

The connection of observed hostile family conflict to adolescents' developing autonomy and relatedness with parents

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Abstract

This study examined the link between hostile conflict in families with adolescents and adolescents' efforts to establish autonomy and relatedness in interactions with parents in both normal and psychiatrically impaired groups. Longitudinal, observational data were obtained by coding family interaction tasks involving 53 adolescents and their two parents at age 14 and age 16 years. Measures were obtained for hostile adolescent-parent conflict, hostile marital conflict, and indices of adolescents' success or difficulty in establishing autonomy and relatedness in interactions with parents. Relative increases in adolescent-parent hostile conflict from age 14 to 16 years were predicted by adolescents' behaviors actively undermining autonomy in disagreements with parents at age 14 years. Hostile marital conflict observed by the adolescent at age 14 years predicted adolescent withdrawal from the hostile parent over time, a prediction that was not mediated by observed parenting behaviors. Difficulties in establishing autonomy and relatedness were linked to prior history of psychiatric difficulty. A developmental view of conflict as both reflecting and predicting difficulties in adolescents' establishing autonomy and relatedness in interactions with parents is proposed.

Hostile conflict in families with adolescents has been repeatedly linked to negative adolescent outcomes ranging from delinquency and drug use to anxiety and depression (Emery, 1982; Fauber, Forehand, Thomas, & Wierson, 1990; Gehring, Wentzel, Feldman, & Munson, 1990). Comparatively little research, however, has examined the *development* of hostile conflict and the ways it changes over time in adolescent-family

interactions, or considered how such conflict is related to other aspects of adolescent social development within the family, particularly in families of severely disturbed adolescents (Collins, 1990; Smetana, 1989). Yet, understanding the developmental precursors and sequelae of hostile family conflict is essential to guiding efforts to prevent its occurrence or lessen its impact.

This study examined the role of hostile family behaviors as both precursors and sequelae of difficulties handling a major developmental challenge for both normal and psychiatrically impaired adolescents: establishing autonomy while maintaining a sense of relatedness in interactions with parents (Allen, Hauser, Bell, & O'Connor, 1994a; Collins, 1990; Grotevant & Cooper, 1985; Steinberg, 1990). Bowlby (cited in Murphey et al., 1963) coined the term "autonomous-relatedness" to describe the successful resolution of this developmental

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challenge—a resolution that has now been linked to higher levels of self-esteem, assertion, dating competence, ego development, and adjustment to separations (Allen, et al., 1994a; Collins, 1990; Connell & Wellborn, 1993; Grotevant & Cooper, 1985; Hill & Holmbeck, 1986; Kenny, 1987; Lamborn & Steinberg, 1993; Moore, 1987; Ryan & Lynch, 1988; Steinberg, 1990). Less optimal outcomes can be seen in a lack of positive demonstrations of autonomous relatedness (e.g., quiet withdrawal in the face of disagreements), or, alternatively, active efforts of adolescents or parents to *undermine* either autonomy or relatedness in interactions, efforts that have been linked to both depression and externalizing problem behaviors (Allen, Hauser, Eickholt, Bell, & O'Connor, 1994b; Kobak & Ferenz-Gillies, 1995).

Hostile conflict appears likely to play several roles in the development of adolescent autonomy and relatedness, in part depending upon where the conflict appears within the family. Hostile conflict between adolescents and parents has been associated with a range of adolescent difficulties including criminal activity, peer rejection, and academic failure (Henggeler, Hanson, Borduin, Watson, & Brunk, 1985; Patterson, DeBaryshe, & Ramsey, 1989). Although some types of conflict may reflect adjustments to normative stressors such as puberty (Hill, 1988), high levels of hostile conflict are believed to occur when a relationship is not meeting the basic needs of at least one family member (Kobak & Cole, 1994). In adolescence, difficulties with the fundamental task of establishing autonomy vis-à-vis parents appear likely to predict the development of increased levels of adolescent hostility over time. This may be expected both as a response to the frustration of an increasingly pressing developmental drive, and also as a means of attaining autonomy by undermining a parental relationship that is not permitting the development of autonomy *within* the relationship (Allen, Aber, & Leadbeater, 1990; Hagan, Hollier, O'Connor, & Eisenberg, 1992; Kobak & Ferenz-Gillies, 1995). To date, the

role of difficulty in establishing autonomy within the family as a developmental precursor of escalating levels of hostility during adolescence has not been empirically examined.

