Multiple Perspectives Within the Family

Family Relationship Patterns

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The first aim of the present study was to examine the extent to which the larger network of family relationships (parent-adolescent, marital, and sibling relations) affect adolescent adjustment. The second aim was to identify distinct patterns of family relationships and to examine whether these different family relationship patterns are associated with adolescent adjustment. The sample consisted of 288 intact families with two adolescent siblings. Each family member provided information on the affective quality of his or her relationship with every other family member (round-robin design). The quality of all family relations was related to the indicators of deviant development (problem behavior) but not to the indicators of normative development (identity formation). Five distinct and theoretically consistent clusters of different constellations of affective family relations were found. Differences in adolescent problem behavior were related to the cluster membership. The usefulness of the family systems perspective for research on adolescent development is discussed.

Keywords: *family relationships; family systems; adolescent problem behavior; cluster analysis*

Most of the research on family influences during adolescence has focused on the effects of the parent-adolescent relationship on adolescent adjustment (Baumrind, 1991; Gecas & Seff, 1990; Maccoby, 2000; Noller, 1995). Although these studies provided valuable insights into the nature of the parent-adolescent relationship during this developmental period and its consequences for adolescent development, this research has also been the subject of considerable criticism.

The first point of criticism relates to the choice of informants about family relationships. In most of the research, self-report data were used in

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which only one perspective is assessed: that of the adolescent or that of (one of) the parents. However, several studies have shown that perceptions in the family are often not shared and that family members experience the same events in different ways (Barnes & Farrell, 1992; Demo, 1991; Larson & Richards, 1994; Paulson & Sputa, 1996). The discrepancy in perceptions of family relations seems to be especially pronounced during adolescence (Noller & Callan, 1988; Paikoff, 1991; Steinberg, 2001). These findings suggest that the research on family relations should include more than one family member as informants. Furthermore, it seems that the assessment of the perceptions of both parties involved in a relationship yields a more reliable measure of the quality of that relationship than the assessment of only one of the parties (Mathijssen, Koot, Verhulst, de Bruyn, & Oud, 1998).

The second point of criticism on traditional family research concerns the exclusive focus on the effects of only one specific relationship within the family, mostly the parent-adolescent relationship. In addition to the research on the parent-adolescent relationship, there has been extensive research into the effect of the quality of the marital relationship on child and adolescent development (Barber & Eccles, 1992; Cummings & Davies, 1994; Fauber, Forehand, McCombs, & Wierson, 1990; Fincham, Grych, & Osborne, 1994; Hetherington & Anderson, 1988; Hetherington, Bridges, & Insabella, 1998). In recent years, there has also been a growing interest in sibling relationships (Carey, 1992; Garcia, Shaw, Winslow, & Yaggi, 2000; Rowe & Gulley, 1992; Stocker, 1995; Stocker, Burwell, & Briggs, 2002). This research, however, tends to ignore the fact that relationships within the family are interconnected and mutually dependent. For example, disturbances in the marital relationship tend to be associated with problems in the parent-adolescent relationship (Erel & Burman, 1995; Fauber et al., 1990; Harold, Fincham, Osborne, & Conger, 1997). In addition, the relationships can have a compensatory or exacerbating role. For example, it has been shown that the negative effects of parental discord on a child's adjustment tend to be lower when the child has a warm, supportive relationship with at least one parent (Emery, 1982; Fincham, 1994). On the other hand, the incidence of problem behavior is highest among children who have negative relationships with their parents and whose relationships with their parents are less favorable than their siblings' relationships with the parents (Stocker, 1995). In conclusion, dyadic family relationships do not occur in isolation and may in fact be influenced by other family relationships. It is, therefore, particularly important to examine how these relationships operate together.

Finally, the third point of criticism concerns difficulties in interpreting the quality of the system (family) from disparate reports from family members on their relationships. To study the family as a system of relationships, it is necessary to study processes that exist at the family level. In other words, a proper methodology requires variables that measure system properties (Cox & Paley, 1997; Deal & Anderson, 1995; Sabatelli & Bartle, 1995). An example of such a variable is the specific configuration of the affective relations within the family (O'Connor, Hetherington, & Clingempeel, 1997; O'Connor, Hetherington, & Reiss, 1998). The expected pattern of affective relations in well-functioning families is characterized by supportive relationships among all family members and by parents who experience relatively few marital difficulties and who distribute their affection equally among their children—there are no favored or disfavored children. Problematic family functioning could be reflected in several different relationship patterns. The simplest of those is the pattern in which all family relationships are characterized by conflicts, hostility, and lack of supportiveness. However, the problems may also be restricted to the level of family subsystems. A dysfunctional parental subsystem would be reflected in a pattern of family relationships characterized by a markedly bad relationship between parents, but all other relationships need not be conflictive. Similarly, a conflictive relationship could exist only between siblings. Finally, problems may arise when supportiveness is unequally distributed within the subsystems. One pattern frequently referred to in the clinical literature is characterized by the phenomenon of "cross-generational coalitions," in which boundaries between family subsystems (parental, sibling) are diffuse, and one parent, usually the mother, forms a stable coalition with a child (or children) against the other parent (Mann, Borduin, Henggeler, & Blaske, 1990; Minuchin, 1974). In this pattern, there is also hostility in marital relationships. Finally, parents may have a different affective relationship with each child, a phenomenon known as "differential treatment of siblings" (Dunn, Stocker, & Plomin, 1990; McHale & Pawletko, 1992; Stocker, 1995), which usually has adverse effects on the quality of the sibling relationship. These different constellations of affective family relations are unique to the system, rather than to the dyadic relationship, and therefore truly reflect systems properties. Each constellation can be seen as a different context for adolescent development.

