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Embedded parenting? The influence of conjugal networks on parent–child relationships

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ABSTRACT

Data from a large survey of family functioning in Switzerland explore the extent to which various types of conjugal networks affect parenting and parent–child relationships (e.g., problems in assuming parental roles, parent–child disagreements, quality of parent–child relationships, and parental worries about the child). Results show that conjugal networks have significant indirect and direct effects on parent–child relationships but no buffering effect. Bicentric conjugal networks are singled out as indirectly associated with improved parenting practices and parent–child relationships. They strengthen the conjugal subsystem and improve the psychological well being of parents. Interfering and unicentric networks have negative direct effects on some but not all dimensions considered. These results are important for the understanding parenting and parent–child relationships within relational contexts larger than the nuclear family.

KEY WORDS: parenting • parent-child relationships • parental roles • parental worries • social networks

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Most empirical research on parent–child relationships and their outcomes has focused on dyads within the nuclear family, and in particular on the mother–child dyad, with little concern for their integration in wider systems (Cox & Paley, 1997). In contrast, some scholars have emphasized how important it is to take into account the relational context within which the nuclear family is embedded (Belsky, 1984; Bott, 1955, 1957; Burger & Milardo, 1995; Cochran & Niego, 2002). As a matter of fact, some evidence shows that parents with more social support and fewer negative interactions with significant others, provide more sensitive care to, and have less conflict with, their children (Belsky, 1984, 1990; Chen & Kaplan, 2001; Cochran & Niego, 2002).

How, then, may conjugal networks influence parent–child relationships? Do they have an effect because they enhance the psychological well being of parents, because they help them to develop a satisfactory conjugal relationship, or through other mechanisms? Do they have a buffering effect (Cohen & Wills, 1985), preventing outside events or situations from threatening the parent–child relationship? Or do they directly influence parent–child relationships, providing parents and children with alternative sources of normative influences (Coleman, 1988) or material resources, either financial or domestic (Coenen-Huther et al., 1994; Widmer, 2004)? As parent–child relationships have a strong impact on a variety of children and adolescent developmental outcomes (e.g., relational competence, drug use, educational success; Baumrind, 1989; Widmer & Weiss, 2000), it is important to understand how larger relational contexts may help or hinder these family linkages.

This article tests a set of hypotheses about the effects of wider relational contexts on parent–child relationships, with a focus on the mechanisms underlying these effects. Rather than conceptualizing the relational contexts of immediate families in terms of unidimensional social support, we use cluster analysis to capture their distinct relational structures. This enables us to test their linear as well as nonlinear effects on both parent–child relationships and on parenting.

Mediated, indirect, direct, and buffering effects of conjugal networks

Systems theory (Broderick, 1993; Cox & Paley, 1997; Minuchin, 1974) and social ecology theory (Bronfenbrenner, 1979) emphasize that subsystems constituting the immediate family (conjugal, parent–child and sibling subsystems) are embedded in larger relational contexts, from which they draw resources while trying to maintain some boundaries from them. In this perspective, it is hypothesized that what happens in any dyad of the nuclear family reflects to some extent what happens in the larger relational context.

How then is the larger social context likely to influence parent–child relationships? When studying the effects of social support on family

members, research focused on several specific causal channels, suggesting that support available to parents shapes various intermediate variables, which then affect parent–child relationships. In this regard, it has been hypothesized that conjugal networks enhance the psychological well being of parents which, in turn, leads to better parenting. For instance, a mother's self-confidence as a parent may be bolstered by praise from a supportive network member (Cochran & Niego, 2002). Parents' psychological resources are critically important in the parenting process. More mature parents, with more robust psychological well being, are better able to provide adequate stimulation to their children (Belsky, 1984, 1990). As these psychological resources depend greatly on social support (Cohen & Wills, 1985; Widmer & Weiss, 2000), it may well be that the social network's influence on parent–child relationships is a byproduct of the parents' increased psychological well being. An alternate hypothesis states that conjugal networks enhance conjugal relationships, which in turn increase the likelihood that spouses or partners will develop positive parenting practices. According to family systems theory, family subsystems, such as the conjugal and parental subsystems, are functionally coordinated (Broderick, 1993). The conjugal relationship is hypothesized to be the principal support subsystem for parents: A strong conjugal bond increases the likelihood of providing more effective parenting (Belsky, 1984; Robertson, Elder, Skinner, & Conger 1991), even when adult psychological adjustment is statistically controlled (Cox, Owen, Lewis, & Henderson, 1989).