A second frequently considered arena of conflict in families with adolescents lies within the marital dyad. Hostile marital conflict may signal to the adolescent that family relationships are too fragile to survive the challenge of growing autonomy on the part of the adolescent by demonstrating that parents are unable to tolerate disagreements with each other. Marital hostility provides the adolescent with a highly salient model of unpleasant and maladaptive relationships between adult family members. Viewing such conflict may make establishing positive, autonomous relationships with parents in an (ultimately) adult-adult relationship appear unfeasible, unattractive, or both. High levels of hostile parental conflict may also signal fragility in family relationships, undermine an adolescents' felt security in the family (Davies & Cummings, 1994), and thus, inhibit efforts on the part of the adolescent to establish autonomy within the family—particularly with the hostile parent. Prior researchers have found effects of marital conflict on child and adolescent behavioral outcomes, with these effects sometimes appearing mediated by the parent-child relationship (Fauber et al., 1990; Tschann et al., 1989) and other times not (Crockenberg & Covey, 1991; Fauber et al., 1990; Peterson & Zill, 1986). Marital hostility has been repeatedly linked to poor adolescent functioning, particularly to higher levels of externalizing behaviors in males and internalizing behaviors in females (Camara & Resnick, 1988; Davies & Cummings, 1994; Emery, 1982; Fauber et al., 1990; Grych & Fincham, 1990), but the mechanisms by which it influences adolescent development have received virtually no empirical examination.

In sum, theory would suggest that our understanding of both the precursors and the sequelae of hostile conflict in families with adolescents can be enhanced by adopting a functionalist perspective that consid-

ers the relation of conflict to the adolescent's success in the critical task of developing autonomy and relatedness with parents over time. From this perspective, adolescents' efforts to establish autonomy and relatedness are viewed as ongoing *processes* moving them along a developmental pathway. Yet, because establishing autonomy and relatedness appear to be critical stage-salient tasks in development, adolescents' progress in these processes may also be markers of overall social functioning and social development (Sroufe & Jacobvitz, 1989). The role of adolescent displays of autonomy and relatedness with parents as markers of functioning is supported by studies linking such displays to higher levels of ego development and self-esteem and to lower levels of both depression and externalizing behaviors (Allen et al., 1994; 1994b).

Given the developing nature of family interactions in adolescence, it is presumed that critical continuities are most likely to be heterotypic in nature: stabilities are expected, not in the precise behaviors displayed across time—these will change as development progresses—but rather in the underlying function of observed interactive behaviors (Sroufe & Jacobvitz, 1989). For example, difficulties mastering a developmental task at one point in development may predict the eventual emergence of hostile behavior—whether or not such hostility was previously displayed. Similarly, the impact upon the adolescent of conflict within the marital dyad may be best viewed through the lens of current developmental processes in the adolescent. In essence, the approach taken recognizes that hostility within the family may both mark ongoing developmental difficulties, but may also bring about or increase such difficulties by threatening the parent-adolescent relationship during a critical period of development. A functionalist view of hostile family conflict considers it as interwoven with both normal and abnormal developmental pathways; given this view, hostile conflict is best understood not as cause or effect with respect to other aspects of social develop-

ment, but as playing both roles simultaneously.

To date, all of these theory-based predictions about the relation of hostile conflict to adolescents' developing autonomous relatedness with parents have received virtually no examination with the type of longitudinal, observational studies that are needed to highlight developing patterns of adolescent-family interaction (Collins, 1990). At this point, even basic observational data on the stability or instability in conflictual behavior over time is lacking for this period of rapid social and developmental change. Given the biases inherent in self-reports about social interactions (Nisbett & Wilson, 1977; Noller & Callan, 1988), and the limits of cross-sectional data, studies using longitudinal and observational methods are essential to increase our understanding of the relation of conflict to social development in families with adolescents. We also have relatively little data from studies that consider both normal and abnormal patterns of development.

This study used observational data collected over a 2-year span in midadolescence to examine the relation of hostile family conflict to the development of adolescents' autonomy and relatedness in family interactions among a normal and a psychiatrically disturbed sample of adolescents. The focus of the study was upon family members' behaviors exhibiting autonomous relatedness, or undermining either autonomy or relatedness when discussing a disagreement. To consider these issues across different levels of adolescent functioning, both a high school sample and a sample of adolescents who were psychiatrically hospitalized at age 14 years were examined, with initial analyses conducted to assess ways that this particular sample of normal and severely disturbed adolescents differed in family behaviors.

