2009

The Link between the Marital Bond and Future Triadic Family Interactions

Eve-Anne M. Doohan
University of San Francisco, edoohan@usfca.edu

Sybil Carrère

Chelsea Siler

Cheryl Beardslee

Recommended Citation

NIH Public Access
Author Manuscript

The Link between the Marital Bond and Future Triadic Family Interactions

Eve-Anne M. Doohan,
University of San Francisco

Sybil Carrère,
California State University, San Bernardino

Chelsea Siler, and
Bend La Pine Schools

Cheryl Beardslee
Osceola Medical Center

Abstract

This study examined how the marital bond, as indexed through the Oral History Interview (OHI), is related to future triadic family interactions. Families ($N = 108$), with a 7 – 9 year old child, participated in a longitudinal study (the Family Health Project) examining children's emotional development throughout the transition to adolescence. Parental cohesion and family cohesion, warmth, structure, and problem solving were assessed via behavioral observation during family problem solving discussions and parent-child teaching interactions 18 – 24 months after the OHI. Results indicated that the marital bond was predictive of parental cohesion, family cohesion, warmth, and structure during teaching interactions. The marital bond was not significantly predictive of family problem solving or parental cohesion in problem solving interactions.

Keywords

Family Interaction; Family Relations; Marriage Satisfaction; Parent-child Relations

Researchers have long been interested in examining the marital relationship to learn more about the complex dynamics of marriage and the possible effects that the marital relationship has on the entire family system. According to McDonough, Carlson, and Cooper (1994), "within the family systems framework, the spousal relationship is presumed to be the foundational relationship within the family, and therefore, the most critical to evaluate" (p. 70). Indeed, systems theory reminds us that the behavior of each family member is interrelated, and that the marital relationship and the parent-child relationship are intertwined (O'Connor, Heatherington, & Clingempeel, 1997). Grounded in systems theory, this paper examines the marital relationship through the lens of the Oral History Interview (OHI; Buehlman, Carrère, & Siler, 2005), and assesses how the couples' presentation of

their relationship through this interview is related to future triadic family interactions. Specifically, we study whether and how the *marital bond*, which represents the perceptions spouses have about the nature of their relationship indexed by how they selectively attend to the more negative or positive elements in their marriage (Carrère, Buehlman, Gottman, Coan, & Ruckstuhl, 2000), influences future family teaching and problem solving interactions.

Much of the previous research on the links between the marital relationship and the parent-child relationship has focused on the negative effects of marital conflict. Segrin (2006), however, has recently called for more family research that focuses on positive family interactions and outcomes. This paper is an attempt to answer Segrin's call. We begin with a review of the literature on the connections between marital conflict and child outcomes. The nature of parent-child interactions is then explored.

Marital Conflict and Child Outcomes

Previous research has offered three explanations for the potential relationship between marital conflict and the parent-child relationship: no significant association between marital conflict and parents' relationship with their children, compensation, and spillover (Erel & Burman, 1995). The idea that there is no link between the quality of the marital relationship and the quality of the parent-child relationship has received little to no support, and contradicts the tenets of systems theory. The compensatory hypothesis suggests that parents in dissatisfied marriages try to make up for the low levels of marital satisfaction by being especially warm and involved with their children. The compensatory hypothesis has received minimal support (Brody, Pillegrini, & Siegel, 1986). By far, the proposition that has received the strongest and most consistent support is the spillover hypothesis, which states that negativity and conflict from the marital relationship "spills over" into the parent-child relationship. Indeed, Erel and Burman, in their meta-analysis, found overwhelming support for the spillover hypothesis, as did Krishnakumar and Buehler (2000).

Kitzmann (2000) expressed a sentiment shared by many family researchers (e.g., Kerig, Cowan, & Cowan, 1993; Lindahl, Clements, & Markman, 1997): "poorly managed marital conflict is associated with a range of behavioral and emotional problems for children exposed to it" (p. 3). In support of this, Brody, Arias, and Fincham (1996) found that parents in distressed marriages "become increasingly absorbed in their own conflict and less involved with their children, exhibiting harsher, less consistent, and less communicative disciplinary practices" (p. 408). Similarly, Buehler and Gerard (2002) found that parents who are engaged in more marital conflict are less involved with their children. Brody et al. (1986) found that fathers used less positive feedback and intruded more in teaching interactions as their marital problems increased.

The marital conflict does not have to be enacted in front of the child in order for the negative spillover effect to occur. Based on their meta-analysis, Erel and Burman (1995) concluded that even if a dissatisfied couple is able to engage in their conflict away from their child "they cannot shield them from the negative impact that marital discord has on the parent-child relationship" (p. 128).

Difficulties in the marriage are also associated with difficulties coparenting the child (Katz & Woodin, 2002). Specifically, Katz and Woodin found that distressed parents and their children engage in less playfulness, more conflict, and the family members' interactions are more disjointed. They also appear to be less sensitive to their child's needs and demonstrate less affection and approval (Lindahl et al., 1997). Satisfied couples seem to be able to cooperate in their parenting and act as members of a joint team. Dissatisfied couples instead seem to be competitive and demonstrate hostility, set up different expectations, and show

little agreement (Kitzmann, 2000). Westerman and Schonholtz (1993) argued that marital conflict is damaging to families because of the negative effect it has on how parents function together in triadic family interactions. Katz and Woodin reported that in dissatisfied relationships "the family itself appeared to have difficulty synchronizing their interactions and engaging successfully as a unit" (p. 647).

