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I am submitting herewith a dissertation written by Donna J. Cherry entitled "Scale Validation of Co-parenting in Foster Couples." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Social Work.

John G. Orme, Major Professor

We have read this dissertation
and recommend its acceptance:

Terri Combs-Orme

Marlys Staudt

Brian K. Barber

Accepted for the Council:

Carolyn R. Hodges
Vice Provost and Dean of the
Graduate School

(Original signatures are on file with official student records.)

SCALE VALIDATION OF
CO-PARENTING IN FOSTER COUPLES

A Dissertation Presented for the
Doctor of Philosophy Degree

The University of Tennessee, Knoxville

Donna J. Cherry
May, 2007

DEDICATION

This dissertation is dedicated to the foster parents who selflessly dedicate their time, nurturance, and emotional energy to the children entrusted to their care.

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ABSTRACT

Co-parenting, the joint participation and responsibility of a set of adults in childrearing (Talbot & McHale, 2004), contributes to our understanding of how family systems influence child outcomes. Co-parenting is more proximal to parenting than many measures of marital relationships in that it focuses only on those dyadic processes that are specific to parenting (e.g., child-rearing agreement, support/undermining of parenting practices). Because of this focus, it is also a more flexible construct for thinking about non-traditional parenting arrangements, such as family foster care. Rooted in a family systems theoretical framework, the unique contribution of co-parenting may help us better understand the relationship among marital dynamics, individual parenting, and ultimately, foster child outcomes. Therefore, it is imperative that the social work researchers and practitioners promote awareness of, and attention to, co-parenting in foster parents as an important facet of improving the well-being and care of children in foster care.

To date, co-parenting has not been studied in foster couples and no measure of foster co-parenting exists. The goal of this dissertation is to contribute to the knowledge base of foster couples and co-parenting by initiating the study of co-parenting in foster couples. Specifically, this study examined the psychometric properties of the Casey Foster Applicant Inventory-Applicant – Co-parenting Scale, an instrument developed to measure foster parents' co-parenting potential. Results of the EFA and CFA strongly supported a reliable 10-item, one-factor Co-parenting construct for foster mothers and foster fathers that is distinct from, but related to, marital quality and parenting quality in expected ways.

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Chapter I: INTRODUCTION

Co-parenting, the joint participation and responsibility of a set of adults in childrearing (Talbot & McHale, 2004), contributes to our understanding of how family systems influence child outcomes. When parenting takes place in the context of a marriage or other dyad, individual parenting practices are affected by marital (or other) relationships. Co-parenting is conceptualized as a subset of the marital relationship. Research thus far suggests that co-parenting, although correlated with marital quality and parenting characteristics, makes a unique contribution to understanding child outcomes. Co-parenting is more proximal to parenting than many measures of marital relationships in that it focuses only on those dyadic processes that are specific to parenting (e.g., child-rearing agreement, support/undermining of parenting practices). Because of this focus, it is also a more flexible construct for thinking about non-traditional parenting arrangements, such as family foster care.

To date, co-parenting has not been studied in foster couples and no measure of foster co-parenting exists. The goal of this dissertation is to contribute to the knowledge base of foster couples and co-parenting by initiating the study of co-parenting in foster couples. Specifically, this study will examine the psychometric properties of the Casey Foster Applicant Inventory-Applicant – Co-parenting Scale, an instrument developed to measure foster parents' co-parenting potential.

Children in Family Foster Care

Foster care is an essential out-of-home child welfare service for children who, due to neglect, abuse, exploitation, or delinquency, must be removed from their families (Karger & Stoesz, 2006). As of September, 2003, there were an estimated 523,000

children in foster care; 69% of these children were living with foster families, either relative (23%) or non-relative (46%), and the remainder were in pre-adoptive homes (5%), or in other living situations (e.g., group homes, institutions) (26%) (Adoption and Foster Care Analysis and Reporting System [AFCARS], 2003).

Length of Stay in Foster Care

Foster care is regarded as a safe but temporary placement for children (Dinitto & Cummins, 2005; Karger & Stoesz, 2006). Foster parents are expected to provide stabilization for a child while permanency planning, either reunification or adoption, is sought. In 1997, Congress passed the Adoption and Safe Families Act (ASFA, 1997). The goal of this legislation is to reduce the time that children spend in out-of-home care by setting time limits for agencies to either reunify the child with his/her parents or terminate parental rights and pursue adoption as a permanency outcome. As reported by AFCARS (2003) data, however, it is clear that children are still spending a fair amount of time, not to mention critical developmental time, in out-of-home care. Although 39% of foster children have been in foster care for less than one year, 21% have been in care for one to two years, and the remaining 40% have been in care for more than two years. Further, agencies have reported that, for as many as 60% of children whose parents have had their rights terminated, adoption was not appropriate (Fagnoni, 1999). Specifically, children who enter care at age 10 or older have a near zero probability of being adopted (Wulczyn, Hislop, & Goerge, 2000).

In the event that a child cannot be reunified with his or her biological parents, the goal of foster care is to place that child with a pre-adoptive family. Often, foster parent homes are pre-adoptive placements. For example, 53% of all foster parents ($N = 1279$

families) in Downs' (1986) study of foster family characteristics indicated that they were definitely interested in adopting foster children with whom they formed an attachment, and an additional 26% indicated that adoption was a possibility. Of 304 licensed mothers in a study by Orme, Cherry, and Rhodes (2006), foster families had adopted, on average, one foster child in addition to being active foster parents. Finally, of the 50,362 foster children adopted nationally in 2002, 53.3% had been placed in non-relative foster homes with families who later adopted them (AFCARS, 2003). Therefore, quality foster parenting is important both for children who are reunited with their birth families as well as the many who are ultimately adopted by their foster parents.

Given the current state of children in foster care, it is crucial that social workers, long-established as principal advocates for child welfare, continue to work for improved well-being of foster children while in state custody. Not only is this mandate rooted in social work ethics, but child well-being is generally accepted as one of three primary goals of child welfare services (Altshuler, 1999).

Considerations of Child Well-being

The Bill of Rights of Foster Children (National Action for Foster Children, 1973) includes the right "to receive help in overcoming deprivation or whatever distortion in his emotional, physical, intellectual, social, and spiritual growth may have resulted from his early experiences." Therefore, foster parents, who are primary caretakers of foster children, must be able and willing to parent effectively. Foster parent research often focuses on recruitment and retention issues. These are legitimate concerns, but there is insufficient research to address whether long-term and well-intentioned foster parents actually make a difference in foster children's well-being beyond providing them with

safe places to stay. One salient example of this is the notable lack of research on foster families in general, and foster fathers in particular (Orme & Buehler, 2001). Although the majority of fostering is done by foster families, relatively little is known about the quality of parenting that foster parents provide (Orme & Buehler, 2001).

It is important to understand parenting issues related to all types of foster parents, but this paper will focus on foster couples because they comprise the most prevalent family structure (54.6%) of family foster homes (AFCARS, 2003). Further, very little is known about foster fathers and virtually all foster fathers are married. In essence, this line of inquiry affords the opportunity to pursue two knowledge gaps in foster family care: foster couples and foster fathers. Finally, the research reviewed below on co-parenting in the general population suggests that this might be an important approach to conceptualizing fostering, and one that has not been examined in foster parenting literature. This analysis will, in turn, inform future research on foster parenting effectiveness as a step toward addressing well-being of children in foster care.

Given that we know little about the parenting of foster parents (Haugaard & Hazan, 2002), it is most reasonable to look at the current state of knowledge in parenting literature for children in the general population and, where available, with special populations. This review will provide background on theories and/or conceptual frameworks that can help guide foster parent research. Based on that information, the foster parent literature will be reviewed for relevant studies, followed by a summarization of the knowledge gaps.

Parenting in the General Population

As recently as the late 1970s, marriage, parenting, and child development have been mostly studied independently of each other and across many disciplines (Belsky, 1979). Whereas family therapy gave considerable attention to triadic (mother-father-child) interactions using a sociological approach based in system theories (Doherty & Beaton, 2004), psychologists attended mainly to parent-child relationship with major emphasis on mother-child dyads (Belsky, 1979). Parenting research that has linked these systems has deepened our understanding of how microsystems in a child's world interact. However, findings and causal inferences among marital relationships, parenting practices, and child outcomes have not been consistent. The following discussion will show how many current researchers have gravitated toward the study of co-parenting as a specific mechanism to further elucidate our understanding of critical issues in parenting.

Parent-Child Dyads

Parenting competence in the 20th century followed late 19th and early 20th century acceptance of childhood as a separate developmental stage (Teti & Candelaria, 2002). Foremost guiding parental theories for childhood socialization in the early twentieth century were based on behaviorism and psychoanalytic theory. Psychoanalytic theory, with its emphasis on the psychosexual stages of development, directed parents to bring children's sexual impulses and desires under social control, while behaviorists focused on parent behaviors of reinforcement and punishment as tools to shape children's behavior.

As the focus on parents-as-socializing-agents continued to develop, increasing attention was given to specific parental behaviors or styles that produced desirable outcomes in children (Teti & Candelaria, 2002). Research on parenting typologies, led by

Sears, Maccoby, & Levin (1957) and Baldwin (1948) was coalesced by Baumrind's (1967, 1968) framework of three major parenting styles (authoritarian, permissive, and authoritative) that explain parenting competence. These styles describe varying combinations of control, clarity of communication, maturity demands, and nurturance, with the authoritative style repeatedly found to have the greatest benefit to children's social competence. The correlation between authoritative parenting style and positive socioemotional outcomes in children has been shown repeatedly across studies (Teti & Candelaria, 2002) in both cross-sectional (Arnold, O'Leary, Wolff, & Ackers, 1993; Belsky, Hsieh, & Crnic, 1998) and longitudinal research (O'Leary, Slep, & Reid, 1999) and across different age groups including school age children (Kaufmann et al., 2000; Shumow, Vandell, & Posner, 1998) and adolescents (Hickman, Bartholomae, & McHenry, 2000). However, authoritative parenting has not consistently predicted academic achievement (Chao, 2001).

Inconsistency in the relationship between authoritative parenting and academic achievement has led some researchers to pursue a dimensional approach to parenting (as contrasted with Baumrind's typologies). This is not a new pursuit but is a renewal of interest in an index of parental behaviors proposed by Schaefer (1965a, 1965b) and validated with his Children's Report of Parent Behavior Inventory (CRPBI). The CRPBI captures parenting behaviors on three continuums: (a) Acceptance versus Rejection, (b) Psychological Autonomy versus Psychological Control, and (c) Firm Control versus Lax Control. Although the CRPBI was considered a reliable measure from the beginning, it had fallen out of favor when Baumrind's typology approach was introduced (Barber, Stolz, Olsen, & Maughan, 2005). Recently, though, the CRPBI has re-emerged in

parenting literature (e.g., Barber, 1996, 1997; Barber et al., 2005; Gray & Steinberg, 1999; Steinberg, 1990; Steinberg, Elmen, & Mounts, 1989).

While the typology versus dimensionality struggle continues in contemporary parental research with children who are at least pre-school age, Bowlby's (1969) attachment theory is applied to parental competence with infants. Attachment theory explains infants' propensity to attach to caregivers. The extent to which infants successfully attach to caregivers has implications for the ability of parents to subsequently socialize their children. More recently, parenting competence has been broadened and categorized to encompass an array of parental tasks germane to infant development: sustenance, supervision and safety, stimulation, support and affection, and structure (Combs-Orme, Wilson, Cain, Page, & Kirby, 2003). Together, these infant-focused and preschool-age-and-older-focused frameworks have made a substantial contribution toward understanding successful parenting.

Mother-child dyads were seen as the primary socialization context for children until the late 1970s (Talbot & McHale, 2004). The advancement of the feminist movement and subsequent increase in numbers of women in the workforce during the 1970s (as well as rising divorce rates) spurred an interest in the role of father-child dyads (Belsky, 1979). Father involvement has slowly increased over the past four decades in divorced and intact families, although their relative involvement is still less than that of mothers (Pleck, 1997; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). Research on child development indicates a positive relationship between quality paternal involvement and child social, emotional, and cognitive outcomes (Parke, 1979, 1996; Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000; Pleck, 1997). The benefit of father

involvement is found even when controlling for mother involvement (Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Isley, O'Neil, & Parke, 1996; Mosley & Thompson, 1995; Parke, 1996; Rohner, 1998), although this unique contribution is not found in all studies (Barnett, Kibria, Baruch, & Pleck, 1991; Brody, Stoneman, Flor, McCrary, Hastings, & Conyers, 1994; Wright, Peterson, & Barnes, 1990).

Marital Relationships and Parenting

Marriage, parenting, and child development initially were studied independent of each other and continued in this fashion through the late 1970s, despite calls by some for a more integrated approach (Belsky, 1981). Beginning in the early 1980s, researchers began studying relationships between various components of marital quality and parenting (Grych, 2002). Research has indicated positive correlations between healthy marital relationships and desirable parenting (Arnold, O'Leary, Wolff, & Ackers, 1993; Coiro & Emery, 1998; Kitzmann, 2000; Lindahl, Clements, & Markman, 1997; O'Leary, Slep, & Reid, 1999). Specifically, a positive relationship between marital satisfaction and preferable parenting behaviors and attitudes has been found in both cross-sectional (Goldberg & Easterbrooks, 1984; Pederson, Anderson, & Cain, 1980) and longitudinal studies (Belsky, Youngblade, Rovine, & Volling, 1991; Cowan & Cowan, 1992; Cox, Owen, Lewis, & Henderson, 1989). Such studies looked at parenting during the transition to parenthood as well as with older children and adolescents. Specific parenting behaviors related to marital satisfaction include fathers' involvement in caregiving, quality of parent-infant attachment, affect, disciplinary practices, and teaching (Brody, Pillegrini, & Sigel, 1986; Deal, Halverson, & Wampler, 1989; Stoneman, Brody, & Burke, 1989).

A refinement to marital satisfaction research has been a focus on interparental conflict as some theorists believed this to be the most important aspect of marital relationships for predicting child outcomes. Individual studies as well as meta-analyses (e.g., Buehler et al., 1997; Krishnakumar, & Buehler, 2000) have shown that interparental conflict can, in part, undermine the quality of parent-child relationships or the consistency of desirable parental discipline practices, or result in undesirable parenting practices (e.g., harsh discipline, lax control, and emotional unavailability).

However, the relationship between marital quality and parenting has not been clear or consistent across all studies. For example, parenting has been shown to either mediate (Buehler & Gerard, 2002; Frosch & Mangelsdorf, 2001; Frosch, Mangelsdorf, & McHale, 2000) or moderate (Frosch & Mangelsdorf, 2001; Gordis, Margolin, & John, 2001) the relationship between marital quality and children's behavior. Erel and Burman (1995) conducted a meta-analysis of 68 studies investigating relationships between different aspects of marital quality (marital satisfaction, marital conflict, and marital alliance) and parenting. Although most of the studies indicated a spill-over effect between marital quality and parenting, a number of studies reported an inverse relationship. In particular, some studies found that in troubled marriages, parents were more invested in their relationships with their children. Also, and conversely, other studies indicated that parents in highly satisfactory marriages were less involved with their children.

Although research on the marital quality-parenting link shows there is a relationship, the exact mechanism(s) of this relationship are as yet unclear (Grych, 2002). Katz and Gottman (1996) suggested that co-parenting be explored as the potential link

and Grych (2002) concluded that co-parenting, which assesses spousal support and participation in childrearing, “sits squarely at the interface of marriage and parenting” (p. 205). This interparental dyad is seen by some as a critical bridge between marital quality and individual parenting (Feinberg, 2003) because it considers just those elements which examine parent interactions and processes (Talbot & McHale, 2004).

Summary

Quality of parenting is important for favorable outcomes of children in the general population and should be a focus on behalf of children in foster care. In couples, quality of individual parenting is generally positively related to marital quality, although the strength of the relationship and consideration of marital conflict as the more salient aspect of marital quality is still debated in the literature. Further, co-parenting is arguably the link between marital quality and individual parenting. Because the majority of children in family foster care reside with foster couples, it follows that co-parenting should be explored for its relevance as an important mechanism that might explain or predict individual parenting quality.

Chapter 2: CO-PARENTING LITERATURE REVIEW

Conceptual Framework

Co-parenting, a term that has continued to be redefined since its inception, has also been referred to as “parenting alliance” (Cohen & Weissman, 1984), “parenting partnership” (Floyd & Zmich, 1991, p. 1435), “shared parenting” (Deutsch, 2001, p. 25), and “the ways that parents and/or parental figures relate to each other in the role of parent” (Feinberg, 2003, p. 96). Most recently, in keeping with the numerous parenting configurations present in today’s society, the co-parenting construct has expanded to include “any set of adults participating jointly in childrearing” (Talbot & McHale, 2004, p. 192) or “when at least two individuals are expected by mutual agreement or societal norms to have conjoint responsibility for a particular child’s well-being” (Van Egeren & Hawkins, 2004, p. 166). These broad conceptualizations of parenting partnerships encompass, for example, two biological parents, whether married, divorced, or never married. Also included are mother-grandmother dyads, same-sex couples, or any other combination of adults who provide the executive function of decision-making and parenting a child or children (Talbot & McHale, 2004). Thus defined, co-parenting holds much promise as a relevant construct in foster care, not only for married couples who are not related to the foster child (the focus of this paper), but also for many other unrelated foster family and kinship family configurations.

The concept of co-parenting gained widespread usage in the late 1970s and early 1980s for one of the same reasons that spurred interest in fathers during that time: rising divorce rates (McHale & Kuersten-Hogan, 2004). Therapists began to see severe behavior problems in children from divorced families and researchers subsequently

verified that poor co-parenting relationships after divorce were the source of children's problems. Understandably, assessment of co-parenting at that time focused on conflict and cooperation between parents. Interest in co-parenting in intact families grew out of that initial focus on divorced parents. Weissman and Cohen's 1985 conceptual article on the applicability of co-parenting in intact families began to really take hold in the mid-1990s (McHale & Kuersten-Hogan, 2004).

Co-parenting does not include romantic, sexual, companionate, emotional, financial, or legal aspects of adults' relationship that do not relate to childrearing (McHale, Kuersten-Hogan, & Rao, 2004). However, the bulk of co-parenting research has been conducted on married couples and, as a logical extension, co-parenting has mostly been viewed as a subset of the marital relationship. In general, it is expected that there is a spillover effect from marital quality to co-parenting, that co-parenting affects individual parenting practices, and that parenting practices, in turn, ultimately shape child outcomes (Figure 1; all figures and tables are located in the Appendices). In other words, marital quality is not considered to have a direct affect on child outcomes; it acts indirectly (i.e., is mediated by) on both co-parenting and parenting.

However, just as research findings on the relationship between marital quality and parenting have not been consistent, there is reason to suspect that different paths among marital quality, co-parenting, parenting, and child outcomes may exist. In this respect, marital quality may be mediated only by co-parenting (Figure 2, Path A) which, in turn, directly affects child outcomes. Alternatively, marital quality may have an interaction effect with co-parenting (Figure 2, Path B). These paths may also exist among co-parenting, parenting, and child outcomes (Figure 3).

Lastly, multiple paths (direct, mediated, or interactional) may exist when assessing relationships among all constructs (marital quality, co-parenting, parenting, and child outcomes) (Figure 4), and some of these paths may be bi-directional.

Although co-parenting is defined as the collaborate effort to raise a child, it is not expected that parenting roles are or should be equal in authority or responsibility (McHale, et al., 2002). Parental values, beliefs, and expectations about family relationships (e.g., role of gender in parenting) are influenced by cultural and subcultural themes (Feinberg, 2003). The issue at stake is the degree of agreement and satisfaction between co-parents about how the child is being parented and the extent to which each parent feels supported in his or her parenting role.

The marital quality-co-parenting-parenting model (Figure 4) is perhaps conceptually adequate in research to date, which has largely focused on nuclear, European American, middle class families. However, these models will need to be modified as research with diverse families increases. Marital quality assessment may need to be replaced by measures that capture non-co-parenting aspects of different types of relationships (e.g., families in which children are being raised by mother-daughter or grandmother-granddaughter dyads). Also, social or environmental contexts may become more important. For example, in foster families, where the state is the legal custodian of the foster child, the relationship with the child welfare agency may have a direct and more substantial impact on co-parenting or parenting than would be true for any other type of family system. As well, the interaction between the foster child and birth children in the foster home could be a formidable antecedent to co-parenting and/or parenting quality. Lastly, just as parenting researchers differ on methodologies (dimensionality

versus typology), the same issue may be important in co-parenting research. In other words, there may be different types of co-parenting couples or effective co-parenting styles may vary for different types of children.

Theoretical Frameworks

The principle framework for much co-parenting research has been *family systems theory* (Minuchin, 1974, 1985), sometimes referred to as *structural family theory*. This theory concentrates on multiple and simultaneous interactions in the family, making it a logical and attractive way to understand parenting. However, as research has evolved, it appears that drawing from other perspectives may be necessary to capture the essence of co-parenting.

Family Systems Theory

Family systems theory is the primary theoretical perspective in much of the research on the relationship between marriage and parenting (Grych, 2002) and has also influenced the study of co-parenting (Belsky, Crnic, & Gable, 1995; Gable, Belsky, & Crnic, 1992; McHale, Kuersten, & Lauretti, 1996). It is based on general systems theory (e.g., von Bertalanffy, 1948) and cybernetics (e.g., Wiener, 1948), and describes how family relationships are defined and maintained. Core principles of family systems theory are: (1) the family as a whole is one system and is comprised of various subsystems (relationships between dyadic or triadic combinations of individuals comprise the family system); (2) causal relations among family members are circular rather than linear: each person both affects and is affected by other members of the family; (3) homeostasis, or stability in the family, is maintained through negative feedback, which serves to modify or correct deviations in how a given family member functions; and (4) a family is also

influenced by its environment. In other words, not only does the family change as individuals in the family unit change, but because the family is an open system, it is subject to change based on external events and pressures as well.

A unique component of family systems theory is the emphasis on the negative family process by which parents use their children to deal with marital stress (Grych, 2002). Specifically, parents may involve the child through triangulation (e.g., parents involve a child to avoid conflict), detouring or scapegoating (e.g., parents focus on a child's behavior to avoid resolving their marital problems), or cross-generational coalitions (the child is drawn into an alliance with one parent against the other parent). In each of these situations, marital conflict negatively affects the parent-child relationship. This focus on marital conflict is not broad enough for the co-parenting construct because it disregards the role of positive family functioning or positive feedback in the co-parenting relationship.

Other Perspectives

In addition to family systems theory, other perspectives need to be incorporated to fully understand co-parenting. First, in contrast to the emphasis on marital discord in family systems theory, the *stress and coping perspective* argues that the marital or co-parenting relationship can provide either support or stress for the parenting role (Belsky, 1984; Rutter, 1987) and that this mechanism can directly or indirectly affect parenting (Grych, 2002). Within this framework, a good marital relationship provides positive support (emotional or instrumental) for parenting, whereas marital problems may be a source of subjective distress that saps parental resources, energy, and attention which, in turn, results in neglect of the child or in undesirable parenting practices. Consideration of

distress or support as subjective captures a constructionist perspective to parenting. In particular, Doherty and Beaton (2004) suggest that *social constructivism* is ideal for understanding co-parenting because it stresses how mutual expectations, informed by cultural norms, shape the co-parenting process.

Affective spillover and *withdrawal* are two other perspectives that address how marital or co-parenting dynamics may affect parenting styles and, by extension, child outcomes. Affective spillover shows how positive or negative engagement between spouses tends to “spill over” onto the parent–child relationship (Erel & Burman, 1995; Heinicke & Guthrie, 1992; Katz & Gottman, 1996; Krishnakumar & Buehler, 2000). This construct is similar to the stress and coping perspective but focuses only on the emotional content of parental interactions. The withdrawal hypothesis (Osborne & Fincham, 1996; Lindahl, Clements, & Markham, 1997) also purports a spillover effect, but in an opposite fashion. In this context, parents (especially fathers) have been found to become increasingly involved with their children as they withdraw from their wives. This is similar to *compensation theory* in work-family relationships (Staines, 1980) that proposes that people invest more energy in one area to make up for what is missing in the other.

Summary

Co-parenting is rooted largely in family systems theory but is expanding to accommodate other frameworks and theories. Family systems theory provided a logical point of departure for the earliest co-parenting research because this initial work was focused on divorced couples with an emphasis on negative family processes (Ahrns, 1981; Hetherington, Cox, & Cox, 1982). However, once researchers began to apply the concept of co-parenting to intact families as well as theorize about its applicability to

non-traditional parental dyads, it was necessary to broaden the scope of theoretical underpinnings. Although the relative importance of the additional perspectives discussed above are still under investigation as the construct is developed, defined, and tested, it has definite promise as being pertinent to foster couples.

Measurement

Four central components in the co-parenting model that have held sway in the field for the last ten years are (1) division of childcare labor; (2) support versus undermining between partners; (3) active participation by partners in engaging with and directing the child (i.e., mutual engagement); and (4) childrearing agreement (McHale, et al., 2004). These components are not necessarily addressed in all co-parenting measures, as will be discussed later in this paper. Part of the challenge of measuring co-parenting is coming to a consensus about what it entails. The following is a discussion of how each of these dimensions has been conceptualized and some of the issues that are still unresolved.

Division of Childcare Labor

McHale, Kuersten-Hogan and Rao (2004) noted that although division of childcare labor is important, it is likely to be biased toward women because women are the primary caregivers of children in almost every culture or country. Men often play active roles in their children's lives through play or other stimulating activities but less frequently participate in routine caregiving and household management issues. Children benefit by their fathers' involvement in that their affect, regulation, competencies, and adaptive profiles are realized (Levy-Shiff & Israelashvili, 1988; Mchale & Huston, 1984).

Feinberg (2003) elaborated on the domain of childcare labor division and suggested that the central issue is ‘satisfaction.’ That is, division of labor should not be regarded as much as a quantitative measure of assigned responsibilities, but as a reflection of the overall level of satisfaction between co-parents with respect to their specific arrangement. This approach is more proximal to parenting dynamics than the concept of fairness (which has been correlated with marital quality [Terry, McHugh, & Noller, 1991]). Satisfaction reflects the degree to which division of childcare labor is aligned with parents’ beliefs and expectations (Cowan, 1988; Hackel & Ruble, 1992; MacDermid, Juston, & McHale, 1990). Unmet expectations in the division of childcare labor are significantly related to parental depression, marital adjustment (Kalmuss, 1992; Voydanoff & Donnelly, 1999), and resentment (Goodnow, 1998). Feinberg speculated that these issues create parental stress that may, in turn, reduce the quality of interaction with the child.

Support versus Undermining

Co-parenting support refers to positive reinforcement of parenting competency that each parent gives the other, demonstrated by acknowledging and upholding parenting decisions of the other parent (Belsky, Woodworth, & Crnic, 1996; McHale, 1995; Weissman & Cohen, 1985). By contrast, undermining refers to criticism and blame of one parent by the other.

What is unclear is whether support and undermining are two separate constructs or opposite ends of the same continuum (Feinberg, 2003). Floyd and Zmich (1991) found a relationship between support/undermining and perceived parental competence. However, evidence for support and undermining as two distinct constructs has been

found in factor analysis (Margolin, Gordis, & John, 2001; McHale, 1995). Still again, Van Egeren and Hawkins (2004) found mixed results for distinct factors within the same study. Whereas support and undermining were significantly and negatively related for fathers, this was not true for mothers. The authors speculated that family relationships may be less differentiated for fathers than for mothers, a finding consistent with other studies (e.g., Beitel & Parke, 1998; McBride & Rane, 1997, 1998). The implication is that fathers equate their spouses' lack of support of their parenting skills to be a negative commentary on their parenting skills; by contrast, mothers do not appear to construe a lack of support as criticism.

Mutual Engagement with and Directing of the Child

Termed *joint family management* by Feinberg (2003), dimensions of this domain refer to parental communication and behaviors directed toward each other within the presence of the child (e.g., triadic activity). Feinberg proposed three dimensions: interparental conflict, parent-child coalitions, and balance. In the context of joint family management, interparental conflict refers to expressed hostility that is witnessed by the child. Although interparental conflict is often linked to negative child adjustment, including externalizing disorders (Buehler et al., 1997; Emery, 1982; Johnson & O'Leary, 1987; Jouriles, Bourg, & Farris, 1991; Rutter, 1994) and internalizing disorders (Holden & Ritchie, 1991; Jouriles, Barling, & O'Leary, 1987; Jouriles, Murphy, & O'Leary, 1989), constructively managed conflict may have a positive influence or no influence (Cummings & Wilson, 1999; Easterbrooks, Cummings, & Emde, 1994). That is, conflict that is constructively resolved can serve as a positive social model for children.

Parent-child coalitions refer to overt or covert triangulations in which the child is pulled into the middle of parental conflict (Ihinger-Tallman, Pasley, & Beuhler, 1995; McHale, 1997; Minuchin, 1985). Although causality has not been established, it appears likely that triangulation is preceded by marital conflict (Lindahl, Clements, & Markman, 1998; Margolin et al., 2001), which, in turn, has negative effects on the child (Feinberg, 2003).

The third aspect of family management – balance - refers to the proportional amount of time each of the parents engages with the child within a triadic context. Interestingly, the amount of time each parent engages with the child in a parent-child dyad is not consistently correlated with the relative amount of time each parent engages with the child when all three people are together (McHale, Kuersten, & Lauretti, 2000). The difference between the two contexts appears to lie with fathers, who are less engaged with their children in triads (Gjerde, 1986; Stoneman & Brody, 1981).

Childrearing Agreement

Childrearing agreement represents the degree to which parents concur on a spectrum of topics “including moral values, behavioral expectations and discipline, children’s emotional needs, educational standards and priorities, safety, and peer associations” (Feinberg, 2003, p. 102). As distinguished from support and undermining, which are observable behaviors, childrearing agreement and disagreement are theoretical issues, generally viewed as existing on a single continuum.

Both cross-sectional (Block, Block, & Morrison, 1981; Deal et al., 1989, Feinberg, McHale, Crouter, & Cumsille, 2003) and longitudinal (Vaughn, Block, & Block, 1988) studies have linked childrearing disagreement with boys’ and girls’

behavioral problems across various stages of childhood. The mechanism by which this can happen is that disagreement can lead to mutual undermining and/or other aspects of co-parenting which are observable by children (Jouriles, Murphy, et al., 1991; Mahoney, Jouriles, & Scavone, 1997, Van Egeren, 2004). However, this linkage is not inevitable: parents who are able to maintain supportive behaviors despite their theoretical disagreements may avoid negative family outcomes (Feinberg, 2003).

Summary

The dimensions of co-parenting now considered relevant in intact family co-parenting appear consistent with issues in foster families. For example, many foster children come from households headed by single mothers and would presumably benefit from foster father involvement in division of childcare labor. As well, the relationship between childrearing disagreement and children's behavioral problems is particularly apropos to foster care. Therefore, although these co-parenting dimensions may not all have the same degree of importance in foster parent co-parenting, the theoretical importance supports further exploration of co-parenting by examining empirical support.

Empirical Support for Co-parenting

Talbot and McHale (2004) synthesized the research done on co-parenting dynamics and cited evidence of construct validity on four dimensions: (1) association with children's socioemotional adjustment; (2) ability to distinguish co-parenting quality from parent-child dyad quality; (3) ability to distinguish co-parenting quality from marital quality (this is only relevant for a dyad that consists of two married people); and (4) limited findings that indicate poor marital quality does not necessarily imply poor co-

parenting quality. The following section details studies that support each of these dimensions as well as discrepancies or contradictory findings.

Associations with Child Outcomes

Prior to the conceptualization of co-parenting, parenting influences on child outcomes had been measured at the dyadic level (e.g., parent-child level). Therefore, it has been of great interest to know whether co-parenting has an impact on child outcomes and, more specifically, whether co-parenting would make a unique contribution to children's adjustment beyond the effects of the quality of parent-child relationships.

As to the relationship between co-parenting and child outcomes, the majority of studies have found that the quality of co-parenting is positively correlated with children's socioemotional development in both self-report (Abidin & Brunner, 1995; Block, Block, & Morrison, 1981; Brody & Flor, 1996; Brody, Stoneman, Smith, & Gibson, 1999; Deal, Halverson, & Wampler, 1989; Floyd & Zmich, 1991; Floyd, Gilliom, & Costigan, 1998; Ingoldsby, Shaw, Owens, & Winslow, 1999; Jouriles, et al, 1991; Kerig, 1995; Lee, Beauregard, & Bax, 2005; Lindahl & Malik, 1999a; Margolin, Gordis, & John, 2001; McHale & Rasmussen, 1998; Stright & Neitzel, 2003) and observational studies (Belsky, Putnam, & Crnic, 1996; Brody, & Flor, 1996; Fivaz-Deperusinge, Frascarolo, & Corboz-Warnery, 1996; Johnson, Cowan, & Cowan, 1999; Leary & Katz, 2004; Lindahl, 1998; Lindahl & Malik, 1999b; McHale, Johnson, & Sinclair, 1999; McHale & Rasmussen, 1998; Stright & Neitzel, 2003). Although behavioral outcomes comprise nearly all the co-parenting research addressing children, two studies have shown positive co-parenting to be correlated with higher academic outcomes of children in elementary school (Brody & Flor, 1996; Stright & Neitzel, 2003).

