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Fathers, Mothers, Marriages, and Children: Toward a Contextual Model of Positive Paternal Influence

Ariel Rodriguez
Utah State University

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FATHERS, MOTHERS, MARRIAGES, AND CHILDREN:
TOWARD A CONTEXTUAL MODEL OF POSITIVE PATERNAL INFLUENCE

by

Ariel Rodriguez

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Family Life/Family and Human Development

Approved:

Brent C. Miller, Ph.D.
Major Professor

Randall M. Jones, Ph.D.
Committee Member

Shelley K. Lindauer, Ph.D.
Committee Member

Thomas R. Lee, Ph.D.
Committee Member

Xitao Fan, Ph.D.
Committee Member

Noelle E. Cockett, Ph.D.
Interim Dean of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah
2000
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ABSTRACT

Fathers, Mothers, Marriages, and Children:

Toward a Contextual Model of

Positive Paternal Influence

by

Ariel Rodriguez, Doctor of Philosophy

Utah State University, 2000

Major Professor: Dr. Brent C. Miller
Department: Family and Human Development

This research explored positive paternal involvement in the lives of children within the broader familial context of marital dynamics and positive maternal involvement. The National Survey of Families and Households (NSFH) was used to obtain a longitudinal subsample of 582 first-married couples, as well as the wide range of variables necessary to explore this broader context of paternal influence. Three research questions guided the study: (1) What is the unique contribution of positive paternal involvement—with respect to positive maternal involvement and marital quality—in children’s development? (2) How does the influence of positive paternal involvement interact with the influence of positive maternal involvement and marital quality to influence children’s development? (3) To what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship?
Analysis demonstrated little evidence of fathers' unique contribution to children's aggressive/antisocial behavior, school problems, and other outcomes. Similarly, analysis demonstrated no indirect effects for paternal involvement across the 4-5 years span between Wave 1 and Wave 2 of the NSFH. Specifically, fathers' involvement did not indirectly affect children's outcomes via either the marital relationship or maternal involvement. However, limitations relating to internal reliability rendered findings questionable.

Analysis also demonstrated a limited pattern of interaction effects between paternal involvement measures and marital and maternal variables. Specifically, Wave 2 paternal positive activities demonstrated meaningful interactions with maternal positive activities, marital happiness, and marital conflict, with respect to their influence on children's aggressive/antisocial behavior. Interaction between paternal positive activities and marital variables indicated that paternal involvement is capable of interacting with other aspects of family context in ways which have both positive and negative consequences for children.

Future research efforts addressing these questions should assess parental involvement in greater depth and breath, incorporating a framework capable of addressing both parental warmth and control. Similarly, future research should consider methods capable of addressing multicolinearity resulting from parallel paternal and maternal variables. Finally, future research should explore the various ways in which paternal
involvement interacts with other sources of influence within families to impact the lives of children.
ACKNOWLEDGMENTS

The story behind this dissertation is a long one—too long by most people’s standards. Over the past several years this dissertation has unfolded with more than a fair share of challenges. Through it all, many people have helped, encouraged, evaluated, reminded, and waited patiently. Consequently, it is fitting to take a moment and thank those who have helped make this completed work possible.

First of all, I need to express my thanks to Dr. Brent Miller, from whom I gained a clear vision of the process of conducting research. In the course of my work with Dr. Miller, I was exposed to a rigorous, constructively critical, and well organized style which will continue to set the standard for my future research efforts. Furthermore, Dr. Miller performed above and beyond the call of duty in helping me overcome barriers impeding my completion of this work. But most remarkable to me, was the longsuffering I was afforded—Dr. Miller was always patient and understanding, and I always felt encouraged after visiting with him.

Dr. Xitao Fan was another person who was instrumental in helping me complete this dissertation. Without his clear understanding of statistics to guide me, I would never have taken on such a challenging dissertation. Dr. Fan’s cheerful encouragement and willingness to say “come on over” when I was experiencing a “dissertation emergency” helped to keep me on track.

Dr. Randy Jones also provided encouragement and support in his own unique way, helping me to stay focused on the goal of completing my dissertation. Dr. Jones,
along with Dr. Knudsen and Dr. Lee, reviewed my work and provided valuable feedback.

Beyond the members of my committee, there were others who encouraged and helped me along the way. Jeff Hill provided continued cheerful encouragement and advice. Roxann Pfister provided needed encouragement and technical support with the complexities of managing a large data set.

But my greatest thanks go to my wife, Anne, and my three wonderful children: Nathanael, Sariah, and Hannah. Their encouragement, love, prayers, sacrifices, and confidence in me were a continual source of motivation and energy, guiding this project to its completion. I thank God they never gave up on me.

Ariel Rodriguez
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The role of fatherhood in child development has recently attracted considerable attention. As little as 20 years ago, "social scientists in general, and developmental psychologists in particular, doubted that fathers had a significant role to play in shaping the experiences and development of their children" (Lamb, 1997a, p. 1). Current research now commonly reflects widespread acknowledgment of the salience of paternal influence. More than just markers of socioeconomic status, or distant role models of stereotyped masculinity, fathers are frequently considered to have active, direct influences in the lives of children. Researchers studying child outcomes have turned their attention to fathers as sources of effects previously relegated exclusively to mothers.

One widely researched aspect of paternal influence is paternal involvement. Although there is lack of agreement regarding what constitutes paternal involvement (Palkovitz, 1997), researchers have moved toward conceptual and operational definitions of paternal involvement, which include a qualitative dimension (Pleck, 1997). Consequently, researchers conceptualizing and operationalizing paternal involvement are more accurately interested in positive paternal involvement (Pleck, 1997).

Not simply a content free marker of the quantity of father-child interaction, positive paternal involvement reflects a qualitative dimension of paternal behavior conducive to desirable developmental outcomes for the child and father (e.g., Dollahite, Hawkins, & Brotherson, 1997). For example, rather than take a measure of the total time
fathers interact with their children, researchers might measure the time spent in such shared activities as reading and playing.

Positive paternal involvement has been linked to a wide variety of desirable child outcomes at various stages of development from preschool to adolescence. High levels of positive paternal involvement are associated with child outcomes such as greater academic achievement, increased cognitive ability, increased social maturity and competence, internal locus of control, improved self-esteem, greater empathy, and decreased gender-role stereotyping (Pleck, 1997).

Statement of the Problem

Despite this rapidly growing body of research documenting the relationship between positive paternal involvement and a wide range of child outcomes, researchers rarely, if ever, have examined father involvement in relation to the familial context in which it occurs (Cummings & O'Reilly, 1997). Yet fathers do not influence their children in a contextual vacuum. In most cases, the father-child relationship occurs within the broader context of the mother-child relationship and the marital relationship.

Locating the effects of positive paternal involvement within these two aspects of familial context is necessary for three reasons. First, the quality of the marital relationship and the mother-child relationship are important correlates of a wide range of child outcomes (Cummings & Davies, 1994; Maccoby & Martin, 1983). Consequently, the impact of marital relationships and maternal involvement must be taken into account
to accurately understand any unique contribution that fathers make to the development of their children.

Accounting for the direct effects of marital and mother-child relationships is especially important considering the likely possibility that positive paternal involvement is correlated with the quality of these relationships, thus confounding any observable influence on child outcomes. For example, evidence consistently indicates that while greater marital quality benefits both father-child and mother-child relationships, poorer marital quality has a greater negative impact on father-child relationships than on mother-child relationships (Cummings & O’Reilly, 1997; Snarey, 1993). Therefore, any negative child outcomes associated with decreased positive paternal involvement may be confounded by the direct effect of poorer marital quality.

A second reason for studying positive paternal involvement within a familial context is the possibility of uncovering ways in which such influence interacts with, or is mediated by, varying levels of quality in marital and mother-child relationships. For example, although positive paternal involvement may be lower when marital quality is low, the influence of such involvement may be more salient in the child’s life—acting as a buffer against the negative effects of marital conflict or disengagement.

A final reason for placing father involvement in a familial context has to do with disentangling direct and indirect effects of paternal influence. As Lamb (1997a) concluded in his most recent review of fatherhood, researchers are more commonly recognizing "that indirect patterns of influence are pervasive and perhaps more important than direct..." (p. 3). Given this growing consensus, researchers should attempt to
disentangle the direct effects of positive paternal involvement not only from other direct familial effects on child outcomes, but from the indirect effects fathers exert on children.

For example, men’s commitments to, and involvement with, their children are closely related to their investment and involvement in a marital relationship (Doherty, 1997). To the degree that fathers can be thought of as distinct members of the marital dyad, the effects of marital quality on child outcomes are an indirect means by which fathers influence their children. Furthermore, because marital quality has been shown to influence the mother-child relationship (Cummings & Davies, 1994; Davies & Cummings, 1994), the mother-child relationship can also be thought of as a means by which fathers indirectly affect child outcomes. Consequently, locating father involvement within the context of the marital and mother-child relationship is a first step toward disentangling direct effects of positive paternal involvement from indirect effects of other paternal influences.

Statement of Purpose

The purpose of this research is to explore the socializing influence of positive paternal involvement within the broader familial context of marital and mother-child relationships.

Conceptual Framework

Although fatherhood research has a long history, efforts at systematic theory building have only recently appeared. Previous research was characterized by exploration
of empirical relationships between variables chosen for their social salience, accompanied by limited conceptual scaffolding (Hawkins & Palkovitz, 1997). Recently proposed conceptual frameworks of positive paternal involvement do not encompass the research objectives of this study (see Chapter 2 for detailed discussion of these frameworks). Consequently, ecological theory (Bronfenbrenner, 1986, 1989; Bubolz & Sontag, 1993) was used as the conceptual framework of this study. The choice of ecological theory was based on the primary objective of situating father’s socializing influence within the broader context of children’s familial experience.

**Ecological Theory**

Ecological theory emphasizes the contextual framework of individual development (Bretherton, 1993). Ecological theory organizes social context into various levels of systemic process, ordered from the most immediate level/system of context to the most remote. The scope of ecological theory renders it particularly suitable for research linking intrafamilial process to extrafamilial conditions (Bronfenbrenner, 1986). For the purposes of this research, ecological theory is particularly useful in its specification of multiple direct and indirect contexts of development, as well as indirect influences of more remote contexts. More than simply pointing out the importance of context, ecological theory emphasizes the interrelationships among contextual subsystems (Bretherton, 1993).

**Individual**

Ecological theory defines the contextual framework with reference to a particular
developing individual. Although the theory is capable of addressing the contextual framework of fathers or other members of the family, in this study, the individual of interest is the developing child.

**Microsystem**

The most immediate level of context in which the individual child develops is the microsystem. Microsystems are complex “patterns of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting” (Bronfenbrenner, 1989, p. 227). In this study, the family is the primary microsystem of interest while the school microsystem also contains some of the outcome variables of interest.

**Mesosystem**

The mesosystem consists of the interaction between various microsystems. In this study, the focus is more accurately on interaction within the family microsystem rather than between the family and other microsystems.

**Exosystem**

The exosystem includes contexts with which the developing individual does not directly interact, yet which nonetheless influence development. In this study, the parents workplace is an exosystem which will be considered—to a limited degree—in understanding the role of positive paternal involvement in children’s development.
**Macrosystem**

The macrosystem refers to the broader cultural context in which the individual lives. Furstenberg (1988) argued that contemporary U.S. culture defines fatherhood and marriage as a “package deal,” suggesting that men’s involvement with children is closely connected to marital dynamics. Such cultural definitions of fatherhood and family life are assumed to influence the families examined in this research. Consequently, macrosystem elements are considered in this research via parents’ attitudes, beliefs, and values regarding family life.

**Chronosystem**

The chronosystem consists of changes and continuities over time in the various systems outlined above. In this study, changes and continuities over time are considered, to a very limited extent, through analyses of longitudinal data, but there is no attempt to study the effects of longer term historical time or period effects.

**Objectives and Research Questions**

The main objective of the proposed research is to examine the influence of positive paternal involvement in children’s lives within a broader familial contexts. In effect, what is proposed is an exploration of father involvement within a triadic (father-mother-child) context rather than the more commonly examined dyadic (father-child) context.

Three research questions result with this shift in focus from dyadic to triadic
conceptualization: (1) What is the unique contribution of positive paternal involvement—regarding positive maternal involvement and marital quality—in children’s development? (2) How does the influence of positive paternal involvement interact with the influence of positive maternal involvement and marital quality in determining children’s development? (3) To what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship?
CHAPTER 2

LITERATURE REVIEW

The Social Context of Contemporary Fatherhood Research

Recent interest in fatherhood has made perceptible a wide range of complex political, economic, and value laden concerns about fathers and families. At the risk of oversimplification, these concerns evolve around a fundamental question: do fathers make a difference in families? Although not traditionally included in scholarly review of research, such concerns, particularly in the case of fatherhood research, are inextricably connected with the history of relevant empirical findings. As such, these concerns are a necessary part of understanding previous fatherhood research. Among those who have made perceptible such concerns, three groups are particularly worthy of mention.

Concern for Single Mothers

The implication that fathers might make a difference has raised concerns among supporters of women’s and mothers’ rights. Invoking a zero-sum paradigm, this perspective views fathers’ gains in connection with single mothers’ loses. Specifically, the suggestion that fathers are an important part of children’s lives invokes concerns that: such research fuels long-standing biases against female-headed single-parent households; increased services for fathers decrease services for single mothers; and “pro-fatherhood” research may be used by fathers’ rights groups to gain the upper hand in their battle to sway in their favor contemporary custody, child support, and visitation arrangements after
Concern About Family Decline

At another end of the spectrum are those concerned that THE American family is an institution on the verge of disintegration. Increased interest in fatherhood has occurred against the backdrop of demographic trends indicating the rapid decline of the traditional resident, biological father. High rates of divorce and record high births to single women have combined to create a situation in which nearly 40% of all children in America today do not live with their biological fathers (Popenoe, 1996). For those sharing such concerns, the rise of the nonresident father, and his counterpart, the single-parent mother, have become structural markers of family decline. Popenoe's (1996) volume "Life Without Father," and Blankenhorn's (1995) "Fatherless America" are scholarly expositions of this association between family decline and the significance of fathers in families. As presented in these works, involved, resident, biological fathers create positive social and economic outcomes for themselves, their wives, their children, and society as a whole (Blankenhorn, 1995; Popenoe, 1996). In the process of their reviews, Popenoe (1996) and Blankenhorn (1995) present an implicit yet tangible moral imperative concerning the importance of fatherhood: simply stated, society must encourage greater paternal involvement or risk self-destruction.

Postmodern Acknowledgment of Values

A third contingent raising concerns about the social context of fatherhood research have their impetus in the rise of postmodern influence in the study of families. As
proponents of postmodern science slowly erode the long held belief that science can or ought to be value free, contemporary family research moves toward a practice of acknowledging values as a means of accounting for their influence—rather than claiming to be free of such influence (Ahlander & Bahr, 1995; Bahr & Bahr, 1996; Doherty, 1995; Doherty, Boss, LaRossa, Schumm, & Steinmetz, 1993; Gilgun, 1995; Knap & Thomas, 1997; Miller, 1992; Rodriguez, 1995; Thomas & Marsh, 1995). Such a methodological shift has typified recent efforts in fatherhood research. Several notable fatherhood researchers have examined the underlying value structure or cultural ideals influencing past research, and/or acknowledged a value position in their own work (Doherty, 1997; Hawkins & Dollahite, 1997a; LaRossa, 1997; Levine & Pitt, 1995; Pleck & Pleck, 1997).