Adolescents' difficulties establishing and expressing their autonomy with parents when discussing disagreements were hypothesized to predict increasing adolescent hostility over time in interactions with parents. Both passive difficulties (i.e., failure

to assert autonomy) and more active difficulties (i.e., behaviors that directly undermine autonomy, such as enmeshing behaviors) were examined as predictors of emerging hostility. Hostility in the marital dyad when discussing disagreements was hypothesized to hinder development by reducing the adolescent's active display of autonomous relatedness in interactions with parents over time. More exploratory analyses also considered whether this association would result simply from the adolescent observing parents modeling maladaptive adult family relationships, or whether it would be mediated by parental behaviors toward the adolescent. A 2-year time span was selected to allow examination of evolving changes in the nature of family interactions while still remaining within the infrequently observed mid-adolescent era.

Method

Participants

Fifty-three adolescents and their two parents participated in this study (total $N = 159$). There were 24 male and 29 female adolescents. Each family included an adolescent who was a high school freshman (ninth grade) ($N = 33$) or a similar-aged, nonpsychotic, nonorganically impaired, psychiatrically hospitalized adolescent ($N = 20$) ($M = 14.7$ years at Time 1; 16.6 years at Time 2). Hospitalized adolescents carried a range of diagnoses, including oppositional defiant disorder (21%), conduct disorder (19%), major depression (19%), other mood disorders (8%), and a range of other disorders (33%). Families in both groups were predominantly upper-middle class (45% were in Hollinshead (1975) group I; 32% in group II; and 23% in groups III, IV, or V); all participants were White. Participants and their families were paid \$30.00 for participating in the family session. (A more complete description of sampling procedures and sample demographics are provided in Hauser et al., 1991.)

Adolescents from the high school and

psychiatric groups did not significantly differ in terms of age, gender, birth order, or number of siblings, and differed only moderately in social class (higher for the high school sample). The sampling procedure used was selected to examine adolescents across a broader range of levels of psychosocial functioning than would typically be available in a normal sample. Psychiatric hospitalization at age 14 years was thus used as a criterion to obtain a sample likely to be at lower levels of functioning. To assure that observed relations among family interaction measures were not an artifact of comparing two very different groups of adolescents, a dummy variable for adolescents' psychiatric history (high school vs. psychiatrically hospitalized sample) was entered as a covariate into substantive analyses, so that any variance in outcomes explained by this sampling factor could be appropriately monitored. Also, potential interactions of history of hospitalization with other relations of interest in the data were examined to consider whether significant findings might apply only to one of the two groups or differ between the groups.

Setting and procedure

Individual adolescent subjects and families were assessed at age 14 years in private rooms at either their hospital (for the sample that was hospitalized at age 14) or their school (for the high school sample). Family interaction data were collected in the third of three sessions (spaced one month apart) conducted as part of a larger study (Hauser et al., 1984). (Prior sessions involved collection of self-report and semistructured interview data from adolescents.) Interaction data was collected using a revealed differences task (Strodtbeck, 1951) in which family members were first interviewed separately about moral dilemmas, and then brought together to discuss issues about which they disagreed. Family members were asked to take up to 10 min to discuss their first disagreement, and if possible, to resolve it. Families were then presented with

a new disagreement to discuss. This procedure continued for 30 min, with disagreements presented so as to alternate which family member was in the minority. This task challenges adolescents to establish and display cognitive and emotional autonomy vis-à-vis parents in discussions about interpersonal behaviors—a frequent challenge for actual parent-adolescent conflicts focused on less hypothetical issues (Smetana, 1989).

The same procedures were used for assessments at both age 14 and age 16 years, although different moral dilemmas were used in family interactions at each age. The adolescents and families in this sample were part of a larger cohort of adolescents in two-parent families initially assessed at Time 1 ($N = 77$). For the purposes of this study, attrition resulted when any family member refused to return to participate, even if others were reinterviewed individually. Attrition analyses indicate that adolescents who did not participate in the study at Time 2 were more likely from the previously hospitalized group, had displayed less autonomous relatedness in interactions with both parents at Time 1, and had less autonomous relatedness displayed toward them by their mothers at Time 1. No differences were found on any other measures of autonomous relatedness, inhibiting autonomy or inhibiting relatedness between family members for those continuing versus not continuing in the study at Time 2.