The two explanations reported above emphasize a set of indirect effects of conjugal networks on the parent–child relationship, reducing conjugal hostility or improving the psychological well being of parents (Baron & Kenny, 1986). The literature on support, however, also stresses the importance of direct and buffering effects of social support on individual outcomes (Kaplan, Cassel, & Gore, 1977). A direct effect of networks on parent–child relationships is defined as one that modifies the parent–child subsystem independently of the changes occurring in other subsystems (in particular, the conjugal subsystem). For instance, networks provide material resources to parents, which may facilitate parenting; couples with supportive networks being better off in terms of the financial and domestic support associated with child rearing (Coenen-Huther et al., 1994).

In contrast to the direct effect hypothesis, the buffer hypothesis states that support is related to positive outcomes only for individuals under stress (Cohen & Wills, 1985). According to this model, support networks have an effect mostly because they protect individuals from the negative influence of stressful events or situations (Hill, 1949). Buffering effects are an expression of the homeostatic features of families which, according to family systems theory, compensate for adverse conditions in the environment by making co-ordinated changes within the system that help to restore equilibrium (Cox & Paley, 1997). Statistically, this hypothesis postulates that interactions between stress in the conjugal dyad and conjugal networks have significant effects on parent–child relationships and parenting.

Is network embeddedness always a good thing?

Although strong evidence supports a positive effect of social networks on individual outcomes (see for example, Cohen & Wills, 1985), this is not always the case for family relationships. Empirical research shows that the effect of support networks on conjugal quality is curvilinear (Holman, 1981; Widmer, Kellerhals, & Levy, 2004a), that is, a lack of networks and extremely cohesive networks are both detrimental to conjugal functioning. This hypothesis was theorized in the interference model (Johnson & Milardo, 1984; Julien, Markman, Leveille, Chartrand, & Begin, 1994), which suggests that social networks and conjugal relationships might actually compete. Although this hypothesis was primarily developed to deal with conjugal relationships, it might also prove relevant to parent–child relationships. Close-knit networks may not always facilitate parent–child relationships and parenting, especially when the expectations about the child held by parents and other network members are inconsistent (Belsky, 1984), or when network members are perceived by parents as competitors rather than as supporters in the parenting process (Robertson et al., 1991). More generally, systems theory emphasizes the functionality of maintaining strong but permeable boundaries between systems (Broderick, 1993), as overembededness in social networks is a potential threat for nuclear families.

Another critical issue associated with network embeddedness concerns the imbalance of social support available to family members. The assumption that social support for one family member indirectly benefits other family members has been criticized (e.g., Robertson et al., 1991). Imbalanced conjugal networks (in which one parent receives more support than the other) may inhibit conjugal quality because of third party's involvement in case of conjugal conflict (Baumgartner, 1993; Burger & Milardo, 1995; Klein & Milardo, 2000) or because of the perception by his or her partner that the oversupported individual is disloyal or rejecting (Gelles & Straus, 1988; Robertson et al., 1991). Therefore, one may hypothesize that imbalance of conjugal networks is also indirectly detrimental for parent–child relationships.

From systems theory (Broderick, 1993), we hold that networks are specific configurations of relationships with emergent properties. Thus, their effects on conjugal functioning should not be tested on a variable-by-variable basis, even if interaction terms are included. Cluster analysis is an ideal approach to uncover these configurations, as it produces groupings of individuals according to their proximity in terms of patterns of responses (Borgen & Barnett, 1987; Everitt, 1993); in this case, structural features of their conjugal networks. Based on the evidence described above we hypothesize that: (a) social networks of couples have a significant impact on parent–child relationships through indirect, buffering and direct effects; (b) dimensions of the conjugal subsystem mediate the effects of conjugal networks on parenting; (c) conjugal networks buffer parent–child relationships from conflicts and problems in the conjugal dyad; (d) while controlling for buffer

and indirect effects, conjugal networks continue to have a direct effect on parenting; (e) embeddedness in conjugal networks has a curvilinear effect: Social exclusion from conjugal networks as well as extreme network embeddedness are associated with poorer parenting and more difficult parent–child relationships; and (f) network imbalance between partners or spouses is detrimental to parenting.

Methods

The data are drawn from the study '*Social Stratification, Cohesion and Conflict in Contemporary Families*,' a large and representative survey of 1534 married and unmarried couples, with or without children, living in Switzerland (Widmer et al., 2003, 2004b). Conducted in 1998, the study's primary goal was to examine how conjugal functioning is influenced by the partners' social status and position in the life course.

The sample

The sample for the project was drawn randomly using a nonproportional stratified design based on the three major linguistic areas of Switzerland. A computer-assisted telephone survey questionnaire was translated into German, French and Italian. Data collection took place between October 1998 and January 1999. For each couple, both partners were interviewed separately and for most questions, both had to provide an answer. Overall, the sample has demographic features very similar to those of other recent surveys and microcensuses on households and families in Switzerland (OFS, 1998).