These findings have been demonstrated with children of different ages in both cross-sectional and longitudinal studies. Although infants and preschoolers have received the most attention in cross-sectional studies (Abidin & Brunner, 1995; Dadds & Powell, 1991; Deal, Halverson, & Wampler, 1989; Lee, Beauregard, & Bax, 2005; Mahoney, Jouriles, & Scavone, 1997; Margolin, Gordis, & John, 2001; McHale, Johnson, & Sinclair, 1999; McHale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000; O'Leary & Vidair, 2005; Schoppe, Mangelsdorf, Charlton, Dorris, & Frosch, 1999; Snyder, et al., 1988; Talbot & McHale, 2004), children of elementary age have also been studied (Abidin & Brunner, 1995; Brody & Flor, 1996; Brody, Flor, & Neubaum, 1998; Brody, Stoneman, Smith, & Gibson, 1999; Dadds & Powell, 1991; Jouriles, et al, 1991; Kerig, 1995; Lindahl & Malik, 1999; Mahoney, Jouriles, & Scavone, 1997; Margolin, Gordis, & John, 2001; McConnell & Kerig, 2002; O'Leary & Vidair, 2005; Snyder, et al., 1988).

Longitudinal studies also have been most prevalent with infants and preschool-aged children (Belsky, Putnam, & Crnic, 1996; Block, Block, & Morrison, 1981; Fivaz-Deperusinge, Frascarolo, & Corboz-Warnery, 1996; Ingoldsby, Shaw, Owens, & Winslow, 1999; McHale & Rasmussen, 1998; McHale, Kazali, Rotman, Talbot, Carleton, & Lieberman, 2004; Schoppe, Mangelsdorf & Frosch, 2001; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004; VanEgeren, 2004) although a few studies have tracked children from early childhood to elementary age (Block, Block, & Morrison, 1981; Johnson, Cowan, & Cowan, 1999; Katz & Gottman, 1996; Leary & Katz, 2004), during elementary school (Floyd, Gilliom, & Costigan, 1998; Stright & Neitzel, 2003), and one extensive study showed the importance of co-parenting quality during preschool as it related to adolescent socio-emotional outcomes (Vaughn, Block, & Block, 1988).

The bulk of studies have included children who, although somewhat diverse in race, have nevertheless been predominantly European-American and from the mainstream population. The few studies of minority and/or special needs children also report positive correlations between co-parenting quality and desirable emotional outcomes in children. These studies include Brody, Stoneman, Smith, and Gibson's (1999) and Brody and Flor's (1996) studies of African-American children, Lindahl and Malik's (1999) comparison of Hispanic and European-American children; one study of children diagnosed with Oppositional Defiant Disorder (ODD) (Mahoney, Jouriles, & Scavone, 1997), one study of children with Attention-Deficit/Hyperactivity Disorder (ADHD), ODD, or a comorbid diagnosis (Lindahl, 1998), and two studies of children with mental retardation (Floyd, Gilliom, & Costigan, 1998; Floyd & Zmich, 1991). These studies have particularly important implications for foster care research given the overrepresentation of minorities in foster care and the high rate of emotional and behavioral problems found in foster children.

Further investigation into the finer points of co-parenting and child outcomes indicate that, although the majority of findings indicate positive relationships, results sometimes differ depending on the particular aspect of co-parenting that is measured or who is assessing the child's behavior. For example, whereas co-parenting *support* has been correlated positively with children's improved attention spans, being active and independent learners, and achieving better grades (Stright & Neitzel, 2003), Brody and Flor (1996) found youth self-regulation to be positively related only to mothers' reports of co-parenting support. Abidin and Brunner (1995) reported that while fathers' perceptions of *parental alliance* were related to children's self-esteem and social

competence, mothers' perceptions were related to children's self esteem but not to their social competence. Observed co-parenting behaviors with infants were not significantly related to *parents'* report of child behavior at age 4 but were related to *teachers'* reports (McHale & Rasmussen, 1998). Specifically, observed Hostile-Competitive co-parenting and low levels of Family Harmony during infancy were associated with high hostile-aggressive teacher ratings, and greater discrepancies in parental involvement predicted higher Anxious-Fearful teacher ratings.

Differences in outcomes appear also to be related to child gender. Although some studies report no difference between boys and girls in terms of emotional outcomes related to co-parenting (McConnell & Kerig, 2002), McHale, Johnson, and Sinclair (1999) found that, while there were no significant correlations between co-parenting behaviors and girls' internalizing or externalizing behaviors, there were relationships for boys. Boys whose parents demonstrated supportive and engaged co-parenting were less likely to show internalizing or externalizing playground behavior. Also, the children were given puppets to represent family members and asked questions about how the puppet family would deal with different family situations. Boys who included higher levels of intrafamily aggression in their puppet family stories exhibited more externalizing and internalizing behaviors and less positive playground behavior. Similarly, O'Leary and Vidair (2005) reported that, in three of the four structural equation models, direct paths from child-rearing disagreements to child behavior problems were significant for boys whereas only one of the four models was significant for girls. Finally, a longitudinal study by Block, Block, and Morrison (1981) reported that child-rearing agreement was more important for boys' outcomes than for girls'.

Only two studies reported girls as exhibiting poor outcomes. O’Leary and Vidair (2005) reported that, across gender, more variance was accounted for in boys’ than in girls’ externalizing problems while more variance was accounted for in girls’ than in boys’ internalizing problems. Also, Vaughn, Block, and Block’s (1988) longitudinal study found that parental agreement at age 3 was associated with IQ, aspects of moral judgment, and dimensions of personality for teenage boys while child-rearing agreement was mainly associated with self-esteem for teenage girls. So, although there are some unique outcomes for girls, the quality of co-parenting does appear to be more crucial for boys.

Co-parenting-Child Quality Distinguished from Parent-Child Quality

Co-parenting includes beliefs (e.g., childrearing agreement) as well as observable behaviors (e.g., parenting behaviors in triads). Although there is an expected positive correlation between co-parenting dimensions (e.g., child-rearing agreement, cooperation, spousal support of parenting style) and parenting dimensions (e.g., authoritative parenting style, parenting competence, parental involvement) (Abidin & Brunner, 1995; Margolin, Gordis, & John, 2001; McBride & Rane, 1998), numerous studies (Belsky, Putnam, & Crnic, 1996; Buhrmester et al, 1992; Gjerde, 1986, 1988; Johnson, Cowan, & Cowan, 1999; McHale, Rao, & Krasnow, 2000; McHale & Rasmussen, 1998; Stright & Neitzel, 2003) support the premise that co-parenting quality is distinguishable from the quality of parent-child relationships or mediates the relationship between parenting behaviors and child outcomes (Brody, Stoneman, Smith, & Gibson, 1999; Stright & Neitzel, 2003).

In contrast, Deal, Halverson, and Wampler (1989) found that child-rearing agreement did not add anything to parental effectiveness. Some evidence of the

importance of parenting style may explain this discrepancy. Fletcher, Steinberg, and Sellers (1999) found that adolescents with parents who both used an authoritative parenting style were the most well-adjusted and did the best academically. Beyond that, however, consistency in parenting style was less important than having at least one authoritative parent. Specifically, adolescents who had one authoritative parent and one nonauthoritative performed better academically and had better psychosocial assessments than did adolescents whose parents used a similar but nonauthoritative parenting style.

Studies of co-parenting as a triadic construct are particularly interesting for the variation in outcomes by parent and/or child gender. For example, mothers are generally the primary caregivers and family managers, roles which cast them as the more demanding parent with a higher likelihood of having a more aversive dyadic relationship with their children, especially school-age children (Buhrmester et al., 1992). Lytton (1979) found that mothers in two-parent households experienced more positive interactions with their children in a triadic context compared to when they were interacting in a mother-child dyad relationship (i.e., without the father). Ostensibly, this results from fathers assuming some of the responsibility for controlling the child. This finding, to date, seems particularly relevant to mother-son relationships. Gjerde (1986) found that although the mother-daughter relationship was not significantly different from dyadic to triadic settings, the father's presence significantly improved the mother-son relationship. Mothers were more engaged, secure, affectionate, consistent, and less bored when observed in a triadic configuration. In a study of boys, Buhrmester et al. (1992) also found that mother-son relations improved when fathers were present: mothers were less demanding of their sons and sons were less aversive toward their mothers. By

extension, however, fathers in triadic settings are generally more withdrawn or play a more heavy-handed role. Either of these father roles potentially erodes the father-child relationship.

Co-parenting Quality Distinguished from Marital Quality

There is evidence that the relationship between co-parenting and marital quality can be distinguished, although the research is somewhat scattered across numerous dimensions of marital quality (e.g., marital satisfaction, marital conflict). Also, and expectedly, co-parenting and marital quality are generally correlated as shown in both observational (McHale, 1995) and self-report studies (Abidin & Brunner, 1995; Belsky & Hsieh, 1998; Frank, Jacobson, Holle, Justkowski, & Huyck, 1986; Floyd & Zmich, 1991; Jouriles, et al, 1991; Kerig, 1995; Kitzmann, 2000; Lindahl, Clements, & Markman, 1997; Lindahl & Malik, 1999; Mchale, 1997). However, correlational relationships are not always present (McConnell & Kerig, 2002). These correlations indicate that marital relationships and co-parenting are related, as expected, but the strength and nature of the relationship supports two distinct concepts.

Cross-sectional and longitudinal studies that distinguish co-parenting from marital quality have explored and found a variety of relationships (Table 1). For example, research shows that positive co-parenting (e.g., high parenting alliance, low hostile-competitive co-parenting behavior in triads) is related to positive parenting (e.g., parenting confidence, positive parent-child interactions, involvement with children, authoritative parenting style, parental flexibility) after controlling for marital relationships (Floyd, Gilliom, & Costigan, 1998; Floyd & Zmich, 1991; McBride & Rane, 1998; Mchale, 1995; Mchale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000;

McHale, Rao, & Karsnow, 2000; Talbot & McHale, 2004). This differentiation also has been found in studies that accounted for child outcomes. Specifically, co-parenting has been distinguished from marital quality in terms of impact on child adjustment (Dadds & Powell, 1991; Jouriles, et al, 1991; Katz & Gottman, 1996; Kerig, 1995; Mahoney, Jouriles, & Scavone, 1997; McHale & Rasmussen, 1998; Snyder, et al., 1988), even when controlling for both marital quality and individual parenting (Johnson, Cowan, & Cowan, 1999; McHale & Rasmussen, 1998). In addition, two studies have found that co-parenting mediates relationships between marital relationships and parenting experiences (Floyd, Gilliom, & Costigan, 1998; Margolin, Gordis, & John, 2001), and one study reported co-parenting as a moderator between interparental conflict and child outcomes (Ingoldsby, Shaw, Owens, & Winslow, 1999). Last, and perhaps most important for the relevance of the co-parenting construct, co-parenting has been shown to have a stronger influence on parenting and child adjustment than other aspects of the marital relationship (Abidin & Brunner, 1995; Bearss & Eyberg, 1998; Johnson, Cowan, & Cowan, 1999; Jouriles, Murphy et al 1991; Mahoney, Jouriles, & Scavone, 1997; Snyder, et al., 1988). Specifically, McHale, Kuersten, and Lauretti (1996) reported that there were no direct relations between marital quality and toddler adjustment; rather, the linkage was from marital quality to co-parenting quality to toddler adjustment.

Finally, causal direction between marital quality and co-parenting has been found in both directions in longitudinal studies. Three studies found that marital relationship quality predicted co-parenting quality (Lindahl, et al., 1997; McHale, Kazali, et al., 2004; VanEgeren, 2004), while two studies reported that co-parenting quality predicted marital relationship quality (Belsky & Hsieh, 1998; Schoppe-Sullivan, Mangelsdorf, Frosch, &

McHale, 2004). Despite these inconsistent findings, there is an strong body of evidence to show that co-parenting is a distinguishable construct from marital quality.

Nature of Difference between Co-parenting and Marital Processes

Although there is evidence of discriminant validity between marital quality and co-parenting quality, these two constructs are generally correlated. Co-parenting quality, as a more proximal indicator of family interaction, is generally regarded as subject to marital quality but has unique dimensions as well.

However, despite this main effect of marital quality on co-parenting quality, two studies identified subsets of parents for whom this relationship is not true. Lewis, Beaver, Gosset, & Phillip (1976), and Lewis and Looney (1983) each identified parents who exhibited favorable co-parenting traits while experiencing marital distress. These parents are referred to as *competent but pained*, meaning that overall their parenting style and family cohesion is satisfactory, in spite of the fact that they are unsatisfied in their marriages.

Strengths and Weaknesses of Co-parenting Research

Aspects of co-parenting in intact families have now been investigated across more than 50 studies, the majority of which have been completed in the last 10 years, yielding an impressive body of research in a short amount of time. Yet the relative newness of this construct indicates, not unexpectedly, that much refinement is yet to come. The following is a discussion of the strengths and weaknesses of co-parenting research thus far.

Research Design

Population

Studies have consistently shown a positive relationship between desirable co-parenting characteristics and positive child outcomes across populations that have been sampled. However, generalizability of this research is limited because most studies have consisted of white, North American, middle-class, families from the general population (i.e., children who are developmentally ‘normal’). Five studies (e.g., Block, Block, & Morrison, 1991; Gjerde, 1988; Margolin, Gordis & John, 2001; McHale, 1995; McHale, Johnson, & Sinclair, 1999; McHale & Rasmussen, 1998; Vaughn, Block, & Block, 1988) reported that 30 – 36% of their samples were of minority status; unfortunately these minority groups (mostly African American, Hispanic, and Asian American) were not analyzed separately, probably due to the small sample size.

It is noteworthy and promising, however, that the limited studies of other populations have so far found a similar relationship between co-parenting and child outcomes. Three research groups have focused on minority groups. Lindahl’s work has included the most impressive proportion of Hispanics: her 1998 sample of children included 57% Hispanic, 36% Caucasian, and 7% African-American, and her next study (Lindahl & Malik, 1999) consisted of 45% Hispanic, 27% Caucasian, and 27% bi-ethnic (Hispanic and Caucasian) children. Brody’s research (Brody & Flor, 1996; Brody, Stoneman, Smith & Gibson, 1999) has focused solely on African-Americans, specifically rural African American families. Lastly, McHale’s body of co-parenting research includes one study conducted on Chinese mothers in Beijing (McHale, Rao, & Krasnow, 2000).

Children and adolescents from all age groups have been studied in co-parenting research, but studies have rarely looked at specific behavioral or developmental issues. Exceptions, as discussed earlier, include research on children with ADHD or ODD (Buhrmester et al., 1992; Lindahl, 1998; Mahoney, Jouriles, & Scavone, 1997) and children with mental retardation (Floyd, Gilliom, & Costigan, 1998; Floyd & Zmich, 1991). Again, these studies found that co-parenting is positively related to children's socioemotional outcomes, findings that seem particularly relevant in reference to the co-parenting of children in foster care.

Sample Size

Sample size in co-parenting studies ranged from 12 to 282 (Table 2). The mean sample size was 81.54 ($SD = 51.96$), and the median was 72.50. These sample sizes, although respectable for family research, are small for considerations of statistical power and precision of estimates and may have contributed to instances where hypothesized relationships were not found and also to discrepancies in results across studies (see further discussion under 'Analysis').

Sampling

Almost all studies consisted of nonprobability samples. Participants were generally recruited through announcements made through media and flyers handed out at daycare centers and schools. Special populations (i.e., children with behavioral disorders) were often recruited through doctors or community health centers. Two exceptions to the convenience samples were identified: a random sample from graduation lists (Frank, Jacobson, Hole, Justkowski, & Huyck, 1986) and a random digital-dialing telephone screening procedure (O'Leary & Vidair, 2005). This weakness in sampling method also

limits generalizability and introduces the possibility of bias in research findings (Rubin & Babbie, 2001). Types of people who would volunteer for this research probably are interested in, or feel a social responsibility toward, participating in research for the greater good and have time to participate. They also are people who are willing to be examined observationally or through self-report measures which means they are more open and likely had more stable marriages. This would lead to an overrepresentation of couples from nondistressed marriages. To the extent that this is true, findings would be biased toward finding a positive correlation between marital quality and co-parenting quality. This could be a reason that there is little evidence to support the fourth validity hypothesis of *competent but pained* parents: parents who exhibit favorable co-parenting traits while experiencing marital distress. We would expect that distressed couples would be less likely to self-select into these studies.

In the child outcome studies ($N = 39$), a sampling strength is that the majority of studies ($N = 23$ or 66% of studies reporting child gender) included approximately equal numbers of boys and girls (Table 3). In those studies where this was not true, there were more boys than girls ($N = 4$), or the study was conducted with boys only ($N = 8$). Notably, none of the studies focused on girls only. Based on some of the findings, this focus on boys has some justification as boys seem to manifest poorer outcomes than girls (McConnell & Kerig, 2000; McHale, Johnson, & Sinclair, 1999; O’Leary & Vidair, 2005).

Methods

The methodology of the body of co-parenting research is fairly strong. For example, across the entire body of co-parenting research, most studies have measured

more than one correlate of co-parenting (e.g., child outcomes, co-parenting vs. parenting, or co-parenting vs. marital quality) (Table 2).

These studies in the aggregate also are strong in that outcomes have been measured in longitudinal as well as cross-sectional studies (Table 2). Longitudinal studies (18 or 34.62%) ranged from 6 months to 15 years in length with 4 years being the most frequent period of time. Longitudinal studies lend credence to causality (Rubin & Babbie, 2001) and, in these studies, are important for indicating the lasting effects of either positive or negative co-parenting on child development, either directly or indirectly.

An additional design strength is that data have been collected from both observational and self-report measures, and many studies collected both observational and self-report data. In addition, a number of studies have collected data on the same dimension (e.g., co-parenting) using either multiple self-report measures (Margolin, Gordis & John, 2001; McHale, Kazali, Rotman, Talbot, Carleton, & Lieberman, 2004; McHale & Rasmussen, 1998) or both self-report and observational measures (Brody, Flor, & Neubaum, 1996; Deal, Halverson, & Wampler, 1989; Katz & Gottman, 1996; McConnell & Kerig, 2002; McHale & Rasmussen, 1998; McHale, Kuersten-Hogan, Lauretti & Rasmussen, 2000; McHale, Rao, & Karsnow, 2000; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004; Van Egeren, 2004). These multiple-measure studies provide valuable construct validation on co-parenting measures. As well, the concurrent use of a self-report and observational measure of the same dimension (e.g., co-parenting or marital quality) can show that the results are consistent across these methods (e.g., McHale, Kuersten-Hogan, Lauretti & Rasmussen, 2000).

Measures

Many new co-parenting measures, both self-report and observational, were used in the body of co-parenting studies reviewed (Tables 4 and 5). Consistent with the evolution of co-parenting from a focus on divorced couples to intact marriages, older co-parenting scales are often limited to the measurement of child-rearing disagreement (e.g., Abidin & Brunner, 1991; Jouriles et al., 1991; Snyder, et al., 1988) whereas newer co-parenting scales (e.g., Margolin, 1992; McHale, 1997) tend to be multidimensional, taking into account other aspects of co-parenting (i.e., support vs. undermining and division of childcare labor) that are now considered to be part of a more complete picture of the construct.

Scale development is potentially a weakness in cases where there was a choice of Exploratory Factor Analysis (EFA) versus Principal Components Analysis (PCA). The goal of EFA is to identify underlying latent variables that explain the correlations between measured variables and to do so, common variance is separated from unique variance (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The goal of PCA is data reduction. PCA assumes variables are measured without error and thus retains as much of the information for each measured variable as possible. In other words, EFA accounts only for *shared* variance among a set of observed variables while PCA accounts for the *total* variance (Widaman, 1993). Because EFA recognizes the error in the variables, it is preferable because it tends to produce less-inflated loadings and more reliable estimates (Gorsuch, 1990). The difference in accuracy between EFA and PCA is less likely when communalities are high or when more variables are used (McArdle, 1990; Fabrigar et al., 1999; Gorsuch, 1990; Widaman, 1993).

Almost all new co-parenting scales were explored using principal components analysis (PCA) with orthogonal (varimax) rotation, although data reduction was not always indicated as the rationale for this choice. For example, McHale (1997) used PCA with varimax rotation on his 16-item scale even though the scale was composed of two types of questions: 11 items involving overt, family-level behavior, and 5 items depicting covert, one-to-one activities. Although the author believed that these two sets of items would constitute two factors, PCA yielded four factors. Further, two of the factors were comprised of both overt and covert items. In a subsequent study of Chinese mothers using this same measure, PCA resulted in three, not four factors, and some of the items on the first three factors did not load identically to the original study (McHale, Rao, & Karsnow, 2000). McHale's (1997) choice of PCA is defensible but for a different reason. He subsequently used the PCA component scores as input to a clustering program (see discussion later in this section). This use of PCA scores is appropriate and is a technique often employed as it is believed to increase the effectiveness of clustering programs (Johnson, 1998). However, as Johnson points out, principal components are generally not interpretable. Therefore, although it is impossible to know if EFA would have yielded very different results, it seems clear that the use of PCA in this instance was inappropriate as data reduction did not appear to be the goal. To the extent that PCA was used also inappropriately with other co-parenting measures, the results must be regarded with caution.

Since co-parenting research is still new, there is no gold standard measure against which to validate new scales. In some instances, subscales from existing marital measures were used to successfully confirm construct validity. The measures generally correlated

positively with marital quality and parenting quality but did not perfectly correlate with either, thus indicating that co-parenting is a separate construct. In other studies, scale validation was accomplished using other co-parenting measures. McHale, Kuersten-Hogan, Lauretti and Rasmussen (2000) conducted cluster analysis on observational triadic co-parenting data which resulted in three primary clusters (oppositional families, cohesive families, and nonrestrictive families). The utility of these clusters was assessed in two ways. First, marital quality scores of families in each of the clusters were compared. The difference in marital quality means among clusters was significant and the mean levels matched what was expected for the clusters (i.e., the oppositional family had the lowest marital quality mean and the cohesive family had the highest mean). Second, multivariate discriminant analysis was used to investigate how well a 4-factor self-report co-parenting measure would distinguish the groups. The overall Wilks' lambda was 0.66 ($p \leq .01$). Subsequent univariate tests did not fare so well: only two of the wives' self-report subscale scores were successful in distinguishing the groups while none of the husbands' scores were significant. However, it is worth noting that the self-report measure used in this assessment was McHale's (1997) 16-item scale discussed in the previous paragraph. Thus, if the self-report scale was faulty, the discriminant analysis may not have been truly representative of the validity of the clusters.

In summary, many new co-parenting scales have been developed in the past 15 years as interest in the co-parenting construct has grown. These measures, both self-report and observational, are increasingly multidimensional in nature as researchers attempt to broaden the scope of co-parenting beyond the early days of focus on childrearing conflict. One of the potential problems is that the dimensionality of scales is

frequently being explored with analyses that appear to be inappropriate for the stated purpose. Also, scales are being validated against existing marital subscales and with non-diverse populations. This may limit the applicability of these measures to other types of co-parenting dyads (e.g., foster couples).

Overall, there are numerous strengths in the various design elements of co-parenting research as articulated above. In the next section of this paper, the strengths and weaknesses of analysis within these studies will be critiqued.

Analyses

Child Outcome Studies

Studies of the link between co-parenting and child outcomes are arguably the strongest body of studies. Not only is there more research (39 studies) but, in the aggregate, this research has also most consistently found that co-parenting does have a unique influence on children, either directly or indirectly (via its influence on parenting practices).

Most of these studies analyzed these relationships with Pearson product moment correlations and, to a lesser degree, with hierarchical linear regression. Of the significant findings, correlations were in the expected direction. Statistically significant correlations ranged from 0.03 to 0.64. The mean correlation was 0.34 ($SD = .11$); the median correlation was 0.33 and the interquartile range was 0.25 to 0.42. Accordingly, the strength of the average correlation translates into a medium effect size for this type of research.

Not all relationships between co-parenting and child outcomes were significant in these 39 studies. Specifically, the number of correlations tested ranged from 1 to 42, and

the percentage of statistically significant correlations per study ranged from 11.9% to 100%. The variability in findings could be due to the sample size, so to investigate this, studies were ordered from smallest to largest in terms of percentage of significant correlations (Table 6). Although there appears to be some degree of relationship between sample size and findings, this association is not consistent. Studies also were coded as being cross-sectional or longitudinal, and if the data were assessed by self-report measures (generally completed by the parents) or by observational strategies. Neither of these dimensions shows a predictable pattern with the findings, either. There appears to be an inverse but weak relationship between the number of correlations tested and percentage of significant findings, possibly indicating that the correlation tests were done somewhat arbitrarily rather than with a particular expectation of finding a relationship. Also, in some cases correlations were tested among co-parenting and individual items (i.e., Q-sort items) rather than scale scores, and individual items scores would generally be less reliable.

Significant findings may have been missed due to scale reliability. Although most of the scales measuring child outcomes were reliable, most of the co-parenting measures are still developing a history as they are used across situations. For example, McConnell and Kerig (2002) used the Co-parenting and Family Rating System (CFRS, McHale et al, 2000), an observational measure. Most of the CFRS dimensions utilized a 5-point Likert scale, but one dimension was rated on a 7-point scale. The 7-point scale failed to yield significant correlations, and the authors speculated that it may have been difficult for coders to use this more complex scale. They were also using this scale with an older age group of children compared to previous studies, and suggested that it may have been

more difficult to code these children's more complex interactions and conversations with parents.

Parent gender also could be considered a possible reason for lack of significant findings. For example, in McConnell and Kerig's (2002) study, no significant correlations emerged between co-parenting subscales and fathers' reports of child adjustment. The authors speculated that this may have been true because fathers typically spend less time with their children than mothers and may, therefore, be less aware of children's behavioral difficulties.

Lastly, child gender may have been an issue. As discussed earlier, some studies that have compared boys and girls found gender differences. In fact, most of the studies that analyzed boys and girls separately did report a main effect for gender (Table 3). These findings may indicate that child gender is an important moderator in co-parenting research. It is noteworthy that correlations tested in studies with boys had an overall higher rate of significant findings (Table 6). Yet again, these studies had larger samples while testing fewer correlations.

There is further evidence of the importance of child gender that also addresses parent gender in a more sophisticated manner. As discussed earlier, significant findings of poor outcomes are more often detected in boys than in girls. This issue seems specific to mothers in research to date. In McConnell and Kerig's (2002) research, mothers of boys reported significantly higher externalizing problems ($F = 8.07$, $df = 1, 62$) and total problems ($F = 6.30$, $df = 1, 62$) in their children than did mothers of girls. Lee, Beauregard, and Bax (2005) found that mothers of boys reported significantly more frequent child-related disagreements ($M = 35.24$, $SD = 12.82$) than did mothers of girls

($M = 30.56$, $SD = 6.01$). Mothers of boys also reported significantly more frequent use of verbal aggression ($M = 11.40$, $SD = 4.00$) than did mother of girls ($M = 9.40$, $SD = 4.00$). No child gender differences were found in fathers' responses. Similarly, Margolin, Gordis, and John (2001) found that mothers of boys (both preschool and preadolescent) were rated higher on triangulation than were mothers of girls, $t(193.22) = -2.39$, $p \leq .05$, while there were no significant finding with fathers in this regard.

In summary, co-parenting studies to date indicate that co-parenting behavior is important for child adjustment, especially for boys. More studies are needed with older children and children in diverse or non-traditional families, including foster families. As well, more studies that look at interactions between child gender and parent gender are needed to confirm preliminary evidence of the importance of mother-father relationships (in triadic and marital dyadic interactions) in terms of the effect on mother-son relationships.

Parenting and Marital Quality Studies

Unlike studies of child outcomes, untangling relationships between co-parenting and parenting and, in particular, between co-parenting and marital quality, is more complicated. This is to be expected because the essence of the co-parenting construct debate is whether it can be distinguished from marital quality. Further, can it be distinguished from interparental conflict, as opposed to just general marital satisfaction? There is a potential for many different relationship configurations among these three dimensions, and currently there is evidence to support many of these models.

Similar to the child outcome results, not all hypothesized relationships among co-parenting, marital quality, and parenting have been supported. For example, the

relationship between co-parenting and marital quality has ranged from no correlation (McConnell & Kerig, 2002) to evidence that co-parenting has a stronger relationship with parenting and child adjustment than other aspects of the marital relationship (Abidin & Brunner, 1995; Bearss & Eyberg, 1998; McHale, et al., 1996) (Table 1). Unsupported hypotheses could be explained by some of the same issues discussed for child outcomes: sample size, scale reliability, and gender differences. The choice of the appropriate measure could be particularly important in assessing the relationship between marital quality and co-parenting. McHale (1995) reported that each co-parenting factor was significantly correlated with observed marital distress for husbands and wives, but not all of these factors correlated with marital satisfaction. This is excellent evidence to substantiate the belief that marital conflict is more important than general marital satisfaction to child outcomes. Yet, this is also a good example of why relationships have not always been found in other studies that only used a more general measure of marital satisfaction.

Ironically, the absence of an expected correlation between co-parenting and marital quality (McConnell & Kerig, 2002) can be regarded as support for an alternate hypothesis. The *pained but competent* parents identified by Lewis et al. (1976) and Lewis and Looney (1983) were a class of parents that did not fit the expected profile. These parents appeared to be able to work together effectively on co-parenting issues despite their lack of general marital satisfaction. Although these studies had small sample sizes and might otherwise be regarded with skepticism, there might also be reason to believe that studying parents as typologies should be explored, to investigate why correlational

and other linear relationships have not always been confirmed and why studies have reported contrary causal paths between marital quality and co-parenting quality.

There also is evidence to support the *pained but competent* profile in Belsky and Hsieh's (1998) study. Cluster analysis identified three patterns of marital functioning over time: good-stays-good, good-gets-worse, and bad-gets-worse. Each of these groups was compared to how well they scored on co-parenting, a measure that assessed the percentage of time that each couple engaged in unsupportive co-parenting. The amount of unsupportive co-parenting experienced by the cluster of parents whose marital relationships were bad during the entire course of the study was not significantly different from either of the other groups. In other words, although the level of unsupportive co-parenting was the same across the entire sample, marital group subsets responded differently to unsupportive co-parenting, and the "bad" group was not affected at all. Not only does it appear that these parents could be also regarded as *competent but pained*, but this finding supports the need to explore parent typologies.

Unsupported hypotheses also may be explained by gender differences. For instance, Gjerde (1986) found that mothers and fathers simply act differently in triads than they do in dyads. Compared to mother-child dyads, the presence of the fathers in triads enhanced the quality of mother-son relations. Specifically, mothers were more engaged, secure, affective, and consistent, less bored, and less likely to give up control of the situation. By contrast, the presence of mothers reduced the quality of father-son relations. As compared to the dyadic ratings, fathers in triadic engagement were less involved, less engaged, less egalitarian, more critical, and more antagonistic with their sons. Moreover, mothers differentiated more between girls and boys in triadic

engagement, whereas fathers differentiated more between girls and boys in dyadic engagement. Consequently, studies that did not address interactions among parent gender, co-parenting, and parenting may have missed some important relationships. Some of this problem may again be an issue of measurement: some co-parenting measures yield a single couple score for the parental interaction and this eliminates the opportunity to look for gender interactions.

Summarizing the marital quality and parenting findings is also complicated in that many different research designs and analytical approaches have been used. Studies have included longitudinal and cross-sectional designs, and the majority of the co-parenting studies have reported on the strength of relationships using interclass correlations (e.g., Pearson's), Analysis of Variance (ANOVAs), repeated measures ANOVA, and hierarchical linear regression. Other analytical approaches have included path analysis (Brody & Flor, 1996), structural equation modeling (SEM; Brody, Stoneman, Smith & Gibson, 1999; Floyd, Gilliom, & Costigan, 1998; O'Leary & Vidair, 2005), discriminant analysis (Lindahl, 1998) and cluster analysis (Belsky & Hsieh, 1998; McHale, 1995; McHale, Kuersten-Hogan, Lauretti & Rasmussen, 2000). In light of the complexity and importance of this issue, and given that this area of research is still fairly new (especially in foster care research), a discussion of analytical methods considered to be most appropriate for dyadic analysis is warranted.

Dyadic Data Analysis Issues

An attractive and unique aspect of co-parenting research is that the dyad (e.g., co-parental relationship) or triad (if including the child) is the focus of study. However, this also means that the dyad is the unit of analysis and, therefore, analytical approaches

traditionally used in family research are not always adequate (Maguire, 1999; Thompson & Walker, 1982).

At the most fundamental level, members of a dyad are two individuals who are not independent. Rather, it is expected that they have something in common that will affect their scores. This commonality, or *nonindependence*, is true when the members of a dyad score more alike (or more dissimilar) than people who are not members of a dyad (Kenny, Kashy, & Cook, in press). The analytical method used must account for this lack of dependence in order to avoid biased estimates. Over 20 years ago, Thompson and Walker (1982) warned that “(D)ata analysis is often the final and fatal snag in much of the current dyadic research” (p. 892). Despite attempts to resolve this issue, analytical considerations still worry researchers, as Maguire (1999) cautioned: “Once [dyadic] data are collected, researchers confront the challenge of analyzing such rich data. Unfortunately, many interesting questions about relationships are not answered adequately because inappropriate statistical methods are used” (p. 213). The following is a discussion of the ways in which dependency between scores can be addressed and co-parenting studies that used these techniques.

Intraclass correlations. In dyadic research, similarity or nonindependence can be assessed between dyads or within dyads. It is of utmost importance to assess nonindependence between dyads because this determines whether or not the dyad should be used as the unit of analysis (Kenny, Kashy, & Cook, 2006). If nonindependence is present, the dyad should be treated as the unit of analysis. However, if this is not true (i.e., members of a dyad are *not* more similar or dissimilar to each other than to members of others dyads), then the person can be treated as the unit of analysis. The sample size is

thus doubled, which increases power and precision of estimates. By contrast, if independence is wrongly assumed, results of the study will be based on twice as much data as is defensible. Therefore, the assessment of nonindependence between dyads is important for valid statistical inference.

To assess nonindependence within dyads, the intraclass correlation (ICC) should be used.¹ It is regarded as more desirable than the Pearson's correlation because, whereas Pearson's correlation reports the overall relationship between two variables, the intraclass correlation looks at the actual match between scores (Maguire, 1999). To compute an ICC for each dyad, the individual items in a measure are used. The resulting ICC (which ranges from -1 to +1) reveals patterns of similarities or differences for the dyad across observations. Since a coefficient is computed for each dyad, these data can then be used as either dependent or independent variables in subsequent analyses (Maguire, 1999; Tracy, 2000).

