting Conflict Scale was $\alpha = 0.75$ at pre-test and $\alpha = 0.76$ at post-test.

Positive Parenting. The original reliability of the scale as created was low (i.e., $\alpha = 0.68$ at T1 and $\alpha = 0.65$ at T2). Initial PCA of the 7-item Positive Parenting Scale (developed and validated in pilot studies) revealed the presence of two components with eigenvalues exceeding 1, explaining 35.5% and 60.9% of the variance respectively. To aid in the interpretation of these two components, rotation was perfoMREd. The interpretation of the two components was consistent with a Punitive Parenting Scale (yell/shout at child, threats, spank child, and argue with child) and a Positive Parenting Scale (providing reasons for obeying rules, explaining consequences, and giving praise to children). The Punitive Parenting items were extracted and the reliability of the resulting 3-item Positive Parenting Scale, reliability was $\alpha = 0.71$ at pre-test and $\alpha = 0.72$ at post-test.

Parent Involvement. Initial PCA of the 7-item Parental Involvement scale (ROFQ; Palkovitz, 1984) revealed the presence of one component with an eigenvalue exceeding 1, explaining 57% variance. For purposes of this study and in order to reduce the complexity of the model, only the three items with the highest factor loadings were used as indicators of parental involvement (play with child, dress child, and take child to doctor's appointments). Reliability for the 3-item Parent Involvement Scale was $\alpha = 0.73$ at pre-test and $\alpha = 0.72$ at post.

Independent variables: Couple Measures

Several dimensions of couple quality and behavior were assessed using multi-item indicators. *Couple/Marital Adjustment* was assessed using 6 items from the Dyadic Adjustment Scale (Spanier, 1976). Parents responded, on a scale of 1 (always disagree) to 5 (always agree), on items concerning the extent of agreement or disagreement in several

areas. Items included handling finances, sex relations, dealing with family/relatives, parenting, how to behave and act in the relationship, and amount of time spent together. The alpha coefficient at pre-test was $\alpha = 0.87$ and at post-test was $\alpha = 0.88$.

Couple/Marital Quality was assessed using 5 items from the Quality Marriage Index (QMI; Norton, 1983). Parents responded on a 7-point Likert scale from 1 (very strongly disagree) to 4 (mixed) to 7 (very strongly agree) concerning whether they have a good marriage/relationship, a stable relationship, a strong relationship, a relationship that their partner makes them happy, and a relationship in which they feel part of a team. The alpha coefficient at pre-test was $\alpha = 0.97$ and at post-test was $\alpha = 0.98$.

Trust was assessed using 3 items from the Trust Scale (From Rempel, Holmes, & Zanna, 1985). Parents responded, on a 5 point Likert scale from 1 (strongly disagree) to 5 (strongly agree), to questions concerning counting on one's partner to keep promises, being confident one's partner is telling the truth, and believing that one's partner will not cheat on him or her. The alpha coefficient at pre-test was $\alpha = 0.88$ and at post-test was $\alpha = 0.87$.

The degree of *Negative Interactions* was assessed using 2 different scales. The first consisted of 5 items from the Negative Interaction Scale (Stanley, Markman, & Whitton, 2002). Parents respond, on a 5-point Likert scale from 1(never) to 5 (all the time), to items focused on the frequency of such behaviors as, being on opposite teams when solving problems, shout/yell at partner, being shouted/yelled at by partner, hit/strike partner, and being hit/struck by partner. The alpha coefficient at pre-test was $\alpha = 0.81$ and at post-test was $\alpha = 0.84$. The second scale consisted of 7 items from the Positive/Negative Interaction Scale (Huston & Vangelisti, 1991). Parents respond, on a 4-

point Likert scale from 1(never) to 4 (often throughout the day), to items focused on the frequency of such behaviors as, being bored/uninterested with partner, hogging the conversation with partner, showing anger/impatience towards partner, criticizing/complaining to partner, turning down/avoid sexual advances, failing to do something partner asked, and doing things that annoy their partner. The alpha coefficient at pre-test was $\alpha = 0.84$ and at post-test was $\alpha = 0.82$.

The degree of *Positive Interactions* was assessed using eight items from the Positive/Negative Interaction Scale (Huston & Vangelisti, 1991). Parents respond, on a 4-point Likert scale from 1(never) to 4 (often throughout the day), to items focused on the frequency of such behaviors as, complimenting one's partner, making one's partner laugh, saying "I love you," doing something nice for one's partner, talking about the day's events, initiated physical affection with partner, sharing emotions, feelings, or problems, and initiating sex. The alpha coefficient at pre-test was $\alpha = 0.89$ and at post-test was $\alpha = 0.90$.

Conflict Management was assessed using 6 items from the Interpersonal Competence Scale (BuhMREister et al., 1988). Parents respond, on a 5-point Likert scale from 1(not at all like me) to 5 (very much like me), to items concerning how one acts in relationships such as behaviors including, admitting being wrong, putting bitter feelings aside, listening to other's complaints, seeing and accepting other person's point of view, and not exploding at another person to avoid arguments. The alpha coefficient at pre-test was $\alpha = 0.81$ and at post-test was $\alpha = 0.86$.

IV. PLAN OF ANALYSIS

Hypothesis 1 suggests there will be positive changes in co-parenting conflict, positive parenting, and parental involvement over time. These changes across time (pre-to-post test) in each of the three parenting dimensions for the whole sample were examined and analyzed using paired sample t-tests. Research question 1 addresses the extent of change in each of the parenting measures across time by gender (male/female), race (African American/European American), and marital status (married/non-married). In order to address this question, repeated measures mixed between-within subjects analysis of variance (ANOVA) were utilized for each of the dependent variables.

Hypotheses 2 expects there will be positive changes over time in co-parenting conflict, positive parenting, and parental involvement in relation to the amount of change in couple behavioral dimensions and couple quality assessments. This was examined through correlations of difference scores. In order to address research question 2 concerning the dimensions of couple functioning that account for more of the variance in the parenting dimensions at time 2, structural equation modelling was used. Couple functioning dimensions at time 2, controlling for time 1 scores, were used to predict time 2 parenting scores, controlling for time 1 scores.

It is also expected that parent gender may serve as a moderator in the links between couple functioning and parenting dimensions because of evidence indicating that fathers are more likely to experience spillover effects (hypothesis 3). In addition, research question 3 examined the moderating role of race and marital status on links between

couple functioning and parenting at time 2. Structural equation modelling was used. To examine differences based on gender, race, and marital status, parallel models were fit using structural equation modelling to compare the two groups of each demographic characteristic (mothers/fathers, African American/European American, and married/non-married).

V. RESULTS

First, results of examinations of change over time in the parenting dimensions (H1) will be presented. Second, results of change over time in the parenting dimensions based on demographic differences will be provided (RQ2). Third, a correlation table of differences scores is provided to examine change in the couple dimensions over time relative to change in the parenting dimensions over time (H2). Following, results of examinations of the effects of change in the couple domain on changes in the parenting domain (RQ2) will be presented. Lastly, demographic characteristics (H3 and RQ3) are examined to determine differences in model fit for the full hypothesized model.

Assessments of normal distribution

Because structural parameters and goodness-of-fit indices in structural equation modelling are influenced by skewness, kurtosis, and sample size, descriptive statistics, including the means, standard deviations, and measures of normality for each of the measures at each time-point were examined and are presented in Table 1. No serious violations were noted.

Table 1. Descriptive statistics for the couple and parenting dimension indicators at time 1 and time 2.

Time	Scale	Descriptive Statistics						
		N	Min.	Max.	M	SD	Skewness	Kurtosis
Time 1 (Pre-Test)	CoupleQualityPre	522	1	7	4.616	1.693	-.479	-.520
	DASPre	523	1	5	3.297	.915	-.329	-.258
	TrustPre	522	1	5	3.269	1.264	-.319	-1.008
	PosInteractionHustonPre	529	1	4	2.759	.711	-.350	-.163
	ConflictManagementPre	574	1	5	3.408	.874	-.111	-.376
	NegInteractionStanleyPre	525	1	5	2.296	.831	.603	.205
	NegInteractionHustonPre	526	1	4	1.863	.566	1.094	1.922
	Co-parentConflictPre	582	1	5	2.330	.952	.461	-.469
	PositiveParentingPre	551	1	4	3.167	.716	-.868	.402
	ParentInvolvementPre	539	1	5	4.157	.996	-1.256	1.011
Time 2 (Post-Test)	CoupleQualityPost	388	1	7	5.008	1.594	-.700	-.042
	DASPost	371	1	5	3.528	.854	-.473	-.056
	TrustPost	367	1	5	3.577	1.14	-.621	-.416
	PosInteractionHustonPost	394	1	4	2.888	.708	-.375	-.310
	ConflictManagementPost	425	1	5	3.551	.861	-.122	-.578
	NegInteractionStanleyPost	391	1	5	2.140	.831	.809	.455
	NegInteractionHustonPost	391	1	4	1.771	.501	.854	1.490
	Co-parentConflictPost	396	1	5	2.274	.939	.616	-.127
	PositiveParentingPost	389	1	4	3.246	.660	-.842	.431
	ParentInvolvementPost	389	1	5	4.173	.942	-1.225	1.143

Hypothesis I: Changes over time in parenting

In order to examine whether positive changes occur from pre-program to post-program (i.e., hypothesis 1) in co-parenting conflict, positive parenting, and parental involvement over time, paired sample t-tests were utilized. Changes across time in each of the three parenting dimensions were examined for the sample of adult parents who attended MRE singly. Participants showed statistically significant changes in ratings of co-parenting conflict (N = 396, M= 0.12, SD=0.91; t = 2.721, p = .007) and positive

parenting (*N* = 389, *M*= -0.09, *SD*=0.66; *t* = -2.67, *p* = .008) and marginally significant change in parent involvement (*N* = 389, *M*= -0.07, *SD*=0.86; *t* = -1.63, *p* = .10).

Research Question 1: Demographic differences in change

Research question one expands the hypothesis of positive changes in the parenting dimensions (i.e., co-parenting conflict, positive parenting behaviors, and parental involvement) and explores the interaction of time and several demographic characteristics (i.e., gender, race, and marital status) using repeated measures mixed between-within subjects analysis of variance (RMANOVA).

Co-parenting Conflict

There were no significant interaction effects for Time X Gender, Time X Race, or Time X Marital Status on change over time in levels of reported co-parenting conflict. Univariate ANOVAs examined differences by group at each time point and found European Americans reported significantly higher levels of co-parenting conflict at time 1 [*F* (1, 581) = 4.08, *p* = .04], but European Americans and African Americans' co-parenting conflict scores did not differ at time 2. Mean level scores did not differ at time 1 or time 2 based on gender or on marital status.

Positive Parenting

There were no significant interaction effects for Time X Gender, Time X Race, and Time X Marital Status on positive parenting. Based on univariate ANOVAs, there were significant differences at both time 1 [*F* (1, 549) = 6.41, *p* = .01] and time 2 [*F* (1, 389) = 14.96, *p* = .000] for positive parenting based on gender; mothers reported significantly higher levels of positive parenting at both times. Mean level scores on

positive parenting did not differ at time 1 or time 2 based on race or based on marital status.