The subsample considered here focuses only on couples with coresident children. Sample sizes ranged between 771 and 440 depending on the dependent variable. Average age of fathers was 43 and average age of mothers was 41 (*SD*s = 8.7 and 8.3). Average duration of the couple relationship was 16.9 years (*SD* = 11.3), with 15.4 years spent within marriage (*SD* = 12.1). Households contained an average of 2.02 children, with an average age of coresident children of 11.7 (*SD* = 7.7). Only 4% of couples were unmarried and 6% include at least one child who is not the biological child of both partners. Levels of education of mothers surveyed are: 9% with only compulsory schooling (up to 15), 63% with an apprenticeship diploma, 22% with the equivalent of a high-school diploma, and 6% with a university degree. Of fathers, 6% have only compulsory schooling, 52% have an apprenticeship diploma, 29% have the equivalent of a high-school diploma, and 13% have a university degree. Concerning household income, 6% of couples receive less than 4000 Swiss francs a month, 22% between 4000 and 6000, 30% between 6000 and 8000, 23% between 8000 and 10,000, and 19% more than 10,000. Compared with other surveys of the population of Switzerland, there is a slight but statistically significant overrepresentation of high levels of income and education in this sample (Kellerhals, Levy, & Widmer, 2000). This is mostly due to the fact that this study only selects individuals who belong to couples.

Measures

Three sets of variables are examined in this article: Types of conjugal networks, parenting and parent–child relationships, and mediating variables. We also

include various control variables which are significantly associated with parent–child relationships (i.e., age of children in the household, age and level of education of mothers, household income, presence of a nonbiological child of either or both parents in the household, and the mother's participation in the work place) (Aldous, 1996). All measures are available from the authors and are described in detail in Widmer et al. (2003).

Conjugal network variables. In order to derive meaningful types of conjugal networks from the data, we focused on: Size, composition, activity, support available, and the overall cohesiveness of the network(Bott, 1955, 1957; Coenen-Huther et al., 1994; Milardo, 1988; Surra, 1988; Wellman & Wortley, 1989). Information was collected independently from both partners of each couple, so that we have measures for each partner's network. All measures were transformed into dichotomous variables.

Network size was measured by asking respondents how many members of the kinship and friendship network live in parents' geographical area (no more than 20–30 minutes' drive). Forty-two per cent of fathers and 41% of mothers had four or more relatives living in the area (coded '1'); respondents who had fewer relatives living in the area were coded '0.' Sixty-eight per cent of respondents of both genders had three or more friends close by (coded '1').

Network activity was measured by the frequency with which each parent meets with relatives and friends. Sixty-four percent of fathers and 66% of mothers met with relatives at least once every 2 weeks. Sixty-eight per cent of fathers and 58% of mothers met with friends at least once a week.

Network support available was measured by asking whether respondents can count on family and friends' support in the event of a serious problem. *Emotional support* is the most readily available: 65% of fathers and 76% of mothers think that they would get such support if needed (coded '1,' other cases coded '0'). *Domestic support* is also present: 52% of fathers and 53% of mothers said that they could rely on important domestic support from relatives or friends if needed. Similar results were found for *financial support*: 47% of fathers and 48% of mothers said that they could count on important financial support from their network if needed. Available support was used instead of activated support, as various studies have shown that this has much more impact on individual outcomes (e.g., Wethington & Kessler, 1986).

Cohesiveness of the kinship network is measured with two indicators: The overall quality of interpersonal relationships in the kinship network and the interference of the kinship network in the couple functioning. Sixty-two per cent of mothers and 50% of fathers said that they belong to a close, affectionate and united family (coded '1,' other cases coded '0'). Network interference was measured by a single item asking respondents whether or not they feel controlled by their relatives in their conjugal life. Twenty-two per cent of mothers and 18% of fathers felt that their couple is controlled by their family (coded '1').

Parenting and parent–child relationships. Parenting and parent–child relationships were measured in four domains: Problems in assuming parental roles, parents' worries about their children, the seriousness of parent–child disagreements, and the quality of the parent–child relationship with the oldest and second oldest child (Sabatelli & Waldron, 1995). The first two measures refer to parenting, defined as the act of caring for someone in the manner of a parent (Cowan,

Powell, & Cowan, 1998), whereas the third and fourth measures directly refer to interactions between parents and children. These measures were constructed at the couple level, by including responses from both fathers and mothers.

Problems in the assumption of parental roles (n = 771) refer to the notion of parental role strain and perceived parental competence (Sabatelli & Waldron, 1995). To study this, a randomly selected partner in each couple had to indicate whether or not the couple was currently experiencing any of five problems with any child still in the household (e.g., significant difficulties in raising the child or maintaining a satisfying conjugal relationship because of the child). For each of the five items, respondents indicated whether this problem had ever existed with the child. Responses were then compiled into a 5-point scale, ranging from 0 to 5 problems (M = 0.95, SD = 1.35, Cronbach's alpha = .73). In order to have a more or less balanced distribution of respondents across the scale's values, we recoded the larger values into a single category (three problems or more). Of all respondents 53% did not report any problem with any child living in the household; 23% reported one problem, 12%, two problems, and 12%, three or more problems.