One criticism of the ICC is that, because it does not indicate the direction of difference between members within a dyad, it may have limited utility for interpretation (Maguire, 1999). In other words, the ICC may indicate that husbands and wives are different. However, it will be impossible to distinguish couples in which husbands have higher scores than their wives from couples in which wives have higher scores than their husbands.

Few co-parenting studies made reference to the use of intraclass correlations. McConnell and Kerig (2002) used intraclass correlations to periodically estimate inter-

¹ If the data are analyzed with Confirmatory Factor Analysis (CFA), the data can be structured such that nonindependence is tested as part of the CFA. In this instance, a separate test of the ICC is not necessary.

rater reliabilities. The authors explained that intraclass correlations allowed them to take into account both the order of possible difference between raters as well as the magnitude of such differences. By contrast, they used interclass correlations to examine the relationship between mothers' and fathers' reports of externalizing behaviors, internalizing behaviors, and total problems. Deal, Halverson, and Wampler (1989) also did not use intraclass correlations with parental data but explained why it was not necessary: "(S)ince Q-sorts have identical means and standard deviations, the Pearson r is exactly the same as Robinson's (1957) intraclass measure of similarity" (p. 1029).

Repeated measures Analysis of Variance (ANOVA). The repeated measures ANOVA (or ANCOVA) can handle dyadic data by simply entering one of the dyadic members as the repeated measure (Maguire, 1999). The slope of the line will not only indicate the difference between members of dyads but, as an advantage over the intraclass correlation, will also indicate the direction of the difference. The dataset can be analyzed as a whole, and subgroups of the dataset may be compared to the whole group and to each other. A second advantage of this approach (over correlations) is the ability to include covariates (Tracy, 2000). The latter is also the advantage of repeated measures ANOVA over paired t -tests. If there are no covariates, then the paired t -test will yield the same results as a repeated measures ANOVA.

There are, however, weaknesses to this approach. Because the analysis is conducted at the group level, only the average difference between partners is compared, thus possibly obscuring important dyadic-level differences (Tracy, 2000). In other words, it is possible for equal numbers of dyads to have negative difference scores and positive difference scores. When combined for group level analysis, however, these scores will

cancel each other out. In this situation, cluster analysis may be preferable because it would detect the difference in the two types of dyads. Also, because this method looks at group mean differences as opposed to having generated coefficients for each dyad, it is not possible to subsequently use these data as independent variables (which is possible with intraclass correlations [Maguire, 1999]).

Floyd and Zmich (1991) used repeated measures MANOVAs to control for interdependence of couple data in their co-parenting study. Two MANOVAs were conducted, one for each of self-report and observational data. The MANOVA that analyzed self-report data of marriage and co-parenting did not identify a group effect. This result may be because of the issue that Maguire (1999) discussed: that scores cancelled each other out when combined for group level analysis.

Hierarchical linear modeling (HLM). The second developmental approach, HLM, captures the strengths of the intraclass correlation and the repeated measures ANOVA (Maguire, 1999). Just as the intraclass correlation looks at dyadic differences, HLM provides this same information with regression lines that are fitted for each dyad. Similar to repeated measures ANOVA, the slope in HLM reports the direction of the difference between members of the dyad. None of the co-parenting studies used HLM.

A considerable flaw in each of the three techniques discussed thus far is that none of them adequately addresses measurement error (Tracy, 2000). Per classical test theory, the variance of a score is comprised of true score variance and random error variance and the difference between scores in a dyad includes both. Tracy (2000) stresses that it is important to address random error in each of the original variables before assessing differences in the dyad. The rationale is that because there are only two points of

measurement for each dyad, it is not possible to deconstruct each measurement into a true score and a random error. The only time this would not be an issue is if the random measurement error, relative to the true score, is assumed to be relatively low.

Latent construct modeling. In terms of measurement error, the use of latent constructs (e.g., SEM) offers a solution because relationships between variables are corrected for measurement error (Tracy, 2000). This correction improves the reliability of the dyadic differences, thereby also increasing power. Although the use of latent constructs is a powerful approach, a major drawback is the requirement of a large sample (Tracy, 2000).

O'Leary and Vidair (2005) used SEM with an adequate sample size ($N = 203$) to study mediating effects of child-rearing disagreement between marital adjustment and children's behavior problems. Latent constructs were used to represent mothers' and fathers' scores for both marital adjustment and child-rearing disagreement, and fully or partially mediated models of internalizing and externalizing behavior problems were found in 7 of 8 models. None of the other three studies that used SEM did so for the purpose of addressing dependence in dyadic data. Brody's team did not use latent constructs to represent the dyadic data in their first study (Brody, Flor, & Neubaum, 1996). Latent constructs were used in this manner in the second study (Brody, Stoneman, Smith & Gibson, 1999), but the authors indicated that measurement errors were allowed to covary only on multiple indicators from the same person, not on dyadic data. Lastly, Floyd, Gilliom, and Costigan (1998) used SEM but for the purpose of modeling longitudinal data.

Categorical Analysis. Even with the improvements afforded by the use of SEM, researchers also point out that, for some domains, it may be more practical and accurate to consider dyadic differences as categorical rather than continuous (Belsky & Fearon, 2004; Tracy, 2000). Belsky and Fearon (2004) noted that research of the past 20 years has primarily conceptualized and measured family processes as linear, continuous relationships: that is, as marital quality improves, child development improves. This happens either as a direct linear relationship between marital quality and child development or indirectly (but again through linear relationships) with positive parenting practices as a mediating variable.

Another way to conceive of this difference is that of variables versus individuals. Linear models focus on the relationship between variables (i.e., “variable-oriented”) whereas cluster analysis is a “person-oriented” approach in which the focus is on individuals and their profiles (Magnusson & Bergmann, 1990). Specifically, cluster analysis “identifies and describes groups of individual cases defined by similarities along multiple dimensions of interest. These groupings can form the basis for understanding normal development, risk, or other outcomes” (Henry, Tolan, & Gorman-Smith, 2005, p. 121). Although parenting research has primarily utilized a variable-oriented approach, more attention to the person-oriented approach is being advocated by researchers (Belsky & Fearon, 2004; Bergman, 1996; Bergman & Magnusson, 1997; Cairns, Bergman, & Kagan, 1998; Henry, Tolan, & Gorman-Smith, 2005; Magnusson & Bergmann, 1990; Parke, 2002).

One reason to consider cluster analysis, as pointed out by Belsky and Fearon (2004), is that associations among variables might obscure more pertinent information

that would be revealed through cluster analysis. For example, although it has been widely accepted that quality of marriage and quality of parenting are highly related, effect sizes for this relationship are often weak. Erel and Burman's (1995) meta-analysis yielded an average effect size for the association between measures of marriage and parenting of $d = .46$ but individual study effects sizes ranged from -0.52 to 2.30 . Belsky also cited studies in which high-quality marital relationships and supportive parenting did not co-occur (Amato, 1986; Burman, Jon, & Margolin, 1987; Dickie, 1987; Grossman, Pollack, & Goldin, 1988; Stoneman, Brody, & Burke, 1989). In particular, he speculated that the dose-response linear relationship did not produce stronger findings because "there are different types of families in which marital quality, parenting, and child development go together in rather different ways" (p. 503).

Belsky and Fearon (2004) tested their family typology hypothesis in a study of marital and parenting quality, as well as child development outcomes. Marriage and parenting scores were analyzed using latent-class analysis (LCA), a probabilistic procedure that uses statistical criteria to select an optimal number of clusters (e.g., subtypes) based on homogenous patterns (Vermunt & Magidson, 2000). The LCA approach yielded a five-cluster solution (Belsky & Fearon, 2004). Three of the groups ranged on a continuum of Good Parenting/Good Marriage to Poor Parenting/Poor Marriage and accounted for 74.8% of couples. However, the other two clusters had contrary pairings: Good Parenting/Poor Marriage (18.7%) and Poor Parenting/Good Marriage (6.5%). Further, Good Parenting/Good Marriage groups out-performed contrary pairings in only 4 of 12 child outcomes. Belsky's finding strongly support the rationale for using typologies in family research.

Not all of the co-parenting studies that used cluster analysis did so for the reasons discussed above. Deal, Halverson, and Wampler (1989) conducted cluster analyses on parenting variables (Q-sorts) and identified two groups of parents: parents who would be considered effective and parents who would be considered ineffective. However, this analysis used the individual, not the dyad, as the unit of analysis. Gjerde (1988) also used clustering on 49 parenting variables, but at the dyad level. However, the reason for using clustering was not due to concerns about limitations of linear data analysis. The stated reason for cluster analysis was greater parsimony of data and to reduce the number of significance tests performed. The authors indicated that cluster analysis was selected over PCA because fewer assumptions about the data needed to be met and because it resulted in a cleaner structure. Also, although cluster analysis was conducted on the dyads, resulting clusters were then correlated with child-rearing agreement scores separately for mothers and fathers with boys and girls. In essence, the ultimate goal of cluster analysis was not to derive typologies of couples.

McHale (1997) initially analyzed his self-report measure using PCA with varimax rotation and found four factors: family integrity, disparagement, conflict, and reprimand. Using the subscale score data for both husbands and wives, cluster analysis was conducted, yielding a five-cluster solution. McHale then compared the characteristics of the principal components to that of the clusters. McHale's goal was to broaden the focus of co-parenting to overt activities that enhance a sense of family as well as covert disparagement of the co-parenting partner. The cluster solutions provided additional information for discussion and also lent support to construct validation of the PCA results. Therefore, cluster analysis was apparently a means to an end rather than there

being any apparent intention to use the cluster findings in subsequent research. As discussed earlier (see ‘Measures’), the use of PCA for identifying underlying factors is generally regarded as inappropriate, although it is common to use PCA scores as input for clustering methods or to use PCA to validate clustering solutions (Johnson, 1998). A comparison of EFA factors and clusters would appear to have been more appropriate in this study. Nonetheless, the notion of looking at a new measure using more than one approach (e.g., comparing person-centered solutions to variable-centered solutions) is certainly worthwhile.

Categorical/continuous hybrids. One further refinement in handling dyads as the unit of analysis may be realized by using categorical analysis and continuous analysis together. Tracy (2000) recommended a hybrid approach consisting of latent class analysis and structural equation modeling together. By combining both approaches, it is possible to produce latent class membership which can then be used to predict continuous level outcomes.

A slightly different hybrid approach was used in one of the co-parenting studies. Belsky and Hsieh (1998) used cluster analysis to identify patterns of marital change during the first five years of firstborn sons. Previous to cluster analyses, MANOVA tests had indicated that feelings of love declined over time equally for husbands and wives, while wives reported more conflict over time than did husbands. In cluster analysis, two of four variables (husband’s feeling of love and wife’s report of conflict) produced interpretable cluster solutions. With each variable, three clusters were identified: one in which the level of feeling or conflict was ‘good-stays-good’ ($N = 51$) over time, one in which the level of feeling was ‘good-gets-worse,’ ($N = 11$) and one in which the level

was 'bad-gets-worse' ($N = 38$). Chi-square testing indicated that membership in one of the husband-love clusters was systematically related to membership in one of the logical wife-conflict clusters. For example, husbands in the stays-good love cluster were married to wives in stays-good conflict cluster. Cluster scores were then regressed on co-parenting scores and significant differences were found. Specifically, unsupportive co-parenting distinguished groups of husbands and wives whose marriages stay good from those that were initially good but got worse. In other words, although the quality of co-parenting did not appear to affect a marriage that was already poor, unsupportive co-parenting negatively affected marriages that were good to begin with while supportive co-parenting was positively related to marriages that sustained high levels of satisfaction. In this study, then, the role of co-parenting was clearly demonstrated by the use of cluster analysis. Although almost half of the sample ($N = 48$) showed a decline in love over time, unsupportive co-parenting was only critical for the gets-worse group ($N = 10$). Given the small size of this group, it is questionable as to whether the significance of co-parenting would have been identified in a linear model analysis.

Summary.

Evidence of the relationship between co-parenting and child outcomes and co-parenting as a separate construct from marital quality and parenting is promising, however, further research is needed. In particular, generalizability of co-parenting research in intact families is currently limited to, at best, families that consist of European-American, heterosexual, middle class, married couples with healthy children. Existing measures need to be validated with non-traditional populations (e.g., foster parents) or new measures may need to be developed that will address their unique

characteristics. Second, researchers across all co-parenting studies should carefully consider how to account for nonindependence in dyadic data: an issue also germane to foster parents. Finally, there is a need to explore co-parenting through typologies because, while this type of analysis has rarely been used, there is reason to believe that it might be a worthwhile pursuit, especially in light of recent methodological advances in this area.

Foster Couples

The co-parenting model provides possibly the most attractive approach to study foster couples. Therefore, the following literature review focuses on what is known about co-parenting in foster couples.

Foster Couple Research

Foster fathers have been long-neglected in foster family research and most studies that have included foster fathers with foster mothers have not analyzed these data as dyads. The literature search conducted for this study included electronic databases, peer-reviewed professional journals, books, and other relevant sources. Databases searched included Social Work Abstracts, Web of Science, PsycINFO, PubMed, and Academic Search Premier. In total, only 29 studies were identified that included foster fathers in some fashion. Of these, six studies reported demographics by gender but combined gender for all other analyses; 14 studies collected data from couples but analyzed these data separately for men and for women. As the focus is on foster couples with the couple as the unit of analysis, findings from these 20 studies will not be discussed in detail.

A total of nine studies that reported foster couple data were located (one study had multiple publications [Orme, Buehler, McSurdy, Rhodes, & Cox, 2003; Orme, et al.,

2004; Rhodes, Orme, & McSurdy, 2003]). Additionally, one study (Montalto, 2004) used a foster parent-biological parent as the unit of analysis: this study is discussed separately. Of the nine foster couple studies, two studies (Doelling & Johnson, 1990; Marcus, 1991) reported demographic characteristics for the couples, but the subsequent data analysis was either only for mothers (Doelling & Johnson, 1990) or was by gender, not couple (Marcus, 1991). These two studies are not included in the following discussion. Lastly, Höjer's (2004) study was qualitative. Foster couple studies looked at the following characteristics at the dyad level: parenting attitudes and roles, marital functioning, family functioning, satisfaction with fostering, mental health, social support, temperament, parents as informants, and overall potential to foster (Table 7).

Foster Couple Co-parenting

Although none of the findings were identified as “co-parenting” characteristics per se, three of these categories (parenting attitudes and roles, family functioning, and overall potential to foster) arguably look at some of the dimensions of co-parenting.

Parenting Attitudes and Roles

Orme et al. (2004) measured parenting attitudes in foster applicant husbands and wives ($N = 99$ couples) using the Adult-Adolescent Parenting Inventory (AAPI [Bavolek, 1984]), a self-report scale. Positive and significant correlations between husbands and wives were reported for each of the four subscales in the AAPI (Developmental Expectations ($r = .50, p \leq .001$); Empathy ($r = .45, p \leq .001$); Punishment ($r = .39, p \leq .001$); and Role Clarity ($r = .44, p \leq .001$). Husbands and wives scored about the same on all of the subscales except Developmental Expectations, where husbands indicated higher

(i.e., more appropriate) expectations ($M = 8.28$, $SD = 1.86$) than wives ($M = 6.18$, $SD = 1.51$) (Table 8).

Rhodes, et al. (2003) found similarity between husbands and wives with regard to role responsibility. Foster couple applicants ($N = 99$ couples) completed the Foster Parent Role Performance scale (FPRP; LeProhn, 1993, 1994; Pecora et al., 1999), which assessed their perceptions of their role responsibilities toward the foster child (parenting subscale) and to the foster agency (agency subscale). Findings indicated that there was not a statistically significant difference between husbands and wives on their mean role scores for either the parent or agency subscales. In fact, the correlations on each subscale were statistically significant: agency subscale ($r = .45$, $p \leq .001$) and parenting subscale ($r = .28$, $p = .004$).

Vuchinich et al. (2002) studied parent involvement by observing and comparing the problem-solving styles of three groups of couples and their children ($N = 23$ couples with one child in each group): foster couples, at-risk non-foster couples, and low-risk non-foster couples. Foster mothers participated more in family problem-solving discussion than did foster fathers and also participated more than the two comparison groups of non-foster mothers. Foster fathers, by contrast, were less involved in problem-solving than both non-foster father comparison groups.

Of the other quantitative studies that addressed parenting attitudes and roles, two (Cautley, 1980; Vuchinich, Ozretich, Pratt, & Kneedler, 2002) reported on whose idea it was to become a foster parent. In each study, the majority of foster mothers indicated that fostering was initially their idea. However, there seems to be an ‘involvement curve’ for fathers in the fostering process. For example, most of the husbands in Cautley’s (1980)

study indicated they were at least somewhat interested in fostering by the time the home study was conducted.

Family Functioning

Only one study has measured family functioning in foster couples. Orme, et al. (2004) used the Family Assessment Device-General Functioning (FAD-GF) subscale (Epstein, Baldwin & Bishop, 1983; Kabacoff, Miller, Bishop, Epstein, & Keitner, 1990; McFarlane, Bellissimo, & Norman, 1995; Miller, Epstein, Bishop & Keitner, 1985) to assess overall functioning of foster couple applicants ($N = 99$). Scale items range from 1 to 4, with higher scores indicating poorer functioning. The correlation ($r = .45$) between husbands' and wives' scores was statistically significant and the mean difference ($t = 3.95, p \leq .001$) indicated that husbands ($M = 1.56, SD = 0.40$) perceived family functioning to be poorer than did their wives ($M = 1.40, SD = .33$).

Foster Parent Potential

The Foster Parent Potential Scale (FPPS; Orme, et al., 2003), which assesses the likelihood that foster applicants will provide quality foster care, includes a number of items that are related to child-rearing beliefs and values. Items are rated on a 6-point scale, with higher scores indicating greater potential to be desirable foster parents. In Orme et al.'s study of this scale, foster care workers assessed the potential of foster care applicants. The correlation between married couples ($N = 65$) was 0.93 ($p \leq .001$) but the difference between mean scores was significant ($t = 5.23, p \leq .001$). Husbands showed significantly less potential to be foster parents ($M = 5.14, SD = .62$) than their wives ($M = 5.29, SD = .56$).

Strengths and Weaknesses of Foster Couple Co-parenting Research

The limited number of studies and lack of specific co-parenting measures are the major weaknesses in this research. Studies were based on nonprobability samples and findings have not been replicated. Further, only the role responsibility measure was specifically constructed for foster parents.

All data analyses used correlations or some form of linear analysis. Most correlations were of a medium effect size, except for the FPPS, which had a strong positive correlation ($r = .93$); however, this unusually high correlation is likely due to the fact that spousal pairs were rated simultaneously by the same rater, a social worker. Subsets of parent dyads may be obscured by the use of group averages. It is possible that a cluster analysis approach would have shown different and meaningful patterns, as Belsky and Fearon (2004) found in their study of parent typologies.

Although these studies were not conducted for the purpose of discriminating between co-parenting and marital quality, some findings provided evidence of this. In one study, foster couples scored higher on marital satisfaction than non-foster couples yet concurrently demonstrated the most disparity in problem-solving participation with their foster children (Vuchinich, Ozretich, Pratt, & Kneedler, 2002). This may indicate that problem-solving differences in foster couples are not necessarily incongruent with a happy marriage. Rather, it may simply reflect the manner in which the foster couple has agreed to foster. In a second study, husbands had more appropriate developmental expectations of their children but perceived family functioning and marital adjustment to be poorer than did their wives (Orme, et al., 2004). Although these results are not from co-parenting measures, per se, the measures did assess dimensions of co-parenting. Thus,

these findings suggest the need to assess co-parenting in foster parents if we are to work toward better placement outcomes for foster children.

Foster Parent-Biological Parent Co-Parenting

Montalto (2004) studied the relevance of the co-parenting construct applied to foster parent-birth parent dyads ($N = 24$ dyads). She tested new co-parenting measures (observational and self-report) and the relationship between co-parenting and foster children's internalizing and externalizing behavioral problems and social competence.

Foster Care and Co-Parenting Rating System (FCCRS) is an observational measure developed to assess triadic (foster parent, birth parent, foster child) co-parenting tasks. Interactions were coded on three dimensions of structural family functioning relevant to a foster family triad in addition to eight co-parenting dimensions adapted from the Co-Parenting and Family Rating System (CFRS; McHale, Kuersten-Hogan, & Lauretti, 2000) and the Co-Parenting Style Rating (Cowan, Cowan, & Heming, 1992). In addition to observational data, self-report data were collected using an adapted version of the Co-parenting Questionnaire (CQ; Margolin, 1992) and Co-parenting Events Scale (CES; Linares & Montalto, 2003), a self-report measure developed specifically for this study.

Montalto's (2004) study hypotheses were only partially confirmed. Significant correlations were found among some (but not all) of the subscales on the new measures and existing measures and were inconsistent between foster parents and biological parents (note: co-parenting scores were analyzed separately for foster parents and biological parents). Regarding child outcomes, as measured by the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983), the only significant correlations were

between the biological parents' CES scores and externalizing behavior ($r [5] = -.89, p \leq .05$) and foster parents' FCCRS Supportive subscale and social competence ($r [23] = .40, p \leq .05$). The last hypothesis was that co-parenting would account for unique variance not explained by parenting measures. Due to the limited number of significant relationships between parenting practices and child outcomes as well as between co-parenting measures and child outcomes, only three mediated relationships were considered for testing. Specifically, the only significant parenting-child outcome relationships were between biological parents' harsh discipline and externalizing CBCL ($r = .51, p \leq .001$) and between foster parents' appropriate discipline and social competence ($r = .49, p \leq .05$). Regression analyses failed to show statistical significance in the additional variance accounted for by co-parenting.

The small sample size in this study may, to a large extent, account for the number of nonsignificant relationships. Also, even though the correlations are significant, the small sample size may limit how the findings are interpreted or to what extent they can be generalized. This is especially problematic with the CES data because this measure was only completed by six participants. It is also unfortunate that the foster parent and birth parent data were analyzed separately.

Summary

Social work has an ethical obligation to ensure the well-being of children in foster families. It is important, but not sufficient, that they are in safe environments: their developmental needs must be addressed as well. Given that parenting is one of the most important aspects of child development, we must study the quality of parenting provided

by foster parents. Foster couples are the predominant family structure, yet there is limited research on foster fathers and almost no research on foster couples.

Based on parenting literature in the general population, foster couple parenting quality may be best understood by studying co-parenting. Although there is a general consensus as to what constitutes desirable parenting practices, parenting is more than the parent-child dyad; it is heavily influenced by the family system. Research on the family system has explored how marital relationships affect parenting and, as an outgrowth of that research, strong evidence now exists that the study of co-parenting may be a good indicator of how spousal relationships affect individual parenting styles and, in turn, child outcomes. In order to ascertain whether the co-parenting construct is relevant for foster parents, a specific foster parent measure of co-parenting should be tested and evaluated for discriminant validity against broader measures of marital quality and measures of individual parenting. Because consensus has not been reached on the exact relationships among marital quality, co-parenting, and parenting, both linear and typological analyses should be conducted in exploring data.

Feinberg (2003) strongly urged co-parenting researchers to begin to include nontraditional families as this theory continues to take shape. Abidin and Brunner (1995) specifically recommend foster parents as one of the types of families to be included when validating co-parenting measures. Not only will the study of co-parenting in foster families further co-parenting theory, social work will fittingly promote the importance of foster fathers and broaden the definition of “families” while tending to one of our most at-risk populations.

Chapter III: METHODOLOGY

All data for this dissertation came from a larger study conducted by the University of Tennessee Family Foster Care Project in collaboration with, and funded by, Casey Family Programs. The purpose of the collaborative study between the University of Tennessee and Casey was to develop and test a battery of standardized foster parent assessment tools. These tools will be discussed later in this section.

Sample

The first phase of the study was conducted with foster mothers only because foster mothers are usually the ones who initiate fostering and who play the primary role in fostering (Rhodes, Orme, & McSurdy, 2003). Also, foster mothers head most single-parent foster families. Foster fathers were subsequently studied.

Foster Mothers

Permission to conduct research on human subjects was sought from the Institutional Review Board (IRB) of the University of Tennessee's Office of Research. Form B (Application for Review of Research Involving Human Subjects) was filed and permission was granted for the study (IRB # 6267B).

Foster mothers were recruited through state and local foster parent associations. The list of these associations was obtained from the National Foster Parent Association (NFPA) website (www.nfpainc.org). The NFPA endorsed this study. Recruitment information packets were sent to state and local foster parent associations by mail and email. Recruitment packets included information about the study and tools for distributing information to foster parents. These packets included: cover letters describing the study (Appendix A); endorsement letters from Karen Jorgenson, president of the

National Foster Parent Association (Appendix B); flyers about the study that could be reproduced and distributed to foster mothers (Appendix C); and information about the study that could be placed in association newsletters or websites (Appendices D and E). Associations were asked to distribute flyers to members, place announcements in newsletters, and place announcements on their state association websites and message boards.

All advertisements included an email address and a toll-free project telephone number. Foster mothers were asked to use one of these means to contact the research team secretary to participate. Those willing to participate were asked to provide their names, mailing addresses and, if available, email addresses. When a person requested additional information about the study, this was sent so that the mother could make an informed decision about participation.

Initially, recruitment packets were mailed only to State foster parent associations (Appendix F). About three months into the project when requests from foster mothers had diminished, recruitment materials were resent to state foster parent associations from states from which completed questionnaires were not received. Also at this time, recruitment materials were sent to local foster parent associations from those states (Appendix G).

Each foster mother who was willing to participate was mailed: a cover letter (Appendix H); two consent forms (Appendix I); a flyer about the study (Appendix C); two self-administered questionnaires described below; a *Best times to call* form (Appendix J); a checklist for returning materials (Appendix K); and a pre-paid addressed envelope in which to return the completed materials.

Participants were asked to sign and return the informed consent forms with their completed questionnaires. An extra consent form was included that the participants were asked to retain for their records. Also, an email address and a toll-free project number were provided on the consent forms, and potential participants were told that they could call the toll-free number or email if they had any questions about the study. Flyers about the project were included and participants were asked to share them with other interested foster mothers. In addition, foster mothers were asked on the forms to indicate what times were best to contact them for telephone interviews described below.

Participants were mailed two questionnaires, the Casey Home Assessment Protocol-Self-Report (CHAP-SR) questionnaire and the applicant version of the Casey Foster Applicant Inventory (CFAI-A). Each of these questionnaires contained multiple scales, subscales, and other questions. Computer scannable forms were used. To counterbalance the effects of fatigue, practice, carryover, or order effects, respondents were asked to complete the CHAP-SR first and the CFAI-A second for odd numbered questionnaires, and *vice versa* for even-numbered questionnaires.

Data were collected from October 2002 through September 2003. A total of 304 approved, certified, or licensed non-kinship and kinship foster mothers (married and single) participated voluntarily in the study. Each foster mother who completed and returned the questionnaires was given a \$50 gift certificate for participation.

Foster Fathers

Although initial funding was only for foster mother data, participating mothers who were married or living with male partners were asked if their partners might be willing to participate in a future study of foster fathers. Subsequent to the foster mother

data collection, funding to study foster fathers was obtained. An amendment to IRB #6267B (Form D) was filed with the University of Tennessee's Office of Research and permission was granted for the extension of the larger study.

Each foster father who was believed to be willing to participate was mailed: a cover letter (Appendix L); two consent forms (Appendix M); two self-administered questionnaires described above; and a pre-paid addressed envelope in which to return the completed materials.

Data collection for foster fathers started in October of 2003, one year after data collection started for mothers. Of 238 participating mothers who were married or cohabitating, 148 reported that their male partners would be interested in participating, and 111 participated (74%). Each foster father who completed and returned the questionnaires was given a \$50 gift certificate for participation.

Design

The design was cross-sectional in reference to mothers or fathers. However, about 10 to 11 months (on average) elapsed between completion of the questionnaires by mothers and fathers ($M = 299.90$, $SD = 66.75$, $Mdn = 321.42$ days).

Data Collection

All data were collected using two assessment tools: the Casey Home Assessment Protocol (CHAP) questionnaire and the applicant version of the Casey Foster Applicant Inventory (CFAI-A). These standardized assessment tools are based on competency domains derived by synthesizing competencies suggested by the Child Welfare League of America's (CWLA) professional standards; Parent Resources for Information, Development, and Education curriculum (PRIDE; Illinois Department of Children and

Family Services, 1993), a pre-service foster parent training program; Casey Family Programs (CFP, 1997) program policies; and the competency domains delineated by Shlonsky and Berrick (2001). These domains are (1) providing a safe and secure environment – protecting children; (2) providing a nurturing environment – nurturing children; (3) promoting educational attainment and success; (4) meeting physical and mental health care needs; (5) promoting social and emotional development; (6) valuing diversity and supporting children's cultural needs; (7) connecting children to safe, nurturing relationships intended to last a lifetime; (8) managing ambiguity and loss for the foster child and family; (9) growing as a foster parent – skill development and role clarification; (10) managing the demands of fostering on personal and familial well-being; (11) supporting relationships between children and their families – birth family work; and (12) working as a member of a professional team – working in partnership (Buehler, Rhodes, Orme, & Cuddeback, 2006).

The CHAP and CFAI were designed to complement each other; together, they assess a broad range of characteristics of foster parents thought to be related to the quality of family foster care. The measures included in the CHAP and the CFAI were developed after initially reviewing tools, forms, policies, procedures, and guidelines that state foster care agencies were already using to assess foster families. Further, extensive input was solicited from foster parents, family foster care workers and, to some extent, former foster children. Existing relevant self-report measures with known reliability and validity also were collected.

Casey Home Assessment Protocol-Self-Report (CHAP-SR) Questionnaire

The Casey Home Assessment Protocol (CHAP) is a set of standardized assessment tools designed to be used with foster family applicants during the selection process. Its primary purpose is to help workers and applicants identify applicant strengths and target areas for further development, with the ultimate goal of partnering foster parents with agencies in long-term commitments to provide quality care for children and youth. The CHAP has two parts: (1) a set of self-report questionnaires to be completed by the applicant and (2) the Fostering Challenge interview, presented and rated by the foster care worker.

The CHAP-SR contains new and existing self-report scales developed to measure important and relatively unique aspects of foster parenting. Detailed information about these measures is contained in the CHAP Technical Manual (Orme, Cox, Rhodes, Coakley, Cuddeback, & Buehler, 2006). Existing standardized self-report measures were selected for inclusion in the CHAP-SR after a search of relevant research and recent collections of measures (e.g., Corcoran & Fischer, 2000, a, b; Hersen & Bellack, 1988; Magura & Moses, 1986; McCubbin, Thompson, & McCubbin, 1996; McDowell & Newell, 1996; Thompson, 1989; van Riezen & Segal, 1988). Criteria included: adequate reliability, evidence of validity that would fit the intended purpose, availability of normative data (especially criterion scores that could be used to determine the presence of problems), ease of use (time for completion, reading level), relevance to foster parent applicants (e.g., measures not assuming children already in the home), and accessibility (availability for use without charge).

Best practice in and research on foster care highlights the importance of numerous aspects of parenting and individual and family functioning that are not unique to foster parenting (Orme & Buehler, 2001). Consequently, a number of measures were used that were developed, tested, and found to have good psychometric properties with populations of parents other than foster parents, but for the most part had never been tested with foster parents.

Scoring

Missing item responses. A total or subscale score was computed for an individual only if at least 80% of the items used to compute that particular score were completed. This rule was used in scoring all of the scales and subscales described below.

Computing raw scores. There are different ways to compute raw scale scores. For existing measures used in this study, the scoring methods used by the scales' authors are used to compute total scale and subscale raw scores. Typically this involves either summing item scores (i.e., a *summative* score) or summing item scores and dividing the sum by the number of items summed (i.e., a *mean* score).

Order of Scales

Following is a list of the CHAP-SR measures presented in the order in which they were administered in the larger study:

- Reasons for Fostering (RF)^a
- Available Time Scale (ATS)^a
- Willingness to Foster Scale (WFS)^a
- Cultural Receptivity in Fostering Scale (CFRS)^a
- Foster Parent Role Performance Scale (FPROLE)

- Personal Dedication to Fostering Scale (PDFS)^a
- Receptivity to Birth Family Connections Scale (RBFCS)^a
- Parental Bonding Instrument (PBI)
- Barnett Liking of Children Scale (BLOCS)
- Duke Health Profile
- Alcohol Use Disorders Identification Test (AUDIT)
- Center for Epidemiological Studies-Depressed Mood (CES-D)
- Short Hardiness Scale (HS)
- Social Readjustment Rating Scale (SRRS)
- Duke Social Support and Stress Scale (DUSOCS)
- Family Resource Scale (FRS)
- Support Function Scale (SFS)
- Help with Fostering Inventory (HFI)^a
- Cultural Competence Scale (CCS)
- Foster Parent Satisfaction Survey (FPSS)
- Family Functioning Scale (FFS)
- Parental Psychological Control Scale
- Parental Acceptance Scale (PAS)
- Parental Inconsistency Scale
- Kansas Parenting Satisfaction Scale (KPS)
- Overt Interparental Hostility Scale (OIH)
- Kansas Marital Satisfaction Scale (KMS)

^a Indicates scales that were developed for this study.

This order was selected to move the participant through the questionnaire completion experience in an engaging and logical fashion. Scales related to fostering were placed in the beginning to engage participants by allowing them to think about and report on their fostering experience. Scales that asked about the respondents' care for and liking of children were included next. This was done to help the participant focus on his or her feelings about children and perhaps some motivations for fostering. The next set of scales addressed individual physical and mental health, experienced change and stress, and sources and functions of available support. The Cultural Competence Scale was included next because it should be completed before moving to the scales that addressed dyadic and family functioning. The scales that addressed dyadic and family functioning were included last, with the questions about marital functioning ending the survey.