Parental Involvement

A marginally significant Time X Race interaction effect was found [F (1, 374) = 2.71, p = .10 partial eta squared = .007]. European Americans' level of parental involvement showed increases over time, while levels for African Americans did not. There were no significant Time X Gender or Time X Marital Status interaction effects for parental involvement. Based on univariate ANOVAs, there were significant differences at both time 1 [F (1, 537) = 48.13, p = .000] and time 2 [F (1, 389) = 22.94, p = .000] for parent involvement based on gender; mothers reported significantly higher levels of parental involvement at both times. Mean level scores did not differ at time 1 or time 2 based on race; or based on marital status.

Hypothesis II: Correlation of Difference Scores

In order to test hypothesis 2 – *There will be positive changes in co-parenting conflict, positive parenting, and parent involvement in relation to the amount of change in couple dimensions (couple quality, positive couple behaviors, and negative couple behaviors)* – a correlation table of the difference scores is provided (See Table 3).

The three couple dimensions were created by composite scores of the respective indicator scales (confirmatory factor analyses explicated in the following section). The indicators of couple quality, dyadic adjustment, and trust were added together to create *couple quality*. The indicators of positive interactions and conflict management were added together to create *positive couple behaviors*. The two indicators of negative interaction were added together to create *negative couple behaviors* (See Table 2).

Table 2. Descriptive statistics for composite couple scores at time 1 and time 2.

		Descriptive Statistics						
Time	Composite	N	Min	Max	M	SD	Skewness	Kurtosis
Time1	CoupleQualityPre	509	3.00	17.00	11.2005	3.41963	-.455	-.535
	PosCoupleBxPre	523	2.00	9.00	6.1350	1.25229	-.093	-.170
	NegCoupleBxPre	519	2.00	9.00	4.1552	1.22730	.683	.807
Time2	CoupleQualityPost	361	3.00	17.00	12.1127	3.27363	-.712	-.023
	PosCoupleBxPost	390	2.00	9.00	6.4246	1.27857	-.135	-.292
	NegCoupleBxPost	387	2.00	9.00	3.9058	1.17582	.773	.906

For the full sample across domains, the difference score (change over time from time 1 to time 2) of co-parent conflict was significantly and positively related to the difference score of negative couple behavior ($r = .35$, $p < .01$); this indicates that higher levels of change over time in negative couple behaviors are associated with higher levels of change over time in co-parent conflict, and vice versa. The difference score of positive parenting was significantly and positively related to difference scores for couple quality ($r = .14$, $p < .05$) and positive couple behavior ($r = .25$, $p < .01$) and negatively related to negative couple behavior ($r = -.11$, $p < .05$), indicating that higher levels of positive change over time in positive parenting are associated with higher levels of positive change over time in couple quality and positive couple behavior and higher levels of reduction over time in negative couple behaviour (i.e., the desirable difference), and vice versa. The difference score of parent involvement was not significantly correlated with any other change score.

Table 3. Zero-Order Pearson correlations for difference scores of the composite parenting and couple variables.

Variables	Coparent Conflict Diff	Positive Parent Diff	Parent Involvement Diff	Couple Quality Diff	Positive Couple Diff	Negative Couple Diff
CoparentConflictDiff	1					
PositiveParentDiff	.057	1				
ParentInvolvementDiff	-.013	.097	1			
CoupleQualityDiff	-.077	.136*	.087	1		
PositiveCoupleBXDiff	-.007	.245**	.063	.335**	1	
NegativeCoupleBXDiff	.347**	-.113*	-.077	-.290**	-.116*	1

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

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

The Model for the Current Study

Overview

The model tested to address research question 2, hypothesis 3, and research question 3 was constructed with multi-indicator latent constructs using the sample of adult parents who attended MRE singly ($N = 582$). Several steps in the analyses were undertaken. Measurement models for each latent variable in the structural model were created and tested using SPSS 17.0 and AMOS 17.0. The exogenous variables (*couple quality*, *positive couple behavior*, and *negative couple behavior*) were then tested and examined together using confirmatory factor analysis (CFA). The exogenous measurement models at pre-and-post time points are described using descriptive statistics, standardized regression weights, and goodness-of-fit indicators (see Figures 1 and 2). Following this, the endogenous variables (*co-parenting conflict*, *positive parenting*, and *parent involvement*) were tested together. The measurement models at pre-and-post time points are described, including results from descriptive statistics, standardized regression weights, and goodness-of-fit indicators (see Figures 3 and 4).

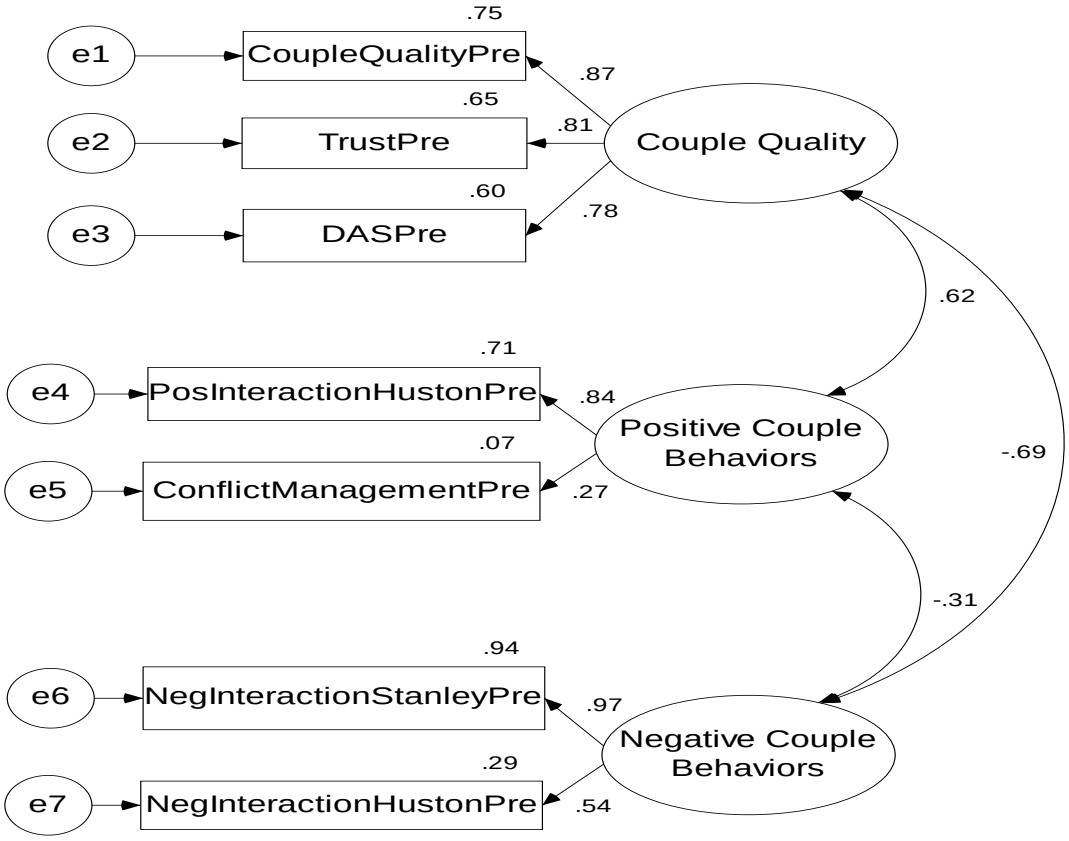
Finally, the full hypothesized model was created and tested using the full sample of cases (see Figure 5). The model was then fit comparing mothers and fathers simultaneously (see Figures 6 and 7), African Americans and European Americans simultaneously (see Figures 8 and 9), and married and non-married participants simultaneously (see Figures 10 and 11).

Couple Dimension Measurement Model

The measurement model for the exogenous side of the model was examined for strength of regression weights and the correlation between the latent variables and for goodness of fit. This was done in two steps. First the measurement model for the time 1 exogenous side was examined. Second the measurement model for the time 2 exogenous side was examined.

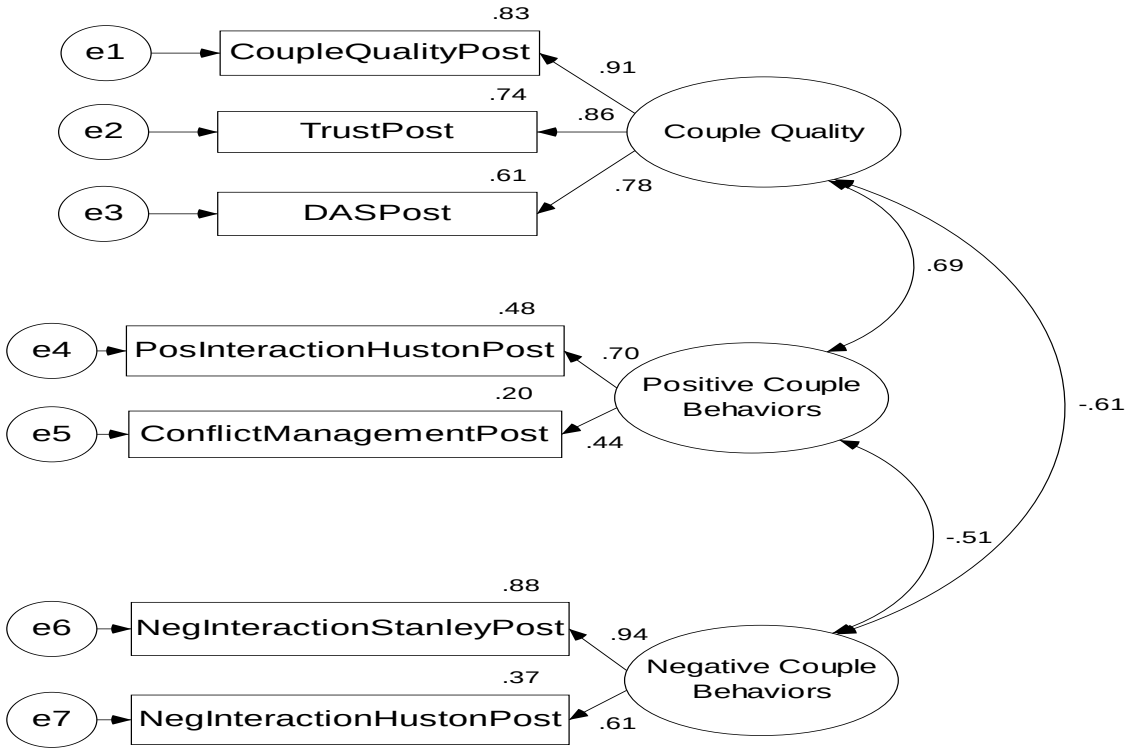
Time 1. For the time 1 exogenous measurement model, all regression weights were significant at the .001 level. The correlations between latent variables were moderately low to moderately high (-.31 to -.69), indicating sufficient distinction between latent constructs. Regarding model fit, Chi-square ($\chi 2$) = 89.625 (df = 11, $p < .000$) was significant, the CFI was .94, indicating a good fit of the data to the model; however, the RMSEA was .11 and considered out of the range of values that indicate good model fit (Brown & Cudeck, 1993). Given the strength and significance of the standardized regression weights specified for the multi-indicator latent variables and the healthy CFI, the measurement model for the exogenous factors used at time 1 appears in Figure 1.

Figure 1. Standardized fitting of the exogenous variable (couple domain) measurement model at time 1.