Worries about children refer to the extent to which children were exhibiting, according to their parents, problematic behavior of various kinds (Barber, 1994; Suitor & Pillemer, 1988). A randomly selected partner in each couple responded to a set of nine items (e.g., behavior of their children at home or at school, their relationships with their peers, their consumption of drugs and alcohol, etc). Because of a highly skewed distribution toward few worries, the first three answer categories were merged into a single value. These items were combined into a single scale, ranging from 0 ('no worry on any of the items') to 9 ('minor, some, or major worries on all items'). These items exhibited α = .65. As the distribution of this variable was also skewed, we dichotomized it, with 18% of couples reporting five or more worries for their child. Parents were asked to report worries only about children over 6 years old who were living at home. Therefore the subsample is limited in size (n = 507).

The quality of parent–child relationships was measured using a set of eight items which capture the extent to which it is characterized by trust, exchange and intimacy, or by anxiety and anger. Questions with four response options (ranging from 'not at all' to 'very much') were asked independently to both partners and concerned the oldest and the second oldest child still living in the household. Because of a highly skewed distribution toward positive responses, the answer categories indicating the presence of a problem were merged into a single value. These items were then combined into a single scale, ranging from 0 ('no problem on any of the items') to 8 ('some problems on all items'). As scales based on responses from fathers and mothers taken independently had only low reliabilities (e.g., Cronbach's alpha for quality of relationships with the oldest child was .62 for fathers and .56 for mothers), their responses were combined into two single ordinal measures (four categories), with a Cronbach's alpha of .70 for the oldest child in the household and .77 for the second oldest child. Because the distribution of these scales was also highly skewed, scale values were merged into a four-fold scale: A total score of 0 to 4 problems reported by both partners was set to 0, a score of 5 to 7 problems to 1, a score of 8 to 11 problems to 2, and a score of more than 11 problems to 3. The sample size is 772 for the oldest child, but only 563 for the second oldest child.

Finally, *parent–child disagreements* were measured using a single indicator describing the severity of parent–child open conflicts. As in the case of the two

previous variables, the question on parent–child disagreements was asked to a randomly selected partner. Fifteen per cent of respondents reported serious conflicts existing between them and at least one of their cohabiting children, 54% reported minor conflicts and 31% no conflict at all (n = 763).

Mediators

In order to investigate the hypothesized indirect and buffering effects of conjugal networks on parent–child relationships, we included indicators of conjugal conflict, parental experience in their own families of orientation and psychological distress, as potential mediators (Baron & Kenny, 1986) of network effects.

Conjugal conflict was measured by three constructs: Conjugal problems, conjugal disagreements and coping strategies (Widmer et al., 2003, 2004a, 2004b). These measures were constructed at the couple level, by including responses from both fathers and mothers. For *conjugal problems*, each partner had to indicate whether or not they were currently experiencing any of a list of 19 problems (e.g., a serious inability to communicate, problems in dealing with their partner's personality, sexual problems). Responses from both spouses were combined into a single measure (α = .73). *Conjugal disagreements* were measured using a set of four indicators describing the frequency of open conjugal conflict, the frequency of covert conjugal conflict (passive aggressiveness), the severity of these conflicts and the ease with which they were overcome. Responses from both spouses were summed into a single measure (α = .78). *Poor coping strategies* were measured with a set of nine items that captured the way partners acted toward each other when a serious problem occurred (e.g. put each other under pressure, threaten, negotiate, listen). These items were summed into a single measure (α = .70).

Psychological distress was measured using a set of six items. Respondents were asked whether they currently felt sad, lonely, helpless, tired or nervous and whether or not they had unexplained somatic troubles (Radloff, 1977). Cronbach's alpha was .74 for fathers and .75 for mothers. Both scales were dichotomized at the last quartile.

Parental experience with family of origin was assessed by two constructs. One item measured quality of relationships in family of origin. In 43% of couples, at least one parent reported poor relationships in his or her family during childhood. Another variable measured whether one or both partners had experienced divorce in their families of origin before the age of 15, which was the case of 14% of couples.

When measuring the effect of conjugal networks on relationships between cohabiting parents and children, we controlled for several sociodemographic variables.