Of these scales, only those that were used in this study for purpose of validating the co-parenting scale will be discussed at length. Descriptions of the other scales can be obtained from the CHAP Technical Manual (Orme, et al, 2006).

Kansas Marital Satisfaction (KMS) Scale

The KMS is an existing 3-item scale designed to measure marital satisfaction (Schumm, et al., 1986). Each item is rated on a 7-point scale ranging from *extremely dissatisfied* (1) to *extremely satisfied* (7). The total scale score is the sum of the three item scores (potential range from 3 through 21). Higher scores indicate greater marital satisfaction. This scale is only for married or otherwise partnered respondents. The KMS is brief and reliable and has been shown to have concurrent and discriminant validity (Crane & Middleton, 2002).

Overt Interparental Hostility (OIH) Scale

The OIH is an existing 6-item scale designed to measure how often overt verbal and physical expressions of hostility occur between parents (Buehler, et al., 1998). Each item is rated on a 4-point scale: *never* (1), *once in a while* (2), *fairly often* (3), and *very often* (4). The total scale score is the sum of the six item scores (potential range from 6 through 24). Higher scores indicate greater interparental hostility.

Parental Acceptance Scale (PAS)

The PAS is an existing 10-item scale designed to measure behaviors and feelings indicating acceptance of a child by a parent (Schaefer, 1965a, b; Schludermann & Schludermann, 1970). Parental acceptance is defined as parenting behaviors that convey love, warmth, support, affirmation, and value to the child (Rollins & Thomas, 1979). Low parental acceptance is characterized by low responsiveness, disinterest, and emotional unavailability. Each item is rated on a 3-point scale: *not like me* (1), *somewhat like me* (2), and *a lot like me* (3). The total scale score is the mean of the 10 item scores (potential range from 1 through 3). Higher scores indicate greater parental acceptance.

The PAS in its original form is one of three subscales of the Child's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965a, b; Schludermann & Schludermann, 1970) that assess caregiving behavior: accepting versus rejecting, psychological control versus psychological autonomy, and firm control versus lax control. These subscales yield scores that parallel Baumrind's (1966) parenting styles (Pelton & Wierson, 2002) and have been found to have good internal consistency (Barber, Stolz, Olsen, & Maughan 2005; Schwartz, Barton-Henry, & Pruzinsky, 1985), replicable factor structure (Schludermann & Schludermann, 1970), and cross-ethnic

validity (e.g., Barber et al., 2005; Knight, Tein, Shell, & Roosa, 1992). A 30-item parent-report form covering each of these dimensions was adapted from the original form and there is some precedent for its use (e.g., Fauber, Forehand, McCombs-Thomas, & Wierson, 1990; Pelton & Wierson, 2002). The 10-item PAS subscale used in this study measures *acceptance vs. rejection*.

Casey Foster Applicant Inventory-Applicant (CFAI-A) Questionnaire

The CFAI is a standardized questionnaire foster family applicants (CFAI-A) and their worker (CFAI-W, the worker version of the CFAI) complete during the licensing process (Cuddeback et al., 2007; Orme et al., 2007). It is used to identify applicant strengths and areas for development and support, with the ultimate goal of facilitating the quality care of children who live with foster families.

In addition to the CFAI-A itself, the CFAI-A questionnaire administered in the present study contains numerous additional scales, subscales, and other questions (described below) that were administered to describe the sample and to test the validity of various measures in the larger study.

The CFAI-A, as administered in the original study, was a 185-item measure. It consisted of 157 core items completed by all foster parents, 11 items completed only by foster parents who are married or otherwise partnered; nine items completed only by foster mothers who have birth or adopted children; and seven items completed only by foster mothers who provide kinship care. The foster parent co-parenting scale (CFAI-CP) that is the focus of this dissertation is a part of the CFAI-A.

CFAI-A Co-parenting Scale (CFAI-CP)

The Co-parenting subscale assesses an applicant's perception of agreement with her or his partner regarding child-rearing issues and parenting, as well as the presence of supportive co-parenting behaviors. Each item is rated using a 4-point response format: *strongly disagree* (1), *disagree* (2), *agree* (3), and *strongly agree* (4). The original scale items included:

1. *My spouse strongly supports my fostering efforts.*
2. *My spouse and I have similar beliefs about how to parent foster children.*
3. *My spouse and I have differing views on how to discipline young children.*
4. *My spouse and I are used to talking things over every day.*
5. *Our marriage has been stormy because of the different ways we were raised.*
6. *My spouse and I are willing to spend less time together.*
7. *My spouse and I share household responsibilities.*
8. *My spouse and I agree on how to discipline teenagers.*
9. *My spouse and I are used to solving problems together.*
10. *I have a strong marriage.*
11. *My spouse and I will back each other up in parenting.*

These items may be assessed in relation to the four dimensions of co-parenting identified by McHale, et al. (2004): (1) division of childcare labor; (2) support versus undermining between partners; (3) active participation by partners in engaging with and directing the child (i.e., mutual engagement); and (4) childrearing agreement. These dimensions appear to be reflected in items 7 (division of childcare labor); 1 and 11

(support versus undermining); and 2, 3, and 8 (childrearing agreement). There are no obvious items for the fourth dimension (mutual engagement).

Demographic Characteristics and Fostering Experience

The CFAI-A questionnaire administered in the present study collected a wide variety of demographic and background information as well as information about the foster couples' fostering experiences. The following data were used in the dissertation to describe the sample.

Age. The date the CFAI-A was completed and the birth date of the applicant were obtained and used to compute each applicant's age.

Current employment status. Foster parents were asked if they were currently: employed full-time (30 hours or more per week) (1); employed part-time (less than 30 hours per week) (2); unemployed and looking for work (3); homemaker, not employed outside of the home (4); disabled or retired, not employed outside of the home (5); or other (*specify*) (6). This question was taken from the National Survey of Current and Former Foster Parents (Cuddeback & Orme, 2002; Rhodes, Orme, & Buehler, 2001).

Highest degree or level of school completed. Foster parents were asked the highest degree or level of school completed. This question and the response categories were taken from the United States census (U.S. Census, 2000).

Race/ethnic background. These questions and the response categories were taken from the United States census (U.S. Census, 2000).

Children. Foster parents were asked to report the total number of children living in their homes and the age and gender of each of these children. Foster parents also were asked to report the number of birth and adopted children not living in their homes and the

age and gender of each of these children. The following variables were created based on these data: number of children living in the home; age of youngest child living in the home; number of children under the age of 6 living in the home.

Income. Foster parents were asked to report total family income in the past year from all sources, before taxes. This question and the response categories were taken from the 2000 United States Census.

Fostering Experiences

Foster parents were asked a number of questions about foster parenting per se. These include the following.

Foster family utilization. Foster parents were asked to report: (1) the number of children their homes are licensed to accept at one time; (2) the number of foster children currently in their homes; (3) the total number of children they have cared for since they began fostering; and (4) their number of years of foster parent experience.

Intention to continue fostering. Foster parents were asked three questions about their intentions to continue fostering. They were asked if over the next three years, the next year, and the next six months they intended to continue fostering for any agency (*no* = 0, *yes* = 1).

Adoption. Foster parents also were asked *How many children have you fostered who were adopted by your family?* This is one indicator of the extent to which a foster family is willing and able to provide a stable placement for foster children.

Placement changes. Foster parents also were asked how many children they have fostered who:

- *Returned to live with birth parents.*

- *Were adopted by a family other than yours*
- *Were placed somewhere else at your request*
- *Were placed somewhere else at the agency's request*

The number of children placed somewhere else at the request of the foster mother is one indicator of the extent to which a foster family is willing and able to provide a stable placement for foster children. The remaining three questions are used to describe foster parents' experience with other types of placement change.

Research Questions

Research Question 1

What is the factorial structure of the Co-parenting scale for foster mothers and fathers?

Research Question 2

What is the internal consistency reliability of the Co-parenting scale factor(s) for foster mothers and fathers?

Research Question 3

What is the validity of the foster couples' Co-parenting scale towards its intended interpretation and use?

Chapter IV: RESULTS

This chapter first describes characteristics of the sample used to test the Co-parenting Scale (hereafter referred to as Co-parenting). Next, the extent to which Co-parenting data are missing is examined. Following the examination of missing data, this chapter examines the factorial structure, reliability, and empirical evidence concerning the validity of Co-parenting.

Demographic Characteristics of Foster Mothers and Fathers

The 111 foster couples lived in 29 different states. Table 9 shows the demographic characteristics of these foster parents. Most foster parents were European-American, and had a high school education or some college. About one-quarter of foster mothers and three quarters of foster fathers worked full-time outside of the home, and nearly one half of foster mothers were homemakers, not employed outside the home. Finally, the mean age of foster mothers was 42.28 ($N = 110$, $SD = 9.51$, $Mdn = 41.73$, $Range = 26$ to 65) and the mean age of foster fathers was 45.79 ($N = 111$, $SD = 9.92$, $Mdn = 44.57$, $Range = 28$ to 72). Although yearly family income varied slightly between mother and father reports (Table 10), about 30% of foster couples lived in families with yearly family incomes below \$40,000 and about 20% lived in families with yearly family incomes above \$80,000.

Table 11 shows the demographic characteristics of foster couples' families (these data were collected from mothers only). Almost all families had one or more children living in the home; the median number of children living in the home was 4; most had one or more birth or adopted children living in the home; and most had at least one child six years old or younger living in the home.

Availability and Utilization of Foster Families

On average, parents had fostered from three to five years and were licensed to foster about three children. Typically these parents had fostered eleven or more children, had requested that one be removed, had adopted one foster child, and had one or two foster children in their homes at the time of participation. About 90 to 95% of mothers planned to continue fostering for six months, one year, and three years (Table 12). About 85% of fathers planned to continue fostering for each of these three intervals.

Missing Data for Co-parenting

There were almost no missing data for Co-parenting. Only two of the 11 items were missing for one foster father. These exceptions were for items 10, *"I have a strong marriage"* and 11, *"My spouse and I will back each other up in parenting."* These missing item values were imputed using the Expectation-Maximization (EM) method in SPSS 14.0 for Windows (SPSS, 2005) using all of the co-parenting items for fathers. The imputed values were rounded to the nearest whole number for analyses.

Research Question 1: What is the Factorial Structure of Co-parenting for Foster Mothers and Fathers?

An exploratory factor analysis (EFA) of Co-parenting was conducted separately for foster mothers and fathers to explore whether one or more dimensions underlie the item scores. EFA was used because Co-parenting is a new measure of a new concept and there is not enough information to specify the underlying factor structure of the item scores (Fabrigar, Wegener, MacCallum, Strahan, 1999; Loehlin, 1998). The EFA was conducted in Mplus 4.2 (Muthén & Muthén, 2006). The items were specified as categorical, the designation in Mplus for nominal or ordinal data, and robust weighted

least squares (WLSMV) estimator with promax rotation was used to extract factors. The WLSMV estimator provides weighted least square parameter estimates using a diagonal weight matrix and robust standard errors and a mean- and variance-adjusted X^2 test statistic (Muthén & Muthén, 1998-2006).

The scree test was used to get a preliminary idea of how many factors to extract. The scree test for mothers clearly indicated a one-factor solution. However, the factor loading for item 6 (*My spouse and I are willing to spend less time together*) in the structure matrix was .12 while the remaining loadings were above .62. Item 6 was deleted from the analysis and the EFA was rerun. The scree test of the remaining 10 items (Appendix N) clearly indicated a one-factor solution (Figure 5) and all factor loadings in the structure matrix were above .63 (Table 13).

The results of EFA for Co-parenting with fathers were similar to that of mothers. Although the scree test of the 11 items indicated a one-factor solution, the factor loading for item 6 (*My spouse and I are willing to spend less time together*) was .07 while the remaining loadings were above .60. Item 6 was deleted from the analysis and the EFA was rerun. The scree test of the remaining 10 items clearly indicated a one-factor solution (Figure 6) and all factor loadings in the structure matrix were above .57 (Table 13).

Research Question 2: What is the Internal Consistency Reliability of the Co-parenting Scale Factor(s) for Foster Mothers and Fathers?

Cronbach's alpha (α) was used to quantify the internal consistency reliability of Co-parenting (Nunnally & Bernstein, 1994) using the 10 items identified in the EFA. Internal consistency reliability refers to the consistency with which individuals respond to items within a scale. Cronbach's alpha is a measure of the mean correlation among items

weighted by variances, stepped up for the number of items. All else being equal, the larger the number of items in a scale, the higher Cronbach's alpha. Cronbach's alpha will be higher when there is homogeneity of variances among items than when there is not. Also, the more consistent within-subject responses are, and the greater the variability among subjects, the higher Cronbach's alpha.

The widely-accepted social science convention is that alpha should be equal to .70 or higher to be considered adequate, but some use .75 or .80 whereas others use .60. However, there does seem to be agreement that alpha greater than .90 indicates excellent internal consistency reliability (Nunnally & Bernstein, 1994).

For this study, the same benchmarks used in the larger study were used:

Poor: $< .60$

Marginal: $.60 - .69$

Good: $.70 - .79$

Excellent: $\geq .80$

Given the factors that contribute to coefficient alpha, a careful item analysis was conducted prior to computing coefficient alpha. This included an examination of item means and standard deviations, item variances, inter-item correlations, and corrected item-total correlations.

Item Means

Foster mothers' average score across item means was 3.53, with a range from 3.28 to 3.70 on the 4-point scale (Table 14). Foster fathers' average score across item means was 3.39, with a range from 3.22 to 3.58. It is favorable to have an average score across item means that is near mid-range of possible scores (DeVellis, 1991). For

instance, 2.5 would be a desirable mean for Co-parenting with response options ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Extreme means or those means close to the lowest or highest response option values indicate that the items were not designed to effectively detect all levels of the construct with this population. Also, mid-range means demonstrate that the item was worded properly as to allow respondents to give the item a low rating (i.e., *none*). Items with means that are close to the extreme range value are indicative of low variances (DeVellis, 1991). Thus, the item means for mothers and fathers is somewhat higher than desirable.

Item Variances

It is important that a scale be able to discriminate among various types of individuals. In other words, it should have high item variances. There should be a good distribution of different responses from the sample that indicates the respondents' varied levels of the construct being measured. Table 15 shows the distribution of Co-parenting responses. There are four possible responses for each of the co-parenting items: *strongly disagree* (1), *disagree* (2), *agree* (3), *strongly agree* (4). Higher scores indicate stronger co-parenting. In this study, Co-parenting mean item variance is .30 ($SD = .10$) for mothers with a range of .24 to .45; the mean item variance for fathers is .32 ($SD = .05$) with a range of .27 to .39. This suggests that Co-parenting is capable of efficiently discriminating among different individuals.

Mean Inter-Item Correlation

Table 15 shows that mothers' Co-parenting items have a mean inter-item correlation of .45 ($SD = .11$) with a range of .20 to .70; fathers' Co-parenting items have a mean inter-item correlation of .43 ($SD = .13$) with a range of .19 to .76. The minimum

mean inter-item correlation for mothers is .20 and the maximum is .70. For fathers, the minimum mean inter-item correlation is .19 and the maximum is .76. These inter-item correlations are typical of a good scale (DeVellis, 1991).

Corrected Item-Total Correlations

Each scale item should be positively and relatively highly correlated with the total of the remaining items, and this can be examined through a computation of its item-total correlation. There are two types of item- total correlation; the corrected and uncorrected item- total correlation (DeVellis, 1991). The corrected item- total correlation correlates the item that is being evaluated with all scale items, with the exclusion of itself. For instance, on a 10-item scale such as Co-parenting, the corrected scale item for any one of the scale items would consist of its correlation with a composite of the other 9 items, whereas the uncorrected correlation would consist of its correlation with a composite of all 10 items including itself. It generally is acceptable to examine the corrected item-correlation instead of the uncorrected item- total correlation (DeVellis, 1991). Therefore, Co-parenting was evaluated using the corrected item- total correlation.

All corrected item-total correlations for mothers were positive and .50 or greater, and the majority were greater than .65 (Table 14). For fathers, all corrected item-total correlations also were positive and were .49 or greater with the majority greater than .65. The large, positive correlations suggest that all of Co-parenting items measure the same underlying construct and that the items have good discrimination (Nunnally & Bernstein, 1994).

Coefficient Alpha

The Co-parenting scale has an alpha of .88 for foster fathers and .89 for foster mothers. This indicates that Co-parenting is a uni-dimensional scale, with very good internal consistency reliability for fathers and mothers.

Standard Error of Measurement

In addition to Cronbach's alpha, the standard error of measurement (SEM) also was used to quantify the reliability of Co-parenting (Gregory, 2000; Nunnally & Bernstein, 1994). This is an estimate of the standard deviation of an individual's observed scores from repeated independent administrations of a measure under identical conditions. As such, it is an index of measurement error, and these errors in measurement are assumed to be normally distributed. Unlike Cronbach's alpha and other measures of reliability, the SEM is scale-dependent, and so there is no standard for the magnitude of the SEM.

The SEM is useful primarily in the interpretation of an individual's score on a measure. That is, the SEM can be used to compute confidence intervals for an individual indicating the likely range for his or her true score. A discussion about the distribution of Co-parenting total scores follows.

Computing Raw Scores

The following formula was used to compute raw score totals for Coparenting:

$$S = \frac{(M-1)(100)}{(K-1)}$$

where: S = the scale score

M = the mean item score

K = the largest possible value for an item response

This formula will result in a potential range of values from 0 through 100, and higher scores will indicate greater potential. This method of scoring was used because a potential score range from 0 to 100 is relatively easy to understand and familiar to most people.

Distribution of Scores

Frequency Distributions

Figures 7 and 8 show the frequency distributions of Co-parenting total scores for mothers and fathers, respectively.

Measures of Central Tendency

Table 16 shows the measures of central tendency for Co-parenting. As discussed earlier, the raw scale scores have been scaled to result in a potential range of values from 0 through 100 with higher scores indicating greater co-parenting. The actual range is from 50 to 100. Mothers' mean total score was 84.32 ($SD = 12.85$) and the median is 87. Fathers' mean score was 79.40 ($SD = 13.25$), median was 77 with an actual range is from 40 to 100.

Percentile Ranks

A percentile rank indicates the percentage of people in the normative sample who are at or below a particular raw score (AERA, APA, NCME, 1999; Anastasi & Urbina, 1997). A higher percentile rank suggests greater potential for foster co-parenting, relative to those in the normative sample. For example, a foster parent applicant with a raw score corresponding to a percentile rank of 75 scored higher than 75% of the people in the normative sample; an applicant with a raw score corresponding to a percentile rank of 25

scored higher than only 25% of those in the normative sample. Percentile ranks are easy to understand, widely applicable, and often used for selection and placement (Aiken, 2003).

In these data, mothers scored higher than fathers at each percentile, especially at the 50th percentile (Table 17). Nonetheless, even the lower boundary of the interquartile range was a relatively high score (73.33 for mothers, 70.00 for fathers). These results, in addition to the mean and median scores indicate, on average, relatively high co-parenting. In addition, a paired *t*-test indicated that, on average, fathers score significantly lower than mothers: $t(110) = -4.92, p = .000$. The effect size, as measured by the *d*-index (Cohen, 1988), was .36 for Co-parenting, placing the effect size in the small to medium range.

In addition to measures of central tendency and variability, it is important to examine the shape of the distribution of Co-parenting scores. Skew and kurtosis are reported for Co-parenting because these two statistics are useful for identifying markedly non-normal distributions. Skew is a measure of the asymmetry of a distribution. The normal distribution is symmetric, and skew equals 0. A distribution with a significant positive skew has a long right tail. A distribution with a significant negative skew has a long left tail. As a rough guide, a skewness value more than twice its standard error indicates a departure from symmetry (Norusis, 2002). Kurtosis is a measure of the extent to which observations cluster around a central point. For a normal distribution kurtosis is 0. A distribution with positive kurtosis has a spiky center and fat tails. A distribution with a negative kurtosis has a flat center and thin tails (Norusis, 2002).

The Co-parenting scale skewness for mothers is $-.41$ ($SE = .23$) and the kurtosis is -1.01 ($SE = .46$) (Table 16). This indicates that in comparison to a normal distribution, the distribution of Co-parenting total scores is negatively skewed with a long left tail. However, because the skewness value is not more than twice its standard error, it is not considered asymmetric. Also, although it is negatively kurtotic, it is not in a range that indicates concerns about a nonnormal distribution. For fathers, Co-parenting skewness is $-.08$ ($SE = .23$) and the kurtosis is $-.46$ ($SE = .46$). These values indicate the father data have a nearly normal distribution.

Research Question 3: What is the Validity of the Foster Couples' Co-parenting Scale toward its Intended Interpretation and Use?

The following investigates the characteristics of Co-parenting for foster couples. Confirmatory evidence of the co-parenting construct for fathers and mothers implies that interpretations of Co-parenting scores are validated.

Validity Defined

Validity refers to the degree to which accumulated evidence and theory support specific interpretations of test scores entailed by proposed uses of a test (AERA, APA, NCME, 1999). Different types of evidence may be examined in the course of validation, lending support to distinct types of validity delineated in the past (e.g., content, criterion, construct). However, the contemporary view is to conceptualize validity as a unitary concept that can be supported by different lines of evidence. Such evidence might include, for example, evidence based on an analysis of the content of a measure and the intended construct measured; this includes evidence similar to but broader than that encompassed by what typically is referred to as content validity. This entails evidentiary

support from empirical or logical investigations. It must adequately contain all relevant content domains. Also, evidence based on the relationship of test scores to other variables external to the measure is a key element of validity; this includes evidence similar to but broader than that encompassed by the ideas of criterion and construct validity. External variables may include measures of some criteria that the test is expected to predict or may include relationships to other tests hypothesized to measure related or distinct or unrelated constructs (AERA, APA, NCME, 1999).

Validation involves formulating propositions that support the proposed interpretations and uses of scores, and then accumulating evidence for the intended interpretations and uses of test scores. To some extent, evidence concerning the validity of Co-parenting has already been presented in earlier chapters. For example, the literature review in Chapter 3 included a detailed discussion about the dimensions of co-parenting and empirical support for validation of co-parenting as distinguished from parenting and marital quality in the general population.

Further, evidence of face and content validity of the CFAI-A Co-parenting Scale was presented in Chapter 4 which details the procedures that were used to specify, construct, and select items for Co-parenting. Face validity refers to the extent to which an item appears to measure what it is intended to measure while content validity means that the items are representative of the construct under consideration (Nunnally, 1978). Although not all of the items match McHale et al's (2004) four dimensions of co-parenting, items reflect extensive input and review from foster parents and family foster care workers, thereby providing important support for face and content validity evidence as perceived by both professionals and the population of interest: foster parents.

In this section, validity evidence is examined based on the relationship of Co-parenting between mothers and fathers as well as to variables external to it. To do this, research, theory, logic, and professional judgment were used to formulate multiple propositions to test proposed interpretations and uses of Co-parenting. It should be noted that these propositions are relatively tentative given that Co-parenting is a new measure of a construct applied for the first time to foster couples.

3.1 What is the Validity of the Foster Couples' Co-parenting

Scale for Foster Mothers and Fathers?

Overview of Statistical Methods

Determining the unit of analysis. Prior to examining the relationship between mothers' and fathers' Co-parenting, it was important to assess the extent to which there is nonindependence within and between the dyads as this will indicate whether the individuals or the dyads will be the proper unit of analysis (Kenny, et al., 2006). If dyad scores are independent (i.e., there is no evidence of nonindependence), then the person can be treated as the unit of analysis. If the person and not the dyad is the unit of analysis, the sample size doubles, which increases power and precision of estimates. Although ignoring nonindependence will not bias the effect size estimates themselves (unstandardized regression coefficients and mean differences), variances will be biased, which are then likely to affect the standard errors of test statistics (r and F), making test statistics and their associated p values biased (Kenny et al., 2006). If variances are biased, the standardized measures (r , β , and d) are also biased. Therefore, although we would not typically expect independence between or within dyads, this initial analysis is nonetheless an important step.

Nonindependence within dyads was tested in confirmatory factor analysis (CFA) as part of measurement invariance testing. The data were structured with the dyad as the unit of analysis. In other words, each couple's data were entered on one row rather than separately in two rows but the original score for each spouse on each item was retained, not aggregated. Thus, the CFA model analysis was conducted on a sample size of $N = 111$.

Measurement invariance. Subsequent to assessing nonindependence, the Coparenting data were subjected to invariance testing through a series of CFA models. *Measurement invariance*, also known as measurement equivalence/invariance (ME/I) tests the ability of a measure to function without bias across groups or occasions (Meade & Lautenschlager, 2004). This step was deemed necessary as measurement invariance is now seen by many as a logical and necessary precursor to tests of construct validity (Vandenberg & Lance, 2000). Vandenberg and Lance argue that evidence of measurement equivalence is as important for substantive interpretations as are measures of reliability and validity.

Equivalence of all measurement and structural parameters of the factor model across couples was examined. This equivalence is referred to as *measurement invariance*, when examining measurement parameters, or as *population heterogeneity*, when examining structural parameters. Both types of equivalence test the extent to which spouses are identical in how items and constructs are measured (Brown, 2006). More specifically, measurement invariance investigates the extent to which the content of each item is perceived and interpreted in exactly the same way across samples while population heterogeneity, also called structural equivalence, refers to the underlying

theoretical structure of the measure (Byrne & Watkins, 2003). For example, do the items of Co-parenting measure this construct in the same way for mothers and fathers? If not, then it is crucial to understand where differences between husbands and wives reflect systematic bias rather than substantive differences (Vandenberg & Lance, 2000). This investigation is particularly important in mother-father measures because, although studies of mother-father equivalence in parenting are scarce (Adamsons & Buehler, in press), studies of other constructs suggest that women and men often have different conceptualizations of constructs (e.g., Corwyn & Bradley, 2005). It is reasonable to expect that this same issue is true in co-parenting.

Typically, measurement invariance proceeds from a least restricted model through increasingly more restricted (or *nested*) models (Brown, 2006; Vandenberg & Lance, 2000). CFA is recommended because nested model differences can be evaluated statistically. For multiple groups, Brown recommends the following sequence of CFA invariance evaluation: (1) test the CFA model separately in each group (due to nonindependence, the CFA model will be tested on dyads rather than multiple groups); (2) assess configural invariance: the same pattern of factors and factor loading; (3) assess metric invariance: equality of factor loadings; (4) assess scalar invariance: equality of indicator intercepts; (5) assess invariance of unique variances (i.e., equality of indicator residual variances); (6) assess invariance of factor variances; (7) assess invariance of factor co-variances (not applicable in this study); and (8) assess invariance of factor means. The first five steps evaluate measurement invariance and steps 6-8 evaluate population heterogeneity.

Although it is improper to continue the sequence of testing for measurement invariance if evidence of noninvariant measurement parameters is encountered, this is not necessarily true for exploring population heterogeneity. Bryne, Shavelson, and Muthén (1989) argue that *partial measurement invariance*, occasions where some but not all of the measurement parameters are equivalent, justifies proceeding with invariance testing. This is especially relevant where the structural parameters are of great interest. This is true in this study, where there are questions about the equivalence of the measure across spouses (measurement invariance) as well as whether husbands' and wives' mean co-parenting scores differ (population heterogeneity). Factor loading invariance, but not the higher levels of measurement invariance, is a prerequisite for means invariance testing. Therefore, partial measurement invariance may be sufficient to allow means testing.

Invariance was tested with CFA using Mplus (Muthén & Muthén, 2006). Mplus was used because it can accommodate ordinal-level data. Further, Mplus is the only program that utilizes the robust weighted least squares (WLSMV) estimator. The WLSMV estimator provides weighted least square parameter estimates using a diagonal weight matrix and robust standard errors and a mean- and variance-adjusted χ^2 test statistic (Muthén & Muthén, 1998-2006). This estimator has performed well in simulation studies, producing accurate test statistics, parameter estimates, and standard errors of CFA models under a variety of conditions (e.g., sample sizes ranging from 100 to 1,000, varying degrees of non-normality and model complexity; Flora & Curran, 2004). Therefore, it is more appropriate than weighted least squares (WLS) for the characteristics of the variables and sample in this study.

Through simulated Monte Carlo studies, Yu and Muthén (2001) found that the overall goodness-of-fit indices most reliable with the WLSMV estimator are (1) the Comparative Fit Index (CFI; Bentler, 1990) and the weighted root-mean-square residual (WRMR; Muthén and Muthén, 1998-2001). CFI should be at least .90, although Bollen (1989) argues that fit indexes are relative to progress in the field and therefore somewhat arbitrary. For WRMR, a value of 1.0 or less is regarded as desirable for a good fit.

In addition to the overall goodness-of-fit indices, two other criteria are suggested for model acceptability: (1) absence of localized strain; and (2) interpretability, size, and statistical significance of parameter estimates (Brown, 2006). Localized strain is most often identified by large standardized residuals or modification indices. A modification index indicates the degree of improvement in model fit achieved by freeing a particular parameter. Statistical significance of the estimated parameters is determined by dividing the parameter estimate (e.g., factor loading of an item) by its standard error. This ratio can be interpreted as a *z*-score, so that ± 1.96 is the critical value at an alpha level of .05 (two-tailed).

Findings

Mothers' and fathers' Co-parenting scores were significantly correlated ($r = .51, p \leq .05$), indicating that the data were nonindependent and should be analyzed at the dyad level. The least-restrictive CFA model with both mother and father data was tested, resulting in a relatively good fit: (CFI = .93; WRMR = 1.35). All items loaded significantly on the respective factors, but one localized strain for correlated error terms was identified in the father data: item 1 with item 2 (modification index = 37.49). This pair of items is similar in content: item 1 reads "My spouse and I have differing views on

how to discipline young children” and Item 2 “My spouse and I have similar beliefs about how to parent foster children.” Further, these items are reverse scored. This suggests a possible *method effect*, an artifact that exists “when some of the differential covariance among items is due to the measurement approach rather than the substantive latent factors” (Brown, 2006, p. 159). In this instance, it was justifiable to correlate the errors (Podsakoff, MacKenzie, Lee, Podsakoff, 2003). The CFA model allowing correlated errors between fathers items 1 and 2 resulted in an excellent overall model fit: CFI = .97 and WRMR = 1.08. All factor loadings were statistically significant and positive (Table 18) and the factor correlation ($r = .53$) was statistically significant, positive, and in the expected direction. Further, no modification indices greater than 10 were indicated with this model.

The second step of invariance testing is configural invariance. To satisfy the requirements for configural invariance, groups must demonstrate the same pattern of factors and factor loadings. Also, configural invariance assumes no correlated errors (Brown, 2006). Therefore, having correlated errors in the father data in the least-restrictive model technically precludes advancing to this step. However, since the model fit was good before the errors on items 1 and 2 were correlated, a configural invariance model was tested without these correlated errors. Factor loadings for identical items in each factor were constrained to be equal. This model was not successful because the constrained loadings resulted in standardized estimates greater than 1 on two of the father items (items 4 and 9). It was concluded that configural invariance does not exist for Co-parenting, indicating that, although there is solid evidence of the co-parenting construct, spouses do not have completely equivalent conceptualizations of co-parenting.

Despite the lack of configural invariance, this model did offer evidence of partial measurement invariance and the ability to test for factor mean invariance. Specifically, when the factor loadings on items 4 and 9 were unconstrained, the model fit with the remaining factor loadings constrained was $CFI = .94$, $WRMR = 1.33$. This fit was slightly better than the original CFA model with no constraints ($CFI = .93$; $WRMR = 1.35$). A chi-square difference test of the nested model was not possible. Specifically, the difference test when using the WLSMV estimator involves testing the derivatives from the main model against the nested model. Unfortunately, the difference test would not run since the nested model contained nonlinear constraints. Despite this limitation, the fact that the CFI and WRMR fit indices were better in the nested model than in the full model suggests the fit of the nested model did not deteriorate with the factor loading constraints. This indicated factor loading invariance across 8 of the 10 items, supporting partial measurement invariance.

With only partial measurement invariance, it was not possible to test for factor mean invariance. However, the paired t-test conducted earlier indicated that fathers' and mothers' means were statistically different. This finding indicates that although there was partial measurement invariance at the item-level of the measure, there is heterogeneity between genders at the structural level. In other words, it appears that spouses have a somewhat similar understanding and interpretation of the items. However, on average, husbands' factor means were lower than were mother's factor means, indicating that couples do not agree on the level of co-parenting.

3.2. Do Demographic Characteristics Account for Co-parenting Scores?

The extent, if any, to which demographic characteristics predict Co-parenting scores was examined. If demographic characteristics account for an appreciable amount of variance in Co-parenting scores it would raise questions about the validity of Co-parenting.

In testing propositions concerning the effect of demographic characteristics on Co-parenting the following demographic characteristics were examined: highest degree or level of education completed, race/ethnic background (0 = African-American/other, 1 = European-American), and total family income in the past year. Ordinary least squares (OLS) regression was used to test these propositions (Cohen, Cohen, West, & Aiken, 2003).

Table 19 shows results from the linear multiple regression analysis used to examine this proposition. The findings indicated that demographic characteristics did not influence Co-parenting scores for either mothers or fathers.

3.3. Is Co-parenting Quality Distinguished from Parenting Quality?

3.4. Is Co-parenting Quality Distinguished from Marital Quality?

Based on co-parenting research in the general population, the relationship between Co-parenting and measures of parenting quality and marital quality were examined. Talbot and McHale (2004) synthesized the research done on co-parenting dynamics and cited evidence of construct validity on four dimensions: (1) association with children's socioemotional adjustment; (2) ability to distinguish co-parenting quality from parent-child dyad quality; (3) ability to distinguish co-parenting quality from marital quality; and (4) limited findings that indicate poor marital quality does not

necessarily imply poor co-parenting quality. Data used in this study could not be used to address the first dimension but were used to address the remaining three issues.