Hawkins and Dollahite's (1997a) edited volume "Generative Fathering: Beyond Deficit Perspectives," is perhaps the most value explicit example of such a shift. In the opening chapter (Hawkins & Dollahite, 1997b), the editors characterize previous research as far from value free. To the contrary, Hawkins and Dollahite argue that past fatherhood research has evolved from implicit value positions referred to as "deficit perspectives." By moving "beyond" deficit perspectives, the authors propose not an increased effort to maintain value free research but an alternative value position, a "conceptual ethic" of fatherhood—a framework informed by the authors' "scholarly understandings, clinical and educational experiences, and deeply held beliefs about the importance of good fathering for the next generation" (Dollahite et al., 1997, p. 18, italics added). Hawkins and Dollahite are by no means alone in their approach. Both Doherty and his associates (Doherty et al., 1998), and Levine and Pitt (1995) have cited concerns about "deficit
perspectives” and proposed similar conceptual frameworks: focusing on definitions of “responsible fathering” which explicitly incorporate a value position.

Although a seemingly “straight forward” empirical question, the degree to which fathers may or may not influence their children’s lives is bound up in these broader social, ideological, and political, and ethical issues. Concerns for single mothers, concerns about family decline, and concerns about non-productive value presuppositions of past fatherhood research (i.e., deficit perspectives) are part and parcel of the more traditional empirical findings typically reviewed by fatherhood researchers. The details of how these social phenomena have influenced the research presented in the following review would be the topic of another paper. For now, be forewarned that fatherhood research is, perhaps now more than ever, firmly entrenched within a powerful and complex social context.

On a personal note, this author welcomes the recognition of values as a long overdue inevitability of conducting research in the social sciences. In keeping with the post-modern shift away from radical objectivity, I feel inclined to acknowledge my agreement with researchers such as Hawkins, Dollahite, Doherty, and Levine. As a father of three and a child of my own father, I share with these researchers a personal bias that fathers are, or rather ought to be, a vitally important part of their children’s lives; and that children greatly benefit from an involved relationship with a responsible father.

Historical Context of Paternal Involvement Research

The history of fatherhood research could be construed as an increasing awareness
of the erroneous presuppositions which have guided past studies. From the earliest scientific efforts to understand the role of fathers in families, researchers were startled to learn that their oversimplified hypotheses of fatherhood, heavily informed by cultural ideals, were not confirmed by empirical data. For example, early researchers hypothesizing that fathers made a significant contribution to sons' gender-role development were surprised to learn that measures of masculinity for fathers and sons were uncorrelated (Lamb, 1981). To be sure, researchers have learned much about fatherhood. But this knowledge was created as a result of iterative refinements in the questions, hypotheses, and methods put forward by researchers only after they were made increasingly aware of what they did not know, and had taken for granted, about fatherhood.

Consequently, although a comprehensive review of fatherhood research would require multiple volumes, cutting-edge researchers in this field are still in the process of calling for and proposing conceptual and operational definitions of paternal involvement (Doherty et al., 1998; Dollahite et al., 1997; Hawkins & Palkovitz, 1997; Palkovitz, 1997). In short, fatherhood researchers have learned much, but still know relatively little.

Initial investigations of fatherhood aimed at understanding paternal influence as an antecedent (i.e., of child development) rather than a consequence (i.e., of individual, familial, or cultural factors). Lamb (1986) and Pedersen (1987) presented partially overlapping accounts of the research traditions which composed these early studies and how they contributed to understanding of paternal influence. A framework based on both authors' accounts identifies the following three research traditions: correlational studies,
father-absence studies, and studies of increased paternal involvement. Although a
detailed review of these traditions is not prerequisite to the current study, the overall
contribution of these traditions is an important aid to better understanding current
research.

Correlational Studies

Many early studies of paternal influence examined correlations between paternal
characteristics or characteristics of the father-child relationship and child characteristics.
Informed by cultural images prevalent between the 1940s and the 1960s, most of these
studies focused on the correlation between fathers' and sons' masculinity. Other topics
of study included paternal characteristics such as authoritarianism and father-child
relationship characteristics such as warmth, closeness, and hostility.

Surprisingly for the time, researchers were unable to document consistent
correlations between fathers' and sons' masculinity (Lamb, 1986). But focusing on the
quality of the father-child relationship proved more empirically rewarding. Father-child
relationship characteristics of warmth and closeness proved to be important correlates of
sex-role development, achievement, and psychosocial adjustment (Biller, 1971; Radin,
1981). Researchers were again surprised: warmth and closeness were traditionally seen
as feminine characteristics that were associated with maternal influence. In short, the
long-term contribution of this research tradition was the conclusion that mothers and
fathers influence children in similar—rather than dissimilar—ways; and that fathers
influence children via their characteristics as *fathers*, rather than their characteristics as *men* (Lamb, 1986).

**Father Absence Studies**

At the height of the correlational fatherhood studies of the 50s, researchers turned their attention to understanding fatherhood by designing studies in which families with fathers were compared to families without fathers. Although highly controversial, the results of these studies indicated that boys growing up without fathers were more likely to develop problems with respect to sex-role and gender-identity, school performance, psychosocial adjustment, and aggressive behavior (Biller, 1974).

These studies were eventually criticized for their lack of rigor and lack of appropriate controls, including SES (Herzog & Sudia, 1973). As Pedersen (1987) pointed out, what constitutes an appropriate control for SES becomes problematic when one considers the "breadwinner" role of fatherhood. Father absence studies presupposed that the only difference between intact families and father-absent families was the presence or lack of a father. But most father-absent families occurred as a result of divorce, which often exposed children to additional influences including some or all of the following shown to create negative outcomes for children: the absence of a co-parent, feelings of abandonment, economic stress, emotional stress, and pre-divorce (and post-divorce) marital conflict (Amato, 1993; Amato & Keith, 1991; Hetherington, Cox, & Cox, 1982; Lamb, 1987). Consequently, poor child outcomes documented in father absent families may not result from the absence of the father.
Such criticism led to acknowledgment of a more fundamental problem underlying the logic of the design of these studies: the assertion that a deficit-based research paradigm can provide meaningful information about the actual behavior and influence of fathers in families rests precariously upon speculation and inference (Pedersen, 1976). In other words, these studies made inferences about the role of fathers in child development based on data from families in which fathers' multiple roles go unfulfilled and may have been inappropriately fulfilled. Consequently, Lamb (1986) summarized the contribution of this research tradition by suggesting that it facilitated recognition of the need to assess fathers' multiple roles as breadwinners, parents, and husbands in understanding their influence on children's development.

**Studies of Primary-Caregiving and Role-Sharing Fathers**

A third and final research tradition identified by Lamb (1986) involves the opposite of father-absence studies: understanding paternal influence by comparing "traditional" families with families in which fathers either shared (at least 40-45%) or were primarily responsible for in-home child care. Reviewers of these studies concluded that children with highly involved fathers demonstrated increased cognitive competence, greater internal locus of control, increased empathy, and decreased sex-stereotyped beliefs (Lamb, 1986, 1997a; Lamb, Pleck, & Levine, 1985). Russell's (1986) review of this research expressed far less confidence in any general conclusions, citing the limited number of studies—"all of which have one or more major methodological inadequacies" (p. 42). Nevertheless, Russell concluded, contrary to Lamb, that the most remarkable
pattern of findings of this research tradition was the absence of any dramatic positive or negative effect on children hypothesized by researchers. In other words, Russel made the same assertion about the contribution of this fatherhood research that Lamb made about early correlational studies: paternal and maternal influences are more similar than dissimilar.

In summarizing the contribution of this research tradition, Lamb (1986) cautioned that the benefits of increased paternal involvement may have more to do with the context accompanying such involvement. For example, increased paternal involvement resulting from unwelcomed unemployment is likely to have less beneficial consequences for children (Russel, 1986). Favorable child outcomes may result not so much from the time fathers spend with children but how fathers feel about the increased involvement as well as how their partners feel about, and benefit from, their involvement. Lamb (1986) concluded that the contribution of this research was to highlight the need for a broader contextual understanding of the influence of fathers in child development by taking into account the complexity of family dynamics surrounding fathers’ multiple roles within the family.

Paternal Involvement

During the 80s, researchers turned their attention to addressing the growing social concerns that children were not getting enough fathering, and fathers were not doing their fair share to reduce the childrearing burdens of working mothers (Pleck, 1997). Research significantly shifted focus from the quality of fathers and or fathering (i.e., masculinity,
warmth, hostility, playfulness), to the quantity of fathering. Paternal involvement—as opposed to the mere presence of a father, or the quality of his behaviors in the home—emerged as a “new” research interest with its own unique conceptual, operational, and methodological issues.

Lamb, Pleck, Charnov, and Levine (1985, 1987) proposed a content-free construct of paternal involvement—and parental involvement in general—composed of three unique elements: engagement, availability, and responsibility for the child’s care—as opposed to just the performance of care. Within Lamb and others’ conceptual framework, paternal engagement referred to direct interaction with the child, such as child care, leisure, or play. Availability represented the fathers potential interaction with the child as defined by the amount of time the father is present or accessible to the child. Responsibility reflected the amount of time the father spent making sure the child was cared for: selection and management of alternative child care, scheduling appointments with pediatricians, participating in key decisions, and availability at short notice. Such a conceptualization recognized that paternal involvement is more than direct interaction with the child—such as child care, leisure, or play. Parents also spend time making arrangements for the child’s non-parental care, and one or both parents have to be accessible to their child even when not engaged in direct interaction.

Lamb, Pleck, Charnov, and Levine’s (1985, 1987) framework became the guiding construct of paternal involvement research. Researchers interested in the social questions of the day adopted Lamb and others’ framework to study how much fathering children were getting and how much fathers were doing in relation to mothers. Recently, Pleck
(1997) conducted a comprehensive review and analysis of studies during the 1980s and 1990s investigating the answers to these questions about father involvement.

**Paternal Responsibility**

Paternal responsibility is the least researched of Lamb and others' three components of paternal involvement. Although there is some indication that average levels of paternal responsibility are slowly increasing (Robinson, Andreyenkov, & Patrashev, 1988), the limited studies available suggest that fathers' average share of responsibility is considerably lower than mothers'—even when mothers are employed full time (Lamb et al., 1987; Leslie, Anderson, & Branson, 1991; McBride & Mills, 1993; Peterson & Gerson, 1992). Similarly, research indicates that fathers' average share of paternal responsibility is lower than their share of engagement or availability (McBride & Mills, 1993). Pleck (1997) indicated that the limited studies to date, focusing primarily on responsibility for making alternative child-care arrangements, have "yet to identify any child-care task for which fathers have primary responsibility" (p. 73).

**Engagement and Availability**

Averaging across studies from the 1980s and 1990s, Pleck (1997) reported that fathers' proportion of engagement was 43.5% that of mothers, while accessibility was 65.6% that of mothers. Pleck noted that these figures are somewhat higher than corresponding data from the 1970s and early 1980s.

With respect to absolute levels of paternal engagement and accessibility, Pleck (1997) found that fathers were more engaged and accessible with young children than
with adolescents. According to Pleck, the best available estimate of paternal engagement for fathers of young children was 1.9 hours per weekday, and 6.5 hours for Sundays. For fathers of adolescents, Pleck's best estimate was 0.5 to 1.0 hours per weekday, and 1.4 to 2.0 hours for Sundays. Pleck also found that fathers of adolescents spent more time with sons than with daughters. As might be expected given the nature of the constructs, Pleck also found that absolute levels of accessibility were higher than engagement: ranging from 2.8 to 4.9 hours per day for children and 2.8 hours per day for adolescents.

Positive Parental Involvement

By focusing on the quantity of paternal involvement, researchers accurately documented contemporary levels of paternal involvement both in terms of their absolute values as well as their relation to levels of maternal involvement. However, as researchers attempted to draw connections between measures of the quantity of paternal involvement and child outcomes, an implicit shift occurred toward qualitatively positive paternal involvement (Pleck, 1997). In designing measures and studies capable of discovering any association between the quantity of paternal involvement and improved child outcomes, researchers implicitly gravitated toward aspects of paternal involvement which would—based upon tacit theoretical considerations—more likely yield favorable child outcomes. Pleck (1997) has drawn attention to this shift and suggested that positive paternal involvement is a more helpful construct in terms of its research potential.

Palkovitz (1997) identified six misconceptions which resulted from the wide spread adoption of Lamb, Pleck, Charnov, and Levine's (1985, 1987) conceptual
framework of parenting. Two of Palkovitz's critiques are particularly important. First, more involvement is not necessarily better. Rather, one would hypothesize that more positive involvement is better. Second, positive involvement is multidimensional and dynamic: fluctuating across time and context within families. Consequently, one particular aspect of involvement, such as time spent in vocalization, should not be taken as a comprehensive, static measure of paternal involvement.

**Conceptual Frameworks of Positive Involvement**

Although researchers have begun to explicitly examine, and implicitly make corrections for, limitations of the previous paradigm, no single construct has managed to define the current research interest in quantity and quality of paternal involvement. In truth, fatherhood research has been short on systematic theory building since its inception. Previous research was characterized by exploration of empirical relationships between variables chosen for their social salience, accompanied by limited conceptual scaffolding (Doherty et al., 1998; Dollahite & Hawkins, 1996). However, current interest in fatherhood research accompanied by a shift in interest toward qualitatively positive involvement has created an environment which seems more conducive to theory building. Recently three theories of positive paternal involvement have been proposed: Palkovitz's *involved fathering* (1997); the framework of *responsible fathering* proposed by Doherty, Kouneski, and Erickson (1998), and the conceptual ethic of *generative fathering* originally proposed by Dollahite and others (1997) and expanded in Dollahite and Hawkins (1996). Although these frameworks were not incorporated in the present study.
a brief overview provides useful insights into the current focus and direction of fatherhood theory and research.

**Involved fathering.** Palkovitz (1997), focusing primarily on the impact of involvement on fathers’ adult development, proposed a comprehensive model of positive paternal involvement referred to as *involved fathering*. Palkovitz’s conception of *involved fathering* portrayed the vast complexity of human action which falls under the definition of positive paternal involvement. Composed of 15 dimensions (e.g., teaching, caregiving, providing), three domains (cognitive, affective, behavioral), seven continua (e.g., appropriateness, observability, proximity), and four factors—consisting of contextual and temporal variations—*involved fathering* provided a greater appreciation for the complexity of paternal involvement in all its forms and contexts.

Yet, Palkovitz’s (1997) emphasis on adult development led him to tacitly adopt the father’s perspective as the locus and criterion of involvement. Many aspects of Palkovitz’ model, such as the proximity, salience, and affective quality of involvement were defined in terms of the parental perspective. Consequently, Palkovitz’s *involved fathering* is likely to produce a richer account of men’s subjective understandings of fatherhood. Yet as applied to the task of establishing connections between paternal involvement and child outcomes, defining positive involvement in terms of the father’s perspective becomes problematic.

Positive involvement is grounded in the supposition that some forms of involvement are more responsive to the child’s developmental needs, and therefore to child outcomes. Consequently, positive involvement must be linked to improved child
outcomes either logically, intuitively, or through already existing empirical research in child development. Yet, by grounding involvement in the paternal perspective, Palkovitz included much in his framework which, like purely quantitative involvement, is not necessarily connected to positive child outcomes. For example, Palkovitz (1997) provided the example of a father who thinks about and misses his children while he is away on a business trip as an example of non-proximal, cognitive, and affective involvement. Yet, children of an absentee father who frequently misses them are not necessarily likely to have better outcomes than children of an absentee father who is not as affectively involved. In sum, Palkovitz’s framework proves more helpful as a guide for research examining the positive influence paternal involvement may have for fathers, and less helpful as a guide for researchers examining the positive influence of paternal involvement for children.