Time 2. For the time 2 exogenous measurement model, all regression weights were significant at the .001 level. The correlations between latent variables were moderate to moderately high (-.51 to .69), indicating acceptable distinction between latent constructs. Assessing the goodness-of-fit, $\chi 2 = 57.999$ (df= 11, $p < .000$) , the CFI was .96 and the RMSEA was .086, indicating an acceptable fit of the data to the model. Given the strength and significance of the standardized regression weights specified for the multi-indicator latent variables and the healthy goodness-of-fit indices, the measurement model for the exogenous factors used at time 2 appears in Figure 2.

Figure 2. Standardized fitting of the exogenous variable (couple domain) measurement model at time 2.



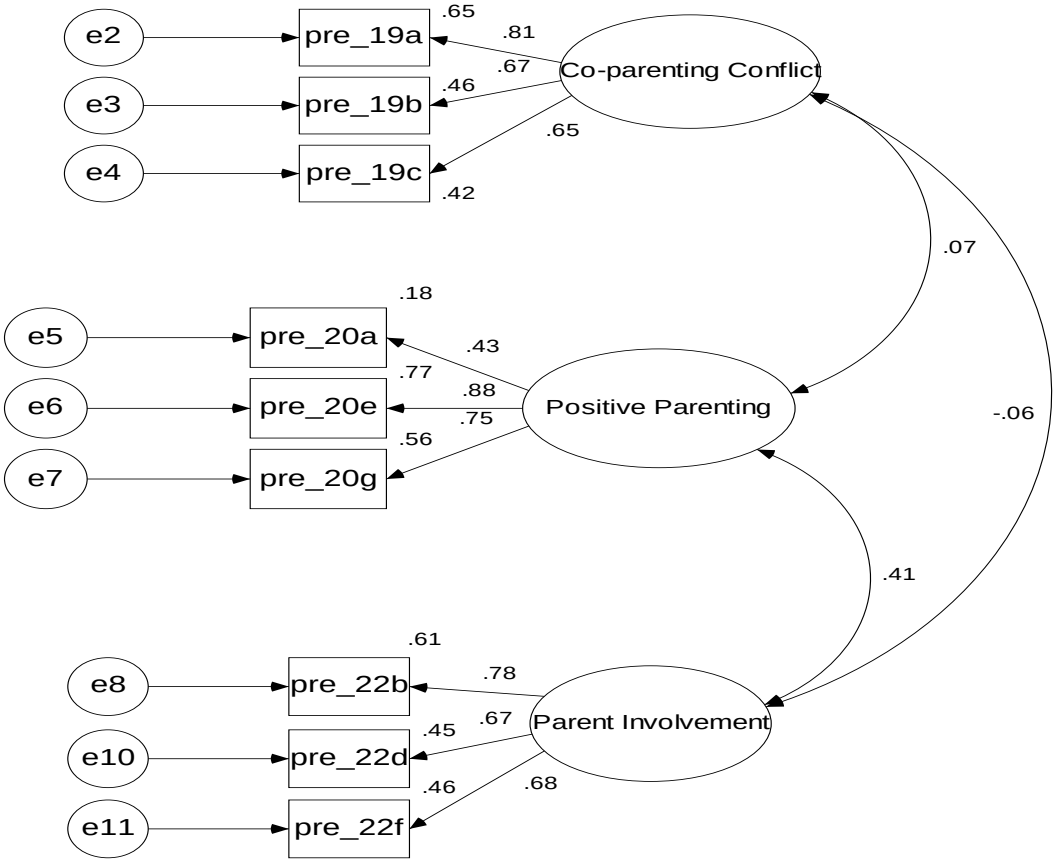
Parent Dimension Measurement Model

The measurement model for the endogenous side of the model was examined for strength of regression weights and the correlation between the latent variables and for goodness of fit indices. This was done in two steps. First, the measurement model for the time 1 endogenous side was examined. Second, the measurement model for the time 2 endogenous side was examined.

Time 1. For the time 1 endogenous measurement model, all regression weights were significant at the .001 level. The correlations between latent variables were low to moderate (-.06 to -.41), indicating sufficiently discrete latent constructs. Assessing the goodness-of-fit, $\chi 2 = 78.602$ (df = 24, $p < .000$), the CFI was .96 and the RMSEA was .06, indicating a good fit of the data to the model. Given the strength and significance of

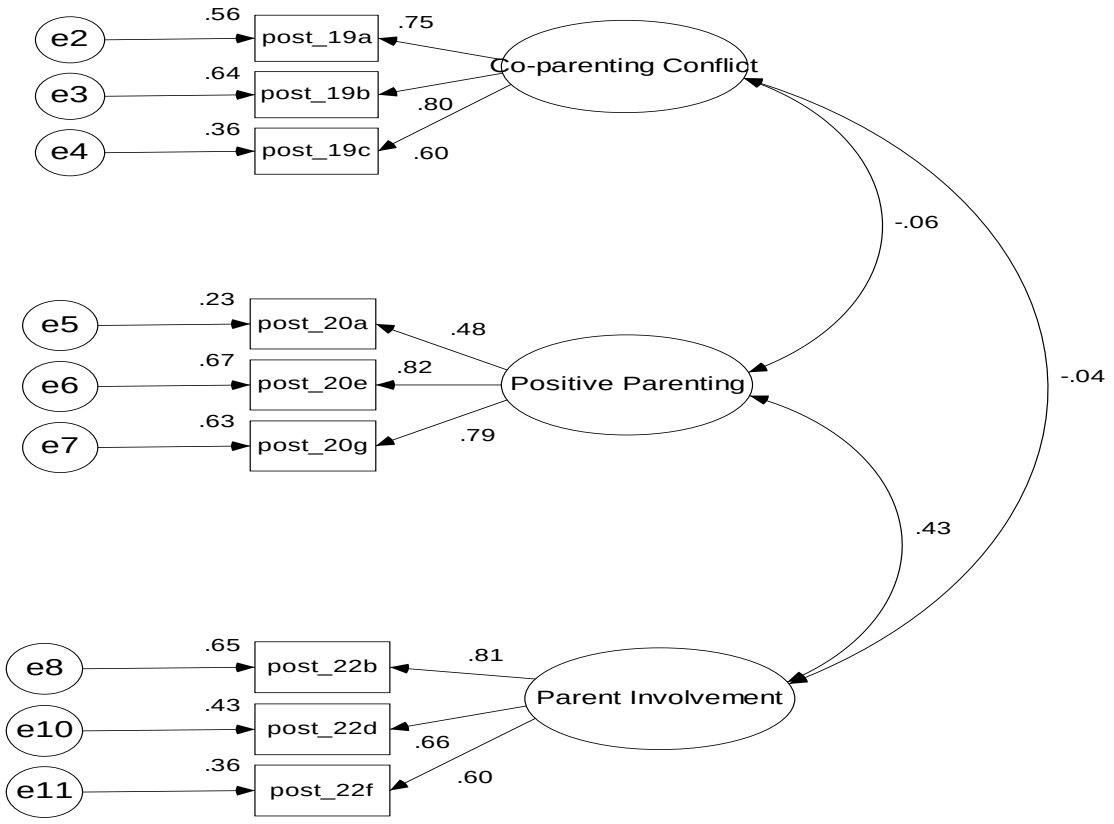
the standardized regression weights specified for the multi-indicator latent variables and the healthy goodness-of-fit indices, the measurement model for the endogenous factors used at time 1 appears in Figure 3.

Figure 3. Standardized fitting of the endogenous variable (parenting domain) measurement model at time 1.



Time 2. For the post (time 2) endogenous measurement model, all regression weights were significant at the .001 level. The correlations between latent variables were low to moderate (-.04 to .43). Assessing the goodness-of-fit, $\chi 2 = 83.259$ (df = 24, $p <$ .000), the CFI was .93 and the RMSEA was .065, indicating a good fit of the data to the model. Given the strength and significance of the standardized regression weights specified for the multi-indicator latent variables and the healthy goodness-of-fit indices, the measurement model for the endogenous factors used at time 2 appears in Figure 4.

Figure 4. Standardized fitting of the endogenous variable (parenting domain) measurement model at time 2.



The Full Hypothesized Model

The full hypothesized model was tested for the sample of adult parents who attended MRE classes singly and then three separate tests compared the fit of the model by gender, race, and marital status. Results are presented in Figures 5 to 11. The models were examined for significant standardized regression weights, correlations between the latent factors, and goodness-of-fit indices.

Exploring the effects of change in the couple domain on changes in the parenting domain

RQ2 focused on the examination of changes in couple functioning dimensions (*couple quality, positive couple behaviors*, and *negative couple behaviors*) and their comparative effects on changes in parenting dimensions (*co-parenting conflict, positive parenting,* and *parental involvement*). An initial fitting of the model without predictive

paths from the couple domains to parenting domains at time 2 was analyzed to determine variance explained by time 1 alone. The model explained and accounted for 44% of the variance in co-parenting conflict, 45% of the variance in positive parenting, and 44% of the variance in parental involvement.

The analytic model for the study tested paths from the couple dimensions at time 2 to the parenting dimensions at time 2, controlling for the time 1 parenting and couple dimensions (Figure 5). In analyses, correlated error term paths between time 1 and time 2 for each item indicator at a given time-point were included, however are not depicted in the figures presented. In addition, covariance paths among latents at time 1 were included; however are not shown in the presented figures.

Goodness-of-fit indices revealed a strong fit of the data to the model. Chi-square was significant 965.875 (df = 423, $p < .000$), the CFI was .92 and the RMSEA was .047. For the full sample (N = 582), the model explained and accounted for 47.5% of the variance in *co-parent conflict* at time 2, 48.6% of the variance in *positive parenting* at time 2, and 54.9% of the variance in *parent involvement* at time 2.

Figure 5 shows all possible path coefficients to the final outcome variables: *co-parent conflict* time 2, *positive parenting* time 2, and *parent involvement* time 2. Controlling for everything else in the model, all direct paths from the time 1 variable to each one's respective time 2 variable were significant ($p \leq .001$), indicating that time 1 variable scores influence time 2 variable scores. Examining the spillover from couple dimensions at time 2 to the parenting dimensions at time 2, controlling for everything else in the model, several significant paths were identified (see Table 4). Change in *positive couple behaviors* predict change in *parent involvement* ($\beta=.41$, $p<.001$) and

positive parenting behaviors (β=.19, $p < .01$) Change in *negative couple behaviors* predict change in *co-parent conflict* (β=.23, $p<.001$). Change in *couple quality* predicts *parent involvement* (-.19 $p \leq .01$).

These results reveal that, controlling for all else in the model, higher levels of change in *positive couple behaviors* are associated with higher levels of change in *parental involvement* and *positive parenting behaviors*; on the other hand, higher levels of change in *negative couple behaviors* are associated with higher levels of change in *co-parenting conflict*. Interestingly, higher levels of change in *couple quality* were associated with lower levels of change in *parental involvement*.

Comparisons of the path coefficients reveal the strongest predictor for each parent outcome dimension. The strongest predictor of change in *co-parent conflict* (i.e., time 2 accounting for time 1) was change in *negative couple behaviors*. The strongest predictor of change in *positive parenting behaviors* and *parent involvement* was change in *positive couple behaviors*.