Although most research on the connection between the marital relationship and the parent-child relationship has focused on the effects of marital conflict, there are some studies that have examined family warmth and cohesion. McDonough et al. (1994) found that a supportive spousal relationship is related to positive parent-child relationships and positive family affect. Research has also found that couples in more affectionate marriages were warmer to their children (Miller, Cowan, Cowan, Hetherington, & Clingempeel, 1993). Conversely, McHale (1995) found that there was less warmth in the triadic family interactions of distressed couples.

The findings from existing research on the connections between the marital relationship and the parent-child relationship and triadic family interactions are consistent regarding the spillover hypothesis, however, there are several limitations to this body of research. Most of the studies were based on relatively small sample sizes, with the exception of Low and Stocker's (2005) study. The studies that we reviewed ranged from a sample of 16 (Westerman & Schonholtz, 1993) to 68 (Vuchinich, Vuchinich, & Wood, 1993), with the average being 43 families. The present study seeks to expand the sample size used.

Another limitation to previous research is its reliance on mostly European American samples. Erel and Burman (1995), in their meta-analysis, pointed out that the majority of existing studies are based on mostly European American samples (e.g., Brody et al., 1996; Lindahl et al., 1997; McDonough et al., 1994; Vuchinich et al., 1993). Additionally, a surprising number of studies were based only on families with sons (e.g., Buhrmester, Camparo, Christensen, Gonzalez, & Hinsaw, 1992; Capaldi, Forgatch, & Crosby, 1994; Kitzmann, 2000; Vuchinich et al, 1993). Researchers such as Lindahl et al. (1997) have called for more research on families representing more diverse ethnic and socioeconomic groups. In the present study we seek to examine families representing greater ethnic and socioeconomic diversity and include more of a balance between sons and daughters.

Finally, Davis, Hops, Alptert, and Sheeber (1998) argued that one flaw of existing research is the focus on dyadic relationships rather than triadic family interactions. For example, several studies examined the marital relationship and then the mother-child and/or father-child relationship (e.g., Brody et al., 1996; Kerig et al., 1993). The present study utilizes behavioral measures of both the marital relationship and the triadic family relationship in an effort to overcome this limitation.

The Nature of Parent-Child Interactions

It is well established that parenting styles influence children's emotional and social development. A major focus of previous parenting research is the combination of disciplinary style used in parenting and the predominant affects parents display towards their children. In general, when parents use inconsistent and restrictive discipline techniques in combination with a preponderance of cold and hostile affect, research shows that their children will display more negative affect, are more easily stressed, and have poorer social interactions than children whose parents use warmth in combination with either a restrictive or permissive consistent disciplinary style (e.g., Baumrind, 1967; 1971; 1987; Gray & Steinberg, 1999; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). The Cowans and their colleagues found such results in their longitudinal study of the transition to parenthood (Cohn, Cowan, Cowan, & Pearson, 1992; Cowan & Cowan, 1992). Other

researchers (Ainsworth, Bell, & Stayton, 1971; Becker, 1964; Maccoby & Martin, 1983; McHale, 1998) have found comparable positive childhood outcomes when parents use warm, engaged and responsive, or emotionally involved parenting styles.

This work, while important, needs to be extended beyond the disciplinary situation to encompass the wide range of interactions parents have with their children. A good candidate for this extension involves emotion-filled interactions, such as family problem solving interactions and situations where parents are teaching their children. The purpose of the current study was to address this issue by considering the ability of the parents and the entire family to work successfully together toward a common goal. Specifically, we wanted to determine whether the parents' marital bond was predictive of the quality of family interactions during parental teaching moments and problem solving discussions. Based on the above review of the literature, and the well-established characteristic of systems theory that what happens in one family subsystem will affect other family relationships (e.g., Satir, 1988), the hypotheses and research questions for this study are listed below:

H_1: The parents' marital bond will be positively related to parental cohesion in family problem solving interactions and teaching interactions.

H_2: The parents' marital bond will be positively related to family cohesion in problem solving interactions.

H_3: The parents' marital bond will be positively related to family warmth in teaching interactions.

RQ_1: How is the parents' marital bond related to family problem solving?

RQ_2: How is the parents' marital bond related to parental educational structuring behaviors in teaching interactions?

Method

Participants

The data for this study come from the first two time points of a five-year longitudinal study called the Family Health Project funded by the National Institute of Mental Health (MH42484). The primary goal of the longitudinal study was to examine family communication patterns and how they affect children's emotional development during the transition to adolescence. Participants were recruited through a mixture of procedures (e.g., flyers sent home with children through schools, newspaper stories, community presentations). Interested couples contacted the research project and were interviewed over the telephone separately about their marital satisfaction and racial and ethnic background.

Marital satisfaction was assessed using the Locke-Wallace Marital Adjustment Test (MAT; Locke & Wallace, 1959). Families were matched on racial group, marital satisfaction, and neighborhood crime level statistics obtained from the U.S. Economic Census (i.e., there were equal numbers of distressed and satisfied couples in each racial group and in each neighborhood crime level). Families were recruited in an effort to over-sample for Interracial and African American families because these families have not been well represented historically in research studies. Members of over 600 families called the research project during the recruitment process, and from these the final sample, made up of 129 legally married couples with a child in elementary school, was selected. Family members received monetary compensation for their participation in each session. All research activities were approved by the campus Institutional Review Board for the protection of human subjects.