The notions that the family is a system of relationships, that these relationships influence each other, and that the whole (family system) is different than the sum of its parts (dyadic relations) are not new (Haley, 1976; Hoffman, 1981; Minuchin, 1974). During the past 30 years, family

systems theory, which serves as a basis for a large number of family interventions, has proved to be of considerable value to the treatment of child and adolescent behavior problems (Cottrel & Boston, 2002; Mann et al., 1990; O'Connor et al., 1998). The theoretical assumptions of family systems theory, however, have rarely been empirically tested, although it has become increasingly clear that, to fully understand the family influence on adolescent development, research should move from studying one isolated dyadic relationship to simultaneously examining the effects of all the relationships that exist within the family. To address these points of criticism, in the present study we examine all of the relationships within families with two adolescents: marital relationship, sibling relationship(s), and each parent's relationship with each adolescent in a relatively large nonclinical sample. These relationships are assessed from the perspectives of all parties involved: mother, father, and older and younger adolescents.

The first aim was to examine the extent to which all of these relationships predict adolescent adjustment. In this study, the adolescent's adjustment is defined by two indicators, one regarding normative development and one regarding deviant development. The first indicator concerns the most important developmental task in this period: the formation of identity. According to Marcia's theory (Marcia, 1966; Meeus, 1996), identity develops during a period of exploration of various alternatives, after which adolescents make choices regarding their future in a number of life domains. Following this theory, we operationalized identity formation with two separate dimensions: exploration and commitment. The second adjustment indicator includes a broad range of both externalizing (aggression, delinquency, social problems) and internalizing (withdrawal, depression) problems (Achenbach, 1991). We expected that the quality of the family relationships would be related to both indicators of adjustment (identity development and problem behavior). Furthermore, we expected that the relationships in which the adolescent himself or herself participates would bear a stronger association with his or her adjustment than the quality of the relationship in which the adolescent does not participate (i.e., the marital relationship and the parents' relationships with the sibling). We do recognize that all family relationships might be important, and indeed previous research showed that adolescent adjustment is affected by the marital relationship (Cowan & Cowan, 2002; Fincham, 1994) as well as by parents' relationships with siblings, especially if the preferential treatment is perceived as unfair (Kowal, Kramer, Krull, & Crick, 2002). Still, according to the social interactional and ecological perspective, "it is the more proximal person-environment transactions and

developmental circumstances that define the child or adolescent's immediate day-to-day experiences that most directly shape adaptation" (Felner et al., 1995, p. 775). Following this line of reasoning, it could be expected that direct interaction with another family member would affect adolescents' adjustment more strongly than what they observe in their parents' marriage or in their parents' relationship with their siblings.

Second, in addition to examining the separate and combined effects of each of the family relationships on adolescent adjustment, we aim to study the effects of family system properties. In other words, our objective is to empirically test the existence of different patterns of affective family relationships and examine how these different family relationship patterns relate to adolescent adjustment.

METHOD

SAMPLE AND PROCEDURE

The sample consisted of 288 intact families with two target adolescent siblings between 11 and 16 years old and no more than 3 years apart in age. The average age was 12.4 years for the younger adolescent and 14.5 years for the older adolescent. In 154 of the families (54%), the two participating adolescents were the only two children in the family. In 224 families (79%), the older adolescent who participated in the study was actually the firstborn child, and in 219 families (77%), the younger adolescent had only one older sibling (being the older participating adolescent). The distribution of boys and girls was about equal for the total sample and for the sample of younger and older siblings. The siblings were the same sex in 50% of cases.

All parents were the children's biological parents. The mean age of mothers was 41.6 years; the mean age of fathers was 43.9 years. The sample was generally middle class. Almost all of the families had Dutch nationality (99.6%). Concerning parental education, 45.1% of the fathers had finished college or university, compared to 27.5% of the mothers. A comparatively small percentage of the fathers (18.4%) and mothers (17.3%) had received only primary or lower secondary education. The rest of the fathers (36.5%) and mothers (54.7%) had finished medium secondary education. The participating families showed traditional family roles. Only 5.6% of the mothers had a full-time job, compared to 88.9% of the fathers. A substantial group of mothers had part-time jobs (59.0%), compared to 3.5% of the fathers. An even larger group of mothers defined

themselves strongly by their caregiving tasks at home (64.2%), whereas only 3.1% of the fathers did so.