Table 4. Unstandardized and standardized coefficients between the latent constructs for the full model.

Paths	Regression Weights	
	Unstandardized	Standardized
Coparent Conflict T2 ← Coparent Conflict T1	.54***	.55***
Coparent Conflict T2 ← Couple Quality T2	-.05	-.05
Coparent Conflict T2 ← Positive Couple BX T2	-.06	-.04
Coparent Conflict T2 ← Negative Couple BX T2	.22***	.23***
Positive Parenting T2 ← Positive Parenting T1	.66***	.64***
Positive Parenting T2 ← Couple Quality T2	-.02	-.03
Positive Parenting T2 ← Positive Couple BX T2	.12	.19**
Positive Parenting T2 ← Negative Couple BX T2	-.02	-.04
Parent Involvement T2 ←Parent Involvement T1	.61***	.57***
Parent Involvement T2 ← Couple Quality T2	-.22**	-.19**
Parent Involvement T2 ← Positive Couple BX T2	.57***	.41***
Parent Involvement T2 ← Negative Couple BX T2	-.07	-.07

Note. ~ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

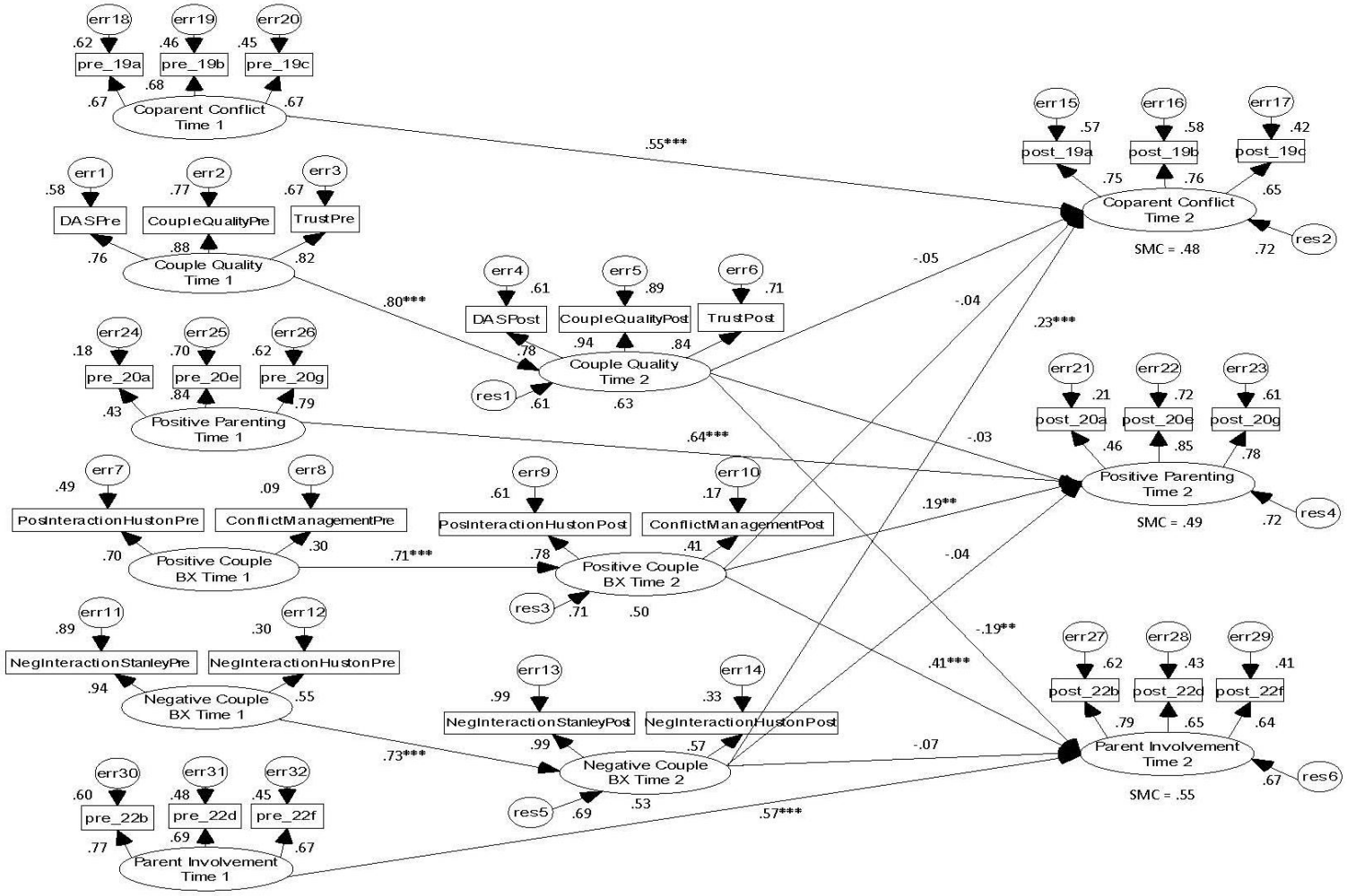


Figure 5. Standardized path coefficients of the structural equation model for the full sample. Fit indices: $\chi 2$=965.875 (df = 423, p < .000), CFI = .92, RMSEA = .047. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

Hypothesis III and Research Question III: Differences in the full hypothesized model based on demographic characteristics

Next, differences in model fit based on gender, race, and marital status were examined for the model. The dichotomous groups for each demographic characteristic (fathers/mothers, African American/European American, and married/non-married) were fit to the data simultaneously (see Figures 6 to 11).

Gender (Mothers and Fathers)

Simultaneously fitting the data to the model based on gender, separate parameters were identified for both fathers and mothers. The data fit the model well. Fit statistics indicate a significant: $\chi 2 = 1579.1$ (df = 846, $p < .000$), CFI = .89, and RMSEA = .04. For fathers, the model accounted for 70% of the variance in *co-parent conflict* at time 2, 98% of the variance in *positive parenting* at time 2, and 57% of the variance in *parent involvement* at time 2. For mothers, the model explained 48% of the variance in *co-parent conflict* at time 2, 39% of the variance in *positive parenting* at time 2, and 53% of the variance in *parent involvement* at time 2.

For both fathers and mothers, all direct paths from time 1 variables to respective time 2 variables were significant ($p \leq .001$) except for fathers' parent involvement time 1 to parent involvement time 2 which was significant at $p < .05$. The standardized and unstandardized coefficients are presented in Table 5. Similarly, Figures 6 and 7 provide visual models for fathers and mothers with standardized regression weights and squared multiple correlations.

Positive change in *positive couple behaviors* predict positive change in *parent involvement* for fathers (β=.62, $p < .05$) and for mothers (β=.42, $p < .001$). Reductions in

n*egative couple behaviors* predict increases in *co-parenting conflict* for fathers (β =-.19, p<.10) and reductions in *co-parenting conflict* for mothers (β =.29, $p < .001$).

Reductions in *negative couple behaviors* predict positive changes in *parent involvement* for mothers (β =-.12, $p = .06$) but not for fathers (β =-.02, *p*=ns). Positive changes in *positive couple behaviors* predict increases in *positive parenting behaviors* for mothers (β =.15, $p = .06$) but not for fathers (β =.23, *p*=ns). Increases in *couple quality* predict decreases in *parent involvement* for mothers (β =-.22, *p*<.01) but not for fathers (β = -.25, *p*=ns).

Comparisons of the path coefficients also reveal the strongest predictor for each parent outcome dimension. For both mothers and fathers, the strongest predictor of change in *co-parent conflict* was change in *negative couple behaviors*; the strongest predictor of change in *positive parenting behaviors* was change in *positive couple behaviors*; and the strongest predictor of change in *parent involvement* was change in *positive couple behaviors*.

Assessing comparative path strength between mothers and fathers, it appears that both have significant paths from *negative couple behavior* to *co-parent conflict* at time 2 (β=.29, β=-.19, respectively), yet there is discrepancy in path strength and the direction of the link is reversed for the two. In addition, it appears that fathers had a stronger path (β=.62) between *positive couple behaviors* and *parent involvement* than mothers (β=.42). Also, mothers had significant paths not found for fathers, negative significant path from *couple quality* to *parent involvement* at time 2 (β=-.22), positive marginally significant path from *positive couple behaviors* to *positive parenting* at time 2 (β=.15), and the

negative marginally significant path from *negative couple behavior* to *parent involvement* at time 2 (β=-.12).

Tests of invariance for these paths were undertaken. First, all paths in the model were fully constrained to be equal, revealing a significant delta chi-square when compared to the unconstrained model ($\Delta\chi2$=371.33, Δdf=105, *p*=.000). Based on these results, one or more of the path coefficiants is not operating equivalently across mothers and fathers, confirming differences noticed in the unconstrained model. Tests of invariance per individual path that appeared to look different were undertaken. The only path strength with significant variance between mothers and fathers is the effect of *negative couple behavior* at time 2 on *co-parenting conflict* at time 2 ($\Delta\chi2$=4.1, Δdf=1, *p*=.05).

Table 5. Standardized (unstandardized) coefficients between the latent constructs for mothers and fathers.

Paths	Standardized (Unstandardized) Regression Weights		$\Delta\chi 2$	Δdf
	Fathers	Mothers		
Coparent Conflict T2 ← Coparent Conflict T1	.74 (.87)***	.52 (.49)***		
Coparent Conflict T2 ← Couple Quality T2	-.17 (-.34)	-.08 (-.09)		
Coparent Conflict T2 ← Positive Couple BX T2	-.22 (-.39)	.06 (.09)		
Coparent Conflict T2 ← Negative Couple BX T2	-.19 (-.41)~	.29 (.26)***	4.1*	1
Positive Parenting T2 ← Positive Parenting T1	.89 (.95) ***	.57 (.54)***		
Positive Parenting T2 ← Couple Quality T2	.03 (.02)	-.01(-.00)		
Positive Parenting T2 ← Positive Couple BX T2	.23 (.17)	.15 (.09)~	.1	1
Positive Parenting T2 ← Negative Couple BX T2	-.01 (-.01)	-.07 (-.03)		
Parent Involvement T2 ←Parent Involvement T1	.38 (.37)*	.55 (63)***		
Parent Involvement T2 ← Couple Quality T2	-.25 (-.52)	-.22 (-.21)**	.1	1
Parent Involvement T2 ← Positive Couple BX T2	.62 (1.17)*	.42 (.54)***	.3	1
Parent Involvement T2 ← Negative Couple BX T2	-.02 (-.05)	-.12 (-.09)~	0	1