The present study is based on 108 of the original 129 families. Twenty-one families were excluded due to incomplete data at Time 2. Independent samples *t*-tests were completed to examine potential differences between those families with complete data at both time points and those with incomplete data. Although there were no differences between the two groups regarding income or education level, those families with incomplete data at Time 2 did report lower marital satisfaction at Time 1. The average marital satisfaction score for husbands who remained in the study at Time 2 was 115.89 (*SD* = 18.18), compared to 91.37 (*SD* = 29.53) for husbands who dropped out of the study (*p* = .001). The average marital satisfaction score for wives who remained in the study at Time 2 was 117.84 (*SD* = 18.85), compared to 84.49 (*SD* = 27.21) for wives who dropped out of the study (*p* = .037). The children included 52 males (48.1%) and 56 females (51.9%) between the ages of seven and nine at the beginning of the study. Couples were married for an average of 13 years (range = 3 years to 26 years). Husbands ranged in age from 30 to 59 (*M* = 41.20, *SD* = 5.83) and wives ranged in age from 27 to 52 (*M* = 38.88, *SD* = 5.03). As can be seen in Table 1, which provides additional demographic data, the sample for this study was more diverse than most family studies, because more than a third of the parents were members of racial and ethnic minorities. More than half of the children were from multiracial or other racial and ethnic minority families.

Measures and Procedures

Time one marital session and the OHI—The independent variable in this study, *marital bond*, was derived from the scoring of the Oral History Interview. The OHI is a semi-structured interview that was conducted jointly with the husband and wife during a laboratory session at the university in the first year of the longitudinal study. The hour-long interview was videotaped in a laboratory designed to look like a living room. The couples were asked to tell the story of their relationship, beginning with how they met and fell in love, decided to get married, and made the transition to parenthood. Couples were also asked how they made it through difficult times in their relationship. See Buehlman et al. (2005) for a complete description of the interview.

The OHI assesses the marital bond between spouses and is based on the premise that how a couple talks about their past provides important information about their present relational status and their future relational path (Carrère et al., 2000). The OHI has been used successfully in two studies to predict marital dissolution. Buehlman, Gottman, and Katz (1992) used the OHI to predict with 94% accuracy which married parents of preschoolers would divorce over a three year period. Buehlman and her colleagues (Carrère et al., 2000) then used the OHI with newlyweds to predict who would divorce within 4 to 6 years of marriage with 87% accuracy. The interview has also been used to assess the degree to which the marital bond can predict the quality of the couple's transition to parenthood (Shapiro, Gottman, & Carrère, 1999).

Another important quality of the OHI is that it is based on observation of the couples' verbal and nonverbal behaviors, rather than their questionnaire self-reports about marital quality. In both Buehlman and her colleagues' prospective studies of marriage, the OHI was significantly better at predicting divorce than a self-report of marital quality (Buehlman et al., 1992; Carrère et al., 2000).

OHI coding system—A global coding system was utilized to measure spouses' perceptions of their partner and their relationship. Each dimension of the OHI is made up of several items, each rated on a 5 point Likert scale. A complete description of the coding system is available in Buehlman et al. (2005) and through Buehlman, Siler, Carrère, and Gottman (2006). Five trained research assistants rated the interactions presented in this

paper. A randomly selected 20% were rated by two coders separately to assess reliability. In instances where the coders were not reliable, a third coder rated the interaction, and this person's coding was compared against each of the first two to see which pair obtained the highest reliability. If the third coder was reliable with coder 1, then coder 1's scores were used. If the third coder was reliable with coder 2, then coder 2's scores were used. There were no cases where we needed to bring in a fourth coder, and we did not average scores between coders. Interrater reliability was assessed via intraclass correlation coefficients (ICCs; Armstrong, 1981; Shrout & Fleiss, 1979). Acceptable reliability levels were obtained for all dimensions (ICC range = .82 – .92).

Fondness/Affection toward spouse captures how much spouses express affection and positive affect with one another (husbands' ICC = .87; wives' ICC = .89). *Negativity toward spouse* indexes the extent to which spouses display negative affect toward each other and also includes if they are vague about what attracted them to their spouse (husbands' ICC = .89; wives' ICC = .90). *We-ness* assesses how much the spouses emphasize their interdependence versus their own independence, separate from that of their spouse (husbands' ICC = .90; wives' ICC = .86). *Expansiveness* captures how expressive each spouse is, versus how withdrawn they are from the interview (husbands' ICC = .88; wives' ICC = .88). *Gender role stereotypy* assesses how traditional a couple is regarding their beliefs and values, particularly about gender roles. One score is given per couple (couple ICC = .82). *Chaotic relationships* rates how much control a couple perceives having over their lives (couple ICC = .86). *Glorifying the struggle* assesses the extent to which couples see difficult times as bringing them closer together (couple ICC = .85). Finally, *marital disappointment and disillusionment* captures the extent to which spouses seem to have given up on their marriage (husbands' ICC = .87; wives' ICC = .89).

Marital bond, the independent variable for this study, is a composite score derived from the OHI (Carrère et al., 2000) that adds the positive dimensions (husband and wife fondness and affection, husband and wife we-ness, husband and wife expansiveness) of the OHI and subtracts the negative dimensions of the OHI (husband and wife negativity, the couple's chaotic relationship score, and the husband and wife marital disappointment and disillusionment scores). The marital bond score is based on previous principal components analyses by Buehlman and her colleagues establishing the latent integrity of this variable (Buehlman et al., 1992; Carrère et al., 2000). Because the "glorifying the struggle" and "gender role stereotypy" do not meet the criteria for loading on the marital bond component (Buehlman et al., 1992; Carrère et al., 2000), they are not used in scoring the marital bond variable.