The families were visited at their homes by trained interviewers. During the visits, family members completed a set of questionnaires independently of each other. In the present study, a round-robin design was used: that is, each family member provided information regarding his or her relationship with all other family members.

MEASURES

Affective quality of relationship. To assess the overall affective quality of relationships between family members, a modified version of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) was used. The original instrument was developed for assessing adolescents' attachment to parents (as a unit) and peers. In the present study, the items were selected that could be applied to each of the family relations, and the wording of the items was reformulated. Based on the results of our previous research (Buist, Dekovic, Meeus, & van Aken, 2004; Dekovic & Meeus, 1997), the 2 items with the lowest item-total correlation coefficients were deleted from the modified IPPA (Nada-Raja, McGee, & Stanton, 1992). This resulted in 10 items, to be rated on a 5-point scale (from 1 = *completely untrue* to 5 = *completely true*), that assess the extent to which family members trust each other and communicate with each other freely and openly. The same items were used for the assessment of each of the family relationships. Mothers and fathers completed this questionnaire for their relationships with each other and for their relationships with each target adolescent (e.g., "If my partner/older child/younger child knows something is bothering me, he/she asks me"). Similarly, both target adolescents completed the questionnaire for their relationship with each parent and for their relationship with target sibling (e.g., "If my father/mother/sibling knows something is bothering me, he/she asks me"). Therefore, in this measure the direction of effect was retained (i.e., parent relation to the child was distinguished from child relation to the parent), leading to 12 relationship measures: mother-father, father-mother, mother-older child, older child-mother, mother-younger child, younger child-mother, father-older child, older child-father, father-younger child, younger child-father, older child-younger child, and younger child-older child.

Reliabilities of the IPPA ranged from .69 (father regarding older child) to .83 (older child regarding father). Mean reliability was .78, which is

comparable to earlier findings (Armsden & Greenberg, 1987; Dekovic & Meeus, 1997; Nada-Raja et al., 1992).

The 12 relationship measures were combined in dyadic scores. First, the correlations between the scores of two family members regarding each other (e.g., correlations between the mother's report regarding the father and the father's report regarding the mother) were examined. These correlations were all positive and significant at the .001 level, although small to modest in magnitude (mother-father .44, mother-older child .22, father-older child .28, mother-younger child .32, father-younger child .30, and siblings .41), suggesting that there is reciprocity within the dyadic relationship and that family members tend to agree regarding the quality of their relationship (Cook, 2000). More reciprocity was found between the family members belonging to the same generation (i.e., mother and father) than between members of different generations (i.e., parents and children). The largest discrepancy, as indicated by the lowest correlations, was found between parents and their older child. This is consistent with previous findings showing that divergent views on the family are most pronounced in the period of middle adolescence (Holmbeck & O'Donnell, 1991; Paikoff, 1991; Papini & Micka, 1991).

Next, we computed the aggregated scores—six family relations scores—in which the perceptions of both members involved in each dyad are combined. This was done in the following way. The raw scores were transformed into *z* scores, and then the *z* scores of the two family members of each dyad were summed and divided by two, yielding six dyadic scores. For example, the dyadic score for mother-father relationship was the mean score of mother's report regarding father and father's report regarding the mother. The disadvantage of this procedure is that it sacrifices information on family members' unique perspective and blurs the differences in perceptions. On the other hand, it has been shown that the aggregation of scores improves the generalizability of family self-report data. Compared to the report of a single informant, the ratio of true-score variance to error-variance (i.e., reliability) improves with aggregation across multiple informants (Cook & Goldstein, 1993; Mathijssen et al., 1998). Also, the validity of reports by different informants seems to be higher than validity of reports by single informants (Loeber et al., 2000; Stern & Kalof, 1996).

Identity development. Identity development was measured by the Utrecht-Groningen Identity Development Scale (U-GIDS; Meeus, 1996). This questionnaire assesses two dimensions of identity development, exploration and commitment, in the domain of interpersonal relation-

ships. The adolescent's best friend is used as a reference person in all items. The first scale, Exploration (5 items), measures the degree of reflection and information seeking (i.e., "I try to learn as much as possible about my best friend"). The second scale, Commitment (5 items), measures the degree and depth of personal investment (i.e., "Because of my best friend, I have self-confidence"). The items were rated by adolescents on a 5-point scale (from 1 = *completely untrue* to 5 = *completely true*).

The Cronbach's alphas for the exploration scale were .76 for the older child and .79 for the younger child. For the Commitment scale, the alphas were .88 and .89 for the older and younger child, respectively.