**Responsible fathering.** Doherty et al. (1998) presented a conceptual framework of positive paternal involvement which they refer to as *responsible fathering*. Building upon Levine and Pitt’s (1995) four domains of responsible fathering—establishing legal paternity, presence vs. absence, economic support, and involvement with children—Doherty et al. proposed a systemic, ecological framework capable of organizing the totality of contextual factors which constitute fathering. Centering on the father-child relationship, the framework is useful in examining how factors within the family—such as the coparent relationship, the mother, the child, and the mother-child relationship—as well as a host of factors outside the family influence the father-child relationship. Based on
their review, the authors argued that fathering, more so than mothering, is influenced by such factors.

Unlike Palkovitz’s (1997) focus on adult development of fathers, Doherty et al. (1998) were more concerned with the development of positive father-child relationships; their explicit assumption and value stance was that “children need and deserve active, involved fathers throughout their childhood and adolescence” (p. 279). Consequently, the authors implicitly assumed that responsible fathering has a positive, meaningful influence in the lives of children. Doherty et al. argued that children’s need for responsible fathering is grounded in more general needs for predictability, nurturance, appropriate limit setting, economic security, a cooperative relationship between parents, and varying other needs across the developmental stages of childhood and adolescence. However, by focusing their model on the father-child relationship and assuming that responsible fathering has a positive influence upon children, Doherty et al. effectively skirted the questions of how, under what conditions, and to what degree fathers positively influence their children—it is simply assumed that they do.

As with Palkovitz’s (1997) framework, the explanatory objective of responsible fathering is slightly off the mark for researchers focused on establishing connections between paternal involvement and child outcomes. By relegating the connection between paternal involvement and positive child outcomes to the realm of assumptions, Doherty et al. (1998) located such phenomena beyond the explanatory power of their framework.

Generative fathering. Although primarily focusing on fathers’ adult development, Dollahite, Hawkins, and their associates (Dollahite & Hawkins, 1996; Dollahite et al.,
proposed a framework of paternal involvement which distinguished positive involvement from other forms of involvement in terms of various positive outcomes for the father and the child. Drawing upon the psychosocial developmental framework of Erikson (1950, 1959), the authors argued that both adult fathers and their children are at stages of development in which they may benefit from appropriate involvement with each other. With reference to Erikson (1950, 1959) and Snarey (1993), Hawkins and Dollahite called their framework *generative fathering*. The authors classified their framework as a *conceptual ethic* of fathering in that it suggests what is possible rather than describing what is real.

*Generative fathering*, at the most fundamental level, was defined as “fathering that meets the needs of children by working to create and maintain a developing ethical relationship with them” (Dollahite et al., 1997, p. 18). The most recent expansion and revision of the framework presupposed specific needs of children (e.g., security and continuity, resources and opportunities, attention and accommodation) resulting from seven challenges of the human condition (e.g., dependency, scarcity, change) loosely tied to Erikson’s first seven stages of psychosocial development (Dollahite & Hawkins, 1996). These needs in turn were conceptually linked to seven types of *generative work* (e.g., ethical work, stewardship work, developmental work) fathers can, and ought to, perform to address children’s needs. These seven types of *generative work* are in turn linked to seven desired results for fathers and children (e.g., involved fathers and secure children, responsible fathers and confident children, responsive fathers and purposeful children).
In this way, *generative fathering* establishes firm conceptual links between children's needs, fathers' involvement, and children's outcomes.

Yet as a framework, *generative fathering* is in its infancy. Further, because it is a conceptual ethic—describing what is possible rather than what is real—the authors were less restricted by the burden to tailor the framework to fit available empirical evidence or clinical experience. Consequently, the authors have yet to refine the model through operationalization and empirical evidence. As such, the model currently includes definitions outlined in the most general terms, as well as relationships between variables not yet addressed in scientific research.

In sum, three conceptual frameworks were recently proposed to guide and organize research on positive paternal involvement. One, Palkovitz's (1997) *involved fathering*, focused on positive involvement in terms of its impact in the lives of fathers. A second, Doherty and others' (1998) *responsible fathering*, focused on positive involvement in terms of the factors which influence its likelihood. Finally, Dollahite and Hawkins' (1996) conceptual ethic of *generative fathering* focused on positive involvement in terms of developmental benefits for both fathers and children. These three frameworks reflect the current interest in, and direction of, research regarding positive paternal involvement. Although more specifically addressed in Doherty and others' framework, all three models are a response to the current social concern that fathers should become more involved in the lives of children. The social questions of the 80s regarding whether or not children were getting enough fathering, and whether or not fathers were doing their fair share, seem to have been answered with a resounding "no."
Consequently, researchers have turned their attention to the task of understanding the factors which encourage and inhibit positive paternal involvement (e.g., Doherty and others' responsible fathering), as well as providing conceptual frameworks that motivate fathers in the direction of increased paternal involvement (e.g., generative fathering characterized past conceptualizations of fathers as deficit perspectives).

On the whole, fatherhood researchers continue to accept as a "given" that fathers do or can have a positive influence in the lives of children. In response to current statistics indicating the limited quantity of father-child involvement, researchers seem to have shifted their attention to efforts aimed at increasing such involvement. As such, the driving force of fatherhood scholarship has shifted hands from child developmentalists to adult developmentalists and family scholars. Consequently, research attempting to document the extent to which paternal involvement does or can have a positive influence in the lives of children has been eclipsed by the more immediate social concern to increase and improve father's involvement with their children.

**The Assumption of Meaningful Paternal Influence**

The assumption that fathers influence children in meaningful ways yet to be documented through empirical research is neither new nor unfounded. Lewis (1997) suggested "that as early as the 1970s wave of fatherhood research ... there was a strong conviction that men must have an influence on their children's development" (p. 122). Lewis explained that the major theories of the day—psychoanalysis and social learning theory—stressed the importance of the same sex parent. Furthermore, the method
commonly used to explore paternal influence lent itself to speculation that fathers made important, unique contributions to their children's development. Specifically, past researchers commonly observed mother- and father-child interaction in an attempt to document differences between mothers and fathers, differences which would justify speculation of unique paternal influences. For example, research examining differences in parent-child interaction with infants characteristically focused on the minute details of face-to-face interactions, while research examining parental differences with preschoolers characteristically focused on parent-child linguistic interaction (Lewis, 1997). Where researchers were successful in documenting even slight differences in father- and mother-child interaction, they commonly speculated about the likelihood of paternal effects.

Yet subsequent research often failed to link such differences between mothers and fathers to specific child outcomes, perhaps due to the fact that father-mother differences are often small (Lamb, 1997b; Lewis, 1997). As Lewis's (1997) review of research addressing fathers and preschoolers concluded, "If there are differences between mothers and fathers, these are not easy to measure and do not have demonstrable effects on the child's development, as was once simply assumed in the child development literature" (pp. 141-142). For example, fathers' speech directed toward children is characteristically, slightly different from that of mothers, yet researchers have been unable to determine if such subtle differences affect children (Lamb, 1997b; Lewis, 1997).

Lamb (1997b) suggested that "some of the speculation concerning paternal influences focus less on the specific differences in maternal and paternal styles than on the fact that they differ in many ways" (p. 117). Citing examples relevant to infant
development, Lamb explained that infants may more readily learn to recognize the characteristic features of mothers when frequently exposed to characteristically distinct features of fathers; or mothers’ and fathers’ different types of interaction may increase infant awareness of social styles and facilitate perceptual sensitivity to such differences, thus contributing to the development of social competence.

As a result of these specific and general differences between mothers and fathers, researchers have come to assume, believe, or otherwise suspect that fathers wield subtle yet real influence in the lives of their children. However, as will be shown, findings from paternal involvement studies are not unambiguously conclusive.

Positive Paternal Involvement and Older Research

Although research emphasis on positive paternal involvement is a relatively recent phenomenon, older research on paternal influence provides significant insights as to the role positive involvement may play in the lives of children. Specifically, early correlational studies and studies of primary caregiver fathers and role sharing fathers have generated findings which, hypothetically, could be attributed to the effect of positive paternal involvement. Consequently, before considering recent research specifically addressing the influence of positive paternal involvement in the lives of children, evidence from these past traditions of research is reconsidered.

Early correlational studies. Before the quantity of paternal involvement became a salient research interest, early correlational studies, similar to current positive involvement research, emphasized the quality of parent-child interaction. As previously
mentioned, early correlational studies documented the influence of various paternal characteristics on a range of child outcomes (Biller, 1981; Hoffman, 1981; Radin, 1981). Typically, paternal characteristics have been found to impact children even when fathers are relatively uninvolved, and have subsequently been interpreted as distinct sources of influence in relation to paternal involvement (Pleck, 1997).

However, in addition to dealing with relatively fixed paternal characteristics (e.g., masculinity, locus of control) this category of research also included studies of father-child relationship/interaction characteristics which bear a striking resemblance to what one might consider components of positive paternal involvement (e.g., warm, affectionate interaction). Indeed, these relationship characteristics were often operationally defined through observation of father-child interactions. Consequently, although such studies of father-child relationship characteristics did not address quantitative levels of involvement per se, they may have inadvertently addressed qualitative dimensions of involvement. For example, Radin (1976) observed fathers interacting with their 4-year-olds and found a positive association between father’s nurturing behaviors and children’s intelligence test scores in both cross-sectional and longitudinal analysis. Studies such as Radin’s blur the distinction between early correlational research and recent studies of positive paternal involvement. As such, studies operationalizing paternal characteristics in the form of interactional styles such as warmth, nurturance, and restrictiveness have some bearing on the effect of positive paternal involvement in the lives of children.

Much of the research examining the influence of fathers on children’s cognitive development, for example, occurred in the heyday of these early correlational studies.
Such research characteristically employed cross-sectional data to document associations between paternal interaction characteristics (such as warmth) and child outcomes in the cognitive domain (such as intelligence test scores and academic performance).

In her review of studies from the 50s through the 70s, Radin (1981) found several trends in the relationship between paternal characteristics and children’s cognitive/academic development. Of particular note, Radin concluded that paternal nurturance was positively associated with cognitive competence for sons but not daughters; while paternal interest in academic progress was associated with intellectual development for daughters, but not sons. Furthermore, authoritarian paternal behavior and intense paternal involvement in problem-solving activities were negatively associated with academic competence for both sons and daughters.

Children’s sex-role development is another area in which the findings of early correlational studies may, to some degree, reflect the consequences of positive paternal involvement. Although the paternal characteristic of masculinity was shown to be uncorrelated with sons’ masculinity, the quality of the father-son relationship proved an important correlate of masculinity. As Lamb (1997a) explained in his review:

> Boys seemed to conform to the sex-role standards of their culture when their relationships with their fathers were warm, regardless of how “masculine” the fathers were, even though warmth and intimacy have traditionally been seen as feminine characteristics. (p. 9)

Such findings are consistent with research indicating that children of homosexual fathers are no more likely to be homosexual, effeminate, or maladjusted (Patterson & Chan, 1997).
In summary, to the degree that characteristics of father-child interaction can be construed as dimensions of positive paternal involvement, early correlational studies suggest that such positive involvement may benefit children in terms of their cognitive and sex role development, while negative paternal involvement—in addition to the lack of positive paternal involvement—may prove a deficit to children’s cognitive development.

**Studies of primary-caregiving and role-sharing fathers.** In response to the early research tradition of father absence studies—which attempted to understand the influence of fathers by examining the outcomes when fathers were less, or not at all, involved—studies of primary-caregiving and role-sharing fathers constituted an innovative attempt to examine the effects of increased paternal involvement. In an era when researchers were interested in understanding involvement as a purely quantitative concept, studies of primary-caregiving and role-sharing fathers were deemed suspect by reviewers based on the likelihood that the subjects of these studies were different from typical fathers in aspects other than level of involvement (e.g., Lamb, 1986; Russel, 1986). Lamb (1986) suggested that the impact of high paternal involvement in these studies may have been confounded with at least two other phenomena in the families studied: fathers desired the higher level of involvement, and mothers desired the higher level of father’s involvement.

Setting aside the question of how mothers’ greater satisfaction with child-care arrangements and the marriage may have influenced children’s outcomes in these studies, Lamb’s (1986) suggestion about fathers’ desire for greater involvement is significant. As Lamb put it, “What matters is not so much who is at home, but how that person feels
about being at home, for the person’s feelings will color the way he or she behaves with the children” (p. 17). In effect, Lamb suggested that the quality of paternal involvement in studies of primary-caregivers and role-sharing fathers was likely confounding the effects of increased paternal involvement. Specifically, the quality of involvement in these studies may have been uncharacteristically positive. Consequently, this research tradition is worthy of reconsideration in light of the current interest in positive involvement.

As previously mentioned, paternal involvement in studies of primary-caring and role-sharing fathers has been linked to children’s greater cognitive competence, internal locus of control, greater empathy, and less gender-role stereotyping (Lamb, 1986; Radin, 1994). This commonly cited conclusion (e.g., Lamb, 1997a; Pleck, 1997) was based on evidence from five studies conducted in three different countries; and all, according to Russel (1986) had “one or more major methodological inadequacies” (p. 42). However, rather than focus on the validity or generalizability of findings, the studies are considered here in terms of the connections they suggest between positive paternal involvement and children’s development.

First, of the two studies which examined cognitive outcomes, one confirmed that fathers who were more involved went to greater lengths than fathers in traditional families to stimulate their children’s cognitive growth (Radin, 1982). In other words, fathers in the two groups differed not only in terms of the quantity of involvement, but also the quality. Specifically, fathers with the more cognitively “positive” involvement had children with better cognitive outcomes.
The second item of interest in these studies involves the finding of improved empathy for children. Both Radin (1982) and Sagi (1982) examined the relationship between primary-caregiving and role-sharing fathers and children's level of empathy. Radin's study, conducted in the U.S., found no relationship, while Sagi, studying Israeli children, found a positive association. The studies provided a possible explanation for this difference via fathers' self-report and children's perceptions of fathers. In the Radin study, fathers in the nontraditional, high-involvement group were no more nurturing than fathers in traditional families. Furthermore, children in the high-involvement group perceived their fathers as more punitive when compared to the children from traditional families. This trend was reversed in the Israeli families: Israeli fathers in the high-involvement group where much more nurturing than traditional fathers or fathers in the U.S.; and their children perceived them as less punitive when compared to children in traditional families. Although Israeli fathers also reported significantly higher levels of involvement, differences in the quality of involvement provide a more compelling explanation of conflicting results.

In accord with Lamb's (1986) suggestion that quantitative and qualitative aspects of involvement may have been confounded in studies of primary-caregiving and role-sharing fathers, these studies do suggest connections between positive paternal involvement and child outcomes. Specifically, when fathers are more nurturing and take greater effort to cognitively stimulate children, children benefit through increased empathy and improved cognitive development.
Positive Paternal Involvement and Child Outcomes

The following section focuses on research addressing what Pleck (1997) has referred to as positive paternal engagement (i.e., positive paternal involvement restricted to direct father-child interaction). An important caveat is that some of the studies reviewed here deal with purely quantitative measures of involvement while others more accurately reflect positive involvement. Further complicating matters, the operational boundary between involvement and positive involvement is not always easily discernible. For example, one could argue, as Pleck (1997) did, that the frequency of father-child play is a measure of positive paternal involvement—presumably based on findings that play is developmentally stimulating to young children, and that such interaction reflects a qualitative distinction not included in content-free measures of shared time.

Alternatively, Dollahite and Hawkins (1996) might argue that positive father-child play is not accurately reflected in frequency data—based upon their assertion that positive play takes effort (e.g., fathers must work at winding down from stressful jobs, resist the urge to overcorrect while teaching a new game, avoid over-competitiveness). Consequently, where possible, attention will be given to the form of involvement reviewed: purely quantitative versus positive.