The scales used for validation were the Kansas Marital Satisfaction scale (hereafter referred to as Marital Satisfaction), the Overt Interparental Hostility scale (hereafter referred to as Marital Hostility) and the Parental Acceptance Scale (hereafter referred to as Parental Acceptance). Based on research in intact families, it was expected that marital quality would be significantly correlated with, yet still distinct from, co-parenting. Of the two measures of marital quality, theory also suggests that Marital Hostility would be more closely associated with Co-parenting than Marital Satisfaction. Further, theory heavily favors the notion that marital quality precedes co-parenting. However, it is also likely that each partner's perception of marital quality affects not only his or her own perception of co-parenting quality but also affects the perception of co-parenting quality of the other spouse (Kenny, et al., 2006).

Overview of Propositions and Statistical Methods

Exploratory factor analysis (EFA). Although the scales used for validation were established scales, EFA was conducted on the scale items for multiple reasons. First, EFA in Mplus analyzes the data as ordinal-level data with the WLSMV estimator. As this is an improved but relatively new approach to EFA, conducting a new EFA would verify that the data would produce the same results. Second, this provided an initial step to verify that the Co-parenting data would load on a separate factor. Third, these measures have never been tested with foster parents. Lastly, EFA on these data would provide preliminary discriminant and convergent validity evidence.

Confirmatory factor analysis (CFA).

Although the research questions are framed as a set of comparisons between Co-parenting and one other measure at a time, CFA models examining marital quality, co-parenting, and parenting simultaneously were assessed to answer parts 3.3 and 3.4, as this was a more rigorous test of the validity of co-parenting. Ideally, one CFA model with all four measures (Co-parenting, Marital Satisfaction, Marital Hostility, and Parental Acceptance) would have been tested. However, due to the constraints of sample size this was not feasible. Instead, two models were constructed, where each model contained one of the measures of marital quality in addition to Co-parenting, and Parental Acceptance.

In each model, *within-partner correlations* represent the correlations between measures for each spouse (e.g., the correlation between fathers' marital quality scores and fathers' Co-parenting scores). *Cross-partner correlations* (e.g., the correlation between fathers' marital quality scores and mothers' Co-parenting score) will also be assessed.

Findings

Missing data for scales used for validation. There were no missing data for Marital Hostility and Marital Satisfaction. In Parental Acceptance, there were only two data points missing, each from a different foster mother. These items were number 5 (*Is able to make my child feel better when s/he is upset*) and number 9, (*Often praises this child*). These missing item values were imputed using the Expectation-Maximization (EM) method in SPSS 14.0 with all of Parental Acceptance items for mothers. The imputed values were rounded to the nearest whole number for analyses.

EFA on validation scales items and co-parenting items. Two EFA models were conducted for each of the father and mother data. Although it would have been ideal to

include all four measures in the same model, sample size constraints precluded this analysis. As a compromise, the marital quality measures were not included in the same model. Model 1 contained Marital Hostility, Co-parenting, and Parental Acceptance; model 2 contained Marital Satisfaction, Co-parenting and Parental Acceptance. Three items (two Marital Hostility items and one Parental Acceptance item) were problematic in the EFA with the mother data. Specifically, in Marital Hostility, Item 6 (*Pushes, pulls, grabs, or slaps the other*) had no variance and therefore was deleted from subsequent analyses. Item 2 (*Threaten the other*) in Marital Hostility and Item 1 (*Believes in showing my love for this child*) in the Parental Acceptance measure produced zero cells on the bivariate table with numerous other items. Due to the limited variability of these data, the data were dichotomized in an attempt to resolve this problem. This strategy failed. Per Muthén (2006a, 2006b), small samples often result in zero cells in bivariate tables, and these results are likely unreliable. Because collecting more data was not an option, the only other choice was to drop these variables from the analysis. In order to make the measures comparable, these items were deleted from analyses for fathers as well. This resulted in a 4-item scale for Marital Hostility (Appendix O) and a 9-item scale for Parental Acceptance (Appendix P).

The result of the EFA with promax rotation for Model 1 is shown in Table 20. For mothers, all items loaded on separate factors in the expected manner. The Co-parenting scale items loaded on the first factor above .58, Marital Hostility items loaded on the third factor below -.51, Parental Acceptance items loaded together at or above .41. Similar results were found in the father data: Co-parenting items loaded together at or above .43, Marital Hostility items loaded on the third factor below -.60, and Parental

Acceptance items loaded together at or above .73. The negative correlation between Marital Hostility and Co-parenting was expected because, in Marital Hostility items, higher scores indicate more marital hostility (i.e., a less-desirable state of marital quality) whereas higher item scores for the other factors indicate more favorable qualities of the relevant construct.

Co-parenting correlated positively with Parental Acceptance ($r = .27$ for mothers, $r = .39$ for fathers) and negatively with Marital Hostility ($r = -.39$, mothers; $r = -.33$, fathers), indicating good convergent and discriminant validity (Table 21).

For Model 2, items again loaded on separate factors as expected. Co-parenting and Parental Acceptance loaded higher for mothers and fathers in this model. Marital Satisfaction items (Appendix Q) loaded together at or above .90 for mothers and at or above .89 for fathers (Table 22). Again, this model indicated good discriminant and convergent validity between factors.

Co-parenting correlated positively with Parental Acceptance ($r = .27$ for mothers, $r = .35$ for fathers) and positively with Marital Satisfaction ($r = .45$, mothers; $r = .40$, fathers), indicating good convergent and discriminant validity (Table 23).

In order to compare the correlations between Co-parenting and each of Marital Satisfaction and Marital Hostility, an EFA with these three measures was conducted. Items loaded as expected. For mothers, the correlation between Co-parenting and Marital Satisfaction ($r = .55$) was significantly stronger than the correlation between Co-parenting and Marital Hostility ($r = -.45$), $t(108) = -8.15$, $p \leq .0005$. Similarly, in the father data, the correlation between Co-parenting and Marital Satisfaction ($r = .38$) was

significantly stronger than the correlation between Co-parenting and Marital Hostility ($r = -.31$), $t(108) = -4.98$, $p \leq .000$ (Cohen & Cohen, 1983).

Computing raw scores. As these were existing measures, the scoring methods used by the scales' authors were used to compute total raw scores.

Distribution of scores. Descriptive statistics were examined for the existing measures. This was done because two of the measures were shortened. Also, it is always good practice to examine the nature of the data, including reliability, for a new dataset. As seen in Table 24, mothers and fathers scored quite high on Marital Satisfaction and Parental Acceptance, and fairly low on Marital Hostility. Notably, these data are much more skewed than are the co-parenting data. This difference in score distributions serves as further evidence of discriminant validity showing that foster parents do not view co-parenting in the same way as marital quality or individual parenting.

Internal consistency reliability was excellent for mothers and fathers on marital satisfaction and for fathers on parental acceptance (Table 24). However, the reliability estimates for parental acceptance and marital hostility in the mother data were marginal. The alpha for fathers on marital hostility was good.

CFA with Co-parenting, Marital Hostility, and Parental Acceptance. As mentioned earlier, due to the constraints of sample size, a CFA model with all four measures (Co-parenting, Marital Satisfaction, Marital Hostility, and Parental Acceptance) was not feasible. Instead, two models were constructed: one model consisted of Co-parenting, Marital Hostility, and Parental Acceptance, and the second model consisted of Co-parenting, Marital Satisfaction, and Parental Acceptance.

CFA with Marital Hostility as the marital quality measure was analyzed first; correlated error variances were indicated for Co-parenting items 1 and 2 in the father data. The overall fit for this model was very good: CFI = .95, WRMR = 1.09. At the item level, all factor loadings were significant (Table 25).

As shown in Figure 9 and Table 26, dyads were correlated positively for Co-parenting, Marital Hostility, and Parental Acceptance. Further, all within-partner correlations (e.g., correlation between father Co-parenting and father Parental Acceptance factors) were statistically significant and in the expected direction. Specifically, Marital Hostility was negatively correlated with Co-parenting and Parental Acceptance, while there was a positive correlation between Co-parenting and Parental Acceptance. Cross-partner correlations (e.g., correlation between father Co-parenting and mother Parental Acceptance) between Co-parenting and Marital Hostility and between Co-parenting and Parental Acceptance were also statistically significant and in the expected directions. The only cross-partner correlations that were not significant were the Marital Hostility and Parental Acceptance cross-partner correlations (Table 26).

It was not possible to test the correlations for invariance (e.g., setting within-partner correlations and cross-partner correlations between pairs of factors equal to each other) because, as shown earlier in the CFA model with Co-parenting only, factor loadings were not invariant. Factor loadings must be constrained for equality when testing for invariance of correlations or variances. Therefore, although it is important to note the significant relationships between factors in this model, evidence suggests that husbands and wives view these constructs differently.

Lastly, factor means invariance was not tested because it had already been established that Co-parenting means were not invariant. However, paired t -tests for dependent groups were conducted for all measures. Results were not statistically significant for Marital Hostility, ($t(110) = 1.12, p > .05$, two-tailed)) but were significant for Co-parenting and Parental Acceptance. Specifically, fathers' average scores were lower than mothers' scores for Co-parenting, $t(110) = -4.93, p = .000$, two-tailed, and Parental Acceptance, $t(110) = -4.28, p = .000$, two-tailed. The effect sizes for Co-parenting and Parental Acceptance were in the medium to small range, as measured by the d -index ($d = .36, d = .40$, respectively). The effect size for Marital Hostility was in the small range ($d = .11$).

CFA with Co-parenting, Marital Satisfaction, and Parental Acceptance. The proper CFA solution with Co-parenting, Marital Satisfaction, and Parental Acceptance was not obtained for either the father or mother data. Each model indicated linear dependency in the Marital Satisfaction measure. As Brown (2006) explains: "a necessary condition for obtaining a proper CFA solution is that both the input variance-covariance matrix and the model-implied variance-covariance matrix are positive definite. A determinant is a single number (scalar) that conveys the amount of nonredundant variance in a matrix (i.e., the extent to which variables in the matrix are free to vary). When a determinant equals 0, the matrix is said to be singular, meaning that one or more rows or columns in the matrix are linearly dependent on other rows and columns.... Singularity is one reason why a matrix will not be positive definite" (p. 187). In other words, the presence of linear dependency in the Marital Satisfaction data resulted in variance-covariance problems, thereby prohibiting an acceptable CFA solution.

The only way to solve the linear dependency issue is to remove the variable that is causing it. However, the Marital Satisfaction measure only has three items: removing one item would cause the model to be underidentified (i.e., the model would not run). As such, CFA was not possible. However, the EFA provided strong evidence of the discriminant validity of Marital Satisfaction from Co-parenting and Parental Acceptance for mothers and fathers. As well, scale statistics indicated that Marital Satisfaction was severely skewed and kurtotic for mothers (skewness = -2.86, $SE = .23$; kurtosis = 10.59, $SE = .46$) and fathers (skewness = -2.53, $SE = .23$; kurtosis = 8.70, $SE = .46$) whereas this was not true in the Co-parenting distribution of scores for mothers (skewness = -.41, $SE = .23$; kurtosis = -1.01, $SE = .46$) or fathers (skewness = -.08, $SE = .23$; kurtosis = -.46, $SE = .46$).

There was no statistically significant difference between means for couples on the Marital Satisfaction measure, $t(110) = -.21, p > .05$, two-tailed. The effect size for Marital Satisfaction was in the small range ($d = .02$).

Marital quality and Co-parenting factor correlations. Due to lack of solution in the Marital Satisfaction data, it was not possible to compare the correlation between Co-parenting and Marital Hostility to Co-parenting and Marital Satisfaction. However, as shown previously in EFA, The correlation between Co-parenting and Marital Hostility was smaller than the correlation between Co-parenting and Marital Satisfaction.

3.5. Are there Typologies of Foster Couples?

The fourth co-parenting dimension of construct validity evidence covered by Talbot and McHale (2004) was the existence of subtypes of co-parenting dyads. Typological evidence arguably is more useful because it is person-centered, not variable-

centered. In this regard, it is more consistent with family systems theory, which does not support the idea that identical processes exist in all families (O’Conner, Hetherington, & Reiss, 1998). Belsky and Fearon (2004) found convincing evidence of this heterogeneity by identifying five types of parents, some of whom had consistently poor or good marriages and parenting but some of whom had contradictory pairings (e.g., good parenting/poor marriage; poor parenting; good marriage). Lewis, Beaver, Gosset, and Phillip (1976), and Lewis and Looney (1983) identified subsets of parents who exhibited favorable co-parenting traits while experiencing marital distress. In this regard, typological evidence would also serve as validity evidence of co-parenting to the extent that it behaves the way it is expected to with regard to other measures (Devellis, 1991).

Even though the CFA in this study has provided discriminant validity evidence of this construct as unique from measures of marital quality and parenting in the predicted direction, it is desirable to further investigate evidence of validity beyond the CFA. To the extent that typologies for any of the measures exist or that these typologies differ, these findings may offer additional validation support for co-parenting. For instance, if marital quality subtypes have different patterns among parents than do co-parenting subtypes, then there is additional reason to believe that co-parenting is unique from marital quality and/or parenting behavior. Moreover, whereas the EFA and CFA indicated only that co-parenting is different from marital quality and parenting attitudes, the existence of typologies in co-parenting that differ from typologies in the other measures may better explain *how* co-parenting is different.

Overview of Statistical Methods

Latent Class Analysis (LCA) was used to test for typologies. Although latent class modeling was initially developed to handle dichotomous data, this methodology now can accommodate observable variables of different measurement levels (nominal, ordinal, continuous, and counts) (Magidson & Vermunt, 2004), thus making it an attractive analytical strategy for the data that were used in this dissertation. When the dependent variable is continuous, this methodology is technically a variation of LCA called *latent profile analysis*. Because this study used scale scores for analyses, the term *latent profile analysis* is more accurate, but for sake of simplicity the more general term LCA was used in this write-up. LatentGOLD 4.0 (Vermunt & Magidson, 2005) was used in this study for these analyses.

LCA is different from standard cluster analysis techniques because it is a model-based clustering approach (Vermunt & Magidson, 2002). In other words, an underlying assumption in LCA is that there are underlying probability distributions that generate the data about each class. Unlike traditional clustering, this model-based approach provides model fit criteria to guide the selection of number of classes.

To determine the number of classes chosen, the primary method is to statistically assess latent class models with 1, 2, 3, ..., up to the maximum plausible number of latent classes, and to statistically assess the fit of each one to the data. Generally, model fit is assessed by the likelihood ratio chi-squared (L^2) statistic. However, the chi-square statistic does not yield reliable results when the sample size is small (Vermunt & Magidson, 2005).

One alternative model assessment is to compare nested models. Latent Gold provides a conditional bootstrap procedure (Bootstrap -2LL Diff) that uses log-likelihood rather than chi-squared statistics. This bootstrap method tests whether, for example, a 4-class model (source model) provides a significant improvement in fit over a 3-class model (nested reference model). If the estimated p -value associated with the increase in classes is $\leq .05$, this means the 4-class model provides a statistically significant improvement over the 3-class model (Vermunt & Magidson, 2005).

Another set of alternative model assessments are information criterion (IC) estimates, including BIC (Bayes' information criterion), AIC (Aikike information criterion) and CAIC (Consistent AIC). Similar to bootstrapping, ICs also use log-likelihood statistics. In LatentGOLD, the following IC measures are available: BIC, AIC, AIC3 (an adjusted AIC estimate) and CAIC. These goodness-of-fit measures take into account model parsimony (that is, it penalizes for number of parameters in relation to maximum possible number of parameters) and permit comparisons between models. The lower the BIC, AIC, or CAIC values, the better the model in comparison with another. However, these fit assessments are also somewhat problematic. Specifically, Yang (2006) evaluated the use of information criteria measures with samples of 100 to 1000 for up to eight classes. Through simulation studies, he found that all criteria fared well in larger samples but were less reliable for smaller sample sizes (e.g., 100 or 200), especially with a higher number of classes (e.g., 5 or 6 classes). Accordingly, these criteria must be considered with caution with these data.

Given the limitations of the more widely acknowledged assessment indicators, other indicators appropriate for the LCA model were also considered when assessing the

LCA models. These included (1) the classification error ratio, which is the proportion of cases estimated to be misclassified; the closer the error ratio is to 0 the better; (2) the Wald statistic, which is used to assess the statistical significance of the set of parameter estimates for a given variable. Specifically, a p -value $\leq .05$ for the Wald statistic means that the indicator is able to discriminate between the clusters in a statistically significant way; and (3) finally, practical considerations including the number of couples per class and the percent of variance accounted for by the clusters in the model.

Findings

LCA with Co-parenting. LCA model fit statistics for Co-parenting are displayed in Table 27. For co-parenting, a 3-class model appeared best based on BIC and CAIC. At the 3-class solution, both BIC (1751.35) and CAIC (1765.35) were lower than at the 2-class solution as well as lower than the 4-class solution, indicating that the 3-class model was the best fit. The classification error rate and bootstrap p -values did not discriminate effectively between classes 2 and 3 nor between classes 3 and 4.

The profile plot of the 3-class model (Figure 10), offers evidence of three types of parenting dyads. Class 3 represents fathers and mothers who both scored quite high on Co-parenting. Fathers' mean score was 97.51 and mothers' mean score was 95.32 (Table 20). Class 3 couples also indicated agreement in Co-parenting, but at a moderately high level means (72.60 fathers, 71.26 mothers). By contrast to classes 1 and 3, class 2 indicated a subgroup of couples in which fathers ($M = 76.18$) scored 21.50% lower than mothers ($M = 92.56$). Notably, this group represented 36% of the dyads (Table 28) compared to class 1 (41%) and class 3 (22%). In other words, although 63% of dyads

were in relative agreement on Co-parenting scores, in over one-third of the couples husbands scored lower than did their wives.

The Wald statistic assesses the significance of a set of parameter estimates where the null hypothesis is that all of the parameters associated with a given indicator equal zero (note: the parameter estimates utilize effect coding, meaning that for each of fathers and mothers, the estimates sum to zero across the columns). For the 3-class model, parameter estimates indicated that Co-parenting scores significantly discriminated between the class for fathers (Wald = 327.84, $p = 0.00$) and mothers (Wald = 235.85, $p = .000$). Further, 54.54% of the variance in fathers' Co-parenting scores and 74.21% of the variance in mothers' Co-parenting scores was explained by a 3-class model.

LCA with validation measures. Each of the validation measures used in CFA (Marital Hostility, Marital Satisfaction, and Parental Acceptance) was analyzed using LCA. To the extent that each of these measures differed from Co-parenting in number of classes or patterns of dyadic relationships, this offered further evidence of discriminate validity among Co-parenting, marital quality, and parenting quality. Due to sample size limitations, a full model including Co-parenting with other measures was not tested. Rather, only results based on individual LCA analyses were compared. Further, due to concerns about sample size per class, it seemed reasonable to restrict the maximum number of classes to four.

For Marital Hostility, none of the fit statistics identified classes (Table 29). IC estimates continued to decrease rather than stabilize at one level. Neither class error rate, which is near zero for all classes, nor bootstrap p -values, which indicates that each successive class is a better fit than the last, was helpful in selecting a best solution.

Given the lack of clear guidance for choosing a number of classes for Marital Hostility, the best use of the data was to see if there was any indication that a 3-class solution looked appreciably different from that of the 3-class co-parenting solution. Fathers scored slightly higher than mothers in one of the three classes (Figure 11), indicating a higher degree of perceived hostility for husbands than wives. However, as compared to co-parenting, no qualitatively different subtypes were identified statistically, suggesting that there are no homogenous subgroups in this sample for Marital Hostility.

For Marital Satisfaction, BIC and CAIC indicated a 3-class solution (Table 21). Similar to Co-parenting, there were two classes that were only quantitatively different from each other, but one class was qualitatively different. However, as contrasted to Co-parenting, fathers scored higher than mothers in this class, whereas in Co-parenting, fathers scored lower than mothers (Figure 12).

Estimates failed to successfully identify a class for the Parental Acceptance data (Table 21). As seen in the profile plot, there was some indication of a qualitatively different class. Similar to Co-parenting, this class consisted of fathers scoring lower than mothers (Figure 13). However, this profile is tentative as the solution was not supported by the IC estimates.

Summary

Results from the exploratory factor analysis of the Co-parenting data indicated that the same item should be dropped for mothers and fathers from the original 11 items. The remaining 10 items strongly supported a one-factor solution for foster mothers and foster fathers. The Co-parenting scale had excellent internal consistency reliability for both mothers and fathers.

Due to nonindependence in the Co-parenting data, the dyad was identified as the appropriate unit of analysis. Partial configural invariance (i.e., factor loading invariance) for the Co-parenting scale for mothers and fathers was established through CFA, indicating that husbands and wives interpreted the Co-parenting items in somewhat, but not completely, similar fashion. Partial configural invariance provided justification to test for factor means invariance. However, factor means were shown to not be equivalent for husbands and wives. Specifically, husbands scored lower than wives.

Gender-level EFAs on all measures were conducted to ensure that the measures behaved the same way for foster mothers and fathers as they do in the general population and because a relatively new estimator appropriate for ordinal-level items was employed. Due to sample size restraints, two EFA procedures for men and women were conducted: one with Marital Hostility, Co-parenting, and Parental Acceptance; the second with Marital Satisfaction, Co-parenting, and Parental Acceptance. Although the relationship between how Marital Satisfaction and Marital Hostility is of interest, it was deemed more important to explore the relationship among marital quality, Co-parenting, and parenting. As a result of lack of variance and zero cell bivariate frequencies, two Marital Hostility items and one Parental Acceptance item were dropped. For the remaining data, items loaded on expected constructs in each EFA procedure, providing strong support that all constructs are seen as distinct for both fathers and mothers. Factor cross-partner correlations provided additional evidence of discriminant validity between constructs at the gender level.

CFA at the dyadic level also consisted of two models, one with Marital Hostility, Co-parenting, and Parental Acceptance, and the other with Marital Satisfaction, Co-

parenting, and Parental Acceptance. The CFA dyadic model with Marital Hostility, Co-parenting, and Parental Acceptance yielded a very good fit overall and each factor loading was significant. For each measure, the within-dyad correlation was significant in the expected direction. As these data were analyzed at the dyad level, this indicates that there was nonindependence in Marital Hostility and Parental Acceptance data as well as the Co-parenting data. The Co-parenting factor was significantly correlated in the expected direction with the other factors in the model for both within-partner (e.g., father Co-parenting with father Parental Acceptance) correlations and cross-partner (e.g., father Co-parenting and mother Parental Acceptance) correlations. These correlations offer support of dyadic-level discriminant validity between Co-parenting and Marital Hostility as well as between Co-parenting and Parental Acceptance.

The CFA dyadic model with Marital Satisfaction, Co-parenting, and Parental Acceptance did not yield a solution due to the linear dependency among the items of the Marital Satisfaction factor. Although this prohibits drawing conclusions regarding the results of the CFA model correlations, the fact that this model failed to run suggests that Marital Satisfaction and Marital Hostility are somewhat different measures.

To assess typologies, LCA was performed separately on each of the measures. Three classes were identified in the Co-parenting measure: high-scoring dyads; moderately-high scoring dyads; and unequally scoring dyads, in which fathers scored lower than mothers. In Marital Hostility, there was no qualitative difference between classes. Rather, in each class dyads scored approximately the same. In Marital Satisfaction, dyads in two classes scored equally while in the third class, fathers scored higher than mothers. Lastly, in Parental Acceptance, there again was evidence of two

equally-scoring dyads and one unequally scoring dyad. In the third class, fathers scored lower than mothers (similar to Co-parenting), but this solution was not statistically supported.

Again constrained by sample size, LCA on multiple measures was not possible. Nonetheless, a comparison of how the data performed individually provides tentative evidence of substantive discriminant validity among the measures as well as methodological support for LCA as an alternative or complimentary validation technique to means testing and CFA. Class profiles identified in the Co-parenting data are different from each of the 3-class solutions in the other measures, suggesting discriminant validity. Only Parental Acceptance is similar, with a possible, though not statistically supported, class of fathers who score lower than mothers.

Chapter V: DISCUSSION

This dissertation is an examination of the psychometric properties of Co-parenting, a measure that assesses foster couples' potential to co-parent foster children. Results of the study offer support of this measure as reliable and valid. This section includes a discussion on how the substantive and methodological findings in this study relate to foster care policy, practice, and research. Also included is an explanation of the study's limitations and consideration of future research.

Substantive Issues

Results of the EFA and CFA on the Co-parenting data strongly supported a reliable 10-item, one-factor Co-parenting construct for foster mothers and foster fathers that is distinct from, but related to, marital quality and parenting quality in expected ways. This finding is important for a variety of reasons.

Theoretical Importance of Co-parenting in Foster Couples

This study is the first known attempt to explore the construct of co-parenting in foster care. This is striking as the idea of co-parenting has been around for over 30 years, and existing research has consistently shown its relevance in terms of child outcomes. Foster children are one of the most at-risk populations of children in our society and the importance of their care and well-being while in foster care cannot be overstated. Hence, it is negligent to not explore the relevance of co-parenting in foster parents.

It is also surprising that co-parenting has not been investigated as it may relate to recruitment and retention outcomes in foster families. Child welfare departments recognize the importance of healthy foster parent marriages. For example, the Texas Health and Human Services Commission (HHSC; 2006) is implementing a program to

support healthy marital and family relationships among married adoptive and foster parents. Program goals include improving communication between couples and reducing marital conflict, as this commission believes that “(C)ombining a predetermined marriage education curriculum and existing post-adoption services, these programs will strengthen and preserve families who foster and/or have adopted children” (Texas HHSC, 2006, p. 5). Stronger marriages are expected to increase placement stability and optimize foster family environments for foster children. This program provides one example of where scarce program resources and valuable foster parent time might be better utilized by targeting co-parenting issues that may be contributing to conflict, rather than focusing on general marital quality.

Co-parenting Validation with Foster Mothers and Fathers

This study demonstrated that the co-parenting construct exists for fathers and mothers and can be assessed with the Co-parenting scale. Items in this measure cover three of the four central components of co-parenting identified by McHale, et al. (2004): (1) division of childcare labor; (2) support versus undermining; and (3) childrearing agreement. The fourth component, mutual engagement with the child, is not addressed specifically. However, this may not denote a weakness in the scale. For example, fathers typically spend less time with infants than with older children. Also, in families where one parent works full-time outside the home while the other parent stays at home, the lack of equality between parents on engagement with the child may be part of how they define co-parenting.

Notably, in both exploratory and confirmatory factor analyses, the items formed a uni-dimensional scale for both mothers and fathers. This suggests that foster couples do

not view co-parenting as several discrete issues but as a unidimensional set of activities that includes both psychological attitudes (e.g., child-rearing agreement) and practical behaviors (e.g., sharing household management).

However, it is also important to note that although most of the item content refers to co-parenting activities, this is not true for all of the items. This suggests that although the items form a unidimensional scale, it is possible that they are measuring something slightly different from co-parenting or that there is a degree of definitional ambiguity in the construct. As discussed in the literature review, the idea of co-parenting is comparatively new and measurement of the construct is still being refined. From a scale development perspective, it is important to note that the items were developed based on input from, and a review by, foster parents as well as family foster care workers. This also suggests that the definition of co-parenting is imprecise. Nonetheless, not only did these items perform exceedingly well in EFA and the internal consistency reliability analysis, the scale was clearly distinct from marital quality and individual parenting quality. Therefore, from a scale performance perspective, it is reasonable to conclude that the scale does measure co-parenting to a certain extent.

One other explanation for the cohesiveness of the items, despite the variability in item content, is the context in which the items were administered. The Co-parenting items appeared in the CFAI-A instrument following over 150 other items about fostering. Therefore, the mindset of the respondents arguably was such that they responded to the items in the Co-parenting scale with fostering attitudes or behaviors as the frame of reference and that this influenced the results. However, this could also be considered a

strength of the scale in that the aim is to measure foster parent co-parenting, not co-parenting in general.

Nonindependence within Dyads

The co-parenting similarities and differences within couples reinforce the need to include foster fathers in practice and research. The nonindependence in the Co-parenting data indicates that foster couples are more similar within dyads (i.e., there is more similarity within couples) than among dyads. Moreover, this nonindependence is related to co-parenting collaboration specifically regarding foster children, not children in general. In effect, this tells us that, on average, foster fathers are definitely engaged in fostering: they are not bystanders in the family fostering process. This confirms sparse foster parent research indicating that, although foster mothers generally initiate becoming foster parents, foster fathers become involved and invested as well (Cautley, 1980). By extension, child welfare agencies may be missing an opportunity to encourage and develop foster fathers as an important part of the foster family team.

Heterogeneity within Foster Couples

Beyond acknowledging the importance of foster fathers in general, it is also important to consider the interpretation and relevance of the fact that fathers' Co-parenting scores were, on average, lower than mothers' Co-parenting scores. This difference would suggest that foster couples do not share the same level of agreement regarding co-parenting activities. Specifically, on average fathers see themselves as less-equally involved in parenting activities and/or in less agreement about how to parent a foster child. This finding is consistent with Vuchinich et al. (2002), who found that foster fathers were less involved than foster mothers in family problem-solving discussions.

As the sample of foster parents in the current study was fairly stable, an assessment of the means differences may lead to the conclusion that it is not necessary that foster parents agree on how to parent foster children. Foster parent research has found that it is the wife who first becomes interested in becoming a foster parent (Cautley, 1980; Vuchinich, Ozretich, Pratt, & Kneedler, 2002) and that foster care workers assess foster father applicants significantly lower than foster mother applicants on the potential to be desirable foster parents (Orme, et al., 2003). To the extent that foster mothers are seen as more important than foster fathers for foster child outcomes because mothers are the primary caretakers and may even restrict father involvement (i.e., *maternal gatekeeping* [Allen & Hawkins, 1999]), this perception of foster couples may reinforce the notion that foster fathers are not as important for family functioning or for foster parent recruitment and retention efforts. This perception may be true, at least to some extent. In Vuchinich et al.'s (2002) study, problem-solving styles were compared across foster couples, at-risk non-foster couples, and low-risk non-foster couples. Foster mothers participated more than did foster fathers and also participated more than the two comparison groups of non-foster mothers. Foster fathers, by contrast, were less involved in problem-solving than both non-foster father comparison groups.

Alternately, the means difference could indicate that fathers are more objective and possibly a better gauge of family well-being. For example, Orme, et al. (2004) reported that husbands perceived family functioning to be poorer than did their wives and Cautley (1980) found that fathers were a better gauge of how well the foster family was doing. Cautley speculated that, because mothers generally initiated becoming foster parents and were often the primary caretakers, they had a larger emotional investment.

Consequently, foster mothers might be less objective about problems with foster child placements due to their desire to succeed as foster parents. By contrast, foster fathers might be more able and willing to acknowledge conflict and strain in the household.

Heterogeneity among Foster Couples

However, as demonstrated by LCA, this mean difference may be limited to a certain subset of foster couples. Identifying homogenous subtypes of couples could lead to more targeted foster parent training and support. Further, clarification as to whether mean differences exist across all dyads or just within a subset of dyads may be important for child placement. For example, in the general population, co-parenting has accounted for more variance in boys' than in girls' externalizing problems, while more variance has been accounted for in girls' than in boys' internalizing problems (O'Leary & Vidair, 2005). Also, Vaughn, Block, and Block's (1988) longitudinal study found that parental agreement at age 3 was associated with IQ, aspects of moral judgment, and dimensions of personality for teenage boys while child-rearing agreement was mainly associated with self-esteem for teenage girls. So, although there are some unique outcomes for girls, the quality of co-parenting does appear to be more crucial for boys. If these findings are true for foster children, a practical implication is to consider the importance of placing boys with foster couples who have better co-parenting scores. It also may indicate the importance of placing boys with 2-parent foster families, rather than single foster mother families.

Co-parenting Validation with Other Measures.

This study offers evidence of convergent and discriminant validity among Co-parenting, Marital Satisfaction, Marital Hostility, and Parental Acceptance, based on

patterns of correlations and mean differences. For mothers and fathers, Co-parenting was significantly and negatively correlated with Marital Hostility and was significantly and positively correlated with Parental Acceptance and Marital Satisfaction. Yet, since the correlations were less than perfect, these findings are an important contribution consistent with co-parenting literature that supports co-parenting as a distinctive family process. Therefore, to better understand foster parents, it is important to make sense of how co-parenting is functioning in the foster family.

The CFA model of correlations lends support to Co-parenting as a unique factor that stands between Marital Hostility and parenting. For example, correlations between Marital Hostility and Co-parenting were higher than correlations between Marital Hostility and parenting. This might indicate that Co-parenting partially mediates the effect of marital relationships on individual parenting behavior and would be consistent with other co-parenting research, both cross-sectional (Margolin, et al., 2001) and longitudinal (Floyd, et al., 1998).

Further, there were statistically significant cross-partner correlations for mothers and fathers between Marital Hostility and Co-parenting (i.e., mothers' Marital Hostility with fathers' Co-parenting and fathers' Marital Hostility with mothers' Co-parenting) and between Co-parenting and Parental Acceptance. However, the cross-partner correlations between Marital Hostility and Parental Acceptance were not significant. This again suggests that co-parenting is more proximal to parenting than is marital quality.

Mean differences were statistically significant for Parental Acceptance with fathers scoring significantly lower than mothers. The mean difference testing is important in two respects. First, it provides some evidence of discriminant validity between marital

quality and Co-parenting, at least to the degree that, as a couple, marital quality is not perceived the same way as Co-parenting. Second, for both Co-parenting and parenting, fathers' mean scores were lower than mothers' scores. In this respect, Co-parenting looks more similar to parenting than to marital quality. This observation is notable in that theorists argue that co-parenting is a subset of marital quality, rather than a superset of parenting.