Note. ~ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

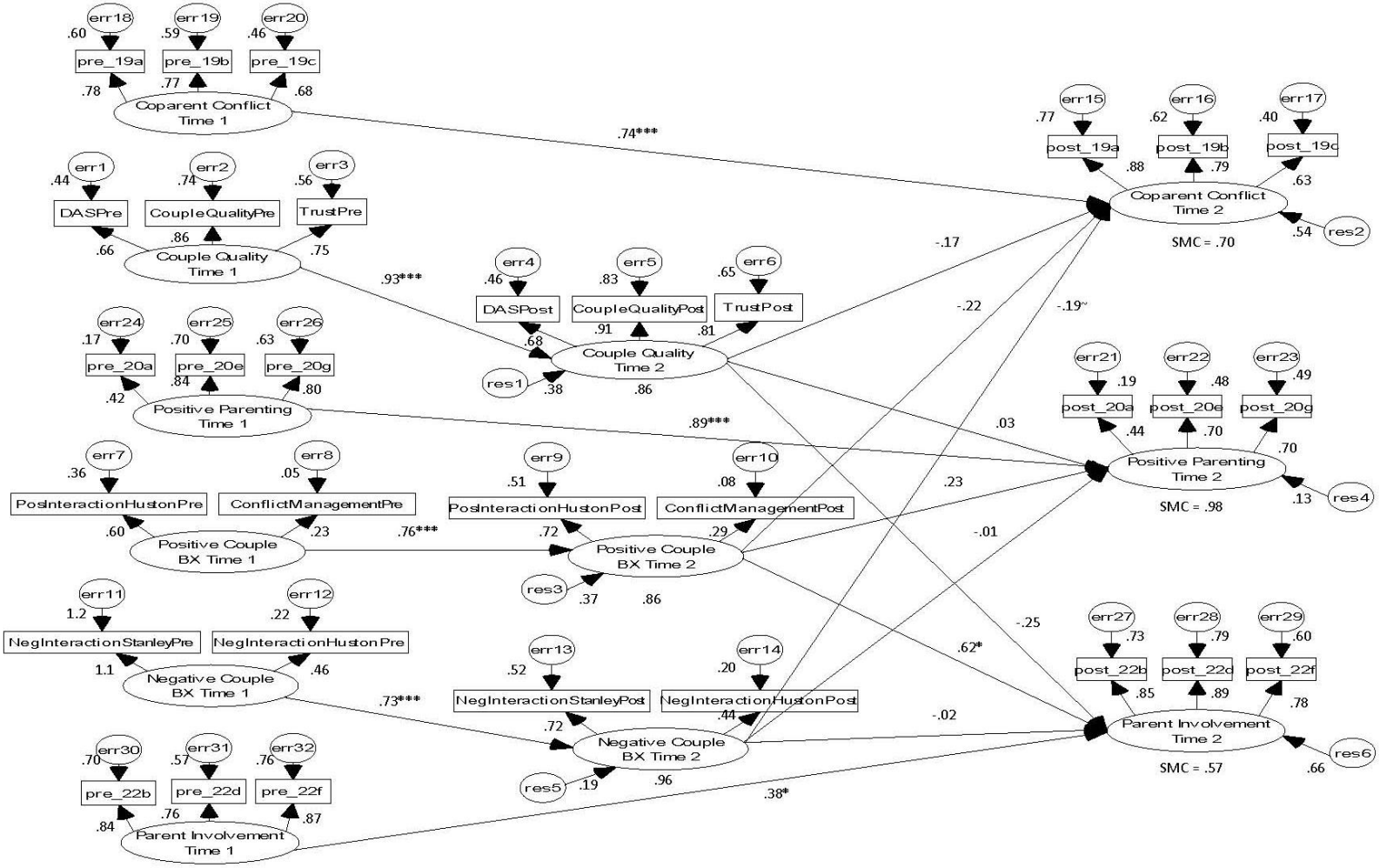


Figure 6. Standardized path coefficients of the structural equation model for fathers. Fit Indices: $\chi 2 = 1579.1$ (df = 846, $p < .000$), CFI = .89, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

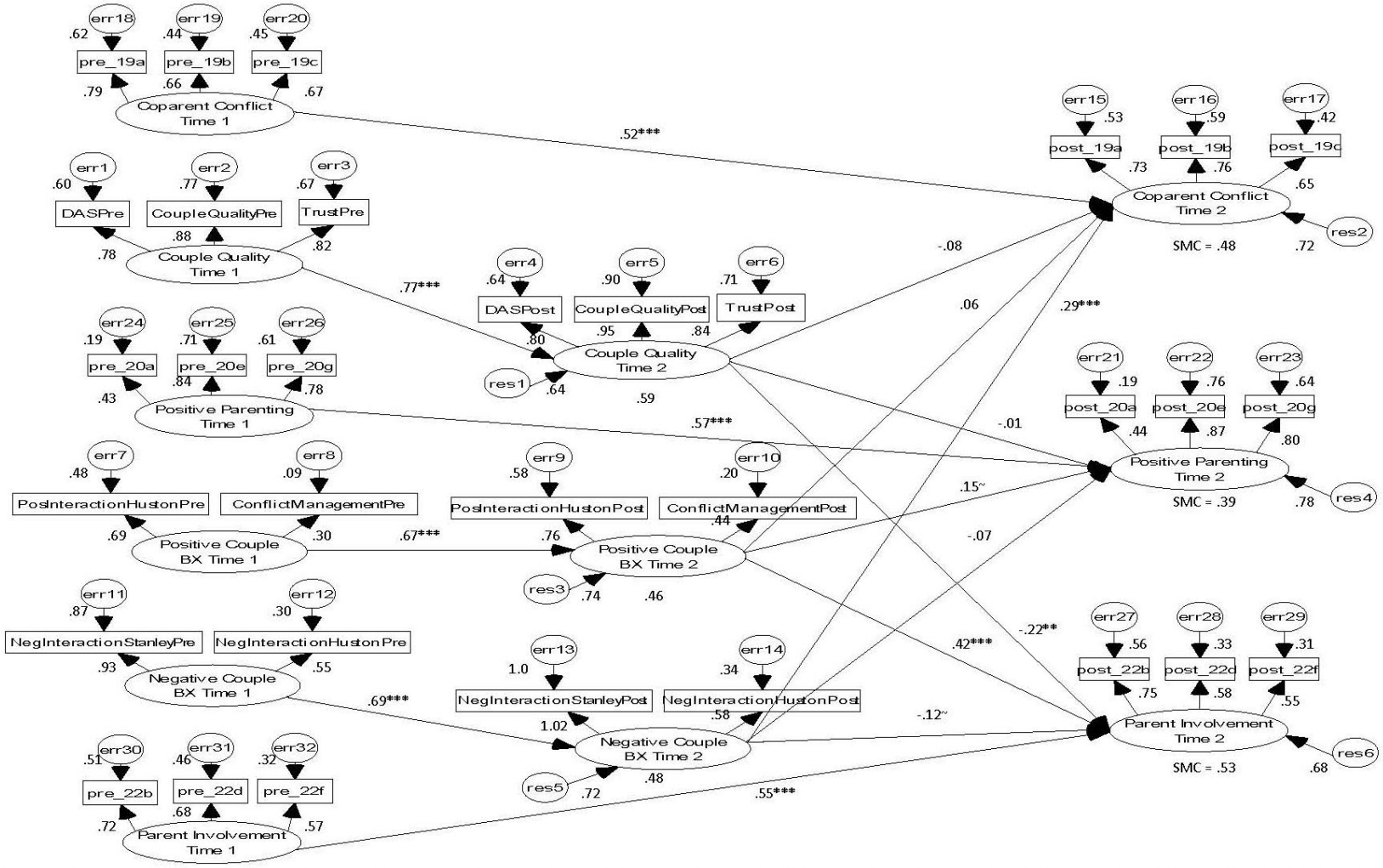


Figure 7. Standardized path coefficients of the structural equation model for mothers. Fit Indices: $\chi 2 = 1579.1$ (df = 846, $p < .000$), CFI = .89, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

Race (African American and European American)

Simultaneously fitting the data to the model based on race, separate parameters were identified for both African Americans and European Americans. The data fit the model well. Fit statistics indicate a significant $\chi 2 = 1536.95$ (df = 846, $p < .000$), CFI = .90 and RMSEA = .04. For African Americans, the model explained 39% of the variance in *co-parent conflict* at time 2, 60% of the variance in *positive parenting* at time 2, and 70% of the variance in *parent involvement* at time 2. For European Americans, the model explained 56% of the variance in *co-parent conflict* at time 2, 38% of the variance in *positive parenting* at time 2, and 36% of the variance in *parent involvement* at time 2.

For both African Americans and European Americans, all direct paths from time 1 variables to respective time 2 variables were significant ($p < .001$). The unstandardized and standardized coefficients are presented in Table 6. Similarly, Figures 8 and 9 provide visual models for African American and European American adult parents with standardized regression weights and squared multiple correlations.

For both African Americans and European Americans (see Figure 8 and 9), reductions in *negative couple behaviors* predict reductions in *co-parent conflict* (β=.21, p <.01; β=.24, p <.01, respectively). Increases in *positive couple behaviors* predict increases in *parent involvement* (β=.35, $p < .01$; β=.27, $p < .05$, respectively). Positive changes in *couple quality* marginally predicts reductions in *parent involvement* at time 2 (β=-.13, $p < .10$; β=-.19, p =.06).

In addition, reductions in *negative couple behaviors* predict increases in *parent involvement* for European Americans (β=-.21, $p < .05$) but not for African Americans.

And increases in *positive couple behaviors* predict increases in *positive parenting behaviors* for European Americans (β=.23, $p < .05$) but not for African Americans.

Comparisons of the path coefficients reveal the strongest predictor for each parent outcome dimension. For African Americans and European Americans, the strongest predictor of changes in *co-parent conflict* was changes in *negative couple behaviors*; the strongest predictor of changes in *positive parenting behaviors* was changes in *positive couple behaviors*; the strongest predictor of changes in *parent involvement* was changes in *positive couple behaviors*.

Comparing the path strengths between African Americans and European Americans, it appears that both races have similar positive significant paths from *negative couple behavior* to *co-parent conflict* at time 2 (β=.21, β=.24, respectively) and similar negative, marginally significant paths from *couple quality* to *parent involvement* at time 2 (β=-.13, and β=-.19, respectively). African Americans (β=.35) had a higher path coefficient for the relationship between *positive couple behaviors* and *parent involvement* than European Americans (β=.27). European Americans had significant paths not found for those who were African American: positive significant path from *positive couple behaviors* to *positive parenting* at time 2 (β=.23), and the negative significant path from *negative couple behavior* to *parent involvement* at time 2 (β=-.21).

Tests of invariance for these paths were undertaken. First, all paths in the model were fully constrained to be equal and compared to the unconstrained model chi-square ($\Delta\chi2$=195.51, Δdf=105, p=.000). Based on these results, one or more of the path coefficients is not operating equivalently across European Americans and African Americans, confirming differences noticed in the unconstrained model. Tests of

invariance per individual path that appeared to look different were undertaken, constraining each selected path to be equal. The only path with significant variance between European Americans and African Americans is the effect of *negative couple behavior* at time 2 on *parent involvement* at time 2 ($\Delta\chi2=3.65$, $\Delta df=1$, $p < .10$). This path was significantly stronger for European Americans.

Table 6. Standardized (unstandardized) coefficients between the latent constructs for African Americans (AA) and European Americans (EA).