Adolescent problem behavior. The self-reported problem behavior was assessed by a 30-item questionnaire consisting of items taken from the Child Behavior Checklist (CBCL; Achenbach, 1991; Verhulst, van der Ende, & Koot, 1996). The selected items represent the most common problems in adolescence (e.g., "I have sudden changes in mood or feelings," "I get involved in lots of quarrels") and were rated on a 5-point scale (from 1 = *does not apply to me at all* to 5 = *applies to me very well*). The internal consistency of this measure was .83 for the older child and .81 for the younger child.

To examine concurrent validity of this measure, adolescents were presented with two additional instruments that measure problem behavior. The first instrument is an 18-item Deviant Behavior Scale (alpha = .83) that includes a wide range of oppositional and delinquent behaviors, from relatively minor acts, such as disobedience to parents' rules and missing curfew, to more serious deviance, such as using hard drugs, beating someone on purpose, shoplifting, and so on (Dekovic, 1999). The second instrument was the Depressive Mood List (Kandel & Davies, 1982) (6 items, alpha = .76). The correlation between the adolescents' score on these instruments and on the shortened version of the CBCL were .78 for the Deviant Behavior Scale and .82 for Depressive Mood, indicating a satisfactory concurrent validity.

RESULTS

CORRELATIONS BETWEEN FAMILY RELATIONS MEASURES

The interrelationship between six dyadic family relations measures are presented in Table 1.

TABLE 1
Intercorrelations Among Dyadic Measures of Affective Quality of Each Family Relation (*N* = 288)

Relation	*1*	*2*	*3*	*4*	*5*
1. Marital	1.00				
2. Mother-older child	0.17**	1.00			
3. Mother-younger child	0.24***	0.40***	1.00		
4. Father-older child	0.36***	0.55***	0.27***	1.00	
5. Father-younger child	0.23***	0.16*	0.60***	0.40***	1.00
6. Sibling	0.10	0.37***	0.41***	0.41***	0.45***

*$p < .05$. **$p < .01$. ***$p < .001$.

Several associations in this table are worth noticing. First, the correlation between the marital relationship and sibling relationship was the only one that was not significant ($r = .10$, *ns*). In other words, the quality of the marital relationship and quality of sibling relationship seem to be independent of each other. The correlations between quality of marital relationship and the affective quality of parent-child relationship were significant but moderate in magnitude. This pattern of association seems to indicate presence of different subsystems in the family: marital, sibling, and parent-child subsystems. Second, the association between a parent's relationship with each child was quite strong (.40 between mother-older child and mother-younger child; .40 between father-older child and father-younger child), which indicates that there is a consistency in parental behavior toward both children ("parent-driven" processes). Third, the correlations between mother's and father's relationship regarding the same child was even stronger (.55 between mother-older child and father-older child; .60 between mother-younger child and father-younger child). These differences were tested using Fisher's z tests, and the associations between the two parents concerning the same child were in all cases significantly stronger than those of one parent concerning his or her two children (z values varied from 2.08 to 2.96; all significant at $p < .05$). This pattern of associations indicates that "child-driven" processes are even more influential: There is more agreement between both parents' relationships with the same child than between relationships that a parent has with his or her two children.

TABLE 2
Associations Between Affective Quality of Each Family Relation and Adolescent Adjustment

	Identity: Exploration		*Idenity: Commitment*		*Problem Behavior*	
Relation	*Older Child*	*Younger Child*	*Older Child*	*Younger Child*	*Older Child*	*Younger Child*
Marital	–.05	–.10	–.01	–.12	–.14*	–.01
Mother-older child	–.11	.02	–.05	.07	–.29***	–.13*
Mother-younger child	–.10	–.03	.07	.08	–.22***	–.38***
Father-older child	–.04	.01	–.01	.06	–.42***	–.21**
Father-younger child	–.05	–.01	.08	.07	–.21**	–.38***
Sibling	.14*	.02	.16**	.09	–.48***	–.31***

NOTE: For older child, $n = 198$; for younger child, $n = 180$).
*$p < .05$. **$p < .01$. ***$p < .001$.

ASSOCIATIONS BETWEEN FAMILY RELATIONS AND ADOLESCENT ADJUSTMENT

In Table 2, bivariate correlations are presented between six family relations measures and self-reported measures of adolescent adjustment (two dimensions of identity development and the degree of problem behavior) separately for the older and the younger adolescent.

Whereas the measures of normative development, the formation of identity, show very low association with family relations, the relationship between family relations and deviant development is quite strong. Only one of these correlations was not significant: The quality of the mother-father relationship was not associated with the problem behavior of the younger child. In general, it could be concluded that the lower the quality of each relationship within the family, the more problem behavior that is reported by adolescents.

To assess the unique contribution of each of the family relations to the adolescents' adjustment, multiple regression analyses were performed for older and younger adolescent separately. In each analysis, after controlling for age and sex effects, an indicator of adolescent adjustment was regressed on six family relations measures (see Table 3).