Finally, because most studies of father involvement incorporate correlational data, research findings must be interpreted with caution. An underlying premise of the current study is that children develop in family systems in which all parties influence and are influenced by one another. Consequently, cross-sectional findings suggestive of paternal
influence may not always be as they appear. For example, Clarke-Stewart (1978) observed 15- to 30-month-olds and found that children’s intellectual competence was correlated with measures assessing the quality of both maternal and paternal involvement; yet longitudinal analysis of these relationships indicated that maternal involvement affected the children’s development which in turn affected paternal involvement. In other words, although paternal involvement is a determinant of variation in the development of children, one must not forget that it is also a consequence of variation in children and families (e.g., Bell, 1968; Sameroff & Chandler, 1975).

Attachment. The quantity of paternal involvement during infancy has been shown to yield only minimal direct effect on infant attachment (Lamb, 1987, 1997a; Lamb, Pleck, Charnov, & Levine, 1985). This lack of findings has been attributed to the likelihood that fathers’ interaction styles are more important than purely quantitative measures of interaction in determining attachment outcomes (Lamb, 1987, 1997b; Lamb, Pleck, Charnov, & Levine, 1985).

This suggestion is typical of the shift from paternal involvement as a purely quantitative variable to more recent conceptualizations of positive paternal involvement. As researchers and reviewers found that purely quantitative measures of paternal involvement failed to account for variations in child outcomes, they speculated that the quality of interactions may explain the variability and account for the lack of findings. Accordingly, Cox, Owen, Henderson, and Margand (1992) found that fathers who spent more time with their 3-month-olds, and who were more affectionate and positive in their attitudes, had more securely attached infants at the end of the first year. Similarly, Jarvis
and Creasey (1991) found that infant-father attachment is more likely to be insecure for fathers reporting high levels of stress, suggesting a possible link via the mediating influence of the quality of father-infant interactions.

Research addressing the effect of infant-father attachment on children’s development has yielded conflicting results. Among infants raised in Swedish non-traditional (primary-caregiver and role-sharing fathers) homes and Israeli kibutzim, secure infant-fathers attachment was positively associated with greater sociability with strangers (Lamb, Hwang, Frodi, & Frodi, 1982; Sagi, Lamb, & Gardener, 1986). Alternatively, Main, Kaplan, and Cassidy (1985) found that infant-mother attachment, and not infant-father attachment, predicted children’s confidence in interacting with a strange adult at age 5-6. Suess, Grossman, and Sroufe (1992) found that the best predictions of 5-year-olds’ play, conflict resolution, and problem behaviors resulted from both infant-mother and infant-father attachment at age 1, with secure attachment to both parents predicting the best outcomes. Finally, Youngblade and Belsky (1992) found that secure infant-father attachment at the end of the first year predicted less synchronous interaction with a close or best friend at age 5. Although contradictory, these studies suggest overall that infant-father attachment plays a secondary role to infant-mother attachment in determining child outcomes.

Fagot and Kavanagh (1993) found, in relation to both parents, that insecurely attached boys—but not girls—had parents who found interaction less enjoyable and became less involved; while the quantity and quality (i.e., sensitivity) of paternal involvement have, in turn, been shown to promote children’s adaptation (Easterbrooks & Goldberg,
Further underscoring the importance of positive involvement, Easterbrooks and Goldberg (1984) found that quality appeared to have a greater effect than the quantity of interactions.

**Sex-role and gender identity development.** Previous reviewers have also speculated that fathers affect sex-role and gender identity development, particularly in boys (Bronstein, 1988; Lamb & Stevenson, 1978; Parke, 1979). Such speculation was based, in part, upon evidence that fathers commonly give preferential treatment to sons from birth (Pleck, 1997). However, more recent large-scale reviews and meta-analyses have failed to support such speculation, finding that fathers and mothers respond to child behavior in consistently similar ways, and fathers are no more likely than mothers to be involved in or promote sex-appropriate behavior (Lytton & Romney, 1991; Siegal, 1987). For example, Fagot and Hagan (1991) failed to find consistent differences between fathers’ and mothers’ reactions to their children’s sex-stereotyped behavior at 12, 18, and 60 months of age.

Alternatively, Lewis (1997) cited evidence that, in public settings, fathers do behave differently than mothers with respect to their treatment of sons and daughters. Specifically, fathers are more likely than mothers to encourage sex-typed behavior in parks, playgrounds, and other public settings. Lewis suggested that past research has paid too much attention to observations of in-home paternal behavior. Lewis speculated that the public display of paternal behavior may be a more significant influence on the sex-role and gender identity development of children.

**Cognitive development.** Motivated in part by findings that male infants in single-
parent homes were less cognitively competent than those in two-parent families, previous research also has addressed the influence of paternal involvement on infant cognitive and motivational development (Pedersen, Rubenstein, & Yarrow, 1979). Yarrow et al. (1984) found that paternal stimulation had a particularly salient influence in the development of boys’ mastery motivation during the first year of life. Likewise, Nugent (1991) found that positive paternal involvement during the first month of infancy had an independent association with cognitive functioning at one year. Gottfried, Gottfried, and Bathurst (1988) found statistically significant relationships between positive paternal involvement and WISC IQ scores and academic achievement among 6- and 7-year-olds in both cross-sectional and longitudinal analyses. Radin, Williams, and Coggins (1994) found a positive association between Native American fathers’ level of involvement in child rearing and children’s academic functioning in school. Using data from a British national cohort study of over 13,000 five-year-olds, Osborn and Morris (1982) found a positive association between children’s performance on tests of spatial motor ability and verbal IQ, and four aspects of paternal involvement: providing care while mother was absent, putting the child to bed, dropping off or picking up the child from nursery or preschool, and reading to the child.

Clarke-Stewart (1978) and Hunter, McCarthy, MacTurk, and Vietze (1987) found, in longitudinal analyses, that qualitative and quantitative aspects of father-child interaction (i.e., amount of interaction, engagement in play) were not predictive of children’s cognitive competence, although aspects of mother-child interaction were. Clarke-Stewart’s study was particularly noteworthy in providing a possible explanation
for such findings: paternal variables—including engagement in play and amount of interaction—were correlated with child cognitive competence although longitudinal analysis revealed them to be consequences, rather than determinants, of variation in child outcomes. Such findings suggest the possibility that paternal engagement in play and other aspects of involvement is elicited once children’s developing capacities are sufficiently proficient (Lewis, 1997).

**Language development.** In the same way that reports of preferential treatment of infant boys by fathers led to speculation that fathers affect sex-role and gender development, differences in fathers’ and mothers’ language characteristics when speaking to preschoolers led to speculation that paternal linguistic communication uniquely influences children’s linguistic development (Gleason, 1975; Rondal, 1980). Although fathers do use “child directed speech” similar to mothers, they tend to use more imperatives, attention-getting utterances, state sentences, and in other ways breach the modifications of simplified language (i.e., motherese) when interacting with their preschool children. Such findings led Gleason (1975) to suggest that fathers may act as a “bridge” to the outside world. In other words, whether through intentional or unintentional efforts, fathers may stretch their children’s linguistic skills.

According to Lewis (1997), Gleason’s “bridge” hypothesis had considerable impact on research examining father-child interaction during the preschool years. Since Gleason, the majority of studies concentrating on paternal interaction with preschoolers have focused on parent-child language. Subsequent research has supported the “bridge” hypothesis in that most studies reported some differences between fathers’ and mothers’
speech (Lewis, 1997). However, specific outcomes in children’s language have not been clearly linked to these differences (Lamb, 1997b).

**Social development.** MacDonald and Parke (1984) found that mothers’ verbal interaction and fathers’ physically playful, affectionate, and socially engaging behavior were positively correlated with later popularity of 3-year-olds, particularly boys. As with Radin’s (1981) review of research linking authoritarian paternal behavior and intense paternal involvement in problem-solving activities with children’s reduced academic competence, MacDonald and Parke also found that more directive fathers had children who were less popular with peers. Subsequently, MacDonald (1987) conducted in-home observations of boys who were neglected in nursery school and found that they engaged in less emotionally stimulating and physical play with their fathers. Likewise, Youngblade and Belsky (1992) found that less positive paternal involvement and paternal negativity when children were 3 years old predicted negative peer interactions with a close or best friend at age 5.

Mosley and Thomson’s (1995) analysis of the National Study of Families and Households found that positive paternal engagement is positively associated with decreased frequency of externalizing and internalizing symptoms and increased sociability among children 5-18 years of age. Further emphasizing the trend of negative outcomes linked to high paternal control, the authors found that high paternal control was positively associated with increased symptoms and decreased sociability. The study also found a positive relationship between positive paternal involvement and decreased school behavior problems among boys and increased self-direction among girls. Mosley and
Thomson's study is noteworthy in that it included measures of positive maternal involvement and was thus able to document a unique contribution for positive paternal involvement. Because the evidence documenting unfavorable outcomes for negative paternal involvement in Mosely and Thomson's study is based on cross-sectional analysis, one might conclude that high control was a parental response to negative child behavior. However, Pleck (1997) pointed out that the study discredits such a conclusion by including, among the findings, negative child outcomes that do not normally elicit increased parental control (e.g., internalizing symptoms and decreased sociability and self-direction).

Studies incorporating data from other cultural/subcultural groups have also provided evidence of the influence of positive paternal involvement on social outcomes. Radin and others' (1994) study of Native American fathers found a positive association between level of involvement in child rearing and children's social functioning in school. Gottfried and others' (1988) study found statistically significant relationships between positive paternal involvement and social maturity among six and seven year olds. Based on studies of Australian families, Amato (1987) found that positive paternal involvement was positively related to self-control, self-esteem, life skills, and social competence in elementary age children and adolescents.

In sum, evidence exists to support the conclusion that positive paternal involvement impacts children's development in meaningful ways. Some research has relied upon, and failed to confirm, differences between fathers' and mothers' parental behavior; while reliance upon cross-sectional studies has confused the direction of causal
linkages between paternal involvement and child outcomes. However, evidence suggests that fathers positively impact children's development when their involvement is characterized by playful, affectionate, nurturing, interaction, and an absence of excessively restrictive and controlling behavior. Such a conclusion is consistent with studies of parenting styles indicating that optimal child outcomes occur in families where parents (most of this research is based on maternal behavior and/or reports) display high levels of warmth and support, and avoid excessive psychological and behavioral control (Barber, Olsen, & Shagle, 1994; Maccoby & Martin, 1983).

Mothers and Marriages As a Context of Positive Paternal Involvement

The research reviewed thus far typifies the way in which researchers have examined the relationship between paternal involvement and child outcomes in that the father-infant dyad has typically been examined in a contextual vacuum. Past research has commonly ignored the primary family context of children's lives—the mother-infant relationship. Similarly, past research has ignored the most consistent and reliable predictor of unfavorable child outcomes—conflict within the marital or coparent relationship (Lamb, 1997a). Thus, past research has not only failed to control for important influences in children's lives, but has failed to consider how fathers indirectly influence children through their influence on mothers and the marital relationship.

Despite this trend of examining paternal involvement in a contextual vacuum, researchers have long called for the inclusion of a broader family context as a prerequisite to better understanding and uncovering the long presumed influence of fathers on
child development (Grossman, Pollack, & Golding, 1988; Layman, 1961; Lewis, 1997; Lewis, Feiring, & Weinraub, 1981; Lewis & Weinraub 1976; Pedersen, 1981). As early as 1961, Layman suggested: “We can delineate the ideal role of the father in relation to effective functioning of the child only if we consider many variables. These include the role assumed by the mother, the mother-father relationship,...” (p. 107). Despite such pleas, studies of paternal influence on child development typically have not included the marital context and only included the mother-child relationship when it served as the standard with which to contrast quantitative and or qualitative aspects of paternal involvement.

Yet in the United States, the prevailing cultural norm is that fathering and marriage are a “package deal” (Furstenberg, 1988). Whereas mothers are expected to be involved in the lives of their children regardless of the circumstances of their marriage, expectations about men’s relationships with their children are tied to their relationship with the children’s mother. Specifically, the predominant trend for post-divorce fathers is one of nonresidential living arrangements and decreased involvement and financial support over time (Hetherington & Stanley-Hagan, 1997). Similar results have been reported for fathers when marriages are never created: children born outside of marriage almost always reside with their mother, paternity is established in only about one third of nonmarital births, and the pattern of involvement when fathers are initially involved is one of decreased contact over time (Doherty et al., 1998). Consequently, mothers and marriages, or coparent relationships, are the prevailing familial context in the lives of children experiencing paternal involvement.
Including marriages and mother-child relationships as the backdrop of positive paternal involvement introduces a wide range of questions for which empirical evidence is limited or altogether lacking. For example, one might ask any of the following questions. How does positive paternal involvement influence mother-child relationships? Does positive paternal involvement indirectly affect children via the marital relationship? How does positive maternal involvement influence positive paternal involvement? Are negative marital dynamics negatively associated with positive paternal involvement? Does positive paternal involvement interact with positive maternal involvement in their affects on children? The possible range of questions can be organized in terms of three broad categories: questions which conceptualize paternal involvement as a source of family influence, questions which conceptualize paternal involvement as a consequence of family influence, and questions which conceptualize paternal involvement as both a source and a consequence of family influence (i.e., a mediating variable). For practical reasons, this study will only address the first category of available questions: those dealing with paternal involvement as a source of family influence.

**Paternal Involvement as a Consequence of Family Influences**

Prior to considering research relevant to these questions, a brief overview of paternal involvement as a consequence of family influences is in order. Because research and common sense suggest that fathers both influence and are influenced by families, any interpretation of results involving the influence of paternal involvement on mothers and marriages must be informed by research articulating alternative causal explanations.
The impact of marriages on paternal involvement. Belsky (1984) suggested that marital relations can support or undermine the parenting role. When marriages are harmonious (i.e., low in conflict), mother-child and father-child relations are more positive and mothers and fathers are more likely to have similar, shared, and reciprocal roles within the family. Specifically, Cummings and O’Reilly (1997) confirmed that when marriages are harmonious both parents rate their children and their parental role more favorably; both parents speak to their children with more complex sentence structures; there is greater parental agreement regarding problem child behaviors and parenting issues; and parents demonstrate more positive teaching styles, are more responsive, and are more sensitive. Also, when marital quality is high, children close to one parent are more likely to be close to the other parent (Booth & Amato, 1994). Given attachment research indicating a “hierarchy of internal working models in which the mother stands foremost” (Main et al., 1985), one would suspect that closeness to the secondary parent must more often involve the father-child relationship.

Alternatively, Cummings and O’Reilly (1997) reviewed research indicating that high marital conflict can have a negative impact on parenting. Specifically, marital conflict has been positively associated with increased parenting stress; lack of parental warmth; inconsistent parenting patterns; observations of parent-child conflict; low parental involvement; parental negativity; insecure parent-child attachment; and increased parent-child conflict. Research does suggest, however, that how marital conflict is expressed and resolved is more important in determining these outcomes than how much marital conflict there is in the home (Davies & Cummings, 1994).
With respect to quantity of paternal involvement, cross-sectional studies yield contradictory results. Specifically, studies are equally divided between those which find high involvement to be associated with good marital quality and those which find it to be associated with poor marital quality (Pleck, 1997). Pleck explained that the association between high involvement and poor marriages is more often found when marital quality is measured in terms of conflict or disagreement, while global measures of marital adjustment more commonly yield associations between high involvement and good marital quality.