Measures

The Autonomy and Relatedness Coding System (Allen, Hauser, Borman, & Worrell, 1991; Allen et al., 1994a; 1994b) builds from a system developed by Grotevant and Cooper (1985) and examines behavior promoting or undermining autonomy and relatedness in the family interaction task described above. The system yields a rating for each family member's overall behavior toward each other family member in the interaction (e.g., separate ratings for adolescents' hostility toward mothers and for mothers' hostility toward adolescents). Rat-

ings are molar in nature, yielding overall scores for each family member's behavior toward each other member across the entire interaction; however, these molar scores are derived from an anchored coding system that considers both the frequency and intensity of each speech relevant to that behavior during the interaction in assigning the overall molar score.

The Autonomy and Relatedness coding system produces 0-4 ratings, using half-point intervals, which are assigned to each of 10 specific types of interactive behavior that are then summed together on a priori grounds into 3 primary scales for behaviors including: (a) *exhibiting autonomous relatedness*, which sums ratings of behaviors expressing and discussing reasons behind disagreements, confidence in stating one's positions, validation and agreement with another's position, and attending to the other person's statements; (b) *undermining autonomy*, which sums ratings of behaviors that make it more difficult for individuals to express autonomy in a discussion, such as by overpersonalizing a disagreement, recanting a position without appearing to have been persuaded the position is wrong (thus ending the discussion), or pressuring another person to agree other than by making rational arguments; and (c) *hostile conflictual behavior*, which sums ratings of behaviors undermining relatedness by overtly expressing hostility toward another member, or by rudely interrupting/ignoring a family member. Thus, each family member receives a single rating for each of 10 different behaviors toward each other family member across the entire interaction. These 10 ratings are then summed to yield 3 different scale scores for each family members' behavior toward each other member, which are then used in analyses below. Table 1 provides extended definitions of each class of behavior, as well as delineation of specific ways the behavior might be displayed in the course of a disagreement.

Raw scores for each rated behavior in a category were summed to yield a scale score for that category (e.g., the undermining autonomy scale was the sum of ratings for

Table 1. Options for handling autonomy and relatedness in disagreements

Function of Behavior	Conceptual Definition	Manifestation in Disagreement	Sample Behavior
Exhibiting autonomous relatedness	Behaviors reflecting differentiation and independence of thought in the context of interest and engagement in another person's thoughts and feelings	Clear statements of reasons underlying one's position, and interest and attention to other person's thoughts and feelings	"I think you have a good point there, but I don't draw the same conclusions from it that you do."
Undermining autonomy	Behaviors that make it difficult or impossible to discuss disagreements and reasoning behind them	Overpersonalizing the disagreement or attempting to prematurely end it by recanting one's position or pressuring others to do so	"You're just saying that because you're afraid to let me win." or "OK, OK, I'll just give in."
Hostility (e.g., undermining relatedness)	Behaviors that undermine the relationship between speakers	Overtly critical, rude, and hostile behaviors, or rudely interrupting or ignoring behaviors	"That's one of your more stupid ideas."

overpersonalizing, recanting, and pressuring behavior in the interaction). Although codes were grouped into scales based on their theoretical function, these groupings were also relatively consistent with a 3-factor solution in a confirmatory factor analysis of the 10 scales (all loadings above .35, goodness of fit index [GFI] = .92), with the exception of one behavior from the inhibiting autonomy scale (recanting a position prematurely) that did not load on any factor. This small incongruity is reasonable given that related codes for some scales served as alternative and, to some extent, mutually exclusive means of expressing the same function, and thus were not correlated.

Exhibiting autonomous relatedness was virtually uncorrelated with either inhibiting autonomy or inhibiting relatedness (mean r 's across dyads were $-.04$ and $-.08$, respectively). Inhibiting autonomy and inhibiting relatedness were moderately intercorrelated (mean r across dyads = .32).

Interactions at both times were coded using both audiotapes and transcripts by three graduate students in psychology who were blind to all subjects data except for

the specific interaction session at a given age that they were coding. Coders were trained in use of the system and supervised as a group in coding transcripts until they were sufficiently reliable to code independently; reliabilities were assessed randomly during the subsequent period of independent coding of all transcripts. Reliabilities, assessed via intraclass correlation coefficients, were .84, .82, and .70 for exhibiting autonomous relatedness, hostility, and undermining autonomy, respectively.