Paths	Standardized (Undstandardized) Regression Weights		Δχ2	Δ df
	AA	EA		
Coparent Conflict T2 ← Coparent Conflict T1	.50 (.48)***	.60 (.59)***		
Coparent Conflict T2 ← Couple Quality T2	-.07 (-.08)	-.03 (-.04)		
Coparent Conflict T2 ← Positive Couple BX T2	-.03 (-.04)	-.04 (-.07)		
Coparent Conflict T2 ← Negative Couple BX T2	.21 (.20)**	.24 (.23)**	.5	1
Positive Parenting T2 ← Positive Parenting T1	.75 (.92)***	.52 (.45)***		
Positive Parenting T2 ← Couple Quality T2	.02 (.00)	-.05 (-.03)		
Positive Parenting T2 ← Positive Couple BX T2	.09 (.05)	.23 (.16)*	.75	1
Positive Parenting T2 ← Negative Couple BX T2	-.01 (-.00)	-.08 (-.03)		
Parent Involvement T2 ←Parent Involvement T1	.69 (.80)***	.49 (.46)***		
Parent Involvement T2 ← Couple Quality T2	-.13 (-.17)~	-.19 (-.17)~		
Parent Involvement T2 ← Positive Couple BX T2	.35 (.47)**	.27 (.35)*	.15	1
Parent Involvement T2 ← Negative Couple BX T2	-.02 (-.04)	-.21 (-.15)*	3.65~	1

Note. ~ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

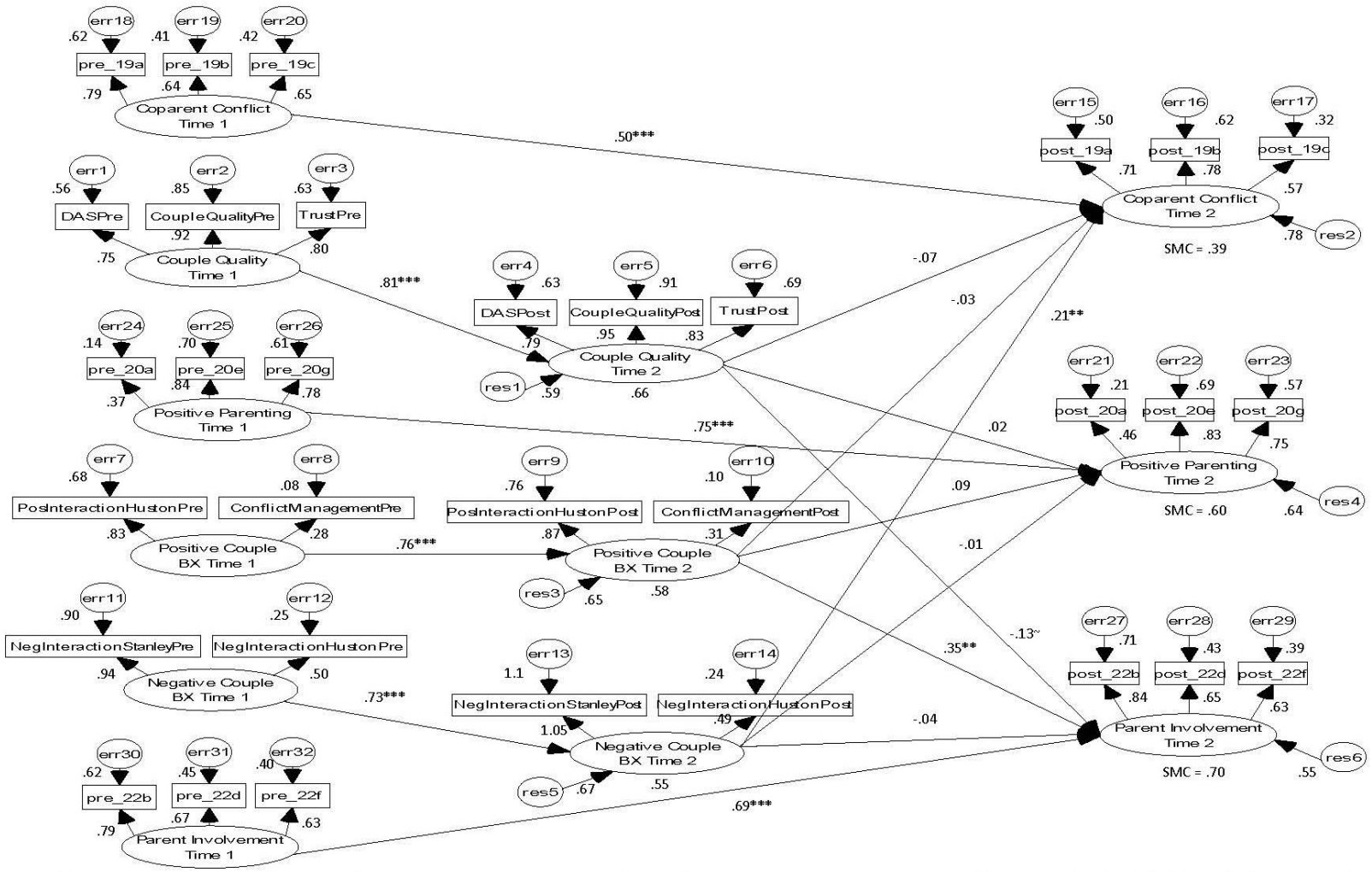


Figure 8. Standardized path coefficients of the structural equation model for African American adult parents. Fit Indices: $\chi 2 = 1536.95$ (df = 846, $p < .000$), CFI = .90, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

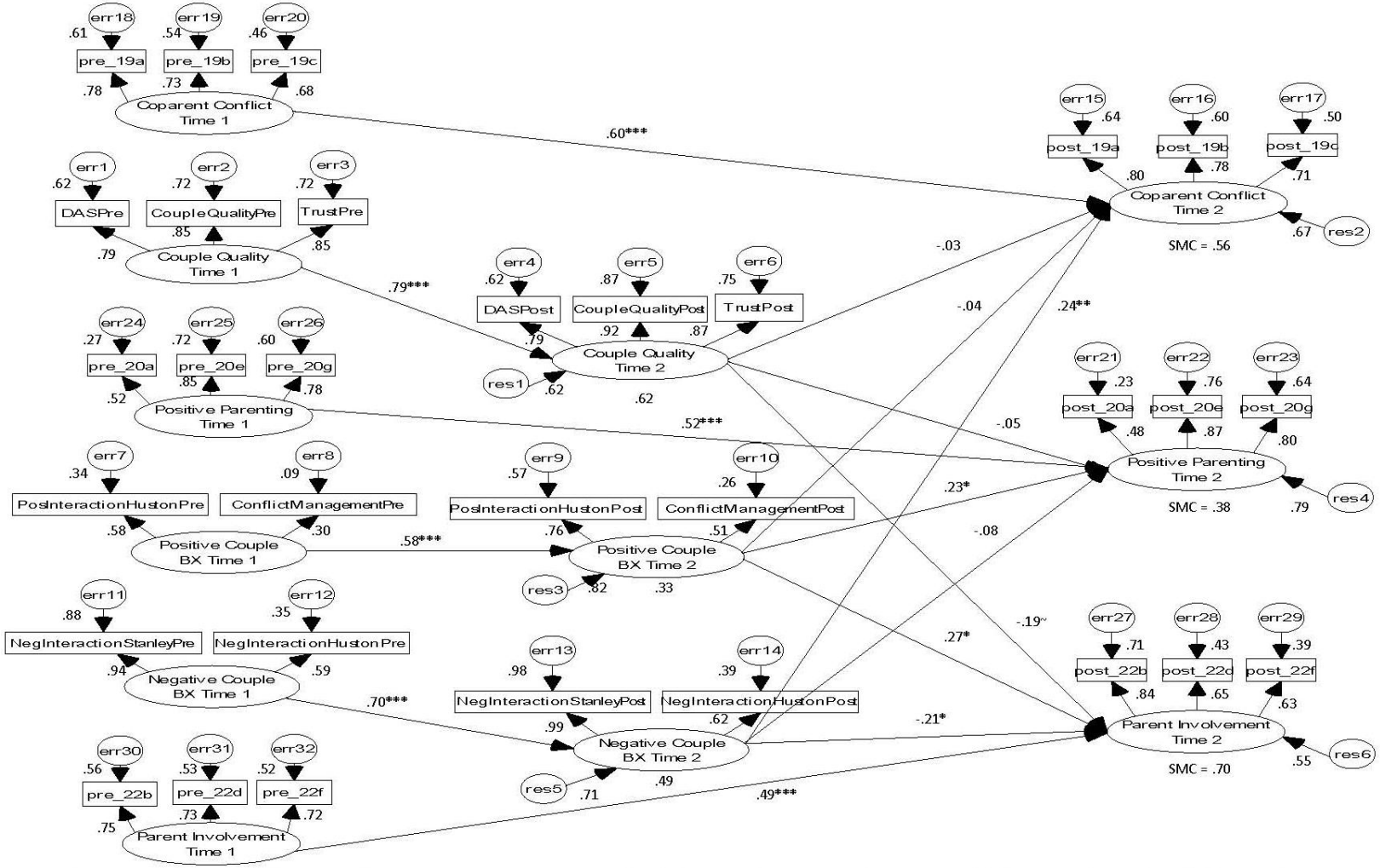


Figure 9. Standardized path coefficients of the structural equation model for European American adult parents. Fit Indices: $\chi 2 = 1536.95$ (df = 846, $p < .000$), CFI = .90, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

Marital Status (Married and Non-Married)

Simultaneously fitting the data to the model based on marital status, separate parameters were identified for both married and non-married participants. The data fit the model well. Fit statistics indicate a significant $\chi 2 = 1496.24$ (df=846, $p < .000$), CFI = .90 and RMSEA = .04. For married parents, the model explained 63% of the variance in *co-parent conflict* at time 2, 65% of the variance in *positive parenting* at time 2, and 54% of the variance in *parent involvement* at time 2. For non-married parents, the model explained 41% of the variance in *co-parent conflict* at time 2, 37% of the variance in *positive parenting* at time 2, and 47% of the variance in *parent involvement* at time 2.

For both married and non-married, all direct paths from time 1 variables to respective time 2 variables were significant ($p \leq .001$). The unstandardized and standardized coefficients are presented in Table 7. Similarly, Figures 10 and 11 provide visual models for both married and non-married adult parents with standardized regression weights and squared multiple correlations.

For both married and non-married parents (see Figure 10 and 11), reductions in *negative couple behaviors* predict reductions in *co-parent conflict* (β=.39, $p < .001$; β=.15, $p < .05$, respectively). Increases in *positive couple behaviors* predict increases in *parent involvement* (β=.28, $p < .05$, β=.24, $p < .05$, respectively).

For married parents but not for non-married parents, increases in *positive couple behaviors* predict increases in *positive parenting* (β=.27, $p < .05$). For married parents but not for non-married parents, increases in *couple quality* predict reductions in *parent involvement* (β=-.34, $p < .01$) and *co-parent conflict* (β=-.17, $p < .10$).

For non-married parents but not for married parents, increases in *positive couple behaviors* at time 2 predict reductions in *co-parent conflict* (β= -.13, $p < .10$). And for non-married parents, but not for married parents, positive changes in *couple quality* predicts increases in *positive parenting* at time 2 (β=.15, $p < .10$).

Comparisons of the path coefficients reveal the strongest predictor for each parent outcome dimension. For both married and non-married parents, accounting for all else in the model, the strongest predictor of changes in *co-parent conflict* was changes in *negative couple behaviors*. The strongest predictor of changes in *positive parenting behaviors* was changes in *positive couple behaviors* for married parents and changes in *couple quality* for non-married parents. The strongest predictor of changes in *parent involvement* was changes in *couple quality* for married parents (i.e., a negative linkage) and changes in *positive couple behaviors* for non-married parents.