Results

Types of conjugal networks

Based on the set of variables that characterize network functioning, we ran a multiple correspondence analysis (MCA) (Greenacre, 1983). We then derived from MCA scores six distinct network types using cluster analysis (Lebart, Morineau, & Piron, 1997). Cluster analysis makes it possible to go beyond the effects of specific dimensions of networks on conjugal quality and find holistic configurations of network dimensions. It has been used before to construct

typologies of networks (Coenen-Huther et al., 1994; Stein, Bush, Ross, & Ward, 1992). To determine the number of network profiles, we examine a sequence of hierarchical cluster analyses based on Ward's method of clustering on the first four axes of the correspondence analysis (Lebart et al., 1997). Instead of partitioning the observations into some predetermined number of clusters in a single step, this hierarchical procedure produces step-by-step splits (Everitt, 1993). Ward's method minimizes within-cluster variance and thus produces good estimates of cluster groupings. Most of the distance reduction occurs at or before the fifth split. Thus, couples can be adequately described as belonging to one of six clusters (profiles are presented are provided in Table 1).

Couples with sparse networks (16% of the sample) are characterized by few ties with friends and relatives for both parents. Their network is rather small and support is not readily available. Interference from the network is very low, as is the overall quality of relationships in the network.

Couples with friendship networks (15% of the sample) are strongly embedded in friendship ties, whereas kinship ties are almost nonexistent. These couples have few relatives living close to them and they do not interact very often with them. Their family is not considered warm and supportive, but neither is it interfering. Support is available. Both partners have similar network profiles, although fathers tend to have a smaller and more passive kinship network than mothers.

In *couples with patricentric networks* (18% of the sample), fathers have a much larger circle of relatives and friends than mothers. Fathers meet with their relatives and friends more often and can get support from them much more easily than the mothers. These couples can be described as asymmetrical or unicentric, as one parent's network – the father's – is predominant. Note, however, that the cohesiveness of the kinships is equal on both sides.

Couples with matricentric networks (21% of the sample) have the opposite characteristics to couples with patricentric networks. In this case, the mothers have a much larger and more active network than fathers, for both relatives and friends. Support is more readily available for the mothers than for the fathers, and the overall the cohesiveness of their kinship network is significantly higher than for fathers.

Couples with bicentric networks (20% of the sample) are characterized by strong kinship and friendship ties for both partners. Both partners make frequent contact with a large number of friends and relatives. Both partners would get support in case of need and see family relationships strong and warm.

Couples with interfering networks (10% of the sample) are similar to couples with bicentric networks with regard to the strength of support with two notable exceptions. First, there is a strong feeling of being controlled by the kinship network, especially for the mothers. Second, family relationships are considered cooler than in bicentric networks.

Network type and conjugal quality

As all dependent variables are on a point-scale, we estimate ordinal logistic models (Kleinbaum & Klein, 2002), using the PLUM procedure of SPSS. The principle of an ordinal regression model is similar to a logistic model, as it estimates the odds ratio for each independent characteristic in the model. A deviation contrast method is used, which makes it possible to estimate the effect of each category of a covariate in comparison to its overall effect. Parameters represent the effect of covariates in terms of odds ratios. For example, the odds

TABLE 1
Characteristics of conjugal networks (average scores according to network types, *n* = 771)

	Gender	I Sparse	II Friendship	III Patricentric	IV Matricentric	V Bicentric	VI Interfering	F-Test
	%	16	15	18	21	20	10	
Network size: Four or more relatives	F	0.19	0.14	0.54	0.46	0.62	0.80	40.7**
living in the area	M	0.23	0.15	0.64	0.31	0.61	0.65	35.2**
Network size: Three or more friends	F	0.49	0.74	0.61	0.76	0.74	0.76	8.3**
living in the area	M	0.39	0.71	0.73	0.60	0.76	0.78	15.5**
Network activity: Meet with relatives	F	0.30	0.30	0.60	0.63	0.83	0.85	42.9**
at least every 1/4 weeks	M	0.23	0.21	0.80	0.52	0.80	0.67	57.6**
Network activity: Meet with friends at	F	0.60	0.84	0.52	0.75	0.71	0.86	11**
least once a week	M	0.40	0.72	0.60	0.36	0.70	0.61	14.2**
Domestic support available	F	0.14	0.65	0.03	0.81	0.95	0.69	174.6**
	M	0.09	0.76	0.68	0.04	0.94	0.76	176.4**
Emotional support available	F	0.44	0.91	0.42	0.97	0.98	0.90	92.3**
	M	0.20	0.97	0.81	0.27	0.94	0.89	159.6**
Financial support available	F	0.07	0.47	0.11	0.69	0.92	0.62	123.8**
	M	0.07	0.77	0.63	0.09	0.84	0.56	111.7**
Cohesiveness of the kinship net:	F	0.38	0.39	0.57	0.77	0.85	0.55	29.2**
Close family	M	0.25	0.39	0.57	0.43	0.68	0.22	21.7**
Cohesiveness of the kinship net:	F	0.13	0.22	0.13	0.17	0.06	0.93	89.2**
Family tries to control the couple	M	0.13	0.08	0.20	0.14	0.09	0.57	26.7**

** = *sig* < .01.

ratio of couples with a bicentric network for problems in assumption of parental roles (see model A of Table 2) means that their odds of reporting problems with their parental roles are multiplied by 0.67 compared to parents on average. As the ratio is less than 1, it indicates that they report fewer problems than parents on average.