The connection between increased quantity of involvement and poor marital quality—reflected by high marital conflict—may result from increased involvement which is not desired by husbands. Specifically, high paternal involvement has been associated with wives' perceptions that husbands should do more (Haas, 1988, as cited by Pleck, 1997); has been shown to have a more negative effect on marital relations in dual earner families (Crouter, Perry-Jenkins, Huston, & McHale, 1987); has been associated with fathers' greater dissatisfaction with wives' time schedule (Baruch & Barnett, 1986); and has been linked to lower marital satisfaction among fathers with traditional sex-role attitudes (McBride, 1989). Taken together, these studies suggest that marital conflict may result when increased quantity of involvement is not desired by fathers, but is necessitated by couple considerations.

Doherty and others’ (1998) recent review suggested that fathering, more so than mothering, is influenced by contextual factors. In congruence with this suggestion, Cummings and O'Reilly (1997) showed that the quality of marital functioning has a
different impact on father-child versus mother-child relationships. Specifically, father-child relationships are more vulnerable to low marital satisfaction (i.e., they suffer a more negative impact) than are mother-child relationships.

The impact of mothers on paternal behavior. Underscoring the importance of the mother-infant relationship as the primary context of paternal involvement, Lewis (1986) cited evidence indicating that short bursts of paternal play in the home usually occur within sight or earshot of the mother. Such a finding suggests the immediate context in which mothers influence fathers. In general, the presence of the mother leads to a reduction in father-child interaction—the same is true of father’s presence on mother-child interaction (Lamb, 1997a). However, in a study comparing traditional and role-sharing fathers in Sweden, only traditional fathers were found to decrease interaction in the presence of mothers (Hwang, 1987).

Research also shows that mothers make efforts to influence fathering, and that fathers look to mothers as models of parental behavior. Maternal gatekeeping is a term sometimes used to reflect “maternal management of paternal involvement, requesting participation but setting the standards and prescribing the process, enlisting ‘help’ but not giving up responsibility” (Hawkins & Dollahite, 1997b, p. 12). A substantial majority of women are satisfied with the status quo and do not want their husbands to be more involved with their children than they currently are (Hochschild, 1995; Pleck, 1982; Quinn & Staines, 1979). Furthermore, women overwhelmingly view breadwinning as a crucial role for fathers; such a view has been shown to constrain paternal involvement in child care as much as do the actual constraints of work time (Gerson, 1993; O’Hare,
Maternal gatekeeping has also been documented in studies of the transition to parenthood and post-divorce fathering (Cowan & Cowan, 1992; Pasley & Minton, 1997).

Research also suggests that fathers in the transition to parenthood look to their wives as models of the parental role. In the Boston University Pregnancy and Parenthood Project, men’s enactment of fatherhood developed as both a reaction to, and identification with, their wife’s adjustment to being a mother (Grossman et al., 1980). In this longitudinal study, fathers commonly reported that they learned to parent from their wives. Corroborating husbands’ perceptions, observational evidence yielded significant correlations between levels of husbands’ and wives’ parenting skills (Grossman et al., 1988). The study also found that maternal locus of control influenced paternal behavior (Grossman et al., 1988). Similarly, Palkovitz (1984) reported that maternal attitudes influenced paternal behavior.

In sum, evidence suggests that positive paternal involvement may be influenced by both mothers and marital dynamics. With respect to marital dynamics, research also suggests that positive paternal involvement, as compared to positive maternal involvement, may be more sensitive to familial processes.

**Paternal Involvement As a Source of Family Influence**

Although fathering appears to be particularly sensitive to familial factors, research suggests ways in which fathering, in turn, influences mothers and the marital relationship. In assessing the influence of fathers, one must keep in mind that much of the evidence linking paternal involvement to mothers and marriages is cross-sectional. Furthermore,
because the pattern of relationships between paternal and maternal involvement and marital functioning are likely to have been established during the transition to parenthood and the transition to the birth of the second child, when applicable (Cowan & Cowan, 1992; Stewart, 1990), longitudinal studies which do not pay careful attention to these transitions may not accurately capture the complexity of causal relationships. Consequently, it is possible that the direction of influence in the above studies has been oversimplified or altogether misinterpreted. The same may hold true for the following research.

The impact of paternal involvement on marriage. Cowan and Cowan (1992) conducted a longitudinal analysis of couples during the transition to parenthood and found that the less fathers were involved in caring for their child at eighteen months, the more their wives were likely to become disenchanted with the marital relationship over the next year. Alternatively, when fathers were involved in the care of their child, wives reported greater marital satisfaction and family cohesion. Similarly, Snarey (1993) found that positive paternal involvement during childhood and adolescence accounted for 12% and 9%, respectively, of the variance in fathers' marital success at midlife. Categorical outcomes at midlife consisted of: divorced, still married but unsure about marital enjoyment, and still married with clear marital enjoyment.

The impact of paternal involvement on mothers. Research has shown that the mere presence of a father influences mother-child interaction. As mentioned above, the presence of the father leads to a reduction in mother-child interaction (Lamb, 1997a). Beyond this general finding, the presence of the father has been found to increase the
effectiveness of maternal discipline and the likelihood that mothers respond positively to children’s compliance (Lytton, 1979).

In addition to the presence of the father, research has shown that paternal involvement impacts mothers. Cowan and Cowan (1992) found that paternal involvement in child care was related to mothers’ as well as fathers’ feelings of well-being. However, the authors explained that they were unsure which came first, citing evidence for both causal pathways. Furthermore, Cowan and Cowan refer to evidence that “mothers with children under five and without a supportive partner are at greater risk for becoming clinically depressed than any other group of adults” (p. x). Although such evidence suggests that fathers, and paternal involvement in particular, have important consequences for mothers, Cowan and Cowan found that the actual amount of paternal involvement required to produce gains in maternal well-being was minimal and that mothers’ perceptions of paternal involvement served as a more accurate predictor.

In a cross-sectional study, Baruch and Barnett (1986) concluded that increased paternal involvement leads to lower overall life satisfaction for mothers. However, given Cowan and Cowan’s (1992) findings, and the above mentioned association between high paternal involvement and poor marital quality in families where such involvement is necessitated rather than desired, the reverse relationship seems to be a more plausible interpretation of Baruch and Barnett’s (1986) cross-sectional results: increased paternal involvement is sometimes a response to mothers’ low life satisfaction.

To summarize, research suggests that fathers affect mothers and marriages. The presence of a father has been shown to improve mother-child interactions. Furthermore,
fathers who are positively involved in the lives of children, and satisfied with the arrangement, have happier, stronger marriages, and wives with enhanced well-being.

**Impact of Marriages and Mothers on Children**

To complete the picture of the triadic context in which positive paternal involvement influences children and accurately consider any unique contribution resulting from such involvement, one must also take account of the direct influence that mothers and marriages have on children’s development. However, given the narrower focus of research questions to be addressed in this study, an exhaustive review is not provided, but some general statements are presented.

To begin with, negative marital dynamics are the most consistent and reliable correlates of unfavorable child outcomes (Lamb, 1997a). Documented paternal influences to date are minimal by comparison. Numerous studies have reported links between marital conflict and child outcomes, while additional studies indicate that marital conflict is an important part of the effects on children of various forms of family dysfunction such as parental depression, parental alcoholism, and physical abuse (Cummings & O’Reilly, 1997). Alternatively, harmonious marital relations may teach children important lessons about conflict expression and negotiation (Cummings & Davies, 1994). These findings necessitate the importance of considering, and controlling for, marital dynamics when assessing the role of the father in child development.

With respect to mother-child relationships, research shows that mothers affect a wide range of developmental outcomes in their children. However, given the focus of
this study it is important to stress the evidence presented above that paternal involvement and maternal involvement are more similar than dissimilar in their effects on children. Like fathers, mothers influence children when their interactions are characterized as warm, supportive, and not excessively restrictive or controlling (Maccoby & Martin, 1983). Again, however, it must be stressed that maternal influence, as compared to paternal influence, is generally a more powerful force in the lives of children. Consequently, such influence must be included in any study of paternal influence.

Conclusion

Research evidence suggests that positive paternal involvement can be an important influence in the lives of children. Fathers, like mothers, can form attachments with their children and engage them in interactions which stimulate development. On the other hand, fathers are almost always secondary parents, whose interactions with children occur within the more central and influential context of children's lives: that of the mother-child relationship. As secondary parents, fathers' involvement with children also occurs within the context of a marital or coparent relationship which has even greater influence in the lives of children. Although scholars have long called for an understanding of paternal involvement within the immediate and influential contexts of maternal influence and marital relationships, researchers have been slow to heed the call.

The present research attempts to address some of the questions created by the inclusion of this immediate familial context. Specifically, this study will address the following research questions.
1. What is the unique contribution of positive paternal involvement—with respect to positive maternal involvement and marital quality—in children’s development?

2. How does the influence of positive paternal involvement interact with the influence of positive maternal involvement and marital quality in determining children’s development?

3. To what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship?
CHAPTER 3

METHOD

Design

The research objectives of this project were addressed through secondary analysis of cross-sectional and longitudinal data from the National Survey of Families and Households (NSFH) (Bumpass, Sweet, & Call, 1988). The NSFH consisted of data collected in 1987-88 (Wave 1) and 1992-92 (Wave 2). The NSFH data included a wide range of family and economic variables collected from a national probability sample of adults in the continental U.S., including an oversample of certain minority groups and family types (n = 13,017). The Wave 1 survey format included a 90-minute personal interview (74% response rate) with a randomly selected primary respondent age 19 or older living in the household, who also completed a self-administered questionnaire (98% of interviewees completed the questionnaire). A self-administered questionnaire containing many of the same items was also completed by the spouse/partner of primary respondents (83% of interviewees’ spouses/partners completed the questionnaire).

The Wave 2 survey gathered additional and follow-up data from primary respondents about 5 to 6 years later (n = 10,008; 99% response rate), using the same format of personal interview coupled with self-administered questionnaire. As part of Wave 2 data collection, the spouse/partner completed the same interview and self-administered questionnaire as the primary respondent, generating a richer body of parallel...
parenting and marital variables than was collected at Wave 1.  

The Wave 1 survey adopted a strategy of targeting a randomly selected “focal” child as the subject for a wide range of parenting questions. Specifically, the interviewer recorded the names of all children in the household and selected the child whose name would be first in an alphabetical listing. The same child was designated the focal child in both Wave 1 and Wave 2 interviews. Questions regarding focal children were organized according to age. The specific age categories were 0-4 years, and 5-17 years. Within these categories there were further subcategories of questions targeting focal children within a more specific age range. For example, some questions in the 5-17 age category were only asked of adolescents—children age 12-17. Additional parenting questions were asked of “any” child or of all the children of the respondent collectively.

The NSFH was uniquely suited to the objectives of this study in that it included parallel data gathered from both parents regarding: parenting, marital functioning, and child social and cognitive performance. The sample was also large enough to allow structural equation modeling capable of examining direct and indirect pathways between latent variables of interest. Analyses were planned to include control variables for race, income, employment, education, number of children in the household, and age and sex of the “focal” child.

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1 In cases where the primary respondent had been divorced and remarried between Wave 1 and Wave 2 interviews, efforts were made to collect questionnaires from both past and present spouses. Consequently, the response rate for secondary respondents at Wave 2 is complex and difficult to calculate.
Sample

The NSFH subsample selected for these analyses consisted of 582 first-marriage couples who were living in the same household at Waves 1 and 2; had a biological focal child 6 years old or younger living in the household at Wave 1; and were each the biological parent to all children of their spouse. Table 1 shows Wave 1 sample characteristics indicating that fathers and mothers were predominantly white, in their late 20s to early 30s, had been married for 8 years, had two children, and the focal child averaged 2 years of age. Generally, fathers and mothers had some college education, and roughly two thirds of the mothers in the sample worked outside the home.

Table 1

Sample Characteristics at Wave 1 1987-88

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Percent of sample</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father’s age</td>
<td>31.8</td>
<td></td>
<td>4.9</td>
</tr>
<tr>
<td>Mother’s age</td>
<td>30.0</td>
<td></td>
<td>4.6</td>
</tr>
<tr>
<td>Father’s years of education</td>
<td>13.8</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>Mother’s years of education</td>
<td>13.5</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>White fathers</td>
<td></td>
<td>86.6%</td>
<td></td>
</tr>
<tr>
<td>White mothers</td>
<td></td>
<td>85.2%</td>
<td></td>
</tr>
<tr>
<td>Dual-income couples (36 or more work hrs/wk each)</td>
<td></td>
<td>61.9%</td>
<td></td>
</tr>
<tr>
<td>Couple’s median income</td>
<td>34,100</td>
<td></td>
<td>43,505</td>
</tr>
<tr>
<td>Years married</td>
<td>8.9</td>
<td></td>
<td>4.1</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.2</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Focal child age</td>
<td>3.4</td>
<td></td>
<td>1.8</td>
</tr>
</tbody>
</table>
Measures

Wave 1

Wave 1 measures included the following categories: controls; parental; and marital variables.

Control variables. Control variables consisted of the focal child’s age and sex; the couple’s race, education, and income; maternal employment; and paternal employment. Child age was measured in years and child sex was measured with a “dummy” variable reflecting female/non-female status. Parental race was also operationalized using a “dummy” variable, coded to represent white/non-white status of couples. Education was measured using a single item reflecting husband’s and wife’s formal educational attainment in terms of grade/years completed—with attainment of specific higher education degrees anchoring values beyond 12, (e.g., bachelors degree being coded as 16 years of education). Values for the education measure ranged from “0” (“no formal education”) to “20” (“doctorate degree”). Income was measured as the annual sum of all income reported by both spouses. Because income was highly skewed, the natural log of income was used in the statistical analyses. Employment was measured as hours per week usually worked (including second jobs when subjects indicated more than one employer).

Parental variables. Parental measures consisted of positive activities, and positive affective display. For parents with no children older than 2 years, *positive activities* was averaged from three items asking parents to report, on a 6-point scale ranging from
“never or rarely” to “almost everyday,” the frequency with which they engaged in the following activities with their children: “an outing away from home (at parks, museums, zoos, etc.),” “at home playing together,” and “reading to” children. Parents of children older than 2 years were asked similar questions, using the same 6-point scale, regarding the frequency of various parenting activities, modified to take into account developing capacities of children: “leisure activities away from home (picnics, movies, sports, etc.),” “at home working on a project or playing together,” “and helping with reading or homework.” Although not identical, the items asked of younger and older children were deemed similar in content, and positive activities was constructed as the average of the three items regardless of age (alpha = .53). Positive affective display was averaged from two items in which parents reported the frequency (a 4-point scale ranging from “never” to “very often”) with which they “praise” and “cuddle or hug” children (r = .41). Although these reliability estimates are low, alpha coefficients in this range are not unusual when an index consists of so few items.

Marital variables. Marital variables consisted of disagreement and aggressive conflict resolution. Disagreement was the average of both spouses’ responses to six items assessing the frequency of disagreements, on a 6-point scale ranging from “never” to “almost every day,” regarding the following topics: household tasks, money, spending time together, sex, in-laws, and the children (alpha = .77). Aggressive conflict resolution was averaged from both spouses’ responses to two separate items (i.e., four items total) addressing ways in which couples “deal with serious disagreements” (alpha = .49). These items were measured on a 5-point scale ranging from “never” to “always” and included
the following strategies: "argue heatedly or shout," and "end up hitting or throwing things at each other." To reflect the greater inappropriateness of physically violent conflict resolution, responses to the "hitting or throwing" item were weighted by a factor of two before being averaged with responses to the "argue or shout" item.