Comparing the significant paths for married and non-married, it appears that the positive link between *negative couple behavior* and *co-parent conflict* path is stronger for those who are married (β=.39) than those who are not (β=.15). Both married (β=.28) and non-married (β=.24) had similar positive significant paths from *positive couple behaviors* at time 2 to *parent involvement* at time 2. In addition non-married had negative marginally significant paths from *positive couple behavior* to *co-parent conflict* (β=-.13) and positive marginally significant path from *couple quality* to *positive parenting behaviors* (β=.15).

Tests of invariance for these paths were undertaken. First, all paths in the model were fully constrained to be equal and the chi-square statistic was compared to that of the unconstrained model ($\Delta\chi2=220.52$, $\Delta df=105$, $p=.000$). Based on these results, one or

more of the path coefficients is not operating equivalently across married and non-married participants, confirming differences noticed in the unconstrained model. Tests of invariance per individual path that appeared to look different were undertaken. Tests of invariance did not reveal paths with significant variance between married and non-married participants.

Table 7. Standardized (unstandardized) coefficients between the latent constructs for married and non-married adult parents.

Paths	Standardized (Unstandardized) Regression Weights		$\Delta\chi 2$	Δ df
	Married	Non-married		
Coparent Conflict T2 ← Coparent Conflict T1	.49 (.50)***	.57 (.55)***		
Coparent Conflict T2 ← Couple Quality T2	-.19 (-.17)~	.04 (.06)	1.76	1
Coparent Conflict T2 ← Positive Couple BX T2	.13 (.20)	-.13 (-.14)~	2.16	1
Coparent Conflict T2 ← Negative Couple BX T2	.39 (.31)**	.15 (.17)*	1.36	1
Positive Parenting T2 ← Positive Parenting T1	.76 (.99)***	.59 (.50)***		
Positive Parenting T2 ← Couple QualityT2	-.15 (-.07)	.15 (.17)~	-.74	1
Positive Parenting T2 ← Positive Couple BX T2	.27 (.20)*	-.04 (-.02)	.36	1
Positive Parenting T2 ← Negative Couple BX T2	-.05 (-.02)	-.06 (-.02)		
Parent Involvement T2 ←Parent Involvement T1	.62 (.58)***	.61 (.65)***		
Parent Involvement T2 ← Couple Quality T2	-.34 (-.27)**	.01 (.01)	-1.94	1
Parent Involvement T2 ← Positive Couple BX T2	.28 (.35)*	.24 (.25)*	.16	1
Parent Involvement T2 ← Negative Couple BX T2	-.10 (-.07)	-.07 (-.08)		

Note. ~ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

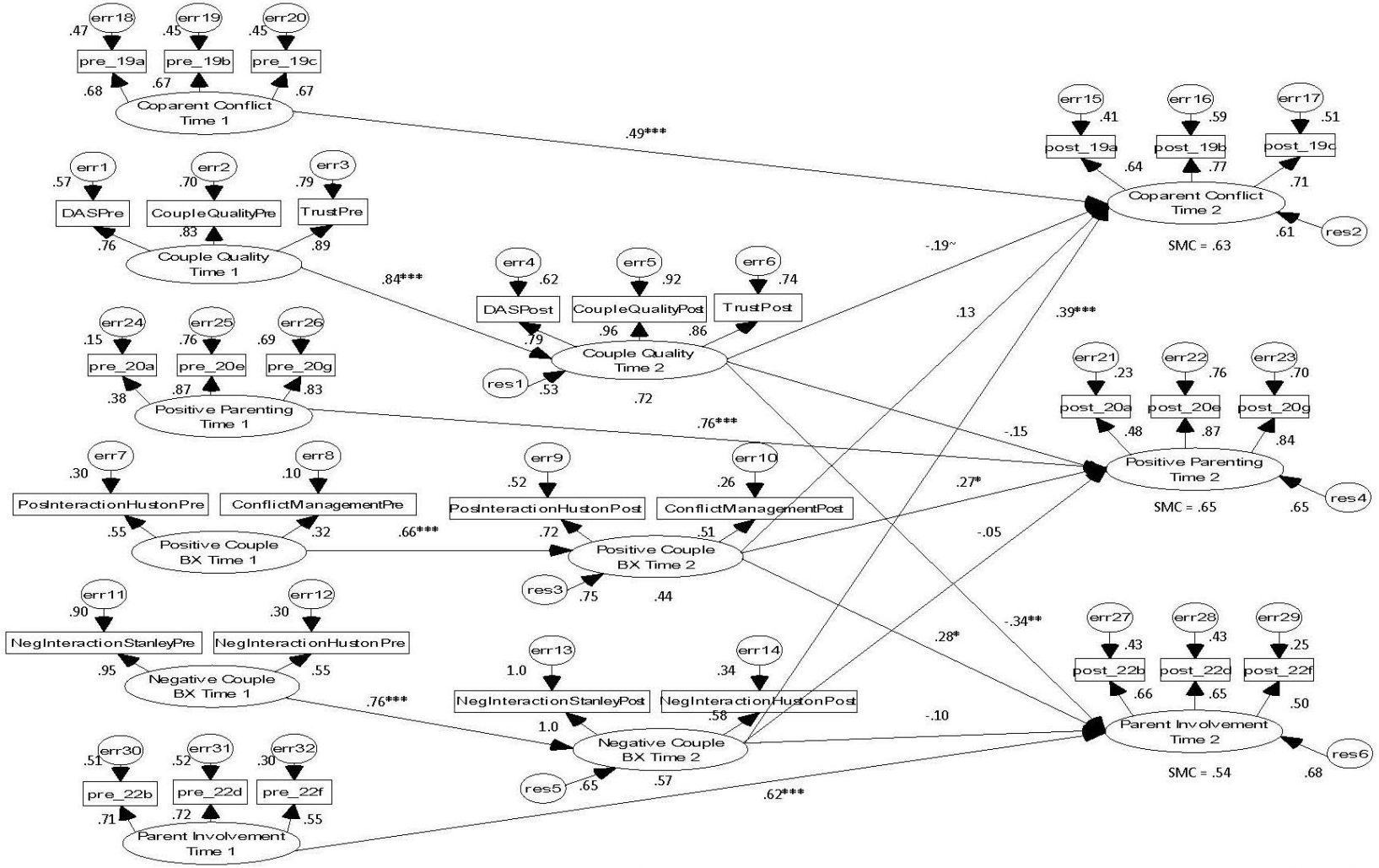


Figure 10. Standardized path coefficients of the structural equation model for married adult parents. Fit Indices: $\chi 2$ = 1496.24 (df=846, p < .000),CFI = .90, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

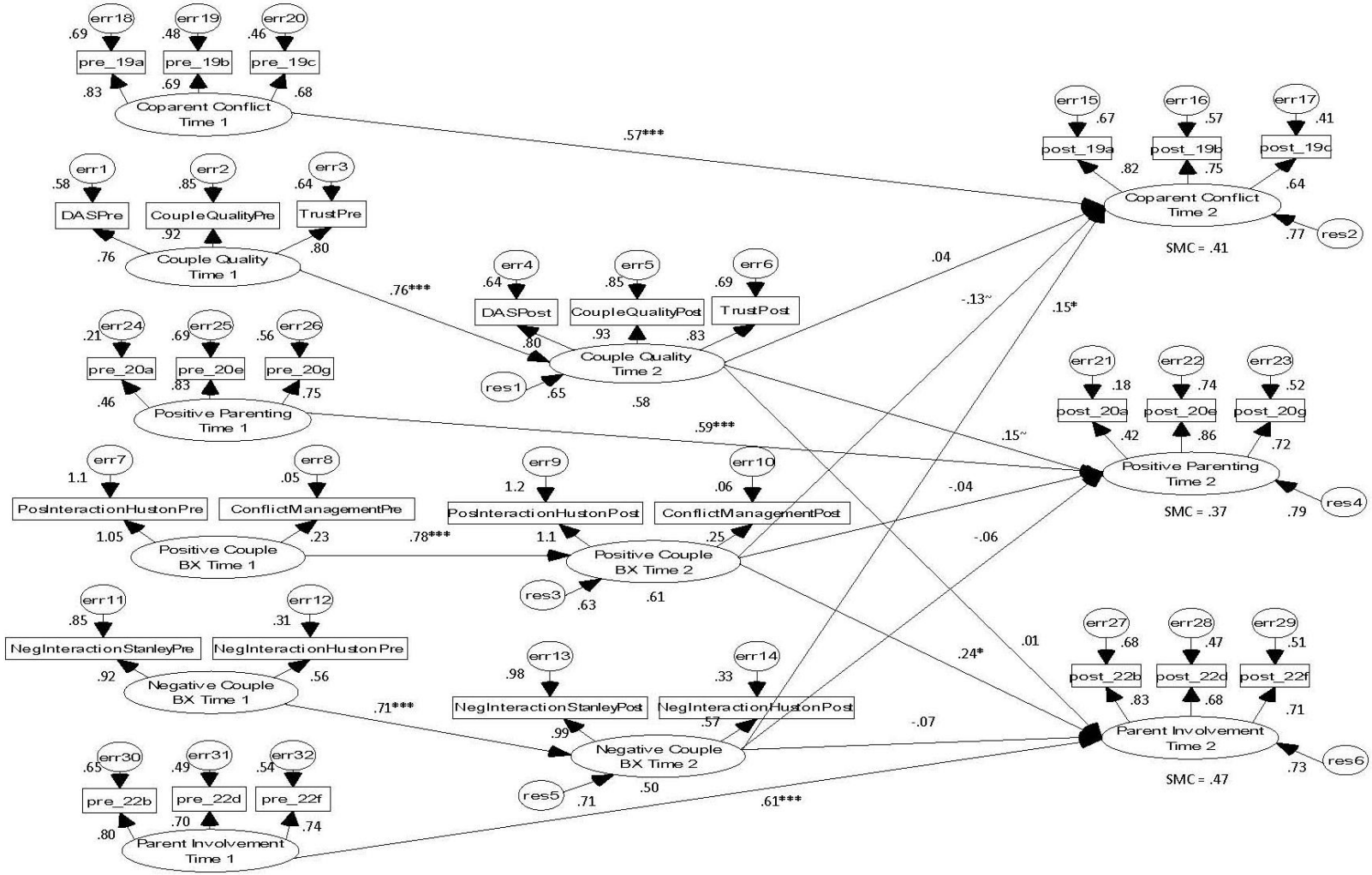


Figure 11. Standardized path coefficients of the structural equation model for non-married adult parents. Fit Indices: $\chi 2 = 1496.24$ (df=846, $p < .000$), CFI = .90, RMSEA = .04. Squared Multiple Correlations (SMC) indicate the percent of variance in the latent constructs accounted for by the model.

VI. DISCUSSION

There is an accumulation of evidence from basic research that couple relationships affect parenting practices, which in turn, affect outcomes for children (e.g., Cummings and Davies, 1994; Erel & Burman, 1995; Zimet & Jacob, 2001). Some previous applied research evaluating parenting programs has examined the inclusion of couple relationship skills training, along with parenting skills training and indicated that there may be added benefit for promoting positive parenting (e.g., Webster-Stratton, 1994; Cowan & Cowan, 2002). No published applied research evaluating relationship/marriage education programs, however, has included assessments of change in parenting due to program participation (Hawkins et. al, 2008).