Time two family space shuttle laboratory session and family interaction patterns—Eighteen to twenty-four months after the marital laboratory session, families participated in a laboratory session in which they completed a family problem solving discussion and a parent-child teaching task. A critical feature of this visit, and one that made the tasks novel and enjoyable for the families, was the use of an outer space theme throughout the session. This is a protocol modified from previous researchers such as Whalen, Henker, Collins, McAuliffe, and Vaux (1979) and Porges and his associates (Porges, Doussard-Roosevelt, Portales, & Suess, 1994). Children were given NASA tee-shirts and encouraged to make-believe that they and their parents were astronauts while completing their session in the space shuttle laboratory, which replicated the interior of a space shuttle. Tasks were presented to the child as components of an astronaut training program which the child was required to complete before being ready to blast-off into outer space. The family problem solving discussion and the parent-child teaching task were designed for this laboratory session as a way to understand a family's ability to

communicate with each other and solve a family issue, as well as the parents' ability to teach a novel task to their child.

The family problem solving discussion was a ten minute videotaped discussion in which the parents and child worked together to try to solve a problem that occurred frequently in their family. Common topics included mealtimes, chores, and schoolwork. Prior to the discussion, each family member separately completed a checklist in which he/she rated the occurrence in their family of thirteen common areas of disagreement between parents and children. Based on a review of these checklists, the session facilitator helped the family select one or two topics for discussion. The family was then given ten minutes alone to talk about one or both of the problems and try to work towards solutions.

The family interaction coding system—The family problem solving discussion was coded using the Family Interaction Coding System (FICS; Siler, Beardslee, Kim, & Carrère, 2006). A total score for each dimension was derived from summing the scores from statements which make up each dimension. Each of these statements was coded as present or not present, and received a score of zero or one. Interrater reliability was established by using the same procedures as for the OHI.

Parental cohesion considers the parents' ability to present a united partnership in interacting with the child, and includes eight statements. Examples include: parents use "we" statements rather than "I" statements to the child, parents argue with each other about the issue (reverse scored), and parents consult and discuss with each other during the discussion. The parents together receive a score of zero to eight on parental cohesion. The ICC for parental cohesion was .92.

Family cohesion is an eight item dimension that considers the overall family unity during the discussion (thus, the family as a unit receives one score). Statements include: there is mutual give and take between parents and child; one or more family members reference the family as a unit; there is positive affect during the interaction; one or both parents display triangulation with the child (reverse scored); and one or more family members dominate the discussion (reverse scored), comprise this scale. The family receives an overall score of zero to eight on this dimension (ICC = .86).

Family problem solving is made up of four statements and considers the family's overall ability to work towards a solution to a problem in their family during the discussion. Items include statements such as family comes up with a solution or plan, family prioritizes problem solving during the discussion, and parents offer suggestions/solutions. The family receives a score of zero to four on this dimension (ICC = .91).

SWEPT family coding system—The parent-child teaching task took place during the simulated space shuttle blast off. Prior to this task, parents received instruction on the use of a space shuttle launch simulation computer program, and were given 45 minutes to practice and plan how to teach it to their child. The teaching task itself was a 20 minute videotaped task in which parents introduced the simulation software and helped their child practice it, before encouraging the child to complete the blast-off procedures by himself/herself with their support.

The SWEPT Family Coding System (Siler, Beardslee, Harvey, & Carrère, 2006) was created to capture family interaction during the teaching task (the coding system includes other dimensions such as emotional expression which are not described here and are outside the scope of this paper).

Coders rated the entire period of the family teaching task to arrive at global scores on the SWEPT. Coders assessed the family as a whole on warmth, and the parents as a unit on structure and parental cohesion. Each of these three codes is assessed on a seven point Likert-type scale. *Warmth* was evaluated by considering the degree to which the family demonstrated positive affect and appeared to be enjoying themselves. It was measured by family members' use of compliments, praise, and positive nonverbal affect. *Structure* was a measure of the degree to which the parents provided an organized, encouraging, and age-appropriate learning environment for the child in the teaching task. *Parental cohesion* measured parents' ability to present a united partnership in interacting with the child, and indexed behaviors identical to those assessed in the family problem solving interactions. Interrater reliability was established by using the same procedures as for the OHI and FICS. Strong interrater reliabilities were reached for all dimensions (warmth = .90; structure = .87, cohesion = .91).

The FICS and SWEPT assess some of the same constructs as those assessed in the OHI. However, the OHI assesses only the couple, and the family coding systems assess both the couple and their child. The coding systems assess both dyadic (marital) interactions and triadic (parents and child) interactions. Having some overlap between dimensions (such as parental cohesion and warmth) allows for consideration of how the husband and wife interact as a couple versus how they interact with their child in different settings. See Table 2 for the correlations between the OHI, FICS, and SWEPT variables. The correlations suggest that there is discriminant validity between the OHI, FICS, and SWEPT coding systems (Kerlinger, 1986). The strongest correlation was between structure and warmth (.73), both codes from the SWEPT. Operationally, these measure very different behaviors. However, the high correlations between each of the SWEPT dimensions may indicate the presence of a latent variable representing "positive family climate." Parental cohesion was also correlated across tasks, although it was not a particularly strong correlation (.32). Because of this, the frequency distributions for the parental cohesion scores were examined. In the family problem solving interaction, the scores were more tightly clustered between scores 5 and 7, with 27 of the 108 families scoring a 6. In the family teaching interaction, there were 20 or more families who scored either a 3, 4, 5, 6, or 7, so the scores were much more evenly distributed. This suggests that the parents seem to be enacting a different pattern of parental cohesion in the family problem solving interaction and the family teaching interaction.