Summary

In summary, this study supports the existence of, and substantive importance of, foster parent co-parenting. Evidence supports co-parenting as a construct recognized by foster mothers and foster fathers, and as a construct distinct from marital quality and individual parenting characteristics. These results serve as a seminal effort to bring focus to foster parent couples, especially the importance of foster fathers. Couples' Co-parenting scores should be used to stimulate and focus discussions between foster care workers and foster couple applicants as well as between the husbands and wives. This information can inform training, support, and services for foster couples, be used as a baseline to monitor development within foster families after licensure, and promote the well-being of foster families by individualizing training and support.

Methodological Issues

This study employed a variety of methodological strategies to understand the Co-parenting data and its relationship to other variables. EFA and CFA are usual approaches to validation. However, this study highlighted the additional understanding of the data that can be gained by strategies that inform us more about the homogeneity or

heterogeneity of the population: dyadic data analysis, measurement invariance testing, and latent class analysis.

Dyadic Data Analysis

Dyadic data analysis is a natural and necessary consequence of family research. Broadly, the history of parenting research has evolved across a continuum of mother-child dyads, father-child dyads, marital quality, marital quality associations with parent-child dyads, and now includes the contribution of co-parenting. In conjunction with this progression has come an understanding that relationships are mutually influential (though not always equally so). This is the basis of Family Systems Theory, which promotes looking at the couple or family as an organic and inter-related unit. Therefore, any family research that focuses on the individual, rather than the couple or the family, is likely to error in the understanding of family processes.

Foster care research, especially co-parenting, is no different from general family research as regards the importance of dyadic analysis. If nonindependence is present, the dyad should be treated as the unit of analysis as it leads the analyses along a more intricate and nuanced path. For example, the test for nonindependence in data proved important in this study. Because the data were nonindependent, the dyad became the unit of analysis, thereby reducing the sample size from 222 to 111. This is unfortunate to the extent that it reduced the statistical power of the analyses. However, had the data been incorrectly assumed to be independent, the results may have been biased. Moreover, equivalence testing at the dyad level indicated that foster couples are somewhat more similar than not in how they perceive the idea of foster co-parenting yet were not in agreement about the extent to which those activities actually played out in their

households. Viewed as independent data, similar results could have only been interpreted as similarities and differences at the gender level.

Measurement Invariance

Measurement equivalence is also an important addition to validity testing. In this study, the least restricted CFA model had a very good fit. However, had invariance testing at increasing levels of restrictiveness not been conducted, two important pieces of information may have been missed. First, it would have been easy to conclude that husbands and wives view the co-parenting construct in the same way. Invariance testing revealed that although this appears to be true at the least-restricted level, differences in item-level response appear as parameters are constrained to be equal. This finding serves as an important reminder to be wary of overgeneralization. In essence, we must be cognizant that subtle differences are likely in populations, even if we have not yet detected them. As noted in Adamsons and Buehler (in press), few studies have investigated equivalence in parenting measures, despite the acknowledged need by researchers to do so. The lack of complete invariance found here reinforces the need to address gender differences in scale construction. Moreover, it highlights the need to include both fathers and mothers in studies rather than relying on one spouse as a source of data.

Second, certain structural differences (population heterogeneity) should not even be examined in the absence of measurement invariance or partial measurement invariance. Drawing conclusions about population variances, covariances, and means without proper measurement invariance may lead to erroneous conclusions. Specifically, it may have been incorrect to conclude that fathers' mean Co-parenting scores were

significantly lower than mothers' mean scores had there not been evidence of partial configural invariance.

Nevertheless, is also possible that total measurement invariance for Co-parenting did exist in foster couples but was not detected in this study. For example, the data collection from fathers occurred approximately one year after data collection from mothers. Therefore, it is possible that household dynamics changed during this time.

Latent Class Analysis

Lastly, results of the LCA indicate that there is reason to believe that foster parent dyads are heterogeneous in character. Specifically, an important contribution in this study was the demonstration of how the Co-parenting data behaved in LCA and the comparison to how these data looked in CFA. Specifically, in CFA fathers overall scored lower than their spouses. Because fathers' mean scores were significantly lower than mothers' scores and the data were nonindependent, a reasonable conclusion would be that these foster couples do not agree on co-parenting issues. The LCA solution, however, elicits quite a different picture. Here it would appear that the majority of couples are, in fact, in agreement about Co-parenting (at equally high or moderately-high levels), yet there was a sizeable proportion of dyads who scored unequally. Notably, few of the co-parenting studies reviewed for this paper used latent class analysis. As shown in this study, important distinctions within populations are possibly being missed by taking a variable-centered, rather than a person-center, approach to analysis.

LCA also might have solved problems of measurement invariance in this measure. As a case in point, there were two classes in this study in which fathers' and mothers' mean Co-parenting scores were about the same. It might well be that invariance

testing would have been more successful if conducted on the data for these couples only (i.e., removing the class in which couple scores were not equal). In turn, this would suggest that the majority of fathers and mothers do have similar interpretations of the construct of co-parenting and that the third class is responsible for the lack of measurement invariance and means difference. (Note: this procedure was not attempted in this study due to sample size constraints and concern about power).

Strengths and Limitations

In addition to some of the strengths and limitations already addressed in the substantive and methodological discussion, there are also pertinent issues relative to the research design, data collection, and sample of this study.

Research Design

Results of the present study should be considered in view of the cross-sectional design used. Parents who intended to quit probably were underrepresented, as were parents who had fostered a shorter time, those licensed to foster fewer children, parents who had fostered fewer children, parents who had requested the removal of fewer children, those who had adopted more children, and parents with fewer foster children in the home (Gibbs, 2004). Lack of information from these types of parents limits the ability to conclude that the Co-parenting scale is wholly valid and reliable for all foster parents.

Use of a cross-sectional design also precludes the ability to draw causal pathways between co-parenting and other constructs. Similar to studies of intact families, Co-parenting and Marital quality were correlated in the expected directions. However, the area of greater interest is that of causality, and a longitudinal study would provide a better test of whether co-parenting leads to or follows from various other foster couple

characteristics. Specifically, the Co-parenting scale should be administered, as designed, to foster parent applicants and then followed over time to better understand how co-parenting quality relates to marital quality and parental acceptance. As seen in longitudinal studies with intact families, marital relationship quality predicted co-parenting quality in some studies (Lindahl, et al., 1997; McHale, Kazali, et al., 2004; VanEgeren, 2004), but was predicted by co-parenting quality in other studies (Belsky & Hsieh, 1998; Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004). Notably, all of these studies began with parents at or before the birth of their first child. Assessing foster parents before the placement of their first child would be comparable to these studies in some ways. This would likely be true whether or not foster parents already had children of their own: most new foster mothers in Cautley's (1980) study found foster children's behavior quite different from that of their own children, often challenging the way they were used to disciplining children in particular.

There are also strengths and limitations in the measures used to validate the Co-parenting Scale. The Marital Satisfaction scale had excellent internal consistency reliability for mothers and fathers but was dramatically skewed in this study. Items had to be omitted from each of Marital Hostility and Parental Acceptance, also a function of variance, and were also skewed. Internal consistency reliability estimates were respectively good and excellent on these measures for fathers but were marginal for mothers. On one hand, these descriptive statistics provided evidence of discriminant validity for the Co-parenting scale, which had good reliability and was not troubled by lack of variance. However, questionable reliability of some of the data jeopardizes the level of confidence in validation results.

Some of the problems with the Parental Acceptance scale may have been related to the wording of the items. Each item was worded to refer to an individual child rather than assessing general parental acceptance characteristics, yet this study was not designed to assess a particular child. Nonetheless, one of the complexities of co-parenting (and parenting) is that it likely is be child-specific to some extent. Individual personalities and behaviors of children are likely to elicit somewhat different co-parenting and parenting responses.

Further, the Parental Acceptance scale is not a measure designed nor worded in reference to *foster* children. Therefore, although this measure was part of a foster parent study, it can only be assumed that answers reflect attitudes toward foster children. On the other hand, this may or may not be a consideration because it is not clear to what extent foster parents parent foster children the same or differently than their own children. Therefore, responses may or may not accurately portray foster parenting attributes as opposed to general parenting qualities.

Along that same line, it would have been very informative to have had foster parents complete a co-parenting scale that assessed co-parenting of their biological or adopted children in addition to completing the foster parent Co-parenting scale. It would have then been possible to investigate the similarities and differences between the two scales and among the co-parenting measures and validation measures.

Data Collection

Data collection from fathers occurred approximately one year after data collection from mothers. This lag time is a strength in that there is less reason to expect that one spouse's responses influenced the other spouse's responses. On the other hand, the

interpretation of mean score differences is obfuscated. Expressly, fathers scored significantly lower on Co-parenting and Parental Acceptance. It is not clear to what extent the time lag is relevant to these mean differences. As well, a significantly lower percentage of fathers than mothers indicated intent to continue fostering for the next 6 months, 1 year, or 3 years. Again, the time lag may reflect a change in family circumstances or may be indicative of disagreement within couples.

Foster child outcomes were discussed above as one of the potential uses of Co-parenting. However, whether or not foster couples with higher Co-parenting scores are associated with better outcomes for foster children is unknown. The limitations of the data collected did not allow this substantive question to be answered.

Sample

The use of a convenience sample poses two potential problems. First, Co-parenting was intended to measure prospective foster couples' potential to co-parent foster children. However, this study utilized a sample of current foster couples; it does not necessarily reflect the opinions of foster couple applicants. Foster applicants would respond to Co-parenting items based on expectation, not experience. In that case, their answers may be more indicative of how they currently co-parent their own children, which may not be the same as co-parenting with foster children. However, the experienced foster parent responses do provide *normative scores*, scores from a sample of people in a reference population (AERA, APA, NCME, 1999; Anastasi & Urbina, 1997). As a result, a foster applicant's score can be compared to the experienced foster parent scores to see if the individual's score is, for example, below average, average, or above

average. This information may assist the foster care worker in anticipating the need for extra support or in opening up a discussion with the foster applicant.

The second issue is that of potential sample bias. The sample is diverse in that the foster couples represent 29 states and their socioeconomic statuses, employment statuses, and education levels vary. However, foster parents in this study were only somewhat representative of licensed foster parents in the United States. The majority of foster couples in this study (over 90%) are European-American. This is more heavily weighted toward European-American foster parents than is the National Survey of Current and Former Foster Parents (NSC&FFP; 1991) (Cox, Orme, & Rhodes, 2002; Rhodes, Orme, & Buehler, 2001), the only nationally representative sample of foster parents. Further, according to this study's findings, the vast majority of foster couples reported that they intended to continue fostering over the next six months, 1 year, and 3 years. Foster couples' race and commitment to fostering could have motivated them to participate in this study, just as those who do not share these attributes might not have been motivated to participate. Therefore, caution should be used in generalizing the results to all approved foster couples.

Response bias also might have resulted in underrepresentation of foster parents with poorer marital quality or lower levels of co-parenting agreement. For example, the original study recruited foster mothers only. Foster mothers in poor relationships (marital or co-parenting) may have elected to not participate to begin with. Further, mothers who did participate were asked if their partners would be interested in participating. Of the 238 participating mothers who were married or cohabitating, only 148 reported that their partners would be interested in participating. For the mothers who did not indicate

partners' interest, it is not known if the partners were actually asked or if the mothers made the decision on behalf of their partners. It may be that the mothers whose partners did not participate had lower marital quality or Co-parenting scores.

Alternately, the lower scores may have resided in the father data. First, it may be that some fathers initially declined to participate. Also, of the 148 mothers who indicated that their partners would participate, only 111 fathers completed the study. It could be that those fathers who did not participate would have reported lower scores. Regardless of the whether non-participation was a decision of the mothers or the fathers, underrepresentation of these couples would result in a sample with less variability in Co-parenting or marital quality scores. In turn, the mean scores for either fathers or mothers may have been lower, the difference between means may have been greater, or there may have been more subtypes of foster couples. Also, this might be one reason why the CFA with Marital Satisfaction was not successful (e.g., linear dependency among the Marital Satisfaction indicators) or why two of the items had to be dropped from the Marital Hostility measure.

The possibility of response bias was explored by comparing married mothers whose husbands participated in the study to those whose husbands did not participate. Binary logistic regression was used to regress the status of husbands' participation in the study on Co-parenting, Marital Hostility, Marital Satisfaction, and Parental Acceptance scores. The overall model was statistically significant ($\chi^2 [4] = 16.95, p = .002$). However, Co-parenting was the only significant predictor. Specifically, mothers with higher Co-parenting scores were more likely to have husbands who participated in the study (Wald [1] = 12.35, $p = .000$, Odds Ratio = 1.04. These results support the concern

of response bias – mainly, that couples with lower co-parenting quality were less likely to both participate in the study. On the other hand, as Co-parenting was the only significant predictor in the model, this again supports co-parenting as an important and separate construct from marital quality and parenting quality.

Future Research

Results support continued testing and tentative use of the Co-parenting Scale. As well, future research should be extended in several ways to address a number of areas that were beyond the scope of these data and research design.

Scale Validation with Other Co-parenting Populations

Although this study offers evidence of the validity of Co-parenting in foster couples, much more research is needed to confirm the validity of the measure and the construct. First, it will be important to validate this scale through replication of this study as well as with other types of intact foster couples. The respondents in this study were experienced, predominantly European-American, non-kinship foster parents. Testing should be conducted with couples who are kinship foster parent couples, foster parent applicants, and/or who are non-white.

Second, as evidence mounts for foster co-parenting as a separate construct from marital quality, it is important to explore its viability for foster parents who are not part of a traditional marital dyad. Specifically, although the majority of family foster parents are heterosexual married couples, 45.4% of family foster parents are single, 23% are kinship foster parents (AFCARS, 2003), many of whom are not married couples, and there is a growing presence of same-sex foster couples (Downs & James, 2006).

For single foster parents who have help from relatives or friends, co-parenting is quite possibly relevant and important. For example, Apgel and Seitz (1996, 1999) found that parenting success and child outcomes in adolescent African-American mothers were related to the quality and quantity of parenting assistance from the maternal grandmothers. Similar patterns may emerge in foster parenting by single parents who have influential caregivers assisting them and is likely even more common in kinship settings. Similarly, the extension to same-sex foster couples is quite logical, especially as co-parenting would likely be related to “marital” quality in this population.

For single foster parents who are not assisted by friends or family, co-parenting may still be relevant. Although there is no literature to support this type of co-parenting at present, the premise behind co-parenting as a collaborative effort has been used to consider the relationship between a single parent of a child with multiple problems and the child’s therapist (McHale, et al., 2002). Extended to foster parenting, co-parenting could conceivably assess the alliance between single foster parents and, in addition to therapists, case workers, teachers, or other closely-involved professionals.

A third way in which the validity of Co-parenting might be studied would be to extend the research into birth parent populations, specifically the foster parent/birth parent dyad. Dyads could be comprised of a foster parent and a birth parent or a foster parent who is caring for a female adolescent foster child who is also a teenage mother. The former type of dyad has been the focus of one study (Montalto, 2004), but the results were compromised by the small initial sample size and subsequent attrition. The utility of such a study is relevant, however, given the focus on reunification and the increased expectations that foster parents be involved in reunification efforts.

Scale Validation with Other Research Designs

Longitudinal studies enable factors of interest to be examined for their stability and continuity over time, and allow developmental sequences to be identified. This is important to help establish causal relationships among co-parenting, marital quality, and parenting. In the general population of intact families, co-parenting has been shown longitudinally to be predicted by marital quality (e.g., Lindahl, et al., 1997; McHale, et al., 2004; Van Egeren, 2004), to predict marital quality (Belsky & Hsieh, 1998; Schoppe-Sullivan, et al., 2004), to be related to parenting after controlling for marital relationships (Floyd, et al., 1998), and to mediate the relationship between marital relationships and parenting experiences (Floyd, et al., 1998). While study results support the unique contribution of co-parenting, the direction of influence is still undetermined. Moreover, no longitudinal co-parenting research has been conducted with foster parents.

Longitudinal research would be valuable not only to better understand causality but to establish test-retest reliability of the Co-parenting measure. Whereas internal consistency reliability was established in the present study, the second broad type of reliability – *test-retest reliability* – was not possible. Test-retest reliability assesses the stability of a respondent's item responses over time (Netemeyer, Bearden, & Sharma, 2003). The magnitude of the correlation coefficient generally serves as an indication of the degree of confidence that the measure accurately represents the construct and can therefore be utilized in other assessments.

However, the correlation coefficients derived in test-retest reliability of Co-parenting likely need to be interpreted contextually. For example, it is certainly possible that a respondent's rating on Co-parenting items might change over time, indicative that

the meaning of the construct has taken on new meaning (Zeller & Carmines, 1980). In general, the longer the time between testing, the more likely it is to see a lower correlation. It is even more reasonable to expect this change in foster couples from the period of foster parent training to when they have some hands-on experience with foster children. On a practical level, these changes would inform child welfare agencies and professionals. Specifically, we may understand that low Co-parenting scores at the time of licensure may indicate the need for additional conversation with the foster couple, or that it is not necessarily cause for immediate action but should be monitored over time for the best long-term outcomes: foster parent retention as well as child outcomes.

Therefore, longitudinal research would help to differentiate between change over time in aggregate (group) data and changes within individuals. While cross-sectional data only allow investigation of differences *between* dyads, a longitudinal study can examine change *within* dyads, as well as variation between them (Farrington 1991).

Methodologically, these changes in dyads could be explored in SEM and LCA.

Foster child outcomes are ultimately the most desirable extension of co-parenting research, ideally as a longitudinal investigation. The intact co-parenting literature uniformly substantiates the relationship between co-parenting and child outcomes in both cross-sectional and longitudinal studies. Importantly, longitudinal findings indicate that co-parenting affects child outcomes when controlling for marital quality and parenting style (Johnson, et al., 1999; McHale & Rasmussen, 1998) and is a stronger influence on parenting and child adjustment than other aspects of the marital relationship (Johnson, et al., 1999). As the well-being of children in family foster care is the ultimate goal, research of this nature is most important.

Summary

Co-parenting, the joint responsibility of two adults for the well-being of a child, is a relevant and applicable construct for foster parenting. Co-parenting is more proximal to parenting than many measures of marital relationships in that it focuses only on those dyadic processes that are specific to parenting (e.g., child-rearing agreement, support/undermining of parenting practices). Rooted in a family systems theoretical framework, the study of the unique contribution of co-parenting may help us better understand the relationship among marital dynamics, individual parenting, and ultimately, foster child outcomes. Because of this focus, it may also be a more pivotal construct for examining non-traditional foster parenting arrangements. As such, it is imperative that social work researchers and practitioners promote awareness of, and attention to, co-parenting in foster parents as an important facet of improving the well-being and care of children in foster care.

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APPENDICES

Appendix A. Cover Letter to Foster Parent Associations

October 1, 2002

Contact's name
Foster Parent Association name
Street address
City, State Zip code

Dear (Contact's Name):

The Family Foster Care Project team at the University of Tennessee in collaboration with Casey Family Programs is starting a nationwide study to test two new tools for assessing foster parent applicants. The National Foster Parent Association has endorsed this study and agreed to help recruit participants from its members. Would you let mothers in the [insert name of FPA] Foster Parent Association know about our study?

We have put together this information packet to tell you about the University of Tennessee Family Foster Care Project team and our projects. It has examples of ways you can share information about our study through your association's newsletter, website, and meetings.

The information packet contains:

- ✓ A copy of a letter from Karen Jorgenson, Administrator, National Foster Parent Association endorsing our study;
- ✓ Flyers to distribute at Foster Parent Association meetings that give details about the study, what participants will do, and the benefits of participating;
- ✓ An article about our study for your Foster Parent Association newsletter and instructions about how to download the article text from our website;
- ✓ An announcement about our study to place in your newsletter and on your website;
- ✓ A copy of our team newsletter the "Foster Family Forum" that has information about our team and projects we are doing to promote effective foster care; and
- ✓ Information about Casey Family Programs.

Please call us toll free at 1-877-447-0011 or email fosterproject@utk.edu if you would like more information about our project.

Sincerely,

John Orme, Ph.D.
Project Coordinator
jorme@utk.edu

Katie Rhodes, Ph.D.
Research Associate
kwrhodes@utk.edu

Appendix B. National Foster Parent Association Endorsement Letter

**National Foster Parent Association, Inc.**

7512 Stanich Avenue #6
Gig Harbor, WA 98335
(800) 557-5238 • fax (253) 853-4001
www.nfpainc.org • info@NFPainc.org

August 28, 2002

John G. Orme, Ph.D.
The University of Tennessee
College of Social Work, Henson Hall
Knoxville, TN 37996-3333

Dear Dr. Orme:

On behalf of the Board of Directors of the National Foster Parent Association, we are pleased to provide a letter of support for your proposal of the project, "Examination of the Psychometric Properties of the Casey Home Assessment Protocol and the Casey Foster Parent Applicant Inventory."

For some time we have realized that the ability to provide quality family foster care is an attribute that we would like to measure. However, we have been unable to identify an instrument that had the capability of assessing this ability, especially one which would provide validity and be reliable. The home assessment and applicant inventory to be investigated through this project will be a valuable resource for child welfare agencies.

The National Foster Parent Association is committed to providing access to foster mother contact information for the purposes of this project. We look forward to working with you and the investigators from The University of Tennessee.

Sincerely,

Karen Jorgenson
NFPA Administrator

Appendix C. Study Flyer to Distribute to Foster Mothers (front)

FOSTER MOMS NEEDED

WE INVITE NON-KINSHIP FOSTER MOTHERS
TO JOIN IN A NATIONWIDE STUDY OF
FOSTER FAMILIES

WHAT YOU WOULD DO:

- Fill out and return questionnaires about you and your family
- Discuss challenging fostering situations in a telephone interview

BENEFITS FOR FOSTER KIDS:

- Facilitate placement success
- Enhance foster parent satisfaction
- Increase foster parent retention

BENEFITS FOR YOU:

- Help develop foster parent assessment measures
- Be on our mailing list (optional)
- Receive a \$50 gift certificate

Want to be part of this project? Call 1-877-447-0011 toll free
or email fosterproject@utk.edu to sign up or to find out more.

We will ask for volunteers until we have information from 300 foster mothers.



This project is being conducted by the
University of Tennessee Family Foster
Care Project in collaboration with
Casey Family Programs.

Endorsed by the NATIONAL FOSTER
PARENT ASSOCIATION



(see back for more information)

Appendix C. Study Flyer to Distribute to Foster Mothers (back)

What is this project about?

Foster parents are special people. They share themselves and their lives with children in need. We are developing foster parent assessment tools for agencies to use during the certification process. This project will help us find out how "on target" these tools are.

What are assessment tools?

The Casey Home Assessment Protocol (CHAP) and the Casey Foster Applicant Inventory (CFAI) measure foster parents' strengths and resources that enable parents to care for children and work with agencies. Information from the CHAP and the CFAI can help foster parents and agencies see foster parents' strengths and know what agencies can do to support foster parents. When this project is completed, both tools will be available to agencies at no cost.

What will I do if I agree to help with this project?

- We will send you a packet of questionnaires to complete. The questionnaires ask about you and your family. Complete the questionnaires and return them in the envelope provided. This should take about two hours. All information you provide will be kept private. Your information will be combined with information from other foster parents across the country. In this way, we can get a total picture of how these tools work with foster families.
- When we receive your completed questionnaires, we will contact you for a telephone interview. During the interview we will discuss challenging fostering situations. This interview will take about 30 minutes. As with the written information you provide, information you give during the telephone interview will be kept private. We may ask to tape record your interview, but it is entirely up to you whether or not we record this telephone interview.

How will my participation in this project benefit children and foster families?

Information you provide will help us see how useful these measures are for foster parents. Careful assessment of foster parents helps:

- Facilitate placement success for children and foster families
- Enhance foster parent satisfaction
- Increase foster parent retention

What is in it for me?

- You will be helping to develop new foster parent assessment tools.
- At your request, we will put you on our mailing list to receive updates about foster family research.
- You will receive a \$50 Wal-Mart gift certificate for participating in the project.

Who is conducting this project?

We are the Family Foster Care Project at the University of Tennessee College of Social Work. This project is a joint collaboration between the University of Tennessee and Casey Family Programs. The National Foster Parent Association endorses this study. For more information about us and what we are doing to help foster families and children in care, please visit our website at <http://utcmhsrc.csw.utk.edu/caseyproject/> or visit Casey Family Programs at <http://www.casey.org/research/fifa/index.htm>.

How do I sign up?

- Call our toll free number 1-877-447-0011 or email us at fosterproject@utk.edu and provide us with your name, mailing address, phone number, and email address.

Appendix D. Article about Study and Download Instructions

Article about our study for your Foster Parent Association newsletter and how to download the article text from our website

Foster Mom Study Launched

The Family Foster Care Project team at the University of Tennessee in collaboration with Casey Family Programs is conducting a nationwide study to evaluate new tools for assessing foster parent applicants. Foster families are a critical national resource. They provide love and care for over three-fourths of children and youth in foster care.

Karen Jorgenson, National Foster Parent Association Administrator notes that, "For some time we have realized the importance of measuring the ability to provide quality foster care. We have been unable to identify an instrument that had the capability of assessing this ability..." The Family Foster Care Project team has developed the Casey Home Assessment Protocol (CHAP) and the Casey Foster Applicant Inventory (CFAI) to fill this gap.

The CHAP and the CFAI complement each other. Together they identify a broad range of foster families strengths and service needs, in order to improve the outcomes for youth receiving family foster care services (e.g., safety, stability, well being) and the outcomes for families who provide those services (e.g., satisfaction, recruitment, retention). When testing is complete, the CHAP and CFAI will be available for agencies to use at no cost.

The CHAP has two parts: (1) a set of questionnaires completed by applicants, and (2) a set of challenging situations that oftentimes occur during fostering which workers present and discuss. The CFAI is a multidimensional questionnaire with applicant (CFAI-A) and worker (CFAI-W) versions of the questionnaire. This study tests the applicant questionnaire.

Research is ongoing to test the CHAP and the CFAI. The newest phase of this research involves having certified foster mothers complete and return questionnaires, and discuss the challenging fostering situations in a brief telephone call.

If you or your agency would like more information about this project or would like to participate in testing the CHAP and the CFAI, contact the Family Foster Care Team at 1-877-447-0011 or fosterproject@utk.edu. For more information about the project or these tools, visit the project websites at: <http://utcmhsr.csw.utk.edu/caseyproject/> and <http://www.casey.org/research/ffa/index.htm>.

How to download the article text from our website

Go to article text at the following web page:

<http://utcmhsr.csw.utk.edu/caseyproject/Documents/Foster%20mom%20article.doc>

Two methods to obtain article text:

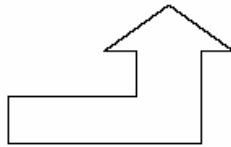
- 1) Copy and paste:
 - i) From **"Edit"** pulldown in browser window, select **"Select All"**, then **"Copy"**
 - ii) From **"Edit"** pulldown in your document, select **"Paste"**
- 2) From **"File"** pulldown in browser window, select **"Save As"**, then assign file name and type (e.g., Word Document, Text Only)

Appendix E. Study Announcement for Web Pages and Newsletters

Announcement for association web page

Foster mothers needed for a nationwide study of foster families.

Help foster children and other foster families by sharing your views. Receive a \$50 gift certificate for your time. The study is being conducted by the University of Tennessee Family Foster Care Project in collaboration with Casey Family Programs. The National Foster Parent Association has endorsed this study. Learn more about this important study and how you can help (click here).



Link under “click here”

<http://utcmhsr.csw.utk.edu/caseyproject/Foster%20Mom%20Study.htm>

Announcement to insert in association newsletter or other written materials

Foster mothers needed for a nationwide study of foster families.

Help foster children and other foster families by sharing your views. Receive a \$50 gift certificate for your time. The study is being conducted by the University of Tennessee Family Foster Care Project in collaboration with Casey Family Programs. The National Foster Parent Association has endorsed this study.

Learn more about this important study at <http://utcmhsr.csw.utk.edu/caseyproject> or send an email to fosterproject@utk.edu and request more information about the study.

Appendix F. State Foster Parent Associations (as of 8/02)

Contact	FPA Name	Address	City	State	Zip Code
Johnna Breland	Alabama Foster Parent Association	1309 Terrehaute Ave. SW	Decatur	AL	35601
Michael Keech	Foster Care Providers of Alaska	P.O. Box 211962	Anchorage	AK	99521-1962
Evelyn Carson		4117 E. Maldonado Rd.	Phoenix	AZ	85040
	Treatment Homes Inc.	PO Box 726	Little Rock	AR	72203
Nina Coake	California Foster Parents Association	17405 Baseline	Fontana	CA	92336
Sherry Bethurum	Colorado Foster Parent Association	7651 W. 41st ave., Ste. 90	Wheatridge	CO	80033-4559
Jean Fiorito	CAFAP	2189 Silas Deane Hwy.	Rocky Hill	CT	06067
	Delaware State FPA	P.O. Box 1527	Wilmington	DE	19899-1527
Suzanne Stevens	FSFAPA	P.O. Box 34	Mt. Dora	FL	32756
Verdell Daniels		12216 Apache Ave.	Savannah	GA	31419
Sarah T. Casken	Hawaii State Foster Parent Association	PMB #261, 111 Hekili Street, Suite A	Kailua	HI	96734
Karen Ledbetter	Idaho Foster & Adoptive Parents Coalition	2164 Brookcliff	Idaho Falls	ID	83402-3840
Tim Russell	Illinois Foster Parent Association	310 E. Adams	Springfield	IL	62701
Christina Morrison	Indiana Foster/Adopt. Assoc.	3901 N. Meridian St. #24	Indianapolis	IN	46208
Lynnon Stout - Director	IFAPA	6864 N.E. 14th St., Suite 5	Ankeny	IA	50021
Jene Hillyer	Kansas Foster and Adoptive Families, Inc.	2201 SW Gage Blvd., Suite 3	Topeka	KS	66614-1156
Phyllis Hurley	KFCA	2110 Clay St.	Paducah	KY	42001
Brenda G. Valteau		10139 Seawood St.	New Orleans	LA	70127
Joyce Pringle		138 Webster Road	Farmington	ME	04938
Deborah Greene	Maryland Lge. of Foster/Adopt Parents	11 E. Mt Royal Ave., Suite 2B	Baltimore	MD	21202
William LaPierre	Massachusetts Alliance for Families	399 Boylston Street	Boston	MA	02116
Myrn McNitt	Michigan Foster/Adopt Parent Assn.	2450 Delhi Commerce Dr., Suite 13	Holt	MI	48842
Ralph Willenbring	Minnesota Foster Care Assoc.	P.O. Box 48716	Minneapolis	MN	55448-0716
Becky Watkins	Mississippi Foster/Adoptive Parent Assoc.	P.O. Box 3451	Meridian	MS	39303
Jim McKenna		P. O. box 277	Cape Fair	MO	65624

Contact	FPA Name	Address	City	State	Zip Code
Janine Burrows-Alberda	Montana Foster/Adoptive Parent Association	P.O. Box 8265	Bozeman	MT	59773
Mary Burt		2125 Stockwell	Lincoln	NE	68500
Elaine Brooks	Foster Care & Adoption Association of Nevada	9401 Empire Rock	Las Vegas	NV	89143
Michael J. Sielicki	NH Foster and Adoptive Parent Association	6 Main Street	Hancock	NH	03449
Mary Jane Awrachow	Foster and Adoptive Family Services	4301 Rt.1 S., P.O. Box 518	Monmouth Junction	NJ	08852
David Shaheen		407 W. Cielo	Hobbs	NM	88240
Daisy Boyd	New York Foster/Adopt Parent Assoc.	92-31 Union Hall, PO Box 120-151	Jamaica	NY	11412
Randy Delling	North Carolina Foster Parent Association	411 Andrews Rd, Ste. 230	Durham	NC	27705
Rich Holm		6855 177 Ave. SE	Wahpeton	ND	58075
Robert & Dot Erickson	Ohio Family Care Assoc.	P.O. Box 82185	Columbus	OH	43202
Kim Green	Foster Care Association of Oklahoma, Inc.	Rt. 2 Box 204	Wellston	OK	74881
Karl Howell	Oregon Foster Parent Assoc.	707 13th St. SE, Suite 275	Salem	OR	97301
Pat Feaster	Pennsylvania Foster Parent Assoc.	5137 Devonshire Rd Suite A	Harrisburg	PA	17112
Margaret Alves	Rhode Island FPA	250 Centerville Rd.	Warwick	RI	02886
Carl Brown		P.O. Box 39	Elgin	SC	29045
Jean Anderson		Box 565	Reliance	SD	57569
Betty Hastings	TFCA	40 Foust Lane	Hollow Rock	TN	38342
Roy Block	TSFPI	13242 Trentwood	San Antonio	TX	78231
Cindy Gates	Utah Foster/Adoptive Family Assn.	P. O. Box 13297	Ogden	UT	84412
Jim Bulger		417 Vermont Route 25	West Topsham	VT	05086
Aileen Edwards	Virginia Foster Care Association	9290 Moonlight Rd.	Smithfield	VA	23430
Darlene Flowers	Foster Parent Assn. of Washington State	451 SW 10th, Suite 103	Renton	WA	98055-2981
Sharon Senopole		150 Brook Lane	Daniels	WV	25832
Sherry Benson	WI Foster and Adoptive Parent Association, Inc.	N1068 Shore Drive	Marinette	WI	54143
Pat Hans		26 Calypso	Casper	WY	82604

Appendix G. Local Foster Parent Associations Used in Study

Contact	Organization Name	Address	City	State	Zip Code
Denise Odom	Foster & Adoptive Family Development Team	800 N. Eckhoff St.	Orange	CA	92868
	Sacramento Foster Parent Assn	P. O. Box 1015	Rancho Cordova	CA	95741
	Utah Foster Care Foundation	136 E. South Temple Ste 960	Salt Lake City	UT	84111-1156
Ralph Hauser	Alameda Co. Foster Parent Assoc.	14967 Norton St.	San Leandro	CA	94579
Carl Christman	Marion Polk Foster Parent Assoc.	P.O. Box 13875	Salem	OR	97309
	Grayson Co. Foster and Adoptive Parent Assoc.	100 W. Houston, 3rd Floor	Sherman	TX	75090
	Foster Parents for Foster Children of Tarrant Co.	P.O. Box 60157	Fort Worth	TX	76115-8157
	Boulder Co. Foster Parent Assoc.	24 Princeton Circle	Longmont	CO	80503
Todd and Allison Goin	Larimer Co. Foster Parent Assoc.	4709 Rosewood Dr.	Loveland	CO	80537-8805
Deborah Fortune	Peninsula Foster Parent Network	219 Springdale Way	Hampton	VA	23666-2260
	Wichita Co. Foster Parent Assoc.	P.O. Box 3423	Wichita Falls	TX	76301-0423
	Northland Foster Parents	208 NW 53rd. Terrace	Gladstone	MO	64118
	Stanislaus Co. Foster Parent Assn.	3900 Morgan Rd., Ste. B	Ceres	CA	95307
	Dillon Co. Foster Parent Assn.	P. O. box 1135	Lake View	SC	29563
Patrice Culclager	Jackson Co. Adoption & Foster Care, Plus	2918 Victor	Kansas City	MO	64128-1170
Darlene Murphy	Rowan Co. Foster/Adoptive Parents Assn.	55 Rogers Dr.	Salisbury	NC	28147
	San Gabriel Foster Care Assn.	P. O. Box 509	Round Rock	TX	78680
	Washington Parish Foster & Adoptive Care Assoc.	31298 Jerry Moses Rd.	Angie	LA	70426
Attn: Adriene D. Gardner	The Master's House	3015 East 32nd	Kansas City	MO	64128
	Orange County Foster Care Auxiliary	333 S. Brookhurst St.	Anaheim	CA	92804
	Inland Valley of Riverside Cty. FPA	PO Box 8632	Moreno Valley	CA	92552
	Monadnock Area FP Assoc.	PO Box 693	West Swanzey	NH	3469
Attn: Carl Simmons	Institute for Black Parenting	15424 S. Butler Ave.	E. Rancho Dominguez	CA	90221
	Clarendon County Foster Parents	311 Collins St.	Manning	SC	29102

Contact	Organization Name	Address	City	State	Zip Code
Brian Nunn	Northern Region V.P.	P.O. Box 7031	Eureka	CA	95502
Velma Moore	Central Region V.P.	3900 Morgan Road #B	Ceres	CA	95307
I'Dell Smith	Valley Region V.P.	123 East Hawes Avenue	Fresno	CA	93706
Eloise Evans	South Coastal Region V.P.	3590 Magnolia Avenue	Lynwood	CA	90262
Patricia Negus	Southern Region V.P.	12419 Oaks Avenue	Chino	CA	91710
Ron De Vries	South Border Region V.P.	1051 Suite Drive, Sp. 174	Brea	CA	92821
Toby David Tripp		#7 Briercroft (MC 2172)	Lubbock	TX	79424
Bill Hill		600 Scott St.	Wichita Falls	TX	76301
Barbara Wells		150 Texas Dr.	Weatherford	TX	76086
Cindy Hodges		324 Yapaco	Gilmer	TX	75644
Kim West		285 Liberty, 17th floor	Beaumont	TX	77701
Gloria Batiste-Roberts		2525 Murworth	Houston	TX	77054
Staci Love		801 Austin Ave.	Waco	TX	76703
Angie Blackmond		PO Box 23990 081-11 (MC 278-5)	San Antonio	TX	78223
Ann L. Bailey		622 S. Oakes	San Angelo	TX	76903
Larry Menchaca		119 N. Stanton	El Paso	TX	79901
Elsa V. Reyna		2411 N. Texas Blvd.	Weslaco	TX	78596

Appendix H. Sample Cover Letter

[Scan w/ Center's letterhead]

[insert date]

Dear Ms. Jones:

Thanks for helping with our project. The enclosed packet contains two consent forms, two questionnaire forms, a "best times to call" form, and a postage-paid return envelope. We also have included a flyer about the study, in case you know other foster moms who would like to participate in this study.