As might have been expected, given the results in Table 2, identity development was not significantly predicted by the family relationship measures. Only one beta coefficient emerged as significant: The quality of

TABLE 3
Regression Analysis Predicting Adolescent Adjustment From Demographic Variables and Family Relations: Beta Coefficients

	Identity: Exploration		*Identity: Commitment*		*Problem Behavior*	
Step/Predictor	*Older Child*	*Younger Child*	*Older Child*	*Younger Child*	*Older Child*	*Younger Child*
1. Demographic variables						
Age	–.00	.00	–.06	–.05	–.02	–.01
Sex	.20**	.07	.17*	.10	.01	–.10
R^2 change	.06	.00	.03	.01	.01	.03
F change	5.67**	.43	3.47	1.36	1.12	2.88
2. Family relations						
Marital	–.10	–.13	–.08	–.12	.07	.11
Mother-older child	–.10	.03	–.09	.02	–.01	.08
Mother-younger child	–.05	–.00	.09	.01	–.05	–.24**
Father-older child	–.09	.09	–.06	.08	–.34***	–.07
Father-younger child	–.11	–.01	.04	.02	.02	–.20*
Sibling	.21*	–.07	.13	–.03	–.29***	–.11
R^2 change	.06	.02	.04	.02	.27	.19
F change	1.58	.64	1.44	.46	11.90***	7.79***

NOTE: For older child, $n = 198$; for younger child, $n = 180$).
*$p < .05$. **$p < .01$. ***$p < .001$.

sibling relations significantly predicted the older adolescent's degree of exploration in the domain of interpersonal relations.

In the prediction of problem behavior, demographic variables that were entered on the first step did not explain a significant amount of variance in problem behavior either for the older or the younger child. The second set of predictors, the family relations measures, explained an additional 27% of variance in older child problem behavior and an additional 19% of variance in younger child problem behavior. However, the predictors that emerged as significant were not the same for the younger and the older child. The best predictor of younger child problem behavior appears to be the quality of his or her relationship with both parents. The quality of the sibling relationship and the quality of the father-adolescent relationship were significant predictors of the older child's problem behavior.

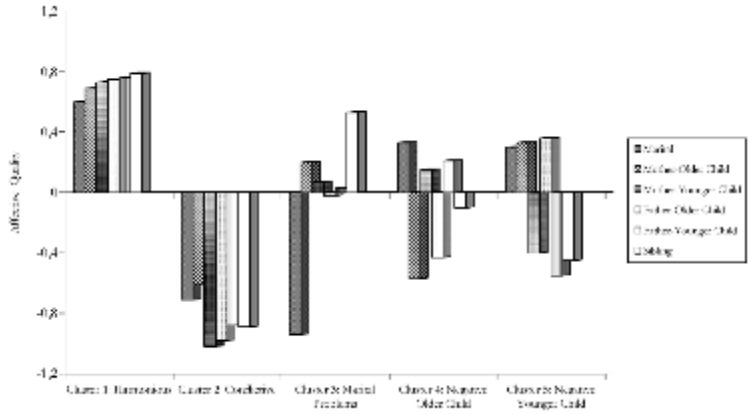

Figure 1: Family Relationship Clusters: Means of Affective Quality of Each Family Relation

FAMILY RELATIONSHIP PATTERNS

In the preceding analyses, the separate and combined effects of each family relationship on adolescent adjustment were examined. In the next set of analyses, we identify different patterns of family relationships and examine their associations with adolescent adjustment.

To identify different patterns of family relationships, a hierarchical cluster analysis using Euclidean distances and Ward's method for combining clusters was applied to the six family relations measures. The criteria adopted for deciding on the appropriate number of clusters were interpretability, adequate size, and the ability of clusters to differentiate outcome measure (Aldenderfer & Blashfield, 1988). The final solution yielded five interpretable clusters, presented in Figure 1. The Y axis represents the standardized family relations scores.

The first cluster ($n = 47$), labeled harmonious families, is characterized by mutual positive relationships. The families in the second cluster ($n = 27$), conflictive families, show low affective quality in all of the relationships. Cluster 3 families ($n = 35$) are characterized by a markedly negative marital relationship, neutral parent-adolescent relationships, and a positive sibling relation. The last two clusters show a pattern of differential parenting: in Cluster 4 ($n = 44$), both parents have a negative relationship with the older adolescent, whereas in Cluster 5 ($n = 45$), the relationship of the parents with the younger adolescents is negative. In both clusters, the

sibling relation tends to be negative; however, sibling relations in Cluster 5 were significantly more negative than sibling relations in Cluster 4, $F(4, 197) = 52, 26$, $p < .001$.

The effects of these different constellations of family relationships on adolescent adjustment were examined in two ways. First, we used analysis of variance to compare the mean level of adolescent adjustment across the five clusters. The results are presented in Table 4.