Wave 2

Wave 2 measures consisted of the following categories of variables: controls; parental; marital and child outcomes. Wave 2 controls included parental employment, education, and income, and were repeated measures of their Wave 1 counterparts.

Parental variables. Parental measures consisted of positive activities and positive communication. Positive activities at Wave 2 was a repeated measure of the Wave 1 counterpart (for children older than 2 years at Wave 1)—being composed of the same three items measured on the same 6-point scale (alpha = .63). Positive communication was averaged from five items assessing the frequency with which parents engaged in child-centered, one-to-one communication with their children (alpha = .71). One of these items measured the frequency with which parents had "private talks" with any of their children, incorporating the same 6-point scale used for the positive activities items. Two more of the five communication items also used this scale to assess the frequency of communication with the "focal" child about his or her "worries" and "interests." The final two variables asked parents to indicate the number of days last week in which they talked to the "focal" child about school events and school learning.

Marital variables. Marital variables consisted of disagreement and happiness.
Disagreement was a repeated measure of its Wave 1 counterpart (alpha = .78).

Happiness was averaged from both partner’s responses to nine items: a global measure of marital happiness and eight items asking how happy respondents were with various aspects of their spouse and marriage (alpha = .90). The eight items consisted of: understanding received from spouse, love and affection received from spouse, amount of time spent with spouse, demands made by spouse, sexual relationship, the way spouse spends money, spouse’s housework, and spouses’s parenting. Items were scored on a seven-point bipolar scale, anchored by the words “very unhappy” and “very happy.”

Child outcomes. Child outcome variables were constructed from parents’ responses to items assessing the frequency of a wide range of negative child behaviors/feelings demonstrated by the “focal” child within the past 3 months. Parents responded to a total of 23 items on a 3-point scale as being 1 “not true,” 2 “sometimes true,” and 3 “often true” of their focal child. Table 2 displays the results of a factor analysis of the 23 items using principal components extraction and oblique rotation, revealing four correlated factors which were used as the basis for constructing the following scales: antisocial/aggressive behavior, school problems, low self-esteem/depression, and cognitive symptomology. A particular item was included in a scale if it loaded strongly (approximately .60 or higher) on the defining factor and did not have a strong or moderate loading on any other factor. Exceptions to this criteria were based on substantive rationale. Antisocial/aggressive behavior was averaged from both parents responses to six items: “argues too much,” “bullies or is cruel or mean to others,”
Table 2

Rotated Factor Matrix for 23 Negative Child Outcome Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>argues too much</td>
<td>.70</td>
<td>.01</td>
<td>.01</td>
<td>-.38</td>
</tr>
<tr>
<td>bullies, is cruel or mean to others</td>
<td>.65</td>
<td>.16</td>
<td>.17</td>
<td>-.16</td>
</tr>
<tr>
<td>disobedient at home</td>
<td>.71</td>
<td>.17</td>
<td>.17</td>
<td>-.30</td>
</tr>
<tr>
<td>doesn’t feel sorry after misbehavior</td>
<td>.57</td>
<td>.19</td>
<td>.19</td>
<td>-.18</td>
</tr>
<tr>
<td>stubborn, sullen, or irritable</td>
<td>.70</td>
<td>.06</td>
<td>.06</td>
<td>-.37</td>
</tr>
<tr>
<td>strong temper, loses it easily</td>
<td>.71</td>
<td>-.02</td>
<td>-.02</td>
<td>-.33</td>
</tr>
<tr>
<td>disobedient at school</td>
<td>.30</td>
<td>.72</td>
<td>.18</td>
<td>-.28</td>
</tr>
<tr>
<td>trouble with teachers</td>
<td>.25</td>
<td>.70</td>
<td>.28</td>
<td>-.24</td>
</tr>
<tr>
<td>feels worthless or inferior</td>
<td>.35</td>
<td>-.05</td>
<td>.73</td>
<td>-.34</td>
</tr>
<tr>
<td>not liked by other children</td>
<td>.33</td>
<td>.27</td>
<td>.64</td>
<td>-.28</td>
</tr>
<tr>
<td>unhappy, sad, or depressed</td>
<td>.41</td>
<td>-.04</td>
<td>.72</td>
<td>-.27</td>
</tr>
<tr>
<td>withdrawn</td>
<td>.19</td>
<td>.18</td>
<td>.65</td>
<td>-.21</td>
</tr>
<tr>
<td>difficulty concentrating</td>
<td>.36</td>
<td>.25</td>
<td>.25</td>
<td>-.80</td>
</tr>
<tr>
<td>easily confused, seems to be in a fog</td>
<td>.25</td>
<td>.09</td>
<td>.09</td>
<td>-.74</td>
</tr>
<tr>
<td>restless, overly active, can’t sit still</td>
<td>.44</td>
<td>.22</td>
<td>.21</td>
<td>-.65</td>
</tr>
<tr>
<td>sudden mood changes</td>
<td>.54</td>
<td>-.20</td>
<td>.40</td>
<td>-.40</td>
</tr>
<tr>
<td>complains not loved</td>
<td>.52</td>
<td>-.15</td>
<td>.51</td>
<td>-.33</td>
</tr>
<tr>
<td>high strung, nervous</td>
<td>.54</td>
<td>-.12</td>
<td>.34</td>
<td>-.47</td>
</tr>
<tr>
<td>cheats, tells lies</td>
<td>.53</td>
<td>.25</td>
<td>.09</td>
<td>-.37</td>
</tr>
<tr>
<td>fearful or anxious</td>
<td>.34</td>
<td>-.16</td>
<td>.44</td>
<td>-.50</td>
</tr>
<tr>
<td>trouble getting along with other kids</td>
<td>.53</td>
<td>.35</td>
<td>.51</td>
<td>-.29</td>
</tr>
<tr>
<td>impulsive</td>
<td>.54</td>
<td>.20</td>
<td>.24</td>
<td>-.50</td>
</tr>
<tr>
<td>obsessive</td>
<td>.28</td>
<td>-.06</td>
<td>.35</td>
<td>-.55</td>
</tr>
</tbody>
</table>

Eigenvalue: 6.9 1.5 1.4 1.3
Percentage of variance explained: 30.4 6.4 6.3 5.5
Cumulative percent: 30.4 36.8 43.1 48.6
"is disobedient at home," "does not seem to feel sorry after (he/she) misbehaves," "is stubborn, sullen, or irritable," and "has a very strong temper and loses it easily" (alpha = .79). School problems was averaged from both parents responses to two items: "disobedient at school," and "trouble with teachers" (r = .48). Low self-esteem/depression was averaged from both parents' responses to 4 items: "feels worthless or inferior," "is not liked by other children," "is unhappy, sad, or depressed," "is withdrawn, does not get along with others" (alpha = .69). Cognitive symptomology was averaged from both parents responses to three items: "has difficulty concentrating, cannot pay attention for long," "is easily confused, seems to be in a fog," "is restless or overly active, cannot sit still" (alpha = .68). In summary, these four factors reflect important dimensions of children’s development and all are measured in a negative direction.

Analysis

Structural Equation Modeling (SEM) was used to examine the unique direct as well as indirect contributions of positive paternal involvement on child outcome measures (i.e., Research Questions 1 & 3). Interaction effects between paternal, maternal, and marital influence (i.e., Research Question 2) were examined through regression analysis.

Regression Analysis

To limit the number of possible permutations resulting from all conceivable interactions, only two-way interactions involving paternal measures and either maternal
or marital measures were tested using only the aggressive/antisocial behavior outcome measure. Twelve specific interaction terms were tested in the regression models: 6 for Wave 1 variables and 6 for Wave 2 variables. Wave 1 interaction terms were constructed from (a) paternal positive activities and maternal positive activities, (b) paternal positive affective display and maternal positive affective display, (c) paternal positive activities and marital disagreement, (d) paternal positive activities and aggressive marital conflict resolution, (e) paternal positive affective display and marital disagreement, and (f) paternal positive affective display and aggressive marital conflict resolution. Wave 2 interaction terms were constructed from (a) paternal positive activities and maternal positive activities, (b) paternal positive communication and maternal positive communication, (c) paternal positive activities and marital disagreement, (d) paternal positive activities and aggressive marital happiness, (e) paternal positive communication and marital disagreement, and (f) paternal positive communication and aggressive marital happiness. Each regression model included either Wave 1 or Wave 2 independent variables, but not both. In the event that analyses yielded strong or consistent interaction effects, additional regression models were tested using the other child outcome measures. All statistically significant controls were included in the regression models.

**Structural Equation Modeling**

Due to the exploratory nature of this study and the limited knowledge available regarding the relationships to be modeled, a definitive specification of the overall model to be tested was not determined from the outset. Figure 1 shows a hypothetical SEM
conceptual model of the proposed relationships between constructs. The final SEM model could have taken a very different form. In order to arrive at a final model, like the one depicted in Figure 1, the relationships to be modeled were broken down into three submodels for analysis: two longitudinal submodels and one cross-sectional submodel. These submodels served to address research questions 1 and 3, and formed the basis upon which the overall model would be initially specified. Without the submodels to guide the process of model specification, statistical analysis of any “best guess” overall model might have failed to converge on a solution. In addition, the submodels could provide partial answers to the research questions, especially if the overall model did not provide a good fit to the data. Although starting specifications for the final model could not be predetermined, specific starting specifications for the three submodels were determined in advance.

**Submodel 1.** Submodel 1 (Figure 2) examined the cross time effects of positive paternal involvement, positive maternal involvement, and marital conflict (i.e., measured at W1) on negative child outcomes (i.e., measured at W2). Submodel 1 was longitudinal, incorporating exogenous variables from Wave 1 and endogenous variables from Wave 2 measured 5-6 years later. Submodel 1 served to determine which, if any, of the Wave 1 variables should be specified as having direct effects on Wave 2 negative child outcomes in the final model. Submodel 1 explored research question 1 by testing for any unique contribution of Wave 1 paternal involvement on Wave 2 child outcomes.

**Submodel 2.** Submodel 2 (Figure 3) relied exclusively on Wave 2 data for all variables. In effect, submodel 2 paralleled submodel 1, providing cross-sectional rather
Figure 1. Hypothetical conceptual model showing the effects of Wave 1 and Wave 2 parental and marital variables on negative child outcomes.
Figure 2. Initial specification of submodel 1: showing relationships between Wave 1 parental and marital variables and negative child outcomes.
Key To Observed Variables

X1 = Marital Disagreement
X2 = Marital Happiness
X3 = (Paternal) Positive Activities
X4 = (Paternal) Positive Communication
X5 = (Maternal) Positive Activities
X6 = (Maternal) Positive Communication

Y1 = Aggressive/Antisocial Behavior
Y2 = School Problems
Y3 = Low Self-Esteem/Depression
Y4 = Cognitive Symptomology

Figure 3. Initial specification of submodel 2: showing relationships between Wave 2 parental and marital variables and negative child outcomes.
than longitudinal evidence for any unique contribution of paternal involvement on child outcomes. Specifically, the exogenous variables consisted of Wave 2 paternal positive involvement, maternal positive involvement, and marital distress, with negative child outcomes serving as the endogenous variable—also measured at Wave 2. Submodel 2 also helped determine which, if any, of the Wave 2 independent variables would be specified in the final model as having direct effects on negative child outcomes.

**Submodel 3.** Submodel 3 (Figure 4) examined the effect of paternal positive involvement, maternal positive involvement, and marital conflict at Wave 1 on paternal positive involvement, maternal positive involvement, and marital distress at Wave 2. Specifically, exogenous variables consisted of positive paternal involvement, positive maternal involvement, and marital dynamics measured at Wave 1, while endogenous variables consisted of positive paternal involvement, positive maternal involvement, and marital dynamics measured 5-6 years later at Wave 2. By examining the pathways from Wave 1 paternal positive involvement to both Wave 2 marital distress and Wave 2 maternal involvement, submodel 3 served to explore potential pathways through which paternal positive involvement might indirectly affect negative child outcomes in the final model. For example, if submodel 3 were to demonstrate that Wave 1 paternal positive involvement had a statistically and meaningfully significant effect on Wave 2 maternal positive involvement, and submodel 2 (Figure 3) demonstrated a similarly meaningful relationship between Wave 2 maternal positive involvement and negative child outcomes, then the final model would be specified with an indirect pathway between Wave 1
Figure 4. Initial specification of submodel 3: showing relationships between Wave 1 parental and marital variables and Wave 2 parental and marital variables.
paternal positive involvement to negative child outcomes via Wave 2 maternal positive involvement (as depicted in Figure 1).

**The final model.** The final model was specified based upon the results of analyzing submodels 1-3. The final model was expected to include both cross time and cross-sectional relationships. Specifically, the model would examine the relationship between paternal positive involvement, maternal positive involvement, and marital conflict all measured at Wave 1; paternal positive involvement, maternal positive involvement, and marital distress measured 5-6 years later at Wave 2; and negative child outcomes also measured at Wave 2. Once the overall structure of the latent variables was successfully modeled, control variables were introduced into the model one at a time and tested through chi-square hierarchical analyses to determine if they significantly improved the model.

**Hierarchical chi-square tests.** Loehlin (1992) explains that direct comparisons can be made between two separate structural equation models if the relationship between the two models is hierarchical. The relationship between two models is hierarchical when “the model with the smaller number of free variables can be obtained from the model with the larger number of free variables by fixing one or more of the latter” (Loehlin, 1992, p. 67). A chi-square test can be used to compare two such hierarchical models. Such a test uses the difference between the chi-squares of the two models as the chi-square value, where the degrees of freedom is the difference between the degrees of freedom for the two models. Using Figure 3 as an example, if the pathway between marital distress and negative child outcomes were to be fixed (i.e., constrained to a value
of zero), the resulting model would have a hierarchical relationship to that presented in Figure 3. The two models could then be tested to determine if the difference between them was statistically significant, by determining if the difference between the two separate chi-squares of the models exceeds the 3.84 value required for significance given 1 degree of freedom (at the .05 level).

For all chi-square tests involving freeing a parameter of a model—either for the purpose of improving model fit or testing the effect of a control variable—modification indices where used as the prerequisite for determining whether a particular planned test was warranted. By default, LISREL output files provide modification indices—for every fixed parameter in the model—estimating the change in chi-square for the model should a particular parameter be freed. In effect, a particular modification index provides an estimate of how the overall model fit would be affected were the corresponding parameter to be freed. Given that a hierarchical chi-square tests uses the difference in chi-square between two hierarchical models, the modification index for a given parameter can also be thought of as an estimate of the hierarchical chi-square value for the test comparing the actual model to a second hypothetical model in which that parameter was freed. Consequently, when a substantive rationale justified a hierarchical chi-square test, the test was only conducted if the modification index was 3.0 or greater.
CHAPTER 4

RESULTS

Structural Equation Modeling

Research questions one and three were addressed via structural equation modeling. LISREL 8.12 (Joreskog & Sorbom, 1994) was used to program the various structural equation models. The purpose of submodels 1-3 was to provide some basis for specification of an overall model. Because a structural equation was successfully fitted to the overall model, the relevance of submodels 1-3 was relegated to the exploratory process through which the final, overall model was specified. Consequently, only a cursory presentation of the results for these three submodels is provided; while research questions one and two will be addressed in terms of the overall model.