Results

Descriptive statistics, including the means and standard deviations for the marital and family interaction variables are presented in Table 3. A summary of the regression analyses is presented in Table 4.

Hypothesis 1

The first hypothesis stated that the parents' marital bond would be positively related to parental cohesion in family problem solving interactions and teaching interactions. To test this hypothesis, a linear regression was performed with marital bond as the predictor variable and parental cohesion in the family problem solving interaction as the criterion variable. The regression model was not significant ($p > .05 = ns$). Another linear regression was performed with marital bond as the predictor variable and parental cohesion in the teaching interaction as the criterion variable. The regression model was significant ($F = 19.26$ (1, 106), $p = .000$, adjusted $R^2 = .15$, $\beta = .39$). Hypothesis 1 was partially supported.

Hypothesis 2

The second hypothesis stated that the parents' marital bond would be positively related to family cohesion in problem solving interactions. A linear regression with marital bond as the predictor variable and family cohesion as the criterion was conducted. The regression model was significant ($F = 4.12$ (1, 106), $p = .05$, adjusted $R^2 = .03$, $\beta = .19$). Hypothesis 2 was supported.

Hypothesis 3

The third hypothesis stated that the parents' marital bond would be positively related to family warmth in teaching interactions. A linear regression with marital bond as the predictor variable and family warmth as the criterion was conducted. The regression model was significant, ($F = 22.97$ (1, 106), $p = .000$, adjusted $R^2 = .17$, $\beta = .42$). Hypothesis 3 was supported.

Research Question 1

The first research question asked how the parents' marital bond was related to family problem solving. A linear regression with marital bond as the predictor variable and family problem solving as the criterion variable was conducted. The regression model was not significant ($p > .05 = ns$).

Research Question 2

The second research question asked how the parents' marital bond was related to parent structuring behaviors in teaching interactions. A linear regression with marital bond as the predictor variable and family structure as the criterion variable was conducted. The regression model was significant ($F = 25.35$ (1, 106), $p = .000$, adjusted $R^2 = .19$, $\beta = .44$). Positive marital bond appears to positively predict supportive parental structuring in teaching interactions.

Discussion

The purpose of this study was to examine the possible connections between the parents' marital bond and family triadic interactions. There were several unique aspects of the study. First, the study sought to examine positive aspects of family functioning. Most previous research has examined marital conflict and its relationship to negative aspects of the parent-child relationship and child functioning. Segrin (2006) called for behavioral family research that would assess interactions predictive of positive developmental and health outcomes. The current study sought to examine these positively valenced aspects of family functioning. Second, this study sought to examine not only dyads (i.e., marital or one parent interacting with the child), but *triadic* family interaction. Previous research was criticized by Davis et al. (1998) for focusing on parent-child dyads rather than family triads. Third, this study examined family processes longitudinally and utilized behavioral observation at both time points. We also examined both family problem solving and teaching interactions. Finally, we sought to examine a larger and more diverse sample of families.

The findings from this study emphasize the ability of the OHI to predict family processes 18 – 24 months later. The marital bond, or the perceptual lens through which spouses view their marital relationship, is not only important for the couple themselves, it is also connected to how the entire family functions together. Previous research has found that the marital bond was able to predict which couples will remain married and which will divorce (e.g., Buehlman et al., 1992; Carrère et al., 2000). This study brings the examination of the marital bond into the realm of parent-child triads. It potentially sheds light on how a couple's

system of interacting and marital connection (bond) interfaces with the larger family system of interacting and cohesion.

According to systems theory, each family contains multiple subsystems, most notably the marital subsystem and parent-child subsystems. The interactions between them are highly complex, and can lead to problematic triangulations within the family (McGoldrick & Gerson, 1985). The characteristics of wholeness, complex relationships, and interdependence, taken from viewing the family as a system, highlight that because a marital couple functions well together does not necessarily mean that they will function well together in front of their child. It also does not mean that because a married couple is satisfied, that interactions with their child will be satisfactory.

The behavioral coding from this study suggests that the two subsystems do necessarily affect each other, but for our families, the interdependence suggests that it can work in a positive way. Specifically, the marital bond positively predicted parental cohesion in parent-child teaching interactions. The strength of the bond between the husbands and wives was also significantly associated with the structure parents provided for the child during the teaching interaction. These findings may reflect that the bond between the spouses can also be found between the couple in their interactions with their child. For example, parental cohesion was measured in part through the use of "we" terms that emphasized interdependence (as opposed to "I" terms that emphasized separateness). As such, this finding makes intuitive sense, as the OHI also indexes we-ness. The measure of parental cohesion also assessed whether the parents consulted with each other on how to work with the child on problem solving and/or verbally contradicted each other. Parental structure, measured during the teaching task, indexed how well the parents work together to present an organized, clear, and nurturing environment for their child's learning. The ability of the spouses to collaborate to provide an optimal teaching environment may be dependent on the depth of their bond with each other.

Importantly, the parents' marital bond was correlated with all of the FICS and SWEPT variables (with the exception of family problem solving), although the strength of the correlations was not particularly high (ranged from nonsignificant .02 to .44). This seems to indicate that the marital bond and the family interaction variables were tapping into distinctly different but related paradigms (Kerlinger, 1986), and offers more support for the interpretation that the marital bond may influence future family interactive behaviors. Although not measured in this study, the congruence of positive perceptions about each other and the marriage may lead parents to operate in a more collaborative, constructive, and warm manner in raising their children.