Again, no significant differences were found in the two dimensions of identity development between the five clusters. However, significant differences emerged in the level of problem behavior for both older and younger adolescents growing up in the families with different patterns of affective relationships. As expected, adolescents from harmonious families experience the least number of problems. The level of problem behavior that they report, however, does not differ significantly from the level reported by adolescents who grow up in the families characterized by negative marital relationships (Cluster 3). Finally, the highest level of problems was reported by adolescents from families with a generally negative affective quality of relationships (Cluster 2) and families with a low level of affection between parent and adolescents (Clusters 4 and 5).

Second, regression analysis was used, with adolescent adjustment measures as criteria and demographic variables (age and sex) and cluster membership as predictors. Cluster membership was entered into the regression as four dummy variables. Dummy codes were constructed so that the corresponding regression coefficients provide comparisons of the harmonious families (Cluster 1) to the other four clusters. In other words, the coefficients for Cluster 2, Cluster 3, Cluster 4, and Cluster 5 represent the effects of each of these patterns of family relations relative to the harmonious families.

The cluster membership appears to be important only for the indicator of deviant development. When entered on the second step after controlling for the demographic variables, the cluster membership explained 5% of variance in older adolescent problem behavior. The significant beta coefficients for Cluster 2, Conflictive Families (.19, $p < .001$) and Cluster 4, Negative Parents-Older Child Relationships (.11, $p < .05$), confirm the results of variance analysis. The cluster membership also explained an additional 5% of variance in younger adolescent problems. The Conflictive Families cluster (beta = .18, $p < .01$) and cluster Negative Parents-Younger Child Relationships (beta = .19, $p < .01$) emerged as significant predictors. In addition, Cluster 4, Negative Parents-Older Child Relationships, was marginally significant (beta = .13, $p < .05$).

TABLE 4
Differences in Mean Level of Adolescent Adjustment Across Family Clusters

Adolescent Adjustment	*Cluster 1: Harmonious* (n = *47*)	*Cluster 2: Conflictive* (n = *27*)	*Cluster 3: Marital Problems* (n = *35*)	*Cluster 4: Negative Older Child* (n = *44*)	*Cluster 5: Negative Younger Child* (n = *45*)	F *Value*
Identity: Exploration						
Older child	2.73	2.78	2.99	2.96	2.71	1.29
Younger child	2.84	2.92	2.86	2.70	2.87	0.40
Identity: Commitment						
Older child	3.34	3.10	3.46	3.43	3.11	2.18
Younger child	3.16	3.08	3.22	3.18	3.16	0.10
Problem behavior						
Older child	2.04^{a}	2.74^{b}	$2.32^{a,c}$	$2.56^{b,c}$	$2.43^{b,c}$	13.06*
Younger child	2.11^{a}	$2.72^{b,c}$	$2.42^{a,c}$	$2.55^{b,c}$	$2.63^{b,c}$	8.93*

NOTE: Different superscripts indicate significant group differences identified by Scheffé tests.
*$p < .001$.

DISCUSSION

In the present study, we tried to avoid shortcomings in traditional designs of studies on family relationship by assessing the quality of all six relationships present in intact families with two adolescent children: marital relationship, sibling relationship, and the relationship of each parent with each of the children. The information regarding the quality of the relationships was obtained from each family member regarding each other family member. In other words, the perceptions of both members involved in each dyadic relationship were assessed.

The first aim of the study was to examine the association of all family relations with adolescent adjustment. Surprisingly, only two significant associations between family relationships and identity development emerged. One possible explanation for the lack of significant associations between family relations and identity development concerns the age of our respondents. In the original theory (Erikson, 1968), the development of identity is seen as a lifelong process that starts in the first years of life. The measure that we used, however, appears to be more sensitive to the issues relevant to late adolescents. In this conceptualization of identity, it seems that real growth in identity development takes place in later years, during late adolescence (Meeus, 1996; Meeus, Iedema, Helsen, & Vollebergh, 1999). Indeed, in our previous work, we found stronger relationships between identity and parental support for late adolescents than for early and middle adolescents (Meeus & Dekovic, 1995).

The results show that all family relations do relate to adolescent problem behavior. It appears also from other studies (Lahey, Waldman, & McBurnett, 1999; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994) that family relationships, although relevant for development of competence, may be even more important for the development of problem behavior. The findings indicate that relationships in which the adolescent does not participate are related to his or her adjustment. For both older and younger adolescents, it appears that the quality of parent-sibling relationships is associated with the target adolescent's adjustment, which is consistent with previously reported results (Reiss et al., 1995; Stocker, 1995). However, as expected, the associations between problem behavior and the quality of relationships were stronger for those relationships in which the adolescent himself or herself is involved: the parent-adolescent relationships and sibling relationship. Although this finding can readily be explained by a greater importance of direct, proximal experience, it should be pointed out that this could also be (at least partly) an artifact. Recall that

the scores of relationship's quality are dyadic scores, combining perspectives of two parties involved. Research has shown that the method of combining scores increases the validity of the measure (Loeber et al., 2000; Stern & Kalof, 1996), but it also leads to informant confounds. In the present case, the adolescent perspective is reflected in both the problem behavior measure and in the measure of affective quality of the relationships in which adolescents participate, which could inflate the magnitude of these associations.