The testing strategy implemented in Tables 2 and 3 is based on the assumption that effects of independent variables on an outcome decrease in significance when mediator covariates are added into the model (Baron & Kenny, 1986). Network types are chosen as the independent covariates, with parent–child relationships as the outcomes, and indicators of conjugal conflict and psychological distress of parents as the mediators, in a series of nested models. For each dependent variable a first model tests the effect of network types with only control variables included. Potentially mediating variables are then added in a second model, and are predicted to make network effects insignificant, following the indirect effect hypothesis. Note that tolerance tests (Stewart, 1987) show that there is no problem of multicollinearity between independent variables in all following analyses. Moreover, indices of variance inflation factors (VIF) do not increase when mediator covariates are added to network and control variables.

Models A and C of Table 2 show that network types are associated with unequal odds of experiencing problems in parenting. Couples with bicentric networks report significantly fewer problems in the assumption of their parental roles and fewer worries about their children than other couples. In addition, interfering networks are associated with significantly more worries about children than other couples.

We proceed in testing indirect effects of conjugal networks by the inclusion of potentially mediating variables in models B and D of Table 2. In other regression models (results not reported) we used mediators as dependent variables and conjugal networks as independent variables, with control variables added. These models showed that bicentric networks are negatively associated with psychological distress of fathers ($p < .05$) and mothers ($p < .01$), conjugal problems ($p < .01$), severe conjugal disagreements ($p < .01$), poor coping strategies ($p < .01$) and negative relationships in families of orientation ($p < .01$). Patricentric networks are associated with greater psychological distress of mothers ($p < .05$) and poor coping strategies ($p < .05$). As further testing reveals that in each case at least one hypothesized mediator has a statistically significant effect except for parental worries, we expect their inclusion in the model to account for the effect of bicentric networks, in making it statistically nonsignificant (mediation effect). This is what happens in Table 2 for parental roles, but, as expected, not for parental worries, because these variables do not have statistically significant effects on parental worries (see model D of Table 2). To the contrary, the negative effect of interfering networks remains significant after mediating covariates are added.

Network type and quality of parent–child relationship

In models A, C and E of Table 3, couples with bicentric networks show higher quality of relationships with the oldest child, with the second oldest child, living in the household, and less severe disagreements with them compared to couples on average. These effects are fully accounted for by the inclusion of mediating variables in models B, D and F, which makes the effects of bicentric networks statistically nonsignificant.

TABLE 2
Problems in parenting and conjugal networks (odds ratios)

Variables	Problems with parental roles (A)	Problems with parental roles (B)	Worries about children (C)	Worries about children (D)
Constants	0.93	1.00		
	0.31**	0.33**		
	0.15**	0.16**	0.23**	0.23*
Conjugal networks				
Sparse	1.61	1.27	1.48	1.57
Friendship	0.91	0.87	0.62	0.67
Patricentric	0.89	0.80	0.83	0.83
Matricentric	0.91	0.99	1.03	0.91
Bicentric	0.67*	0.89	0.50*	0.52*
Interfering	1.27	1.28	2.60**	2.43**
Level of education of mother				
Low	0.86	0.86	0.93	0.91
Medium	0.97	0.99	0.70	0.73
High	1.20	1.17	1.54	1.51
Income of the household (Swiss francs)				
< = 4000	0.73	0.54*	1.64*	1.61*
4001–6000	0.94	1.07	0.42**	0.41**
6001–8000	0.97	1.11	0.77	0.87
8001–10000	1.06	1.22	1.94	1.97
>10000	1.42*	1.28	0.96	0.89
Work participation of mother				
0%	1.04	1.02	1.12	1.13
1–89%	1.04	0.90	1.37	1.36
90–100%	0.93	1.08	0.65	0.65
Age of oldest child				
0–4	0.88	0.79	0.81	0.85
5–12	1.04	1.07	0.58	0.59
13–15	1.14	1.11	0.69	0.67
16–18	0.92	0.99	1.49	1.52
more than 18	1.03	1.08	2.10	1.98
Family structure				
Nuclear	0.88	0.90	0.74	0.69
Recomposed	1.14	1.11	1.35	1.45
Age of mother				
<30	1.32	1.13		
30–40	0.90	0.86	1.48	1.40
41–50	1.11	1.17	1.36	1.33
> = 51	0.75	0.88	0.50	0.54

continued

TABLE 2
Continued

Variables	Problems with parental roles (A)	Problems with parental roles (B)	Worries about children (C)	Worries about children (D)
Psychological distress (father)				
No		0.83		0.76
Yes		1.21		1.32
Psychological distress (mother)				
No		0.67		0.78
Yes		1.50**		1.28
Conjugal problems		1.23**		0.96
Conjugal disagreements		0.99		0.99
Poor coping strategies of couples		1.00		1.02
Relationships in families of orientation				
Good		0.81		1.00
Not good		1.24*		1.00
Divorce in families of orientation				
No		0.96		1.55
Yes		1.04		0.64
χ^2	33.329**	152.718**	51.08**	59.48**
DF	21	28	21	28
N	770	770	440	440

* = sig < 0.01; ** = sig < 0.05.