Previous research has not examined a longitudinal link between the couple's perceptions about their relationship and future triadic family interactions. The finding that the marital bond measured 18 – 24 months prior to a family interaction predicted parental cohesion and parenting structure in a parent-child teaching task is important because it highlights the role of the marital bond in producing cohesive and mutually supportive parenting behavior in teaching a child, a frequent task for all parents. The finding seems to echo the point made by Erel and Burman (1992) that couples cannot "shield" their child from their marital interactions. Whereas previous research has focused on marital conflict, these findings point to the importance of a positive marital bond and the positive "spillover" effects it seems to have on future parent-child interactions.

The couples' marital bond was also found to positively predict family cohesion in problem solving interactions as well as family warmth in teaching interactions. This is an important finding as it offers a possible model for how the marital bond could influence the parent-

child bond, as measured through family cohesion and family warmth. This finding is consistent with Lindahl et al.'s (1997) finding that family cohesion was positively related to pre-child marital satisfaction and McHale's (1995) converse finding that lower levels of warmth were present among families with distressed marriages. A rival explanation for these results might be that the personality characteristics of the parents influence not only the marital bond but also the manner in which the parents collaborate to interact with their children. Such a link between personality characteristics and marital quality is well documented in the literature (e.g., Gonzaga, Campos, & Bradbury, 2007; Whiseman, Tolejko, & Chatav, 2007). Unfortunately, a test of this competing hypothesis is not possible for the current study because personality was not measured in the family members.

Interestingly, the marital bond was not significantly related to family problem solving behaviors or parental cohesion in the family problem solving interaction. In this study, family problem solving was defined as a family's ability to work towards a solution to their problem and prioritize problem solving during the discussion. It appears that the marital bond is not linked to the ways in which a family approaches problem solving. There may be several reasons for this. First, these problem solving sessions were relatively short and may not have allowed the family ample time to resolve the disagreement. Second, as with research on marriage (e.g., Gottman, 1994), what may be most important in family interactions is the warmth and bond between family members rather than the resolution of problems. Gottman reports that even happily married couples revisit the same conflicts repeatedly over the course of the marriage. Families may not solve the problem of children's messy rooms or problematic hygiene, but their interpersonal bonds may make the family a positive social environment for child development.

Limitations and Areas for Future Research

There are some limitations to this study that should be considered. The first is that although this sample did include couples representing a range of marital satisfaction scores, the average marital satisfaction score represented relatively satisfied couples (the mean marital quality score for the couples was just short of being one standard deviation above the national norm for the United States). Additionally, those couples with incomplete data at Time 2 did report lower marital satisfaction scores at Time 1. Future longitudinal research that is able to assess very distressed couples would be helpful. This is an important issue given the well-documented association between marital quality and child outcomes.

Another limitation of this study is the lack of a representative sample. The families who participated in the present study were self-selected. They were primarily college-educated and relatively affluent ($80,000 to $89,000 was the median family income). The sample was composed of larger percentages of families who were Interracial or African American than are typically found in parenting studies. While a strength of the current study was that the racial groups (African American, Interracial, European American) were matched on marital satisfaction and neighborhood crime levels, the ability to generalize these results to a greater population of families must remain for future studies that use nationally representative samples.

Participation criteria for this study included that the couple had to be married and both parents had to have lived with the child for at least two years. Further research could more specifically examine the connections between marital perceptions and the successful blending of families after divorce and remarriage given that this is a growing segment of families. Blended families were included in this sample, but were not specifically assessed, as this was not the focus of the study, nor were there sufficient numbers of children in each category to successfully compare the groups.

Whereas most of our hypotheses were supported with significant regression analyses, it should be noted that the amount of variance explained for hypothesis 2 was low. Therefore, these results should be interpreted with caution.

The possible connections between the marital bond and family problem solving could be examined further, especially in light of the nonsignificant findings from this study. Future research could also examine parental cohesion, given our different findings for the two interactions. Parental cohesion seems to be enacted differently in problem solving and teaching interactions, but we are unable to dissect from our data what these differences look like. Additionally, future research could examine how marital perceptions are related to other aspects of triadic family interactions, such as supportive communication, family conflict, and family resiliency. Finally, it may be interesting to examine the effects of the marital bond on family interactions involving siblings.

This study offers insight into how the marital bond, as indexed by a couple's marital perceptions, is connected to future family processes in triadic family problem solving and teaching interactions, and as such, contributes to an under-studied area of family relationships.

Acknowledgments

References

Ainsworth, MDS.; Bell, SM.; Stayton, DJ. Individual differences in the strange situation of one-year-olds. In: Schaffer, HR., editor. The origins of human social relations. London: Academic Press; 1971.

Armstrong GD. The intraclass correlation as a measure of interrater reliability of subjective judgements. Nursing Research. 1981; 30(5):314–315. 320A. [PubMed: 6912993]

Baumrind D. Child care practices anteceding 3 patterns of preschool behavior. Genetic Psychology Monographs. 1967; 75:43–88. [PubMed: 6032134]

Baumrind D. Current patterns of parental authority. Developmental Psychology Monograph. 1971; 4

Baumrind, D. A developmental perspective on adolescent risk-taking in contemporary America. In: Irwin, C., editor. New directions for child development. Vol. Vol. 37. San Francisco: Jossey-Bass; 1987. p. 93-126.