Whereas the associations between these relationships and problem behavior seems strong, only a few of these relations appear to be significant predictors of problem behavior when assessed simultaneously because of the considerable overlap among them. Regarding this point, somewhat different results were obtained for older and younger adolescents. In the case of younger adolescents, the relationship with both parents appears to be especially relevant in predicting problem behavior, whereas in the case of older adolescents, the best predictors were quality of the relationships with the father and with the sibling. These findings point to a developmental difference between early and middle adolescence. Most of the younger adolescents in our sample are early adolescents (average age 12), a period in which parental influence is still very important. Their older siblings (average age 14) are in the period of middle adolescence, when adolescents spend less time with their families and become more involved with peers. Consequently, the influence of peers, including siblings, seems to increase (Brown, Mounts, Lamborn, & Steinberg, 1993; Dekovic, 1999). Furthermore, the role of the father seems to become more pronounced during adolescence. The reasons for this salience of father-adolescent relationship is not well understood (Lamb, 1997). It has been suggested that "fathers' relative unavailability compared to mothers may bestow on them and their relationship with children a particular psychological salience" (Brody, Stoneman, & McCoy, 1994, p. 283). In addition, fathers see themselves as more actively involved than mothers in encouraging independence and behavioral autonomy, the central developmental tasks during adolescence (Shulman & Seiffge-Krenke, 1997). This may also increase their importance for this period of development.

The second aim of the present study was to identify different patterns of family relationships. We assumed that the constellation of the affective quality of six relationships existing in four-person families reflects a system property and provides information about family functioning that is not captured in an individual's assessment of abstract family functioning. The cluster analysis in this sample resulted in five patterns of family rela-

tionships. Although empirically derived clusters are potentially unstable from one sample to the next, the distinction among clusters appears to be more than arbitrary. Five clusters were coherent and easily interpretable: harmonious families, conflictive families, families characterized by marital difficulties, and families with different quality of relationships between parents and each adolescent. In addition, our results of cluster analysis closely resemble the results of a study by O'Connor et al. (1998). Although these two studies differ with regard to the cultural background of participants and the instruments used to assess family relationships, the same five clusters were identified in both studies. This provides further support for the validity of these findings. Interestingly, in addition to harmonious, conflictive, and marital difficulties cluster, both studies identified two clusters reflecting nonshared parent-adolescent relationship: one in which the relationships of both parents with the older adolescent are more positive and one in which parent-adolescent relationships with the younger adolescent are more positive. These findings underscore the need to turn attention to children's varying experience within the same family. Several studies have shown that there are differences in both the mother's and the father's relationship with siblings and that these differences are associated with variation in the children's psychological adjustment: Children who receive less favorable treatment than their siblings do have more adjustment difficulties than other children (Brody et al., 1994; Dunn et al., 1990; McGuire, Dunn, & Plomin, 1995; Stocker, 1995).

These different configurations of family relationships were, in predictable ways, related to the adolescent's problem behavior. Clusters characterized by the overall negative quality of relations, and clusters in which the target adolescent has a more negative relationship with both parents than his or her sibling does, appear to be relevant for the development of problem behavior during adolescence. A particularly interesting finding is that adolescents from Cluster 3 families (with a negative marital relationship and a positive sibling relationship) do not significantly differ from adolescents growing up in harmonious families (Cluster 1) in the level of problem behavior they experience. It is possible that a positive sibling relationship might function as a buffer against the negative effects of marital problems and therefore might be a within-family protective factor (O'Connor et al., 1997). Future study is necessary to understand more fully the potential protective effects of a positive dyadic relationship in the context of a conflictual family climate.

It should be pointed out that the association between family constellations and adolescent problem behavior were of moderate size and consequently accounted for only a small proportion of variance. This is not

surprising given the fact that the development of problem behavior is a result of a complex interplay of multiple factors at biological (e.g., genetic, neurobiological, neurophysiological), psychological (e.g., affective, social-cognitive, socioemotional), and social levels (e.g., community, culture) that affect individuals over the life course (Dishion, 2000; Dishion, Andrews, & Crosby, 1995; Patterson, Reid, & Dishion, 1992).