The current study utilized a spillover theoretical framework and the empirically established linkages between couple functioning and parenting and informs both research and practice focused on couple relationships. Initially, we examined the extent to which several dimensions of parenting (co-parenting conflict, parental involvement, and positive parenting practices) change after participation in a relationship/marriage education program that focuses on the couple dynamics rather than parenting-child interaction and parenting practices. We then assessed whether these changes are related to changes in specific dimensions of couple functioning and whether these linkages differ by gender, race, and marital status.

Change over time in parenting behaviors

Overall, parents in a MRE program, diverse in gender, race, socioeconomic status and relationship status, demonstrate positive change in several parenting dimensions over

the course of program participation. However, since the current study sample is from the initial implementation of a community-based demonstration program, the lack of a comparison or control group does not allow for a definitive assertion that positive improvements in the parenting dimensions are due to program participation. We do note, however, that the magnitude of change based on a comparison of the mean level differences and standard deviations (mean = 12% of SD), as well as calculated effect sizes (mean = .093) provide some indication that levels of changes in parenting appear to exceed that which might be reasonably expected over a two month period. A recent meta-analysis of MRE programs found that effect sizes for changes in relational outcomes were similar for quasi-experimental and one-sample study designs (Hawkins, et al., 2008).

Assessing parenting outcomes is novel for studies of MRE programs and the indications of positive spillover from a practical focus on the adult relationship to the parenting-child relationship invites replication and further assessment of these outcomes in other current MRE programs and studies. Scholars note the curious, limited focus of outcomes assessed in MRE studies and call for expansion of outcome investigation (Hawkins, et al, 2008). Our initial finding of changes of parenting dimensions among MRE participations highlights the value of implementing a family systems approach in both program design and evaluation study.

Demographic differences in change over time in parenting behaviors

The heterogeneity of the study sample allows for the examination of the influence of demographic factors on changes over time. Typically evaluation studies focus on generalizability of change patterns and often control for demographic differences. From

both a research and evaluation standpoint, there is value in exploring how subsamples within the study sample may differ in their program experience. This type of investigation can reveal "masked" effects for subgroups that may experience change when the larger sample does not, or who may not demonstrate change over time, while the sample as a whole does. In the current study, we examined the possible interaction effects of change over time in the parenting dimensions based on gender, race, and marital status.

We find that, although African American parents are more confident in their parenting than European Americans at both time points, they report lower involvement with their children than European Americans at both time points. This may be interpreted as overall less involved engagement with children, on average, between African American and European American families. However, this finding may reflect cultural norms of multi-parental models among African American families (Berger, 1993). That is, there may be more adults involved in taking care of a child, and therefore any one parent may report lower individual involvement compared to parents who have a smaller co-parenting system (Votruba-Drzal, E., Coley, R. L., & Chase-Lansdale, P. L., 2004). Further exploration involving clearer assessments of co-parenting systems and dynamics will further our understanding and interpretation of this comparative difference found.

Relations between change over time in couple dimensions and parenting dimensions

Since the MRE curricula in the current study do not include lessons on parenting skills or ways to improve parenting behaviors, we can argue that the research questions examined apply and test assumptions of dyadic spillover from the adult relationship to the parent-child relationship. Because current community-based MRE programs,

particularly federally-funded programs, report a "child-centered" focus as rationale for MRE implementation (www.acf.hhs.gov/healthymarriage/pdf/accomplishments.pdf), these questions are critical and provide internal consistency between theoretical and evaluation design. Surprisingly, to our knowledge, this is the first study to inquire specifically about the process of changes in family domains and the spillover between domains in the context of MRE program participation.

Initially, we document that the amount of changes (i.e., difference scores) in the couple domain are associated with the amount of changes in the parenting domain over the same period of time. We acknowledge that much of the variance is accounted for by time 1 levels of the outcome variables, however, the couple factors significantly account for variance in the parenting variables above and beyond that. Although we did not hypothesize specific links' comparative potencies, we note for both men and women a pattern of stronger links between conceptually similar dimensions of couple functioning and parenting. The strongest predictor for men and women of positive parenting behaviors post-program, accounting for baseline levels, is positive couple behaviors. It appears that the more partners behave more positively toward one another, the more likely the partners will engage in more positive behaviors with their child(ren). The strongest predictor for men and women of co-parenting conflict is negative/conflictual couple behaviors. This seems to indicate that the more partners engage in negative behaviors in couple dynamics, the more likely the partners are to argue about the parenting of their child(ren). We note that many of the families in our study were living in complex family systems. The co-parenting measure does not specify the referent co-parent, but allows the respondent to report on the relationship with their child's other

parent. For some, the referent adult is the romantic partner; for others, the referent adult is the foMREr partner. Therefore, our finding of the link between couple conflict and co-parenting conflict is inclusive of both within dyad spillover and between dyads spillover and should be interpreted with caution. Adjustments in this type of measure are warranted and will allow for more specific and clear assessments of linkages within and between microsystems in the family.

It was unexpected and rather interesting that parent involvement was not linked with any of the couple domains. Perhaps other characteristics of the family may be influencing the amount of time each parent is involved with his or her child(ren), such as the role of extended family's involvement in the care-taking of children, the extent and demands of job(s), or separation/divorce or the time that couples are spending together. Further examination of this linkage is suggested.

Results indicated that the most potent predictor for co-parenting conflict was negative couple behaviors for the full sample. The most potent predictor of positive parenting behaviors was positive couple behaviors. In contrast to the correlational results, the use of latent constructs reveals connections between change in the couple domain and change in parent involvement; the most potent predictor of parent involvement is couple quality. Interestingly, the relation is negative, indicating that positive changes in couple quality are related to reductions in parent involvement. It is possible, given limited family time for the majority of families that the enhancements in the couple relationship, particularly engagement as a couple, could result in comparatively less time spent and engagement with children. Change in positive couple behaviors also uniquely accounts for a significant portion of the variance in residual change in parent involvement.

Although a significant portion of the variance in Time 2 outcome variables are accounted for by Time 1 levels, residual change in the couple dimension predictors uniquely account for variance in the outcomes that are not explained by pre-program scores of the outcome measure. This supports the assumption that enhancing the couple relationship and dyadic behaviors positively influences the parent-child relationship and behaviors.

Moderators of couple quality and behavior change predicting parenting behaviors

Gender. Because there is some evidence that suggests that fathers' parenting is more likely to be prone to spillover effects, while mothers may be able to compartmentalize comparatively better, it was hypothesized that parent gender would serve as a moderator of the links between change in couple functioning and change in parenting dimensions.

In comparing the strengths of paths for certain links between the couple dimensions and parenting dimensions, we found interesting differences. For fathers, we found that a marginally significant link between negative couple interactions and co-parenting conflict, such that decreases in negative couple interactions are related to increases in co-parenting conflict. Mothers indicated a strong positive relationship between these two variables, as expected. We can only speculate as to the reasons for the negative relationship for fathers. It could be that a larger portion of participating fathers are in a couple relationship with a different mother than the one with whom they are co-parenting their children (i.e., the possibility of divorce, separation, and stepfamilies)? As the couple relationship improves, conflict in the co-parenting relationship may increase. Clarity in referent relationship would allow for a more infoMREd interpretation.

Race. We compared the strengths of paths for certain links between the couple dimensions and parenting dimensions, based on race. There was a difference for the link between change in negative couple behavior and change in parent involvement between European Americans and African Americans. For European Americans, there was a significant negative relationship between the two variables that suggests that decreases in conflict in the couple relationship is associated with increases in parental involvement, as expected. This path was not significant for African Americans. This compartmentalizing evidence among African Americans warrants further investigation.

Marital Status. Lastly, comparing the strengths of paths for certain links between the couple dimensions and parenting dimensions, delta-chi square tests did not reveal significant differences between married and non-married adult parents. This suggests that marital status does not affect the links between changes in the couple and the parenting domains.

Limitations

We acknowledge several limitations in our current study. Ours is a convenience sample of interested adults and cannot be considered representative of the target population. In addition, participants completed self-report surveys. Observational and multi-informant methods would enhance the validity of the measurement of the target outcomes. Also, information on changes is from only two time points. While indications are that decline in target outcomes is minimal for MRE programs (Hawkins, et al., 2008), continued efforts to collect comparison and follow-up data are essential for identifying growth models of change and maintenance for specific subgroups of participants and nonparticipants. This approach may also capture delayed effects.

Because this sample is from the initial implementation years of a demonstration project that did not yet include a control sample, we cannot ascertain with certainty that these changes over time are attributable to program participation and we do not emphasize these results as program effects evidence. When these quantitative results are combined with information from qualitative responses from participants and facilitators that program participation benefitted the family as a whole, we can cautiously consider that participation in a MRE program may result in initial positive changes in the co-parenting relationship and in several areas of parenting among an economically and ethnically diverse sample.

Future Directions

Future research is needed to replicate and extend the current findings focused on the links between the couple dyad and the parent-child relationship. Assessing other demographic and contextual variables' influence on the linkages would serve to inform both research and practice. Assessments of the process of change across and following MRE participation move us beyond simplistic "does it work?" program evaluation designs. Adopting a broader family systems design in evaluation is consistent with program design assumptions, yet is not currently employed by MRE program evaluators. Future research that utilizes multiple informants and extends the current study's model to include assessments of children's functioning and well-being could serve to further inform practice and policy regarding the usefulness of MRE programs for child development and well-being.

Previous work has demonstrated the comparative value of MRE vs. Parenting programs for married couples' quality, stability, and parenting practices, and their

children's performance in the classroom over time (Cowan & Cowan, 2002). Current demonstration programs offer the opportunity to replicate these previous efforts with nonmarried individuals and couples, more ethnically diverse populations, and with larger samples.

Practical Implications

This study offers some initial practical implications. MRE may be a useful prevention tool that can enhance not only the adult couple relationship, but also, the co-parenting and the parent-child relationship, and subsequently, child well-being. In MRE, adults learn the skills to improve their relationships with significant others and this current study shows how this positively spills over into the parent-child relationship. MRE programs can suggest enhancement of parenting due to participation in both marketing and requests for funding for programs. Parent educators may want to consider the inclusion of couple relationship skill training. This "hybrid" approach to parent education seems justifiable, given previous, and the current study's findings.

Conclusion

The primary contribution of this study is the extension of the current MRE program research and the documentation of a spillover link between change over time in couple dimensions and change over time in parenting dimensions. While previous basic research has identified this link, this is the first applied study of MRE programs using a large, diverse sample to apply these theoretical assumptions to study design.

In addition, this study expands existing further by examining how sex, race, and marital status, influence spillover relationships. These types of explorations of differential change patterns based on participant characteristics are warranted, and there is much to

be done. We are just beginning to explore the experiences of diverse populations in MRE programs. The development of "best practices" for program design and implementation is achieved when differences among participants, as well as contextual factors are considered and studied, rather than controlled in analyses. "Action research" (Small & Uttal, 2005) calls for these types of investigations and an iterative approach to applied research, such that findings are fed back into program design. Moving past "cookie cutter" program templates will give way to more complex MRE program designs more finely tuned to areas of emphasis that are warranted based on anticipated start-points and distinct interests and needs among a diverse population of program participants.

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