It should be emphasized that mediating variables vary depending on the outcome. The effects of bicentric networks on parental roles (Table 2, model B) are mediated by psychological distress of mother, conjugal problems, and relationships in the family of orientation. The effects of networks on relationships with the oldest child (Table 3, model B), on the other hand, are mediated by psychological distress of father and couples' coping strategies. For second oldest child (Table 3, model D), psychological distress of mother and relationships in the family of orientation play a key role. For parent–child disagreements (Table 3, model F), psychological distress of mother and conjugal disagreements are mediators.

In addition, the quality of parental relationships with the second oldest child appears to be significantly lower in unicentric network types (either patricentric or matricentric), the mother's psychological distress being a mediator between patricentric networks and the outcome. Also, parent–child disagreements are more frequent in couples with an interfering network when mediating covariates are added into the model.

Finally, do network effects interact with the psychological distress of parents, conjugal disagreements or problems (buffering or moderator effect)? We single

TABLE 3
Problems in parent–child relationships and conjugal networks (odds ratios)

Variables	Problems relationships with oldest child (A)	Problems relationships with oldest child (B)	Problems relationships with second oldest child (C)	Problems relationships with second oldest child (D)	Parent–child disagreements (E)	Parent–child disagreements (F)
Constants	0.26**	0.28**	0.16**	0.26*	1.65**	0.99
					0.11**	0.06**
Conjugal networks						
Sparse	1.07	1.06	0.62	0.61	0.85	0.69
Friendship	0.80	0.87	0.81	0.91	0.95	0.94
Patricentric	1.22	1.13	1.56*	1.44	1.02	0.97
Matricentric	1.50	1.44	1.97*	1.85*	1.22	1.30
Bicentric	0.68*	0.71	0.65*	0.69	0.70**	0.83
Interfering	0.95	0.93	1.00	0.98	1.43	1.49*
Level of education of mother						
Low	0.68**	0.66**	0.98	0.94	0.90	0.91
Medium	1.21	1.28	1.04	1.13	0.92	0.98
High	1.22	1.18	0.98	0.94	1.21	1.11
Income of the household (Swiss francs)						
< = 4000	1.41	1.31	0.91	0.88	0.92	0.89*
4001–6000	0.74	0.72	1.21	1.13	0.81	0.88
6001–8000	0.94	1.00	1.05	1.16	0.89	0.91
8001–10000	1.26	1.33	1.22	1.29	1.24	1.26
>10000	0.81	0.80	0.71	0.67	1.21	1.10
Work participation of mother						
0%	1.42	1.45*	0.89	0.87	1.28*	1.26
1–89%	1.30	1.29	1.22	1.21	1.25	1.18
90–100%	0.54	0.53	0.92	0.95	0.62	0.67
Sex of the child						
Female	0.85	0.84	0.87	0.84		
Male	1.18	1.19	1.15	1.18		

Age of the child						
0–4	0.25**	0.25**	0.75	0.65	0.38**	0.34**
5–12	0.95	0.96	1.86*	1.88*	1.39**	1.37*
13–15	3.33**	3.33**	3.44**	3.95**	2.12**	2.26**
16–18	1.43	1.55*	2.18*	2.21*	1.55**	1.51*
more than 18	0.87	0.80	0.10**	0.09**	0.58**	0.63*
Age of mother						
<30	2.27*	2.26*	0.92	0.88	0.49**	0.43**
30–40	1.81	1.79	1.60	1.58	1.34	1.31
41–50	1.03	1.04	1.34	1.43	1.46*	1.57**
> = 51	0.24*	0.24**	0.51	0.50	1.05	1.13
Family structure						
Nuclear	0.79	0.80	0.90	0.94	0.97	0.98
Recomposed	1.27*	1.26	1.12	1.06	1.03	1.02
Psychological distress (father)						
No		0.74		0.77		0.89
Yes		1.36*		1.30		1.12
Psychological distress (mother)						
No		0.83		0.63		0.83*
Yes		1.21		1.58**		1.21*
Conjugal problems		0.98		0.96		1.04
Conjugal disagreements		0.97		0.96		1.08**
Poor coping strategies of couples		1.03*		1.03		0.99
Relationships in families of orientation						
Good		1.10		1.31		0.96
Not good		0.91		0.76**		1.04
Divorce in families of orientation						
No		1.05		1.00		0.88
Yes		0.95		1.23		1.14
χ^2	112.30**	129.57**	74.15**	101.58**	100.85**	147.37**
DF	22.00	29.00	22.00	29.00	21	28
N	772.00	772.00	563.00	563.00	763	763

* = sig < 0.01; ** = sig < 0.05.

out bicentric networks when testing interaction terms, in order to include only statistically significant variables in the logistic model (Hosmer & Lemeshow, 1989). However, testing of interaction terms fails to support the buffering hypothesis, as no interaction term is statistically significant.