Family systems theory is a dynamic, circular, and more complex theory than our statistical technique can handle (Cowan & Cowan, 2002). We cannot and do not claim that this study provides the test of the theory, but taken together, the present findings offer tentative empirical support for some assumptions of family systems theory. A first assumption concerns the existence of boundaries between the family subsystems. In addition to the parent-child subsystem, we found evidence pointing out the existence of parental and sibling subsystems. There was more reciprocity between members of the same subsystems (spouses, siblings) than between members of different subsystems (parents and children). In addition, in our study, quality of the marital relationship and quality of the sibling relationship seem to be independent of each other. This is contrary to previous research in which quality of the marital relationship was found to be predictive of quality of the sibling relationship (e.g., Brody et al., 1994). A possible explanation for this discrepancy in findings could be differences in the developmental period studied (middle childhood vs. middle adolescence): The quality of the marital relationship might be more important for sibling relations among young children than among adolescents. Another explanation concerns different operationalizations of marital quality. In the present study, we used a broad index of affective quality of the relationship. It is possible that more specific aspects of marital relationship, such as overt conflict between parents to which children are exposed, might be more relevant for their sibling relationship (Fincham et al., 1994).

A second assumption concerns differences between families in the patterns of family relations. We found five distinct and theoretically consistent clusters of different constellations of affective family relations, which were also found in another study (O' Connor et al., 1998). Third, consistent with the notion that all family relationships are important for adjustment, the results demonstrate that differences in adolescent problem behavior are, at least in part, related to the affective quality of all family relations and to the pattern of relationships within the family.

Moreover, two sets of findings seem to suggest that the affective quality of family relations reflect "child-driven" processes (Lytton, 1990; O'Connor et al., 1998). First, the results of correlational analysis show

that mothers and fathers relate in a similar way to the same adolescent. There is more agreement between parents regarding the same child than between the same parent's relations with each of the children. Second, we found two clusters specific for adolescents (i.e., families in which both parents are closer to the same adolescent). No such parent-specific clusters (i.e., clusters in which differences appear between the mother's and father's relations with their children) were found.

There are several limitations of the present study worth noticing. A first limitation concerns a conceptual issue. Family functioning in the present study is defined as a one-dimensional construct. In other words, we have assessed only one aspect of family functioning—the affective quality of the relationship. Although emotional bonding is a key feature that defines all families, regardless of their structure, composition, or societal position, it provides only limited insight into the overall level of family functioning. In addition to the task of nurturing and supporting individual family members and building family cohesiveness, there are other tasks that a family must fulfill, such as defining the limits of acceptable and appropriate behavior in the family (family values), defining the role of each family member, adapting to changing needs and demands, and so on (Hayden et al., 1998; Moos, 1990; Olson, 1988). These aspects of family functioning also deserve attention in future research.

A second limitation concerns an analytic issue: the unit of analysis explored. It should be noted that in the present study the assessment of family functioning was not based on individual members' assessments of their family but rather, on their assessments of their dyadic relationships with another family member. In this respect, we followed the suggestion of several researchers (Cole & Jordan, 1989; Martin & Cole, 1993; Sabatelli & Bartle, 1995) who pointed out that it is more useful to ask about dyadic relationships among family members than to ask individuals to generalize to the abstract concept of "the family." Such an abstraction may create error in the assessment of family functioning due to differences in meaning. Our approach makes explicit who is being described. The result of this approach is, however, that the key unit of analysis is still the dyad. The strategy that we chose to capture processes that exist at the family level and to describe something unique to the system was cluster analysis. This strategy is useful in providing insights into family processes, but it has its limitations as well—it ignores the intermediate levels such as the level of triadic interactions (i.e., mother-father-adolescent triad). For example, it has been shown that parental behavior when the parent is interacting with the child alone differs from behavior that the same parent shows toward the child when interacting in a triadic context

(that is, when the other parent is present as well) (Deal, Hagan, Bass, Hetherington, & Clingempeel, 1999; Johnson, 2001). Our reliance on assessment of individual family dyads makes it impossible to examine this issue. Future research relying not only on family members' self-report but also on behavioral observations of family members interacting with each other in different contexts (dyadic, tradic, the whole family) is needed for more complete understanding of the processes in family relationships.

A final limitation concerns the sample used in this study. All of the participating families were middle-class, intact families without any serious psychopathology. Future research is needed to examine whether these findings can be generalized and whether similar processes operate in the families who experience difficulties due to, for example, child or parent behavior problems, marital discord, or poverty.

Nevertheless, this study highlights the utility of moving beyond studying different family dyads separately to considering combinations of family relationships within the same family when attempting to understand individual differences in adolescent development. The past two decades have been fruitful for the study of the family, as witnessed by the growing attention the family is receiving as a research object, despite the inherent difficulties in assessing such a complex construct (Dakof, 1996; McCord, 1996). The family systems perspective is a useful approach for conceptualizing the family as a complex and interactive context of development. It also serves as a basis for many family-oriented interventions (Cottrell & Boston, 2002). It is a challenge for researchers on family and adolescent development to find the means to assess its rich premises and bridge the gap between scientific research and clinical practice.

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