Becker, WC. Consequences of different kinds of parental discipline. In: Hoffman, ML.; Hoffman, L., editors. Review of child development research. Vol. Vol. 1. New York: Russell Sage; 1964.

Brody G, Pillegrini A, Sigel I. Marital quality and mother-child and father-child interactions with school-aged children. Developmental Psychology. 1986; 22:291–296.

Brody GH, Arias I, Fincham FD. Linking marital and child attributions to family processes and parent-child relationships. Journal of Family Psychology. 1996; 10:408–421.

Buehler C, Gerard JM. Marital conflict, ineffective parenting, and children's and adolescents' maladjustment. Journal of Marriage and Family. 2002; 64:78–92.

Buehlman KT, Gottman JM, Katz LF. How a couple views their past predicts their future: Predicting divorce from an oral history interview. Journal of Family Psychology. 1992; 5:295–318.

Buehlman, K.; Carrère, S.; Siler, C. The oral history coding system: A measure of marital cognition. In: Manusov, V., editor. The sourcebook of nonverbal measures: Going beyond words. Mahwah, NJ: Erlbaum; 2005. p. 209-219.

Buehlman, KT.; Siler, C.; Carrère, S.; Gottman, JM. The oral history coding system. 2nd edition. Seattle, WA: NCAST-AVENUW; 2006.

Buhrmester D, Camparo L, Christensen A, Gonzalez LS, Hinsaw SP. Mothers and fathers interacting in dyads and triads with normal and hyperactive sons. Developmental Psychology. 1992; 28:500–509.

Capaldi DM, Forgatch MS, Crosby J. Affective expression in family problem-solving discussions with adolescent boys. Journal of Adolescent Research. 1994; 9:28–49.

Carrère S, Buehlman KT, Gottman JM, Coan JA, Ruckstuhl L. Predicting marital stability and divorce in newlywed couples. Journal of Family Psychology. 2000; 14:42–58. [PubMed: 10740681]

Cohn DA, Cowan PA, Cowan CP, Pearson J. Mothers' and fathers' working models of childhood attachment relationships, parenting styles, and child behavior. Development and Psychopathology. 1992; 4:417–431.

Cowan, CP.; Cowan, PA. When parents become partners. New York: Basic; 1992.

Erel O, Burman B. Interrelatedness of marital relations and parent-child relations: A meta-analytic review. Psychological Bulletin. 1995; 118:108–132. [PubMed: 7644602]

Gonzaga GC, Campos B, Bradbury T. Similarity, convergence, and relationship satisfaction in dating and married couples. Journal of Personality and Social Psychology. 2007; 93(1):34–48. [PubMed: 17605587]

Gottman, JM. What predicts divorce: The relationship between marital processes and marital outcomes. Mahwah, NJ: Erlbaum; 1994.

Gray MR, Steinberg L. Unpacking authoritative parenting: Reassessing a multidimensional construct. Journal of Marriage and the Family. 1999; 61:574–587.

Katz LF, Woodin EM. Hostility, hostile detachment, and conflict engagement in marriages: Effects on child and family functioning. Child Development. 2002; 73:636–652. [PubMed: 11949913]

Kerig PK, Cowan PA, Cowan CP. Marital quality and gender differences in parent-child interaction. Developmental Psychology. 1993; 29:931–939.

Kerlinger, FN. Foundations of behavioral research. New York, NY: Holt, Rinehart, and Winston; 1986.

Kitzmann KM. Effects of marital conflict on subsequent triadic family interactions and parenting. Developmental Psychology. 2000; 36:3–13. [PubMed: 10645740]

Krishnakumar A, Buehler C. Interparental conflict and parenting behaviors: A meta-analytic review. Family Relations. 2000; 49:25–44.

Lindahl KM, Clements M, Markman H. Predicting marital and parent functioning in dyads and triads: A longitudinal investigation of marital processes. Journal of Family Psychology. 1997; 11:139–151.

Locke HJ, Wallace KM. Short marital adjustment and prediction tests: Their reliability and validity. Journal of Marriage and Family Living. 1959; 21:251–255.

Low SM, Stocker C. Family functioning and children's adjustment: Associations among parents' depressed mood, marital hostility, parent-child hostility, and children's adjustment. Journal of Family Psychology. 2005; 19:394–403. [PubMed: 16221020]

Maccoby, EE.; Martin, JA. Socialization in the context of the family: Parent-child interactions. In: Hetherington, EM., editor. Handbook of child psychology Vol. 4, socialization, personality. New York: Wiley; 1983.

McDonough MA, Carlson C, Cooper CR. Individuated marital relationships and the regulation of affect in families of early adolescents. Journal of Adolescent Research. 1994; 9:67–87.

McHale JP. Coparenting and triadic interactions during infancy: The roles of marital distress and child gender. Developmental Psychology. 1995; 31:985–996.

McHale, JP. Beyond conflict: Family positivity and young children's adjustment. In: Fivaz-Depeursinge, E.; Papousek, M., editors. Infants and young children's development and family dynamics; Symposium conducted at the International Society for the Study of Behavioral Development; Bern, Switzerland. 1998. (Co-chairpersons)

Miller NB, Cowan PA, Cowan CP, Hetherington EM, Clingempeel WG. Externalizing in preschoolers and early adolescents: A cross-study -replication of a family model. Developmental Psychology. 1993; 29:3–18.