To summarize, parents with bicentric networks are better off than other parents, with respect to all five indicators of parenting and parent–child relationships considered. The hypothesis of an indirect positive effect of bicentric networks, working primarily through their mitigating effect on conjugal problems and the psychological distress of partners, is confirmed for all four dependent variables on which hypothesized mediators do have a significant effect. Parental worries are insensitive to potential mediators included in this study. Therefore, the effect of bicentric networks remains significant after they are added in the model (direct effect). Interfering, patricentric and matricentric networks have negative effects on several dimensions of parenting and parent–child relationships, which remain significant after mediating covariates are added.

Discussion

Conjugal networks do matter for parent–child relationships. Bicentric conjugal networks are singled out as associated with improved parenting practices and parent–child relationships, compared with all other types of conjugal networks. Their effect is mostly mediated. The stress-buffering hypothesis (Cohen & Wills, 1985), which suggests that only couples under conjugal stress benefit from their networks, is inconsistent with our data, which raises questions about the homeostatic features of the larger relational contexts in which the immediate family is embedded. However, it can be noted that tests of buffer effects (Cohen & Wills, 1985; Hill, 1949) usually imply a longitudinal research design, in which the impact of stressful events or situations is measured over several time-lagged observation points. This is obviously not the case in this study, which is cross-sectional.

Bicentric conjugal networks have an indirect effect on parent–child relationships and parenting, by their influence on the conjugal subsystem and the psychological well being of parents. Specifically, bicentric networks indirectly influence parenting and parent–child relationships by decreasing the likelihood that parents experience psychological distress or conjugal problems and conflicts, and by increasing the quality of couples' coping strategies. In other words, the positive effect of network embeddedness on parenting and parent–child relationships works primarily by strengthening the conjugal subsystem, which is the principal support subsystem for parents (Belsky, 1984). Thus, the conjugal subsystem represents the generative mechanism (Baron & Kenny, 1986) through which bicentric networks influence parenting. The results also suggest that specific dimensions of the conjugal subsystem (e.g., conjugal disagreements, conjugal coping, psychological well being or distress of partners) are mediators for specific dimensions of parenting, although more research is needed in this regard.

But this study also confirms that network embeddedness is not always beneficial to parent–child relationships. First, interfering networks are associated with increases of parent–child disagreements and parental worries. This result corroborates research indicating that network interference is detrimental to intimacy development and conjugal functioning (Johnson & Milardo, 1984; Julien et al., 1994; Widmer et al., 2004a). Indeed, boundary issues have long been considered central by family systems theorists (Broderick, 1993). Second, families with unilateral conjugal networks have lower quality relationships with the second oldest child living in the household. In other words, it is not enough for only one parent to have access to a strong network. Both parents need to have one in order for network embeddedness to fully benefit parent–child relationships. Thus, one important result of this study is that balance between parents in terms of network embeddedness is important for some dimensions of parent–child and conjugal relationships (Robertson et al., 1991; Widmer et al., 2004a). The results show that in most cases effects of network interference and network imbalance are not mediated by processes occurring within conjugal dyads. Further research is needed in order to uncover the specific mechanisms associated with these effects of conjugal networks on the parent–child subsystem.

Because relational contexts in which couples are embedded do have consequences for parenting and parent–child relationships, scholars may wish to systematically include measures pertaining to the structural and functional dimensions characterizing the social networks of the immediate family (Widmer, 2004) when dealing with parent–child relationships or their effects on developmental outcomes. From a social policy point of view, these results show that there is a need to include interventions within the larger relational contexts of immediate families when dealing with dysfunctional parenting and poor parent–child relationships.

Limitations and directions for future research

Some of the limitations to this study should be noted. First, the study is correlational in nature. Longitudinal data would permit a more precise test of these models, especially regarding the buffering effect of conjugal networks. Furthermore, it may be that a reciprocal effect of parent–child relationships on network composition also exists. Longitudinal data in which the network structures are measured at an earlier stage in parent–child relationships would be extremely helpful for addressing the causal order among these sets of variables. Second, effects of social networks on parent–child relationships were considered here only in two-parent households. It remains to be seen whether the same mechanisms can be detected in single-parent families in which network embeddedness is hypothesized to play an even more crucial role for parenting (Cochran & Niego, 2002).

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