This is what to do ...

- Enclosed are two copies of the Informed Consent Form. After reading the form, if you agree, sign the form and keep a copy of the form for yourself.
- The form on top is the Casey Home Assessment Protocol (CHAP). We ask that you fill out this questionnaire first. This should take about an hour.
- The second form is the Casey Foster Applicant Inventory (CFAI). We ask that you fill it out next. This also should take about an hour.
- Please fill out the "Best Times to Call" form to tell us the best times to try and contact you to setup the telephone interview.
- Put the signed consent form, the "Best times to call" form, and both completed questionnaires in the postage paid return envelope and drop it in the mail.

Here are some tips for filling out the CHAP and the CFAI ...

- Take your time. The items cause people to think about fostering.
- If you don't know about an answer, use your best judgment. Most of the time what people think of first is the best answer.
- You might want to fill out the CHAP and the CFAI over several sittings. It is best to stop at the end of a section.
- Do your best to answer all of the items. If you have questions or ideas about an item, please write those comments on the last page of each questionnaire form. Please note the measure and/or item number along with any comment. You also may include general comments on the notes pages, which are not specific to any item or measure. Other than on the notes pages, please do not write any comments in the questionnaire forms. If you need more room for comments, please include a separate sheet of paper with additional comments on it.
- Take a minute to look over your completed questionnaires to make sure you did not miss a section. Most of the pages have questions on the front and back, so make sure you fill out both sides of each page.

After we receive your completed questionnaires, we will call you for a telephone interview. The interview should take about 30 minutes. To thank you for your time, we will send you a \$50 Wal-Mart gift certificate after the telephone interview.

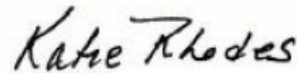
The study is being conducted by The University of Tennessee Family Foster Care Project in collaboration with Casey Family Programs. If you have questions at any time about this study, you may call our toll free number 1-877-447-0011 or email us at fosterproject@utk.edu. If you have any questions about your rights as a research participant, contact the Office of Research at the University of Tennessee, (865) 974-3466.

Thanks again for your help.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Orme".

John Orme, Ph.D.
Project Coordinator
jorme@utk.edu
865-974-7503

A handwritten signature in black ink, appearing to read "Katie Rhodes".

Katie Rhodes, Ph.D.
Research Associate
kwrhodes@utk.edu
423-855-4091

Appendix I. Study Consent Form

Informed Consent Form

We are inviting you to participate in a study of a set of measures of important aspects of foster parenting. These measures are designed to assist family foster care workers and foster parents to identify the strengths and service needs of foster parents. The purpose of this study is to test these measures with foster parents.

If you agree to participate, you will be asked to complete the enclosed questionnaires. This will take about two hours. You will be asked to return your completed materials in the enclosed self-addressed, stamped envelope.

If you agree to participate you also will be asked to complete a 30-minute telephone interview. In this interview you will be asked to describe how you would handle situations that frequently occur in foster care. We plan to tape record a random sample of these telephone interviews, and so we may ask your permission to tape record this interview; it is your choice whether or not we tape record our interview with you.

If you agree to participate, the information you provide will be kept completely confidential. Completed questionnaires and tape recordings will be stored in a locked file cabinet in one of the investigator's office, the data will be stored on computer without your name or other identifying information, and only research team members will have access to your data. Each member of the research team has signed a statement agreeing to keep all study information completely confidential. All reports of this research will be based on aggregate data, and no information about you as an individual will be provided to anyone. No publications or presentations of the data will include any information that could be used to identify you.

There is minimal risk to you from participating in this study. The benefit is the opportunity to participate in the development of measures of important aspects of foster parenting, which we hope can be used in the future to improve the quality of services provided to foster parents and children. To thank you for your participation, you will receive a \$50 Wal-Mart gift certificate for completing the questionnaires and the telephone interview.

This study is being conducted by the University of Tennessee Children's Mental Health Services Research Center in collaboration with Casey Family Programs. If you have questions at any time about this study, you may contact Dr. John Orme, 1-877-447-0011, fosterproject@utk.edu. If you have any questions about your rights as a research participant, contact the Office of Research, University of Tennessee (865) 974-3466.

Your participation in this study is completely voluntary. You may decline to participate without penalty of any kind, or refuse to answer any of the questions. If you decide to participate, you can quit at any time without penalty or negative effects.

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Appendix J. "Best Times to Call" Form

BEST TIMES TO CALL FOR PHONE INTERVIEW

Name: _____

Address: _____

Phone number: (____) ____-____

Time zone (circle one): Eastern, Central, Mountain, Pacific

Email address: _____

Please check days and times that you most likely will be available for a 30-minute telephone interview.

MONDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

TUESDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

WEDNESDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

THURSDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

FRIDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

SATURDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

SUNDAY

- ☐ MORNING
☐ AFTERNOON
☐ EVENING

Other comments about when and when not to call:
 (put additional comments or instructions on the back of this form)

Appendix K. Checklist for Returning Materials

FOSTER MOMS,

BEFORE YOU RETURN YOUR QUESTIONNAIRES,

DID YOU.....

- ☐ SIGN THE CONSENT FORM AND KEEP A COPY?
- ☐ INCLUDE THE COMPLETED CFAI QUESTIONNAIRE?
- ☐ INCLUDE THE COMPLETED CHAP QUESTIONNAIRE?
- ☐ FILL OUT AND RETURN THE “BEST TIMES TO CALL”
FORM

Appendix L. Sample Cover Letter to Foster Fathers

Insert Today's date

Dear _____:

Thanks for helping with our project. The enclosed packet contains two consent forms, two questionnaire forms, a "best times to call" form, and a postage-paid return envelope. We also have included a flyer about the study, in case you know other foster moms who would like to participate in this study.

This is what to do ...

- Enclosed are two copies of the Informed Consent Form. After reading the form, if you agree, sign the form and keep a copy of the form for yourself.
- The form on top is the Casey Foster Applicant Inventory (CFAI). We ask that you fill out this questionnaire first. This should take about an hour.
- The second form is the Casey Home Assessment Protocol (CHAP). We ask that you fill it out next. This also should take about an hour.
- Please fill out the "Best Times to Call" form to tell us the best times to try and contact you to setup the telephone interview.
- Put the signed consent form, the "Best times to call" form, and both completed questionnaires in the postage paid return envelope and drop it in the mail.

Here are some tips for filling out the CFAI and the CHAP ...

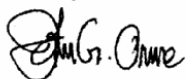
- Take your time. The items cause people to think about fostering.
- If you don't know about an answer, use your best judgement. Most of the time what people think of first is the best answer.
- You might want to fill out the CFAI and the CHAP over several sittings. It is best to stop at the end of a section.
- Do your best to answer all of the items. If you have questions or ideas about an item, please write those comments on the last page of each questionnaire form. Please note the measure and/or item number along with any comment. You also may include general comments on the notes pages, which are not specific to any item or measure. Other than on the notes pages, please do not write any comments in the questionnaire forms. If you need more room for comments, please include a separate sheet of paper with additional comments on it.
- Take a minute to look over your completed questionnaires to make sure you did not miss a section. Most of the pages have questions on the front and back, so make sure you fill out both sides of each page.

After we receive your completed questionnaires, we will call you for a telephone interview. The interview should take about 30 minutes. To thank you for your time, we will send you a \$50 Wal-Mart gift certificate after the telephone interview.

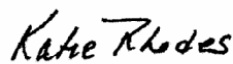
The study is being conducted by The University of Tennessee Family Foster Care Project in collaboration with Casey Family Programs. If you have questions at any time about this study, you may call our toll free number 1-877-447-0011 or email us at fosterproject@utk.edu. If you have any questions about your rights as a research participant, contact the Office of Research at the University of Tennessee, (865) 974-3466.

Thanks again for your help.

Sincerely,



John Orme, Ph.D.
Project Coordinator
jorme@utk.edu
865-974-7503



Katie Rhodes, Ph.D.
Research Associate
kwrhodes@utk.edu
423-855-4091

Appendix M. Study Consent Form to Foster Fathers

Informed Consent Form

We are inviting you to participate in a study of a set of measures of important aspects of foster parenting. These measures are designed to assist family foster care workers and foster parents to identify the strengths and service needs of foster parents. The purpose of this study is to test these measures with foster parents.

If you agree to participate, you will be asked to complete the enclosed questionnaires. This will take about two hours. You will be asked to return your completed materials in the enclosed self-addressed, stamped envelope.

If you agree to participate you also will be asked to complete a 30-minute telephone interview. In this interview you will be asked to describe how you would handle situations that frequently occur in foster care. We plan to tape record a random sample of these telephone interviews, and so we may ask your permission to tape record this interview; it is your choice whether or not we tape record our interview with you.

If you agree to participate, the information you provide will be kept completely confidential. Completed questionnaires and tape recordings will be stored in a locked file cabinet in one of the investigator's office, the data will be stored on computer without your name or other identifying information, and only research team members will have access to your data. Each member of the research team has signed a statement agreeing to keep all study information completely confidential. All reports of this research will be based on aggregate data, and no information about you as an individual will be provided to anyone. No publications or presentations of the data will include any information that could be used to identify you.

There is minimal risk to you from participating in this study. The benefit is the opportunity to participate in the development of measures of important aspects of foster parenting, which we hope can be used in the future to improve the quality of services provided to foster parents and children. To thank you for your participation, you will receive a \$50 Wal-Mart gift certificate for completing the questionnaires and the telephone interview.

This study is being conducted by the University of Tennessee Children's Mental Health Services Research Center in collaboration with Casey Family Programs. If you have questions at any time about this study, you may contact Dr. John Orme, 1-877-447-0011, fosterproject@utk.edu. If you have any questions about your rights as a research participant, contact the Office of Research, University of Tennessee (865) 974-3466.

Your participation in this study is completely voluntary. You may decline to participate without penalty of any kind, or refuse to answer any of the questions. If you decide to participate, you can quit at any time without penalty or negative effects.

CONSENT

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature _____ Date _____

Appendix N. CFAI-CP (Co-parenting Subscale)

Please answer this set of questions if you currently are married or living with an adult in a committed, intimate relationship.

1 = Strongly Disagree 2 = Disagree, 3 = Agree 4 = Strongly Agree

Scale statements

1. My spouse strongly supports my fostering efforts.
2. My spouse and I have similar beliefs about how to parent foster children.
3. My spouse and I have differing views on how to discipline young children.
4. My spouse and I are used to talking things over every day.
5. Our marriage has been stormy because of the different ways we were raised.
6. My spouse and I share household responsibilities.
7. My spouse and I agree on how to discipline teenagers.
8. My spouse and I are used to solving problems together.
9. I have a strong marriage.
10. My spouse and I will back each other up in parenting.

Appendix O. Overt Interparental Hostility (OIH) Scale

When you and your spouse disagree, how often do either of you do the following?

1 = Never 2 = Once in a while 3 = Fairly often 4 = Very often

Scale statements

1. Call each other names.
2. Yell at the other.
3. Insults (shows disrespect for) the other.
4. Tell the other to shut up.

Appendix P. Parental Acceptance Scale (PAS)

As a parent, I'm a person who...

1 = Not like me 2 = Somewhat like me 3 = A lot like me

Scale statements

1. Cheers this child up when s/he is sad.
2. Enjoys doing things with this child.
3. Gives this child a lot of care and attention
4. Is able to make my child feel better when s/he is upset.
5. Is easy to talk to.
6. Makes my child feel better after talking over her/his worries with me.
7. Makes my child feel like the most important person in my life.
8. Often praises this child.
9. Smiles at my child very often.

Appendix Q. Kansas Marital Satisfaction Scale (KMS)

Copyright Walter Schumm

1 = Extremely Dissatisfied 2 = Very Dissatisfied 3 = Somewhat Dissatisfied
4 = Mixed 5 = Somewhat Satisfied 6 = Very Satisfied 7 = Extremely Satisfied

Scale statements

1. How satisfied are you with your marriage?
2. How satisfied are you with your husband/wife as a spouse?
3. How satisfied are you with your relationship with your husband/wife?

Appendix R. Tables

Table 1 Self-report and Observational Studies of Co-parenting, Marital Quality, and Parenting

Authors, year	Sample	Co-parenting relationship to marital quality			Co-parenting relationship to marital quality and parenting			
		No correlation	Marital quality predicts co-parenting quality	Co-parenting quality predicts marital quality	Correlated to marital quality and parenting	Related to parenting after controlling for marital relationships	Mediates between marital relationships and parenting experiences	
McConnell & Kerig, 2002	67	Self Report & Obs.						
Lindahl, et al., 1997	25		Self Report & Obs. ^a					
McHale, et al., 2004	50		Self Report & Obs. ^a					
Van Egeren, 2004	101		Self Report & Obs. ^a					
Belsky & Hsieh, 1998	95			Self Report & Obs. ^a				
Schoppe-Sullivan, et al., 2004	46			Self Report & Obs. ^a				
Kitzman, 2000	40				Self report & Obs.			
McBride & Rane, 1998	89					Self Report		
McHale, et al., 2000	100 mothers					Self Report		
McHale, 1995	47					Self Report & Obs.		

Table 1 Continued

Authors, year	Sample	Co-parenting relationship to marital quality			Co-parenting relationship to marital quality and parenting		
		No correlation	Marital quality predicts co-parenting quality	Co-parenting quality predicts marital quality	Correlated to marital quality and parenting	Related to parenting after controlling for marital relationships	Mediates between marital relationships and parenting experiences
McHale, et al., 2000	52					Self Report & Obs.	
Talbot & McHale, 2004	50					Self Report & Obs.	
Floyd & Zmich, 1991	72 (38 and 34)					Self Report & Obs.	
Floyd, et al., 1998	79					Self Report & Obs. ^a	Self Report & Obs. ^a
Margolin, et al., 2001	75, 172						Self Report & Obs.

^aIndicates longitudinal study.

Table 1 Continued

Authors, year	Sample	Co-parenting relationship to marital quality and			Strength of relationships
	size	child outcomes			
	Number of couples (unless otherwise noted)	Affects child outcomes when controlling for marital quality and parenting style	Distinguished from marital quality in terms of impact on child adjustment	Moderates between interparental conflict and child outcomes	Is a stronger influence on parenting and child adjustment than other aspects of the marital relationship
Johnson, et al., 1999	63	Obs. ^a			Obs. ^a
McHale & Rasmussen, 1998	37	Self Report & Obs. ^a	Self Report & Obs. ^{**}		
Dadds & Powell, 1991	282 mothers		Self Report		
Jouriles, et al., 1991	200 mothers		Self Report		
Jouriles, et al, 1991	87 mothers		Self Report		Self Report
Mahoney, et al., 1997	146		Self Report		Self Report
Snyder, et al.,1988	110		Self Report		Self Report
Kerig, 1995	75		Self Report		
Katz & Gottman, 1996	56		Obs. ^a		
Ingoldsby, et al., 1999	129 mothers			Self Report ^a	
Abidin & Brunner, 1995	61				Self Report
Bearss & Eyberg, 1998	53 mothers				Self Report

^aIndicates longitudinal study.

Table 2 All Co-parenting Studies

Authors, Year	Sample size	Design	Relationship analyzed						
			Number of couples (unless otherwise noted)	Cross-sectional or Longitudinal	Co-parenting vs. child outcomes	Co-parenting vs. parenting style	Co-parenting vs. marital quality		
Abidin & Brunner, 1995	61	Cross			X				X
Bearss & Eyberg, 1998	53 mothers	Cross			X				X
Belsky & Hsieh, 1998	95	Long							X
Belsky, Putnam & Crnic, 1996	92 (sons only)	Long			X	X			
Block, Block, & Morrison, 1981	83	Long			X				
Brody & Flor, 1996	90	Cross			X				
Brody, Flor, & Neubaum, 1998	90	Cross			X	X			
Brody, Flor, & Neubaum, 1998	154 mothers	Cross			X	X			
Brody, Stoneman, Smith, & Gibson, 1999	85	Cross			X	X			
Buhrmester, et al, 1992	36	Cross			X	X			
Dadds & Powell, 1991	282 mothers	Cross			X				X
Deal, Halverson, & Wampler, 1989	136	Cross			X	X			X
Fivaz-Depeursinge, Frascarolo, & Corboz-Warnery, 1996	12	Long			X				
Floyd & Zmich, 1991	72	Cross			X	X			X
Floyd, Gilliom, & Costigan, 1998	79	Long			X	X			X
Frank, Jacobson, Hole, Justkowski & Huyck, 1986	16	Cross				X			X
Gjerde, 1988	70	Long				X			
Gjerde, 1986	44	Cross				X			
Ingoldsby, Shaw, Owens, & Winslow, 1999	129	Long			X				X
Johnson, Cowan, & Cowan, 1999	63	Long			X	X			X

Table 2 Continued

Authors, Year	Sample size	Design	Relationship analyzed				
			Number of couples (unless otherwise noted)	Cross-sectional or Longitudinal	Co-parenting vs. child outcomes	Co-parenting vs. parenting style	Co-parenting vs. marital quality
Jouriles, Murphy, Farris, Smith, Richters, & Waters, 1991	200 mothers	Cross			X		X
Jouriles, Murphy, Farris, Smith, Richters, & Waters, 1991	87 mothers	Cross			X		X
Katz & Gottman, 1996	56	Long					X
Kerig, 1995	75	Cross					X
Kitzman, 2000	40	Cross				X	X
Leary & Katz, 2004	73	Long				X	X
Lee, Beauregard, & Bax, 2005	122	Cross			X	X	
Lewis, Beaver, Gosset, & Phillip, 1976	12	Cross					X
Lewis and Looney, 1983	18	Cross					X
Lindahl, 1998	110	Cross			X		
Lindahl, Clements, & Markman, 1997	25	Long				X	X
Lindahl & Malik, 1999	113	Cross			X		
Lytton, 1979	53	Cross				X	
Mahoney, Jouriles, & Scavone, 1997	146	Cross			X		X
Margolin, Gordis & John, 2001	75 and 172	Cross			X	X	X
McBride & Rane, 1998	89	Cross				X	X
McConnell & Kerig, 2002	67	Cross			X	X	X
McHale, 1995	47	Cross				X	X
McHale & Rasmussen, 1998	37	Long			X	X	X
McHale, Johnson & Sinclair, 1999	43	Cross			X		
McHale, Kazali, Rotman, Talbot, Carleton, & Lieberman, 2004	50	Long				X	X
McHale, Kuersten, & Lauretti, 1996	not reported	Cross			X		X

Table 2 Continued

Authors, Year	Sample size	Design	Relationship analyzed				
			Number of couples (unless otherwise noted)	Cross-sectional or Longitudinal	Co-parenting vs. child outcomes	Co-parenting vs. parenting style	Co-parenting vs. marital quality
McHale, Kuersten-Hogan, Lauretti & Rasmussen, 2000	52	Cross					X
McHale, Rao, & Karsnow, 2000	100 mothers	Cross			X	X	
O'Leary & Vidair, 2005	203	Cross			X	X	X
Schoppe, Mangelsdorf & Frosch, 2001	57	Long			X		
Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004	46	Long					X
Snyder, Klein, Gdowshki, Faulstich, & LaCombe, 1988	52	Cross			X		X
Stright & Neitzel, 2003	52	Long			X	X	
Talbot & McHale, 2004	50	Cross				X	X
Van Egeren, 2004	101	Long					X
Vaughn, Block, & Block, 1988	75	Long			X		

Table 3 Co-parenting Studies with Child Outcomes

Authors, year	Sample	Sampling	Design	Analysis by gender		
				Self report	Together	Separately
	Size (# of couples)	Gender (approximate proportion of boys to girls)	Measurement: cross - sectional or longitudinal	Self report	Observational	No main effect for gender Main effect
Abidin & Brunner, 1995	61	50/50	Cross	X	X	
Bearss & Eyberg, 1998	53	50/50	Cross	X	X	
Belsky, et al., 1996	92	boys only	Long		X	boys only
Block, et al., 1981	83	50/50	Long	X		X
Brody & Flor, 1996	90	50/50	Cross	X	X	X
Brody, et al., 1998	90	50/50	Cross	X	X	
Brody, et al., 1998	154	50/50	Cross	X	X	
Brody, et al., 1999	85	50/50	Cross	X		X
Buhrmester, et al, 1992	36	boys only	Cross		X	boys only
Dadds & Powell, 1991	282	66/33	Cross	X		X
Deal, et al., 1989	136	50/50	Cross	X	X	X

Table 3 Continued

Authors, year	Sample	Sampling	Design	Analysis by gender		
				Self report	Together	Separately
	Size (# of couples)	Gender (approximate proportion of boys to girls)	Measurement: cross - sectional or longitudinal	Self report	Observational	No main effect for gender Main effect
Fivaz- Depeursinge, et al., 1996	12	unknown	Long	X	X	unknown
Floyd & Zmich, 1991	72	50/50	Cross	X	X	X
Floyd, et al., 1998	79	unknown	Long	X	X	unknown
Ingoldsby, et al., 1999	129	boys only	Long	X	X	boys only
Johnson, et al., 1999	63	50/50	Long	X	X	X
Jouriles, et al., 1991	200	boys only	Cross	X		boys only
Jouriles, et al., 1991	87	boys only	Cross	X		boys only
Katz & Gottman, 1996	56	50/50	Long	X	X	X
Kerig, 1995	75	50/50	Cross	X		X
Kitzman, 2000	40	boys only	Cross	X	X	boys only

Table 3 Continued

Authors, year	Sample	Sampling	Design			Analysis by gender		
	Size (# of couples)	Gender (approximate proportion of boys to girls)	Measurement: cross - sectional or longitudinal	Self report	Together	Separately	No main effect for gender	Main effect
Leary & Katz, 2004	73	66/33	Long		X	X		
Lee, et al., 2005	122	50/50	Cross	X				X
Lindahl, 1998	110	boys only	Cross	X	X	boys only		
Lindahl & Malik, 1999	113	boys only	Cross	X	X	boys only		
Mahoney, et al., 1997	146	75/25	Cross	X			X	
Margolin, et al., 2001	75	50/50	Cross	X	X			
Margolin, et al., 2001	172	50/50	Cross	X	X			
McConnell & Kerig,2002	67	50/50	Cross	X	X			X
McHale & Rasmussen, 1998	37	50/50	Long	X	X	X		
McHale, Johnson et al., 1999	43	50/50	Cross		X			X

Table 3 Continued

Authors, year	Sample Size (# of couples)	Sampling proportion of boys to girls)	Measurement: cross - sectional or longitudinal	Design		Analysis by gender		
				Self report	Together Observational	Separately	No main effect for gender	Main effect
McHale, Kuersten, et al., 1996	unk	unknown	unk		X	unknown		
McHale, Rao, et al., 2000	100	66/33	Cross	X		X		
O'Leary & Vidair, 2005	203	50/50	Cross	X				X
Schoppe, et al., 2001	57	unknown	Long	X	X	unknown		
Schoppe-Sullivan, et al., 2004	46	50/50	Long	X	X	X		
Snyder, et al., 1988	110	50/50	Cross	X		X		
Stright & Neitzel, 2003	52	50/50	Long	X	X		X	
Vaughn, et al., 1988	75	50/50	Long	X	X			X

Table 4 Self-report Co-parenting Measures

Authors	Name of measure	What is measured
Abidin & Brunner, 1991	Parenting Alliance Inventory	Assesses agreement in child-rearing
Ahrons, 1981	Quality of Co-parenting Scale	3 subscales: communication, instrumental support, and perceived interparental conflict.
Block, Block, et a., 1981	Child-rearing Practices Report, CRPR	2 subscales: positive parenting, authoritarian control
Cooper, Holman, & Braithwaite, 1983	Family Cohesion Index (FCI)	Graphical representation of the degree of cohesiveness in family
Cowan & Cowan, 1988, 1990	Who does What Questionnaire	Own parents' co-parenting relationship and own expectations for the co-parenting relationship
Frank, et al., 1986	parenting interview	Gratification, confidence, control, parenting alliance
Heming, Cowan & Cowan, 1991	Ideas about Parenting Survey	Thoughts on parenting
Jouriles et al., 1991	Child-Rearing Disagreement Scale (CRD)(CRDS)	30 items regarding child-rearing issues about which caregivers commonly disagree
Kerig, 1996	Conflicts and Problem-Solving Scales (CPS)	2 of the 6 conflict subscales were used in this study: collaboration and verbal aggression
Margolin, 1992	Co-parenting Questionnaire (CQ)	3 subscales: cooperation, triangulation, and conflict.
McHale, 1997	Co-parenting Scale	4 subscales: family integrity, disparagement, conflict, and solidarity
McHale et al., 2002	Co-parenting Interview	Own opinions and predicted opinions of spouse on task allocation expectations
Snyder, 1981	Marital Discord over Childrearing Scale (MDOC) a subscale from the Marital Satisfaction Inventory	Parents' perceptions of marital discord related to childrearing

Table 4 Continued

Authors	Name of measure	What is measured
Snyder, et al., 1988	Childrearing Conflict (CCR)	Disagreement about child-rearing
University of Queensland	Parent Problem Checklist (PPC)	Interparental conflict as relates to child-related executive functions

Table 5 Observational Co-parenting Measures

Authors	Name of measure	What is measured
Belsky & Hsieh, 1998	n/a	Unsupportive co-parenting and division of labor
Brody, Flor, & Neubaum, 1996	Family Interaction Quality	Dyadic and triadic behaviors
Buhrmester, et al., 1992	n/a	16 categories of behavior
Corboz-Warnery, et al., 1993	Lausanne Trilogue Play	Individual differences in triadic family interaction patterns (cooperation, competition, and family warmth)
Cowan & Cowan, 1987	Co-parenting style ratings	4 subscales: disagreement, responsiveness, amount of interaction, competition or cooperation
Deal, Halverson, & Wampler, 1989	Marriage Q-sort	Disagreement over child-rearing
Frank, Jacobson, & Hole, 1986	Family Experiences Q - 11	4 subscales: agreement in childrearing, parenting alliance; negative parenting perceptions, parenting confidence)
Gjerde, Block, & Block, 1981	Family Interactions Q-sort	Measures triadic and dyadic behavior
Gordis, Margolin, & John, 1997	Marital Coding System (MCS)	Dyadic marital conflict discussions about a child-related topic : Hostility/Defensiveness, Agreeableness/Problem Solving
Julien, Markman, & Lindahl, 1989	Interactional Dimensions Coding System (IDCS)	Family-level variables (coalition formation and family cohesion)
Kahen, 1993	Kahen Engagement Coding System (KECS)	7 parental engagement items during triadic interactions
Lindahl & Malik, 1991, 1994	System for Coding Interactions and Family Functioning (SCIFF)	Dyadic (2 items) and triadic interactions (9 items)
McHale, 1995	no name	3 subscales: hostility/competitiveness, family harmony, parenting discrepancy

Table 5 Continued

Authors	Name of measure	What is measured
McHale, Kuersten, & Lauretti, 1996	no name	Instances of parental competition, verbal sparring, parental cooperation, family warmth etc, in triadic play
McHale et al., 2000	Co-parenting and Family Rating System (CFRS)	4 dimensions of co-parenting (competition, cooperation, warmth, verbal sparring)
Schoppe-Sullivan, Mangelsdorf, Frosch, & McHale, 2004	no name	Co-parenting behavior assessment during triadic free-play
Teichman, Cowan, & Cowan, 1988	Family Structure and Process (FSAP)	Co-parenting items mixed with whole family interaction

Table 6 *Correlations in Child Outcome Studies*

Author	Sample Size	Cross-sectional or Observational	Data collection		Total number of correlations tested	Percentage (%) of significant correlations
			<i>Self report</i>	<i>Observational</i>		
McConnell & Kerig, 2002	52 v 48	Cross	X		42	11.9
Leary & Katz, 2004	73	Long	X	X	12	33.33
McHale, Rao, & Karsnow, 2000	100	Cross	X		4	33.33
Margolin, Gordis & John, 2001	75	Cross	X		32	34.38
Vaughn, Block, & Block, 1988	37 v 38	Long	X	X	28	35.71
Floyd & Zmich, 1991	38 v 34	Cross	X		7	42.86
Brody, Stoneman, Smith & Gibson, 1999	85	Cross	X		2	50
Ingoldsby, Shaw, Owens, & Winslow, 1999	129 boys	Long	X	X	10	50
Abidin & Brunner, 1995	160	Cross	X		20	55
Lee, Beauregard, & Bax, 2005	122	Cross	X		8	75
Mahoney, Jouriles, & Scavone, 1997	146	Cross	X		4	75

Table 6 Continued

Author	Sample Size	Cross-sectional or Observational	Data collection		Total number of correlations tested	Percentage (%) of significant correlations
			<i>Self report</i>	<i>Observational</i>		
Snyder, Klein, Gdowshki, Faulstich, & LaCombe, 1988	110	Cross	X		32	75
Stright & Neitzel, 2003	52	Long	X	X	4	75
Bearss & Eyberg, 1998	53	Cross	X		3	100
Johnson, Cowan, & Cowan, 1999	63	Long	X		1	100
Jouriles, Murphy, Farris, Smith, Richters, & Waters, 1991	200 boys	Cross	X		8	100
Jouriles, Murphy, Farris, Smith, Richters, & Waters, 1991	87 boys	Cross	X		2	100
Lindahl & Malik, 1999	113 boys	Cross	X		2	100

Table 7 *Foster Couple Characteristics*

Author	N	Parenting Attitudes and Roles	Marital Functioning	Family Functioning	Satisfaction with fostering	Mental Health	Social Support	Temperament	Parents as informants	Overall potential to foster
Cautley, 1980 ^a	144 ^c	X	X		X		X		X	
Höjer, 2004 ^b	34	X	X							
McAuley & Trew, 2000 ^a	16								X	
1. Orme, et al., 2003	99 ^d	X	X	X		X	X	X		
2. Orme, et al., 2004		X								
3. Rhodes, et al., 2003										X ^d
Ray & Horner, 1990	14	X								
Vuchinich, et al., 2002	23	X								

^a Indicates a longitudinal study.^b Indicates a qualitative study.^c Study was conducted with newly-licensed foster parents.^d Study was conducted with foster parent applicants.