Submodel 1

Submodel 1 explored the cross time effects of paternal positive involvement, maternal positive involvement, and marital conflict—measured at Wave 1—on negative child outcomes measured at Wave 2. Figure 5 shows the model that resulted from this cross time analysis after modification based on hierarchical chi-square testing. Specifically, submodel 1 was modified from what was proposed in Figure 2 in that the correlation between marital conflict and maternal positive involvement was eliminated. The chi-square difference between the two models testing the significance of this correlation (i.e., one model with the correlation fixed at zero, and a parallel model with
Key ToObserved Variables

X1 = Marital Disagreement  
X2 = Aggressive Conflict Resolution  
X3 = (Paternal) Positive Activities  
X4 = (Paternal) Positive Affective Display  
X5 = (Maternal) Positive Activities  
X6 = (Maternal) Positive Affective Display

Y1 = Aggressive/Antisocial Behavior  
Y2 = School Problems  
Y3 = Low Self-Esteem/Depression  
Y4 = Cognitive Symptomology

Figure 5. Results of submodel 1: showing relationship between parental and marital variables and negative child outcomes.
the parameter allowed to vary) was 2.77 (i.e., below the 3.84 value required to obtain significance given one degree of freedom), indicating that freeing the pathway in question was not statistically different than constraining the pathway to a value of zero. In other words, including the pathway did not statistically improve the model fit. Consequently, the correlation was removed from submodel 1 as well as initial specification of the overall model.

Submodel 1 yielded a chi-square of 52.79 (df = 30; p = .0063) and an adjusted goodness of fit index of .95. As expected from prior research, there was a positive relationship (.28) between marital conflict at Wave 1 and negative child outcomes at Wave 2. The model also was noteworthy in that Wave 1 paternal and maternal involvement had small or nonexistent effects on Wave 2 negative child outcomes. Based on this result, the initial specification for the overall model did not include estimated paths from paternal positive involvement and maternal positive involvement to negative child outcomes. Also of note, the model contained a high correlation between the exogenous latent variables: particularly between paternal and maternal positive involvement (.70). Apart from any possible substantive meaning, these correlations indicate multicollinearity within the model. Finally, the $r^2$ for negative child outcomes (.09) is low by behavior science standards (Cohen, 1988).

**Submodel 2**

Submodel 2 explored the cross-sectional effects of paternal and maternal positive involvement, and marital distress on negative child outcomes. Figure 6 presents the
Figure 6. Results for submodel 2: showing relationships between Wave 1 parental and marital variables and negative child outcomes.
model after modification based on hierarchical chi-square testing. Specifically, submodel 2 was modified from what was proposed in Figure 3 in that the correlation between marital distress and maternal positive involvement was not statistically different from zero. Consequently, that correlation was removed from submodel 2.

Submodel 2 yielded a chi-square of 68.23 (df = 30; p = .000) and an adjusted goodness of fit index of .94. Two of the theoretically important paths shown in Figure 6 (all based on Wave 2 data) were larger than the same paths tested with longitudinal data (Figure 5). Marital distress (.38) and maternal involvement (-.10) were related to negative child outcomes in theoretically expected directions, explaining a moderate amount of variance (R^2 = .16) in measures of child behavior. However, hierarchical chi-square tests of the coefficients for paternal (-.03) and maternal (-.10) positive involvement were nonsignificant. Despite the nonsignificant results, these pathways were left in the final model because of their relevance to the research questions. As with submodel 1, submodel 2 demonstrated moderate multicolinearity between marital and paternal variables.

Submodel 3

Submodel 3 explored the effect of positive paternal involvement, positive maternal involvement, and marital conflict at Wave 1 on their Wave 2 counterparts. Submodel 3 yielded unexplainable and contradictory goodness of fit measures, including a chi-square of -622.22 (df = 48; p = 1.0), a "perfect fit" for the adjusted goodness of fit index, and modification indices showing changes that would improve the goodness of fit.
Because the LISREL 8 (Joreskog & Sorbom, 1993) manual made no reference to such unusual and seemingly conflicting goodness of fit measures, it is likely that they reflected serious problems with the model rather than a perfect fit—perhaps problems related to multicollinearity. To explore this possibility further, the same model was run on a different version of LISREL. The alternative version of LISREL failed to converge on a solution for the model. Consequently, results for Model 3 were deemed suspect and not used in determining the specification for the complete model.

**Specification of the Complete Model**

The complete model (Figure 7) was the ultimate focus of the LISREL analysis. Given that submodel 3 failed to produce useful results, the complete model was initially specified with only the most likely pathways between Wave 1 and Wave 2 marital and parental latent variables. Specifically, Wave 1 marital and parental variables were specified as affecting their Wave 2 counterparts. This initial complete model yielded a chi-square value of 187.17 ($p = .00$), and an adjusted goodness of fit index of .91.

**Improving model fit.** Using the hierarchical chi-square testing procedure, attempts were made to determine if the completed model could achieve a better fit by fixing or freeing various parameters of the model. Three criteria were used in determining which pathways would be tested. First, parsimony was applied where possible to simplify the model. Specifically, the pathway between Wave 1 marital conflict and Wave 2 negative child outcomes (.08) was tested and found to be nonsignificant. Consequently, this pathway was removed from the final model.
Figure 7. Initial results of complete model: showing relationships between Wave 1 and Wave 2 parental and marital variables, and negative child outcomes.
The research questions (1 & 3) were the second criterion used to explore the fit of the model. Consequently, although the pathways from Wave 2 paternal and maternal positive involvement to Wave 2 negative child outcomes (-.11 and -.06, respectively) where on par in strength with the pathway from Wave 1 marital conflict to negative child outcomes (.08), these involvement variables were left in the model due to their significance to the research questions.

Research question 3 asked: to what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship? To address this question, hierarchical chi-square tests where conducted to determine whether indirect paths would constitute a statistically significant improvement to the model. Specifically, the following two paths were added to the model and tested: a path from Wave 1 paternal involvement to Wave 2 marital distress, and a path from Wave 1 paternal involvement to Wave 2 maternal involvement. Both paths produced nonsignificant results. Consequently, the two paths were not retained in the model.

The final criterion used to test and improve model fit was an awareness of the fact that the completed model included parallel paternal and maternal indicator variables and latent constructs (e.g., paternal positive activities and maternal positive activities, paternal involvement and maternal involvement). Based on this awareness, the relationship between error terms of parallel, observed paternal-maternal variables—as well as the relationship between residual terms of parallel, latent paternal-maternal variables—was examined and tested as part of the model fitting process. In other words, an effort was made to improve the fit of the model by allowing the error or residual terms of the
parallel paternal and maternal variables to correlate—as opposed to the LISREL default which models error and residual terms as though they are uncorrelated. Modification indices were examined to determine if specifying such correlations would improve the fit of the model. Hierarchical chi-square tests demonstrated that the model would be significantly improved (chi-square = 11.06; df = 1) by freeing the residual terms for the Wave 2 paternal and maternal involvement latent variables to correlate one with another. Consequently, the final model was specified with correlated residual terms for these two latent variables.

**Entering control variables.** Hierarchical chi-square tests were also adopted as the strategy for testing the effects of the eight control variables. Control variables where introduced into the model, one at a time, with all related parameters fixed save the indicator variable itself. In other words, a given control was placed into the model and specified as having no effect whatsoever. Following this, a second model was created identical to the first in every respect save that the control variable was specified as having some effect within the model. Consequently, the two models created for each testing of a control variable had a hierarchical relationship and could thus be directly compared using hierarchical chi-square tests (Loehlin, 1992).

Control variable effects were included only if they affected the structural portion of the model: the relationship between the exogenous (i.e., independent) and endogenous (i.e., dependent) variables. A given control variable could conceivably affect the structural model directly, by directly affecting one or more endogenous variables, or indirectly, through a correlation with an exogenous variable which would significantly
alter one or more pathways between exogenous and endogenous variables. Consequently, all control variables with direct effects on one or more endogenous variables were included, whereas control variables with no direct effects on the endogenous variables were included only if they significantly altered the path coefficients between exogenous and endogenous variables. Following this criterion, three control variables where found to significantly affect the overall model: child’s age and sex, and couple’s race.

The Final Model

Figure 8 presents results for the complete model after modification and introduction of significant control variables. This final model yielded a chi-square value of 260.69 (df = 138; p = 0.00) and an adjusted goodness of fit index of .90. With the control variables included, the model explained 19% of the variance in negative child outcomes.

The marital variables in the model had the strongest effect on negative child outcomes; the strongest effect on negative child outcomes was that of marital distress, while the second strongest effect—although not pictured in Figure 8—was the indirect effect of marital conflict. Indirect effects within a path model are equal to the product of the coefficients of contiguous paths linking any two variables. Consequently the indirect effect of marital conflict on negative child outcomes is .22 (i.e., .70 × .35 = .224).

By contrast, the effects of parental variables on negative child outcomes were smaller and statistically nonsignificant. Within this limited magnitude of parental effects, paternal involvement demonstrated somewhat stronger direct and indirect effects on
Key to Observed Variables

- **X1** = Marital Disagreement
- **X2** = Aggressive Conflict Resolution
- **X3** = (Paternal) Positive Activities
- **X4** = (Paternal) Positive Affective Display
- **X5** = (Maternal) Positive Activities
- **X6** = (Maternal) Positive Affective Display
- **Y1** = Marital Disagreement
- **Y2** = Marital Happiness
- **Y3** = (Paternal) Positive Activities
- **Y4** = (Paternal) Positive Communication
- **Y5** = (Maternal) Positive Activities
- **Y6** = (Maternal) Positive Communication
- **Y7** = Aggressive/Antisocial Behavior
- **Y8** = School Problems
- **Y9** = Low Self-Esteem/Depression
- **Y10** = Cognitive Symptomology

Figure 8. Final results of complete model: showing relationships between Wave 1 and Wave 2 parental and marital variables, and negative child outcomes after modification and controls.
negative child outcomes than did maternal involvement.

For the most part, control variables were readily interpretable with respect to previous research. For example, the negative path coefficients from female child control variable to Wave 2 paternal involvement and negative child outcomes indicated that fathers reported less involvement with daughters than sons, and that daughters demonstrated fewer negative outcomes than sons at Wave 2. Such findings have been documented in previous research (Pleck, 1997). Similarly, the negative path coefficients from child age to Wave 2 parental variables indicated that less involvement was reported by parents of older children as demonstrated in previous research (Hill & Stafford, 1980). The model also indicates that white fathers were less involved than their non-white counterparts.

Research question 1. Research question 1 asked: what is the unique contribution of positive paternal involvement—with respect to positive maternal involvement and marital quality—in children’s development? Although the final model (Figure 8) contained values which rendered the findings somewhat questionable, Wave 2 paternal involvement did have a small negative effect on negative child outcomes. A hierarchical chi-square test was conducted to determine if the -.15 path coefficient from paternal involvement to negative child outcomes constituted a statistically significant improvement to the model fit. The change in chi-square was insignificant (change in chi-square = 2.97; df = 1), indicating no statistical difference in model fit were the path to be fixed at a value of zero.

A second strategy was adopted as a means of exploring the answer to research.
question 1. Research question 1 is a response to the vast majority of studies which have attempted to document the effect of paternal involvement on children’s outcomes without controlling for maternal involvement or marital measures. Although paternal involvement demonstrated only a small and statistically insignificant effect in the full model, nothing was known of how large the effect might have been had maternal involvement and marital distress been excluded. In other words, the effect of paternal involvement might dramatically increase if marital and/or maternal affects were eliminated from the model, thus giving some indication of the degree by which previous studies may have overestimated the unique affect of paternal involvement by failing to control for maternal and marital influences. Consequently, an alternative model was specified, identical to the final model except that the pathways from marital distress and Wave 2 maternal positive involvement to negative child outcomes were fixed at a value of zero. The pathway between paternal involvement and negative child outcomes increased to -.22 in this alternative model: not a clearly dramatic increase, and therefore not easily interpretable as evidence in support of the idea that previous studies greatly overestimated paternal influence.

In summary, results of structural equation modeling in the full models indicated that paternal involvement had little or no unique impact on negative child outcomes. Further, modification to the LISREL model provided no clear evidence that previous research involving only father-child dyads may have overestimated the impact of paternal positive involvement by failing to control for maternal positive involvement or marital dynamics.
Research question 3. Research question 3 asked: to what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship? Hierarchical chi-square tests were implemented to explore this question. Specifically, the model was tested to determine if freeing the pathways from Wave 1 paternal involvement to either Wave 2 maternal involvement or marital distress would constitute a statistically significant improvement to the fit of the model. Neither of these tests produced statistically significant results: the changes in chi-square values were 1.32 ($df = 1$) and 0.34 ($df = 1$), respectively. In other words, the coefficients for these pathways were not statistically different from zero with respect to model fit. Consequently, the model was left unchanged, eliminating any longitudinal indirect effects for Wave 1 paternal involvement via marital and maternal variables.

The same logic was used to test for indirect effects of Wave 2 paternal involvement: hierarchical chi-square tests were used to determine if freeing the pathways from Wave 2 paternal involvement to either Wave 2 maternal involvement or marital distress would constitute a statistically significant improvement to the fit of the model. Again, hierarchical chi-square tests failed to justify the inclusion of these pathways: the reductions in chi-square for these tests were 0.73 ($df = 1$) and 0.25 ($df = 1$), respectively. Consequently, these pathways were not included in the model, eliminating all possible indirect effects for paternal variables in the model.

In summary, results of structural equation modeling provided no evidence in support of any indirect effect of paternal involvement on negative child outcomes via either marital or mother-child variables at Wave 1 or 2.
Regression Analysis

Research question 2 asked whether positive paternal involvement interacts with either positive maternal involvement or marital quality in determining children's outcomes. Because structural equation modeling is unable to test interaction effects, regression analysis was used to examine the statistical significance of the 12 possible two-way interaction terms involving paternal involvement. Table 3 displays the results of these analyses. Of the interaction terms tested, the only ones to approach or attain statistical significance were those involving Wave 2 independent variables. Specifically, the interaction between paternal positive activities and maternal happiness attained statistical significance while the other two interaction terms involving paternal positive activities came close to attaining statistical significance. In sum, regression analysis provided minimal evidence that paternal involvement interacts with marital happiness, but the overall pattern evidenced no interaction effect.
Table 3

Regression of 12 Interaction Terms on Aggressive/Antisocial Behavior

<table>
<thead>
<tr>
<th>Interaction Terms</th>
<th>Beta</th>
<th>T</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td><strong>Wave 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paternal Positive Activities × Maternal Positive Activities</td>
<td>-.56</td>
<td>-1.26</td>
<td>.21</td>
</tr>
<tr>
<td>Paternal Positive Activities × Marital Disagreement</td>
<td>.08</td>
<td>.24</td>
<td>.81</td>
</tr>
<tr>
<td>Paternal Positive Activities × Aggressive Marital Conflict Res.</td>
<td>.11</td>
<td>.41</td>
<td>.68</td>
</tr>
<tr>
<td>Paternal Positive Affect × Maternal Positive Affect</td>
<td>-.50</td>
<td>-.68</td>
<td>.49</td>
</tr>
<tr>
<td>Paternal Positive Affect × Marital Disagreement</td>
<td>.42</td>
<td>.67</td>
<td>.50</td>
</tr>
<tr>
<td>Paternal Positive Affect × Aggressive Marital Conflict Res.</td>
<td>.09</td>
<td>.16</td>
<td>.88</td>
</tr>
<tr>
<td><strong>Wave 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paternal Positive Activities × Maternal Positive Activities</td>
<td>-.66</td>
<td>-1.90</td>
<td>.06</td>
</tr>
<tr>
<td>Paternal Positive Activities × Marital Disagreement</td>
<td>.44</td>
<td>1.84</td>
<td>.07</td>
</tr>
<tr>
<td>Paternal Positive Activities × Marital Happiness</td>
<td>-.97</td>
<td>-2.70</td>
<td>.01</td>
</tr>
<tr>
<td>Paternal Positive Communication × Maternal Positive Com.</td>
<td>-.09</td>
<td>-.25</td>
<td>.80</td>
</tr>
<tr>
<td>Paternal Positive Communication × Marital Disagreement</td>
<td>.16</td>
<td>.59</td>
<td>.55</td>
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<tr>
<td>Paternal Positive Communication × Marital Happiness</td>
<td>.24</td>
<td>.69</td>
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CHAPTER 5
SUMMARY AND CONCLUSIONS

This study explored the impact of positive paternal involvement within a broader familial context. Whereas the vast majority of research examining the impact of fathers has focused exclusively on father-child dyads, the purpose of this research was to step beyond such a limiting framework and consider father-child relationships within the broader context of children’s development: the mother-infant relationship and the marital relationship. The National Survey of Families and Households was used to obtain a sample of 582 first-married couples and the wide range of variables necessary to explore this broader context of paternal influence. Three research questions guided the study: (1) What is the unique contribution of positive paternal involvement—with respect to positive maternal involvement and marital quality—in children’s development? (2) How does the influence of positive paternal involvement interact with the influence of positive maternal involvement and marital quality in determining children’s development? (3) To what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship?