O'Connor TG, Hetherington EM, Clingempeel WG. Systems and bidirectional influences in families. Journal of Social and Personal Relationships. 1997; 14:491–504.

Porges SW, Doussard-Roosevelt JA, Portales AL, Suess A. Cardiac vagal tone: Stability and relation to difficultness in infants and 3-year-olds. Developmental Psychobiology. 1994; 27:289–300. [PubMed: 7926281]

Satir, V. The new peoplemaking. Mountain View, CA: Science and Behavior Books; 1988.

Segrin C. Family interactions and well-being: Integrative perspectives. Journal of Family Communication. 2006; 6:3–21.

Shapiro AF, Gottman JM, Carrère S. The baby and the marriage: Identifying factors that buffer against the decline in marital satisfaction after the baby arrives. Journal of Family Psychology. 1999; 14:59–70. [PubMed: 10740682]

Shrout PE, Fleiss JL. Intraclass correlations: Uses in assessing rater reliability. Psychological Bulletin. 1979; 86(2):420–428. [PubMed: 18839484]

Siler, C.; Beardslee, C.; Harvey, J.; Carrère, S. SWEPT family coding system. University of Washington: Seattle; 2006. Unpublished manuscript

Siler, C.; Beardslee, C.; Kim, C.; Carrère, S. Family interaction coding system. University of Washington: Seattle; 2006. Unpublished manuscript

Steinberg L, Lamborn SD, Darling N, Mounts NS, Dornbusch SM. Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. Child Development. 1994; 65:754–770. [PubMed: 8045165]

Vuchinich S, Vuchinich R, Wood B. The interparental relationship and family problem solving with preadolescent males. Child Development. 1993; 64:1389–1400. [PubMed: 8222879]

Westerman MA, Schonholtz J. Marital adjustment, joint parental support in a triadic problem-solving task, and child behavior problems. Journal of Child Clinical Psychology. 1993; 22:97–106.

Whalen CK, Henker B, Collins BE, McAuliffe S, Vaux A. Peer interaction in structured communication task: Comparison of normal and hyperactive boys and of methylphenidate (Ritalin) and placebo effects. Child Development. 1979; 50:388–401. [PubMed: 487880]

Whiseman MA, Tolejko N, Chatav Y. Social consequences of personality disorders: Probability and timing of marriage and probability of marital disruption. Journal of Personality Disorders. 2007; 21(6):690–695. [PubMed: 18072869]

Table 1

Demographic Information on Husbands and Wives in Family Sample (N =108)

Variable	Husbands	Wives
Ethnicity		
Caucasian	59 (54.6%)	60 (55.6%)
African American	22 (20.4%)	19 (17.6%)
Asian	12 (11.1%)	17 (15.7%)
Hispanic	9 (8.3%)	6 (5.6%)
Multiracial	4 (3.7%)	4 (3.7%)
Pacific Islander	1 (.9%)	0
American Indian	0	1 (.9%)
Not Reported	1 (.9%)	1 (.9%)
Employment Status		
Work Full Time	85 (78.7%)	27 (25%)
Work at Home/Self-employed	13 (12%)	10 (9.3%)
Homemakers	3 (2.8%)	37 (34.3%)
Work Part Time	1 (.9%)	26 (24.1%)
Part Time Student/Part Time Job	0	3 (2.8%)
Unemployed	2 (1.9%)	2 (1.9%)
Disabled	0	1 (.9%)
Not Reported	4 (3.7%)	2 (1.9%)

Table 2

Correlations between Family Teaching and Problem Solving Variables (N = 108)

Variable	1	2	3	4	5	6	7
1. OHI	--						
2. Problem Solving (FICS)	.02	--					
3. Parental Cohesion (FICS)	.12	.38**	--				
4. Family Cohesion (FICS)	.19*	.32**	.44**	--			
5. Warmth (SWEPT)	.42**	-.06	.22*	.35**	--		
6. Structure (SWEPT)	.44**	.11	.22*	.38**	.73**	--	
7. Parental Cohesion (SWEPT)	.39**	.02	.32**	.38**	.72**	.60**	--

*
$p < .05$.

**
$p < .01$.

Table 3

Means and Standard Deviations of Marital and Family Interaction Variables (N = 108)

Dimension	Range	*M*	*SD*
Marital Satisfaction			
Husband	53 – 150	115.89	18.18
Wife	59 – 151	117.85	18.85
Marital Bond	8 – 161	93.36	40.58
Parental Cohesion			
(Problem Solving)	0 – 8	5.75	1.73
Family Cohesion	1 – 8	5.75	1.52
Family Problem Solving	0 – 4	3.01	1.16
Parental Cohesion			
(Teaching Interaction)	1 – 7	4.79	1.62
Warmth	2 – 7	4.78	1.44
Structure	2 – 7	4.79	1.40

Table 4

Summary of Linear Regression Analyses for Marital Bond Variable Predicting FICS and SWEPT Variables (N =108)

Variable	B	SE B	β	adjusted R^2	F
Parental Cohesion (FICS)	5.32	.42	.12	.00	1.28
Parental Cohesion (SWEPT)	3.33	.36	.39	.15	19.26 ***
Family Cohesion (FICS)	5.08	.36	.19	.03	4.12 *
Family Warmth (SWEPT)	3.38	.32	.42	.17	22.97 ***
Family Problem Solving (FICS)	.023	.28	.02	-.01	.05
Family Structure (SWEPT)	3.37	.31	.44	.19	25.35 ***

*
 $p < .05$.

**
 $p < .01$.

***
 $p < .001$.