Table 8 AAPI Scores

	Wives		Husbands	
AAPI Subscales	Mean	<i>SD</i>	Mean	<i>SD</i>
Developmental expectations	6.18	1.51	8.28	1.86
Empathy	5.72	1.7	5.7	1.79
Punishment	6.71	1.7	6.84	1.77
Role clarity	6.49	1.8	6.49	1.88

Table 9 Foster Couple Demographic Characteristics

	Mothers	Fathers
Characteristic	%	%
Race		
European-American	93.7	91.1
African-American	4.5	5.4
Hispanic	.9	0
American Indian	0	1.8
Other Asian	0	0.9
Other	1.8	0.9
Highest Degree		
<HS	1.80	5.41
HS/GED	24.32	39.64
College, No Degree	33.33	22.52
Two-Year Degree	14.41	9.01
Bachelor's Degree	17.12	12.61
Advanced Degree	9.01	10.81
Employment status		
Full-time	27.03	77.48
Part-Time	18.92	1.80
Unemployed, looking for work	.90	1.80
Homemaker, not employed outside home	43.24	2.70

Table 9 Continued

	Mothers	Fathers
Characteristic	%	%
Employment status		
Disabled or retired, not employed outside home	2.70	11.71
Other	7.21	4.50

Note. Race percentages do not add up to 100% because foster parents were asked to select all races that applied.

Note. “Other Asian” indicates the respondent is Asian but that none of the following were appropriate categories: Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese.

Table 10 Yearly Family Income

	As reported by Mothers (<i>N</i> = 109)	As reported by Fathers (<i>N</i> = 111)
	%	%
< 10,000	.92	.90
10,000 - 19,999	3.67	2.70
20,000 - 29,999	7.34	7.21
30,000 - 39,999	21.10	18.92
40,000 - 49,999	9.17	12.61
50,000 - 59,999	15.60	18.92
60,000 - 69,999	11.01	9.01
70,000 - 79,999	12.84	11.71
80,000 - 89,999	6.42	5.41
90,000 - 99,999	4.59	2.70
≥ 100,000	7.34	9.91

Table 11 Foster Couple Demographic Characteristics

Characteristic	%
Number of children living in the home ($N = 111$, $M = 3.75$, $SD = 2.00$, $Mdn = 4.00$, $Range = 0 - 9$)	
0	2.70
1	9.91
2	16.22
3	18.92
4	19.82
5	14.41
6	9.01
≥ 7	9.01
Number of birth and adopted children living in the home ($N = 110$, $M = 1.77$, $SD = 1.59$, $Mdn = 2.00$, $Range = 0 - 8$)	
0	26.36
1	20.00
2	27.27
3	12.73
4	7.27
5	4.55
≥ 6	1.82

Table 11 Continued

Characteristic	%
Number of children < 6 living in the home ($N = 108$, $M = 1.18$, $SD = 1.25$, $Mdn = 1.00$, $Range = 0 - 5$)	
0	39.81
1	24.07
2	22.22
3	8.33
4	3.70
5	1.85

Table 12 Intention to Continue Fostering

	Couples (<i>N</i> = 111)	
	Mothers	Fathers
	%	%
6 months	95.5	85.5
1 year	94.6	84.5
3 years	92.8	83.8

Note. Data were missing for 1 mother from the total sample for 1-year. Data were missing for one father for 6-months and one father for 1-year.

Table 13 Co-parenting: Factor Loadings for Foster Mothers and Foster Fathers

Mothers		Fathers	
Item	Loading	Item	Loading
1	.68	1	.83
2	.90	2	.92
3	.64	3	.64
4	.75	4	.58
5	.70	5	.82
6	.65	6	.67
7	.83	7	.88
8	.96	8	.87
9	.89	9	.89
10	.92	10	.81

Table 14 Reliability Analysis of Co-parenting

Item	Mothers			Fathers		
	<i>M</i>	<i>SD</i>	Corrected Item -	<i>M</i>	<i>SD</i>	Corrected Item -
	Total Correlation			Total Correlation		
1	3.67	.51	.54	3.58	.55	.55
2	3.65	.50	.72	3.50	.55	.66
3	3.38	.60	.50	3.23	.60	.51
4	3.50	.54	.66	3.28	.61	.49
5	3.61	.53	.55	3.35	.63	.70
6	3.34	.67	.51	3.27	.56	.55
7	3.28	.61	.68	3.22	.53	.72
8	3.49	.50	.75	3.31	.52	.73
9	3.70	.52	.67	3.58	.55	.67
10	3.68	.50	.72	3.54	.54	.59

Table 15 Co-parenting Item Descriptive Statistics

	Mean	<i>SD</i>	Variance	Minimum	Maximum	Range	Max/Min	Ratio
Mothers								
Item Means	3.53	.16	.02	3.28	3.70	.42		1.13
Item Variances	.30	.10	.01	.24	.45	.21		1.86
Inter-item								
Correlation	.45	.11	.01	.20	.70	.50		3.48
Fathers								
Item Means	3.39	.15	.02	3.22	3.58	.36		1.11
Item Variances	.32	.05	.00	.27	.39	.13		1.46
Inter-item								
Correlation	.43	.13	.02	.19	.76	.56		3.92

Table 16 Co-parenting Total Score Descriptive Statistics

	<i>M</i>	<i>SD</i>	Mean (<i>SE</i>)	<i>Mdn</i>	Min/Max	Skew (<i>SE</i>)	Kurtosis (<i>SE</i>)	<i>N</i>	Missing
						-.41	-1.01	11	
Mothers	84.32	12.85	1.22	87.00	50 - 100	(.23)	(.46)	1	0
						-.08	-.46	11	
Fathers	79.40	13.25	1.26	77.00	40 - 100	(.23)	(.46)	1	0

Table 17 Co-parenting Total Score Percentiles

		Mothers	Fathers
<i>N</i>	Valid	111	111
	Missing	0	0
Percentiles	25	73.33	70.00
	50	86.67	76.67
	75	96.67	90.00
	99	100.00	100.00

Table 18 CFA on Co-parenting, Dyad Level

	Estimates	Standard error	Estimates/ <i>SE</i>
Factor 1: Fathers			
Item 8	1.00	.00	.00
Item 1	.70	.06	11.28
Item 2	.78	.06	12.28
Item 3	.73	.06	13.27
Item 4	.66	.07	10.05
Item 5	.97	.05	18.59
Item 6	.78	.07	10.53
Item 7	.98	.05	18.69
Item 9	1.01	.06	17.64
Item 10	.87	.05	16.17
Factor 2: Mothers			
Item 8	1.00	.00	.00
Item 1	.69	.06	12.38
Item 2	.96	.04	23.37
Item 3	.67	.06	10.68
Item 4	.79	.05	16.29
Item 5	.75	.07	10.65
Item 6	.69	.07	9.87

Table 18 Continued

	Estimates	Standard error	Estimates/ <i>SE</i>
Item 7	.89	.06	16.03
Item 9	.90	.05	16.96
Item 10	.97	.04	26.39

Note. Model specification entails setting one observed measure on each factor as the marker indicator. This indicator is commonly the item with the highest factor loading in EFA (Brown, 2006).

Table 19 Co-parenting Regressed on Demographic Characteristics

	Mothers			Fathers		
	(<i>N</i> = 109)			(<i>N</i> = 111)		
Variable	<i>B</i>	β	<i>t</i>	<i>B</i>	β	<i>t</i>
Education	-.04	-.13	-1.27	-.03	-.15	-1.43
European-American	.17	.11	1.12	-.05	-.04	-.37
Income	.00	.08	.75	.00	.09	.91
	<i>R</i> ² = .03			<i>R</i> ² = .02		
	<i>F</i> (3, 105) = .99			<i>F</i> (3, 107) = .88		
	<i>p</i> = .40			<i>p</i> = .46		

p* ≤ .05, two-tailed, *p* ≤ .01, two-tailed

Table 20 *EFA with Co-parenting, Marital Hostility, and Parental Acceptance*

	Mothers			Fathers		
	1	2	3	1	2	3
Co-parenting						
1	.74	-.08	-.09	.99	.55	-.01
2	.88	-.04	.16	.97	.43	.12
3	.59	-.03	.25	.62	-.22	-.14
4	.71	.19	-.11	.44	-.12	.29
5	.74	-.09	.03	.77	-.19	-.02
6	.59	.20	-.12	.58	-.05	.21
7	.74	.07	.19	.80	-.18	.04
8	.89	.08	.12	.77	-.28	.05
9	.93	.01	-.16	.85	-.18	-.07
10	.94	.02	-.13	.79	-.18	-.11
Marital hostility						
1	-.13	-.63	-.16	-.04	-.87	.13
2	-.02	-.70	.07	-.09	-.70	.09
3	-.22	-.52	-.10	.16	-.80	-.38
4	.04	-.84	.10	-.05	-.61	-.05
Parental acceptance						
1	-.14	.10	.61	-.12	-.22	.86

Table 20 Continued

	Mothers			Fathers		
	1	2	3	1	2	3
2	-.08	.53	.58	-.06	-.07	.79
3	-.10	.24	.45	.31	.01	.75
4	.06	-.04	.67	-.16	-.06	.83
5	.12	.19	.41	.21	.06	.73
6	-.04	.21	.88	-.06	.13	.94
7	-.03	-.27	.55	-.05	-.13	.83
8	.32	-.25	.62	.25	.04	.81
9	-.06	-.16	.83	-.02	.09	.79

Table 21 EFA Factor Correlations 1

	1	2	3
Co-parenting	1.00	.27	-.39
Parental acceptance	.39	1.00	-.16
Marital hostility	-.33	-.19	1.00

Note. Mother factor correlations are above the diagonal; father factors correlations are below the diagonal.

Table 22 EFA with Co-parenting, Marital Satisfaction, and Parental Acceptance

		Mothers			Fathers		
		1	2	3	1	2	3
Co-parenting							
1		.64	.13	-.07	.95	.42	.09
2		.93	-.12	.14	.98	.27	.19
3		.70	-.24	.25	.66	-.09	-.17
4		.70	.17	-.07	.45	-.09	.25
5		.63	.14	.01	.81	-.09	-.06
6		.64	.06	-.08	.60	.02	.21
7		.75	.04	.20	.83	-.10	.03
8		.93	.00	.13	.78	-.23	.00
9		.75	.39	-.18	.78	-.34	-.16
10		.95	.01	-.14	.71	-.35	-.18
Marital Satisfaction							
1		.13	.92	.05	.03	.96	.08
2		.14	.90	-.01	-.05	.96	.09
3		.12	.93	.06	-.01	.89	.14
Parental Acceptance							
1		-.01	-.18	.62	-.04	-.02	.88
2		.06	.19	.63	-.05	-.06	.78

Table 22 Continued

	Mothers			Fathers		
	1	2	3	1	2	3
3	-.06	.15	.47	.30	-.01	.75
4	.07	-.06	.67	-.15	-.06	.82
5	.18	.02	.44	.15	-.14	.69
6	.12	-.15	.91	-.08	.07	.95
7	-.27	.21	.52	-.01	-.04	.83
8	.23	-.02	.59	.21	-.09	.77
9	-.23	.20	.80	-.06	-.04	.77

Table 23 EFA Factor Correlations 2

	1	2	3
Co-parenting	1.00	.27	.45
Parental acceptance	.35	1.00	.22
Marital satisfaction	.40	.34	1.00

Note. Mother factor correlations are above the diagonal; father factors correlations are below the diagonal.

Note. Sample size for both genders across all measures, $N = 111$, Missing = 0.

Note. Sample size for both genders across all measures, $N = 111$, Missing = 0.

Table 25 CFA on Co-parenting, Marital Hostility, and Parental Acceptance

	Mothers			Fathers		
	Estimates	Standard error	Estimates/ SE	Estimates	Standard error	Estimates/ SE
Co-parenting						
Item 8	1.00	.00	.00	1.00	.00	.00
Item 1 ^a	.67	.06	11.98	.66	.06	10.37
Item 2 ^a	.96	.04	23.73	.77	.07	11.34
Item 3	.67	.07	10.38	.71	.06	11.87
Item 4	.79	.05	15.90	.69	.07	10.47
Item 5	.76	.07	10.83	.96	.06	17.34
Item 6	.68	.07	9.70	.82	.07	11.09
Item 7	.90	.06	15.63	.98	.06	17.26
Item 9	.90	.05	16.78	1.00	.06	16.17
Item 10	.96	.04	25.27	.86	.06	15.07
Marital hostility						
Item 1	1.00	.00	.00	1.00	.00	.00
Item 2	.93	.16	5.81	.92	.13	6.98
Item 3	.90	.15	6.16	.99	.14	6.94
Item 4	.99	.15	6.42	.84	.15	5.47
Parental acceptance						
Item 6	1.00	.00	.00	1.00	.00	.00

Table 25 Continued

	Mothers			Fathers		
	Estimates	Standard error	Estimates/ <i>SE</i>	Estimates	Standard error	Estimates/ <i>SE</i>
Item 1	.54	.12	4.59	1.03	.07	14.12
Item 2	.91	.15	5.87	0.90	.09	10.09
Item 3	.60	.14	4.22	1.09	.08	13.62
Item 4	.72	.13	5.37	.85	.09	9.90
Item 5	.59	.17	3.44	.96	.08	12.71
Item 7	.45	.17	2.61	.99	.08	12.84
Item 8	.82	.17	4.87	1.07	.08	13.45
Item 9	.91	.16	5.73	.85	.10	9.04

^a The error terms for Items 1 and 2 in the father data were correlated as indicated in the previous CFA with the father and mother Co-parenting data.

Table 27 *LCA Model Fit Statistics for Co-parenting*

Classes	BIC(LL)	AIC(LL)	AIC3	CAIC	Npar	Class. Err.	Bootstrap	
							-2LL	Diff p-value
1	1787.38	1776.54	1780.54	1791.38	4.00	0.00		
2	1756.72	1732.33	1741.33	1765.72	9.00	0.05	54.21	0.00
3	1751.35	1713.42	1727.42	1765.35	14.00	0.05	28.92	0.00
4	1759.70	1708.22	1727.22	1778.70	19.00	0.08	15.20	0.04

Table 28 3- Class Co-parenting Model: Profiles and Parameter Estimates

	Class 1	Class 2	Class 3	Wald	<i>p</i> -value	<i>R</i> ²
Class proportion	.41	.36	.22			
Class mean ^a						
Fathers	72.60	76.18	97.51			
Mothers	71.26	92.56	95.32			
Parameter estimates						
Fathers	-9.49	-5.91	15.41	327.84	.00	54.54%
Mothers	-15.12	6.19	8.94	235.85	.00	74.21%

^a*SD* not available

Table 29 LCA Model Fit for Marital Hostility, Marital Satisfaction, and Parental

Acceptance

	BIC(LL)	AIC(LL)	AIC3	CAIC	Npar	Class.Err.	Bootstrap	
							Diff	p-value
Marital Hostility								
1-Class	880.84	870.00	874.00	884.84	4.00	0.00		
2-Class	813.64	789.26	798.26	822.64	9.00	0.08	90.74	0.00
3-Class	776.49	738.55	752.55	790.49	14.00	0.06	60.71	0.00
4-Class	689.57	638.09	657.09	708.57	19.00	0.03	50.55	0.00
Marital Satisfaction								
1-Class	1154.54	1143.70	1147.70	1158.54	4.00	0.03		
2-Class	1037.63	1013.25	1022.25	1046.63	9.00	0.03	140.45	0.00
3-Class	909.50	871.57	885.57	923.50	14.00	0.03	151.68	0.00
4-Class	912.77	861.28	880.28	931.76	19.00	0.04	20.28	0.02
Parental Acceptance								
1-Class	47.20	36.36	40.36	51.20	4.00	0.07		
2-Class	-45.38	-69.77	-60.77	-36.38	9.00	0.07	116.13	0.00
3-Class	-51.55	-89.49	-75.49	-37.55	14.00	0.09	29.72	0.00
4-Class	-110.59	-162.07	-143.07	-91.59	19.00	0.04	82.58	0.00

Appendix S. Figures

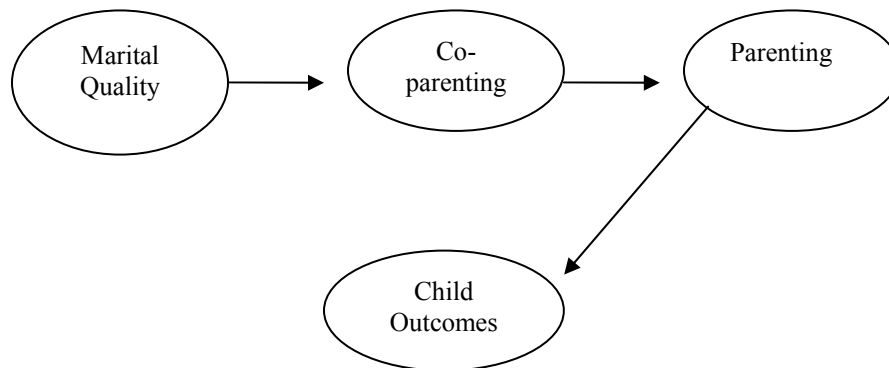


Figure 1 Co-parenting as indirect influence on child outcomes.

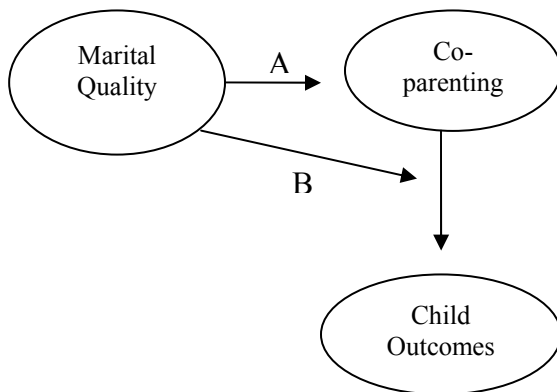


Figure 2 Relationships among marital quality, co-parenting, and child outcomes.

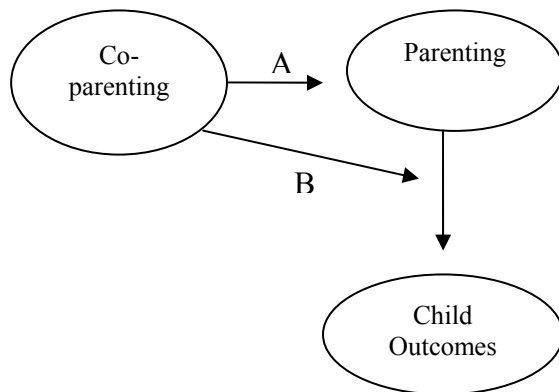


Figure 3 Relationships among co-parenting, parenting, and child outcomes.

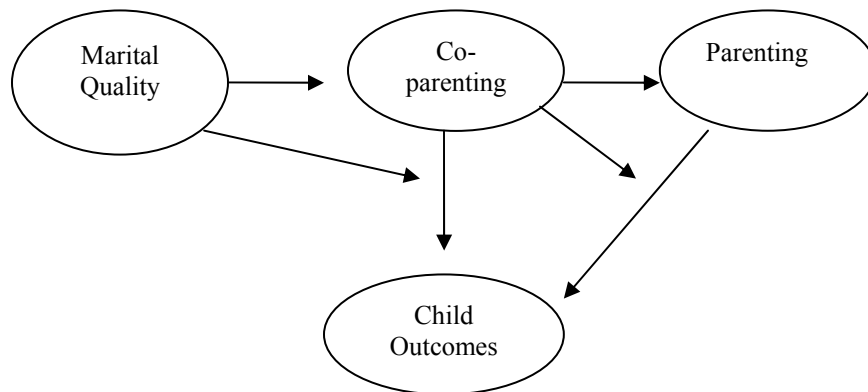


Figure 4 Relationships among marital quality, co-parenting, parenting, and child outcomes.

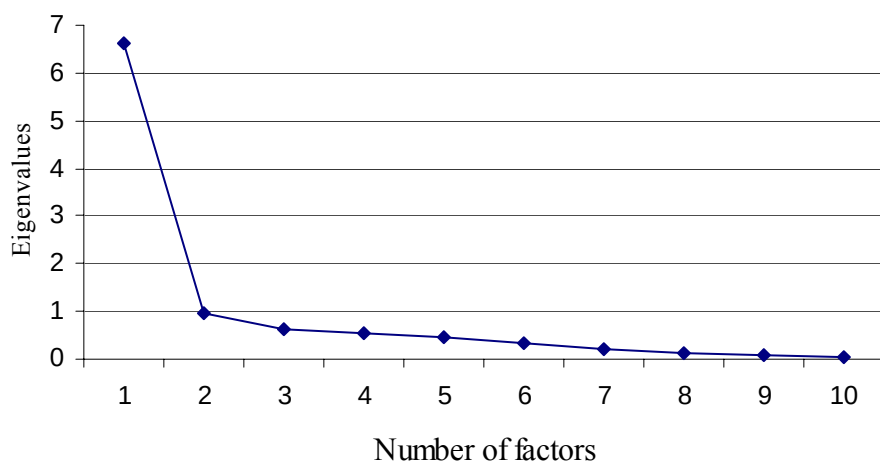


Figure 5 Scree plot of foster mother Co-parenting data.

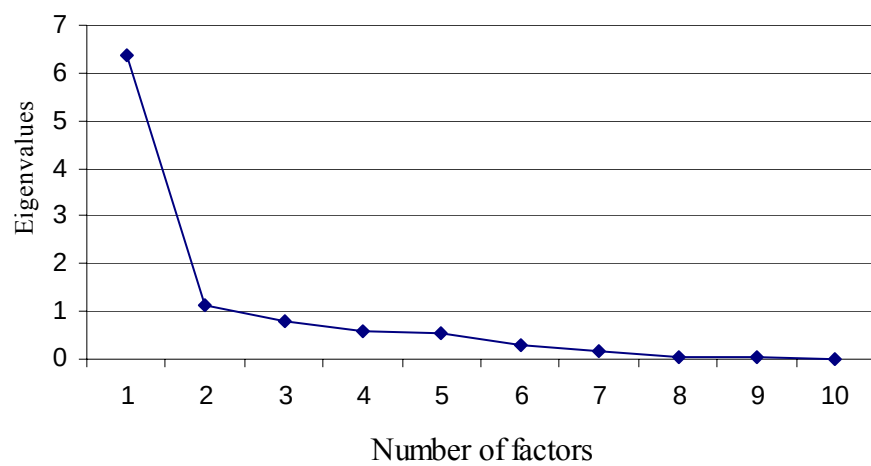


Figure 6 Scree plot of foster father Co-parenting data.

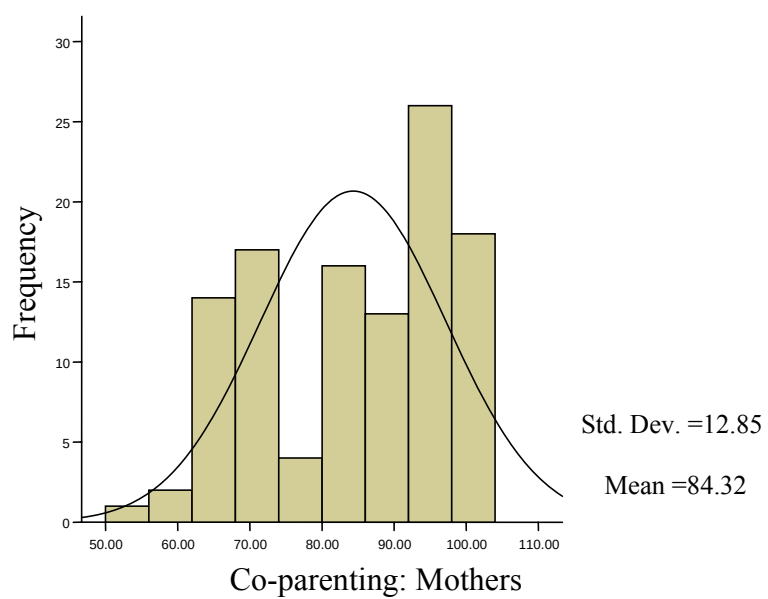


Figure 7 Frequency distribution of foster mothers' Co-parenting scores.

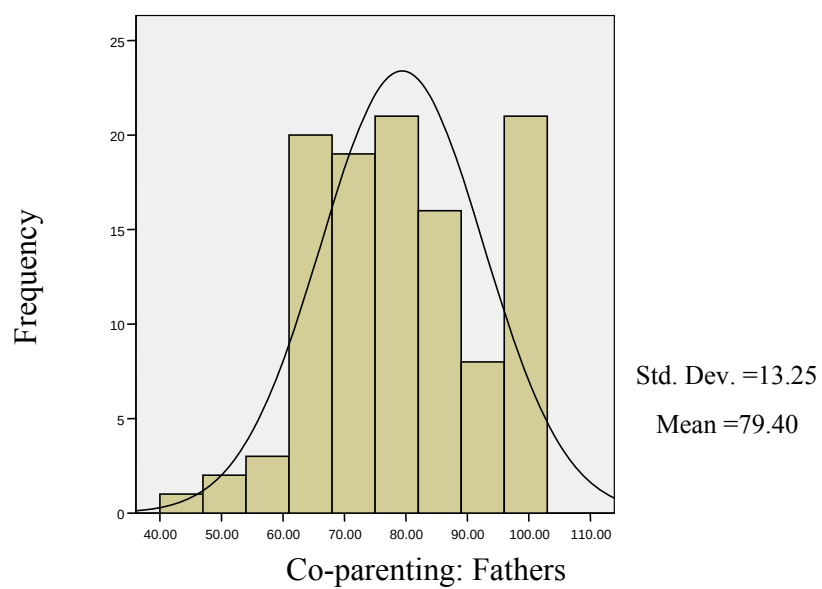


Figure 8 Frequency distribution of foster fathers' Co-parenting scores.

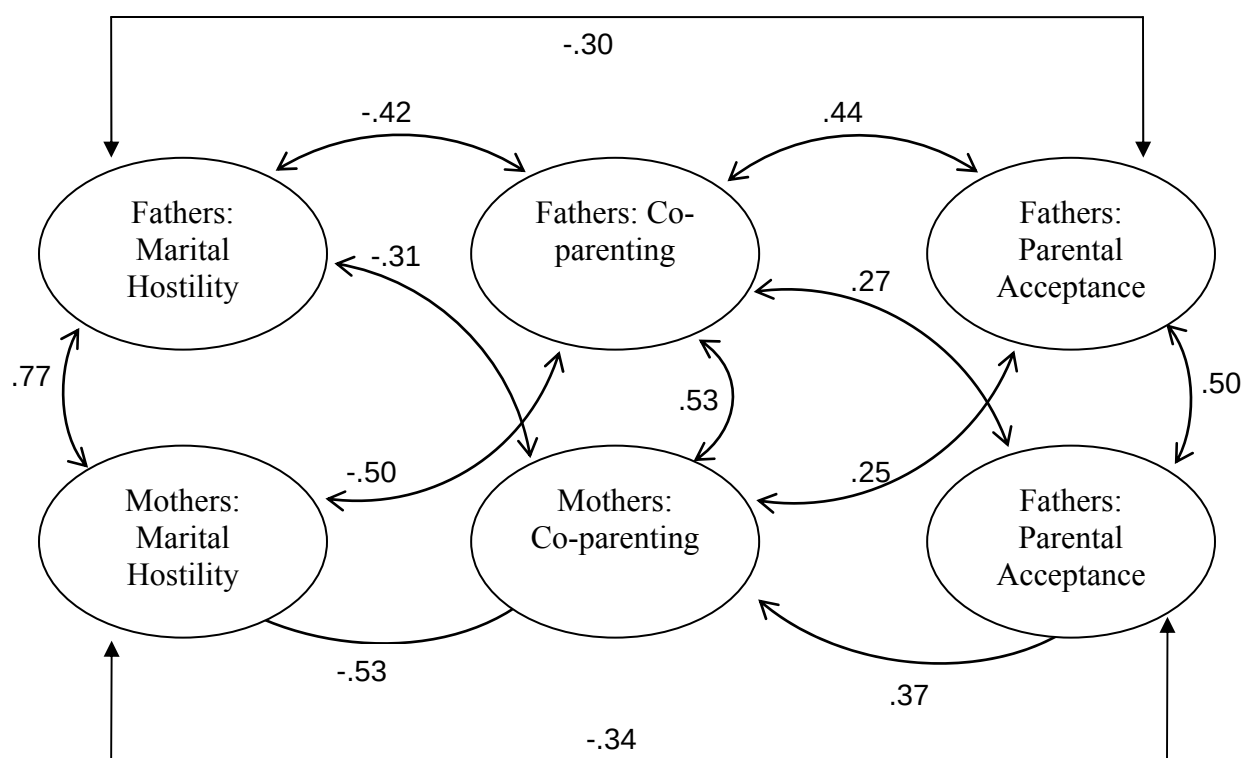


Figure 9 Within-partner and cross-partner correlations.

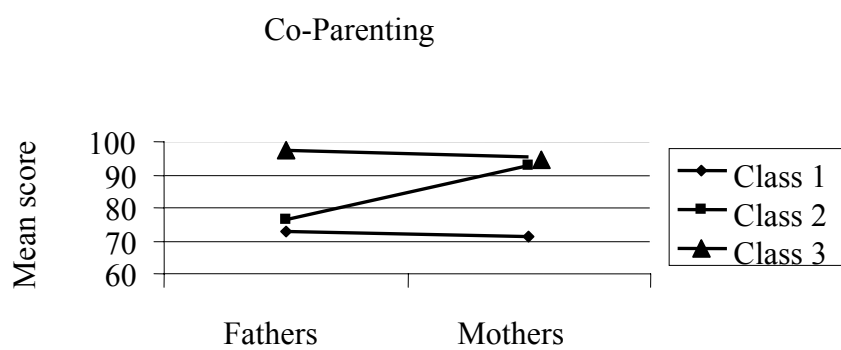


Figure 10 3-class Co-parenting model.

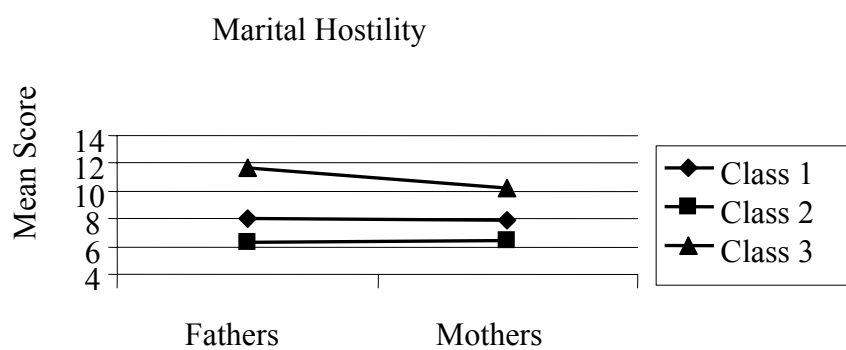


Figure 11 3-class Marital Hostility model.

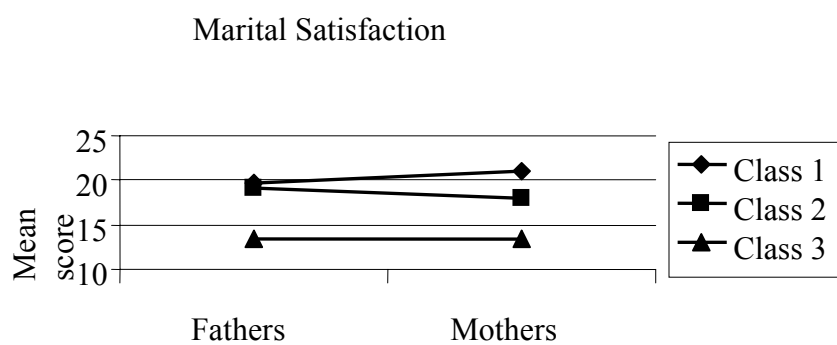


Figure 12 3-class Marital Satisfaction model.

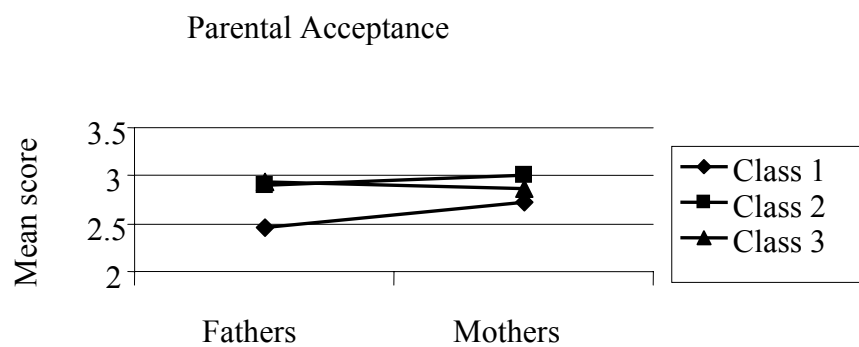


Figure 13 3-class Parental Acceptance model.

VITA

Donna J. Cherry was born in Hillsboro, OR on March 16, 1961. She was raised in Forest Grove, OR and received a B.A. in Music in 1983 from Oregon State University. From there, she attended the University of Tennessee, Knoxville and received a MSSW in Social Work in 2003 and a doctorate in Social Work with a minor in statistics in 2007. She is currently pursuing a post-doctorate at Florida State University, Tallahassee, FL.