Research Question 1

Overall, the findings suggested that positive paternal involvement had little or no unique influence in the lives of children. Yet such a conclusion is rendered questionable due to the fact that maternal influence was equally undiscernable within the LISREL
models—despite a vast body of research documenting the influence of maternal involvement (Maccoby & Martin, 1983). Compared to paternal involvement, maternal involvement had even smaller effects on negative child outcomes.

Such a finding may have resulted from fathers’ differential involvement with sons and daughters, and from the negative child outcomes measured. Research indicates that fathers are more involved with sons than daughters (Pleck, 1997). Further, behaviors such as aggression and trouble with peers at school, central factors of the negative child outcomes measured in this research, are much more common among boys than girls (Fabes, Knight, & Higgins, 1995; Maccoby & Jacklin, 1974). Consistent with these past findings, child sex (labeled “female child” in Figure 8) was stronger than either paternal or maternal involvement in predicting negative child outcomes, and the direction of the relationship was also consistent with past reports: boys had higher levels of negative child outcomes than did girls. Further, the female gender of children negatively affected Wave 2 paternal involvement (path coefficient of -.13), indicating that fathers in this sample were more involved with sons than daughters. Consequently, the negative child outcomes measured in this research may have inadvertently focused to a greater degree on sons’, rather than daughters’, problems; and fathers’ greater involvement with sons may have played a particularly salient role in affecting such “boy” problems. This postulation would explain why paternal involvement had a larger effect on negative child outcomes than did maternal involvement.

Alternatively, the fact that both paternal and maternal involvement variables were found to have little or no effect on the child outcomes suggests problems with research
methods. The most likely explanation for the problematic results lies in the measurement of the variables. Because the marital variables did demonstrate the previously established connection between marital dynamics and children's outcomes, but the parenting variables did not, it could be that measurement of the parenting variables failed to capture the potential influence that parents exert in the lives of children.

One of the challenges of secondary analysis is that researchers must utilize pre-existing variables rather than create variables specifically tailored to address their research questions or hypotheses. The National Survey of Families and Households was designed with secondary analysis in mind by including some of the best measures of individual and family functioning. However, the available parenting measures—particularly for the age category of children under investigation in this study—were less sensitive than this researcher had hoped. Aided by hindsight, it is possible to suggest several measurement-related reasons for the limited relationship between positive paternal involvement and negative child outcomes.

Parenting Control

Research suggests two important dimensions underlying effective or positive parenting: support and control (Baumrind, 1971; Maccoby & Martin, 1983). The best child outcomes occur when parents provide high levels of both support and control. Alternatively, children's outcomes are far less positive when parents involve high levels of only one or the other of these dimensions in their parenting practices. Although researchers are currently calling for broader measures and conceptualizations of paternal
involvement, few have linked paternal influence with this overarching framework of parental support and control (e.g., Hawkins & Palkovitz, 1997). Yet, as summarized in the review of literature for this study, fathers positively impact children’s social development when their involvement is characterized by playful, affectionate, nurturing interaction, and an absence of excessively restrictive and controlling behavior. In other words, positive paternal influence seems to involve elements of both support and control.

In selecting measures for this study, an effort was made to include variables reflecting the amount and quality of both parental support and control experienced by children. However, questions regarding parental control—such as rules about curfews and friends, or the quantity and quality of monitoring—were typically asked of parents with children in the older age categories, or were not asked of both parents. Consequently, the parental positive involvement variables incorporated in this study addressed some supportive behaviors—such as hugging, praising, and child-centered communication. However, the kind of control that research has found to benefit children—appropriate monitoring and rules, limited use of physical punishment, clearly communicated consequences, and consistent follow-through—was not directly addressed by the parental variables included in this study. Therefore, although paternal variables assessed the degree to which fathers provided affectionate and nurturing support, these variables were silent with respect to whether or not fathers avoided excessively restrictive and controlling behavior.

This gap in the content validity of the parental involvement measures suggests one possible explanation for their limited impact in the present research. In general, parental
control seems to be intimately connected with parental support in determining some of
the kinds of negative child outcomes included in this study; namely, aggressive/antisocial
behavior and school problems. Extreme levels of parental control, in the form of
excessive control and harsh discipline, combined with low levels of parental support
(authoritarian parenting), have been linked with children’s social incompetence and
aggressive behavior (Barber et al., 1994; Maccoby & Martin, 1983; Weiss, Dodge, Bates,
& Pettit, 1992). Alternatively, low levels of parental control, combined with high levels
of parental support (permissive or indulgent parenting) have been linked with children’s
social incompetence and lack of self control (Maccoby & Martin, 1983). Therefore,
without knowledge of the amount and quality of parental control experienced by the
children in the sample, it is possible that parental control was confounding the
relationship between parental support—underlying the measures of parental
involvement—and negative child outcomes. For example, in the case of permissive
parents, characterized by high levels of support and low levels of control, increased
involvement would possibly have been associated with greater, rather than lesser,
negative child outcomes such as aggressive/antisocial behavior and school problems.
Juxtaposing these hypothetical permissive parents in the sample against the
nonpermissive parents—for whom increased involvement would have been associated
with lesser negative child outcomes—the net effect would have been the appearance of
little or no association between parental involvement and negative child outcomes.
Positive Parenting and Negative Child Outcomes

The polarity of the independent and dependent variables is another measurement issue which may have contributed to the lack of association between parental variables and child outcomes. Parental measures attempted to assess the positive side of parents’ involvement with their children. Alternatively, the child outcome variables reflected negative possibilities in children’s development. Had both the positive and negative aspects of parental involvement and child outcomes been measured, a stronger connection might have been found between the two. Lending support to such an idea, the marital variables in the LISREL models—which included negative aspects of marital dynamics—evidenced a stronger link to the negative child outcomes measured.

Operational and Statistical Limitations

Beyond the limitation in content validity of the parental and child outcome measures, the available parental variables were limited in sheer number and generated less than optimal alpha reliability scores. Furthermore, paternal and maternal involvement indicator variables were moderately correlated, introducing a certain amount of multicolinearity into the LISREL models. Consequently, even if the above conceptual explanations are not valid accounts of the lack of findings in support of paternal influence, there is some reason to suspect that problems with the parental measures may have led to their limited effect upon the child outcome measures in the LISREL models.
Research Question 2

Research question 2 asked: How does the influence of positive paternal involvement interact with the influence of positive maternal involvement and marital quality in determining children's development? Without revisiting the issue of measurement problems, it should be remembered that all regression equations tested interaction terms using only the aggression/antisocial behavior outcome measure as the dependent variable. Consequently, one might suspect that the previously mentioned measurement problems—if they were indeed present—also played a part in the regression analysis, that is, they attenuated the influence of the interaction terms on the aggression/antisocial behavior outcome measure.

Of the 12 interaction terms tested, the three involving Wave 2 paternal positive activities either attained or approached statistical significance at the .05 level. Specifically, the $p$-values for the T-scores of the interaction terms were as follows: paternal positive activities x maternal positive activities .06; paternal positive activities x marital disagreement .07; paternal positive activities x marital happiness .01. Only one statistically significant result out of 12 (at .05 alpha level), along with two interaction terms which approached significance, is not a pattern to justify further analysis of interaction terms.

These results are deemed a pattern in that they involve only Wave 2 paternal positive activities, to the exclusion of Wave 1 variables and Wave 2 paternal positive communication. The fact that Wave 1 variables yielded no statistically or near
Statistically significant results is likely due to the long time (5-6 years) separating the two data collection periods in which a multitude of unmeasured influences surely occurred within and without the marital and parent-child relationships in question. Also, Wave 1 parental variables generated very low alpha reliability scores—further weakening the possibility of observing a statistically significant interaction term.

Furthermore, the direction of the effects for these interaction terms involving paternal positive activities demonstrated a meaningful pattern. The interaction between paternal positive activities and marital happiness was associated with decreased negative child outcomes, while the interaction between paternal positive activities and marital conflict was associated with increased negative child outcomes. Such a pattern lends support to the sensitive connection between paternal involvement and marital dynamics. Possibly, paternal involvement interacts with marital dynamics to create positive or negative influence depending on the quality of the marriage. Similarly, the interaction between paternal and maternal positive activities was associated with decreased negative outcomes for children.

Another important aspect of the pattern of interactions was their strength. Each of the three interaction terms mentioned had the largest Beta in the regression model which tested its significance. In other words, these interaction effects were stronger than the marital variables—which produced the greatest influence in the structural equation models. Overall, the pattern of interactions points to the need for further research focusing directly on the extent to which paternal involvement interacts with other sources of family influence to determine child outcomes.
Research Question 3

Research question 3 asked: To what degree do fathers indirectly influence their children via the marital relationship and the mother-child relationship? Heirarchical chi-square testing of the LISREL models provided no evidence supporting any indirect influence of paternal variables on child outcomes via the marital or mother-child relationships. This lack of evidence must be understood within the context of the measurement problems already mentioned. Future research must address this question in a manner capable of dealing with multicolinearity, and with measures demonstrating greater validity and reliability.

Limitations

Limited content validity of parental and child outcome measures, marginal reliability of Wave 1 measures, a long interval between Wave 1 and Wave 2 data collection, and some multicolinearity of paternal and maternal measures are the limitations of this study that have already been acknowledged. These limitations share a common theme in that they are all reflections of problems with internal validity. Limited internal validity is not uncommon when conducting secondary analysis of a large scale survey such as the NSFH. The strength of such large-scale surveys lies in their potential for external validity, or generalizability, rather than internal validity. Yet, the research questions addressed through this secondary analysis were exploratory. Researchers conducting exploratory studies typically place greater emphasis on internal validity at the
cost of reduced external validity. Such a research strategy generates clearer and more meaningful findings, which can then be replicated with different samples or subjected to larger scale studies better capable of addressing external validity. Being based on secondary analysis of a large data set, this study sought to strengthen external validity as opposed to internal validity. However, external validity is of little value when limitations of internal validity fail to produce findings that are meaningfully significant or easily interpretable.

Even if this study had generated more meaningful and significant findings, the extent to which external validity might have been an advantage is questionable. Although this study incorporated secondary analysis of a large, nationally representative sample, the specific criteria used to select the subsample of interest were such that the representativeness of findings would have been problematic. As with most studies in the human sciences, the subsample used to generate these findings consisted of predominantly white, middle class, educated families.

The National Survey of Families and Households is a remarkably rich data set. Even limiting the data to the marital, parenting, and child outcome variables, which were the focus of this study, the NSFH data set includes a broad range of conceptually important variables. Specifically, there were measures of marital relationships, father involvement, mother involvement, and child outcomes repeated longitudinally. However, because of the need for parallel paternal and maternal measures capable of addressing the research questions of this study, that range of useful variables was drastically restricted. If all the parenting and marital questions asked of the primary respondent in the NSFH
were also included in the self-enumerated questionnaire completed by the secondary respondent, the independent variables in this study would likely have been measured in much greater depth and completeness. However, in secondary analysis, the researcher must make do with available measures.

Implications

Although the findings of this research are limited, several implications can be stated with respect to future research. To begin with, future research should further explore the impact of father involvement within the broader familial context. Such research should be designed to maximize internal validity, focusing particularly on measuring parental involvement in greater depth and completeness. With improved measures, such an approach would hopefully provide clearer answers to the research questions proposed in this study.

This research also has implications for those responding to the call for broader conceptual and operational definitions of paternal involvement (Hawkins & Palkovitz, 1997). Future research should address father involvement within the broader, and more thoroughly researched, framework of parental control and support. Researchers must consider positive paternal involvement in terms of both the support and control it provides to children, or at least consider the role such involvement plays within the overall parental support and control made available to children. Finally, future research should explore the various ways in which paternal involvement interacts with other sources of influence within families to impact the lives of children.
REFERENCES


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VITA

ARIEL RODRIGUEZ

WORK AND HOME ADDRESSES AND PHONES

Department of Family and Consumer Sciences
Southwest Texas State University
601 University Drive
San Marcos, TX 78666-4616
Voice: (512) 245-2422
Fax: (512) 245-3829
Email: AR12@SWT.EDU

Home
5 De Luna Lane
Wimberley, TX 78676
(512) 847-9785

EDUCATION


PROFESSIONAL POSITIONS


Instructor, Teaching/Research Assistant. Department of Family and Human


PUBLICATIONS


Rodriguez, A. (being prepared for submission). Parenting as technological discourse: The eclipse of ethical obligation in parenting education and intervention. Family Relations.

PRESENTATIONS


UNIVERSITY TEACHING ACTIVITIES

Southwest Texas State University Courses


FCS 3353: Parent and Family Life Education. Instructor, Fall, 1999.

FCS 2351: Child Development. Instructor, Fall, 1999.


Utah State University Courses

FHD 260: Child Guidance. Instructor, Uinta Basin Branch Campus, Fall, 1996.


Brigham Young University Courses

FS 303: Parenting. Instructor, on-campus class, Fall, 1992.


ACADEMIC RESEARCH PROJECTS

Five-a-day Evaluation Study. (1999-2000) Research Consultant to Dr. B. J. Friedman and Dr. Silvia Crixell. Responsible for data analysis.

USU/Kellogg Foundation NeighborCare Research Project (1993-1995). Data Manager/Research Assistant to Dr. Ann M. B. Austin. Responsible for training
and overseeing data entry personnel, data cleaning, and SPSS programming for longitudinal analysis of an intervention program for family home day care providers.

USU Transition to Parenthood Project (1995-1997). Research Assistant to Dr. Brent C. Miller. Responsible for file management and SPSS programming in a project incorporating data from the National Survey of Families and Households to examine variables which mediate the transition to parenthood.

PROFESSIONAL ORGANIZATIONS

National Council on Family Relations. 1995-present.

Society for Research in Child Development. 1995-present.

Southwestern Society for Research in Human Development. 1996-present.

Texas Council on Family Relations. 2000-present


LANGUAGE SKILLS

Bilingual/Bicultural: Spanish

HONORS

Woodstoe Scholarship, Utah State University, 1994.

President’s Fellowship, Utah State University, 1993.

Departmental Scholarship, Brigham Young University, 1991-1993.

OTHER PROFESSIONAL EXPERIENCE

Research Consultant, 1996-
Help graduate students plan and implement statistical analysis for Dissertations and Theses.

Psychological Technician, Logan Regional Hospital, 1994-97
Work with multidisciplinary team to implement treatment goals for patients on inpatient psychiatric unit.

Psychological Technician, Utah Valley Regional Medical Center, 1989-1993.
Work with multidisciplinary team to implement treatment goals for teenagers and children on inpatient psychiatric unit.