Prior research has demonstrated the reliability and construct validity of these codes, with connections of each class of behavior in this revealed differences discussion to theoretically sensible external correlates (Allen et al., 1994a; 1994b). Autonomous relatedness has been linked to a range of outcomes including higher levels of adolescent ego development and self-esteem and lower levels of depression and externalizing behavior problems. Behaviors undermining autonomy have been linked to higher levels of depressed affect and lower levels of ego development. Hostile, relationship-undermining behaviors have been linked to higher levels of externalizing be-

havior problems and lower levels of ego development.

Results

Preliminary analyses

Initial analyses examined the role of gender and adolescents' psychiatric (vs. high school) group membership on the primary analyses presented. No main effects were found for adolescent gender nor its interactions with any of the relations examined in the study, and thus all results are collapsed across adolescent gender. Psychiatric status displayed main effects for a number of family interaction measures at both Times 1 and 2 (with the most common finding being significantly lower levels of autonomous relatedness in the psychiatric group). These specific effects are highlighted further in the models below. When the models described below were examined separately for the psychiatric and high school samples, no significant differences were found between models for the two samples using structural equations modeling techniques also described below. This indicates that psychiatric status (and any sampling factors confounded with it), did not interact with any of the relations described below and that it is appropriate to pool the psychiatric and high school samples so as to allow identification of effects that occur consistently enough across both groups to be significant for the sample as a whole. In all cases, a dummy variable for prior psychiatric hospitalization was retained in models and examined. This approach allows the main effect of psychiatric hospitalization (and all subsample differences associated with it) to be appropriately considered in all models and, additionally, prevents the divergent nature of the samples examined from yielding artifactual findings.

Given that different situations were used as prompts for discussion at age 14 and 16 years, it was not possible to examine whether family members increased or decreased in absolute terms in expressions of autonomy and relatedness. The following analyses

thus consider family members' relative changes in autonomy and relatedness in comparison to other families in the sample.

Stability of family interaction behaviors

Initial analyses examined stabilities of relevant parent and adolescent behaviors over time as well as simple univariate correlations among relevant family interaction measures over time. Results are presented in Table 2. These analyses reveal moderate to high stability in adolescents' displays of autonomous relatedness toward both parents, and low to moderate stability in adolescents' hostility toward fathers and in parents' marital hostility over a 2-year period. Adolescents' hostility toward mothers and behavior undermining autonomy toward either parent did not display significant stability.

Predicting the development of adolescent hostility

One primary hypothesis of this study was that adolescents' hostile conflictual behavior would be best predicted by a history of difficulties in establishing autonomy or relatedness in relationships with parents. This hypothesis was examined in a path model in which scales for family members' behaviors undermining autonomy and for adolescents' hostile conflictual behavior at age 14 years were considered as potential predictors of adolescent hostility at age 16 years. Structural equations modeling techniques were used to assess this and other hypotheses in this study to allow consideration of the effects of multiple measures and multiple paths among measures. These techniques also make it possible to consider predictions for family interactions with mothers and with fathers simultaneously, and they allow relatively straightforward tests of whether an overall set of relations differs across levels of some other variable (e.g., gender or prior psychiatric hospitalization). Use of these techniques is appropriate, even given the small sample size of the study, as the number of parameters

Table 2. *Correlations of autonomy and relatedness in adolescent family interactions from age 14 to age 16 years*

	Age 14		Age 16			
	Adolescent to Mother		Adolescent to Father		Mother to Father	
	Autonomous-Relatedness	Undermining Autonomy	Autonomous-Relatedness	Undermining Autonomy	Hostility	Hostility
Adolescent to mother						
Autonomous-relatedness	.63***	.02	.44***	-.17	-.22	-.13
Undermining autonomy	-.21	.06	-.32*	-.09	.41**	.01
Hostility	-.30*	.03	-.33	.08	.31**	-.05
Adolescent to father						
Autonomous-relatedness	.45***	-.19	.57***	-.07	-.17	-.11
Undermining autonomy	-.19	-.02	-.05	.07	.49***	-.10
Hostility	-.25	.07	-.28*	.05	.30*	.01
Mother to father						
Hostility	-.12	-.04	-.14	-.08	-.00	.28*
Father to mother						
Hostility	-.03	.11	-.16	-.02	.14	.08
History of psychiatric hospitalization at 14	-.45***	.01	-.47***	.04	.15	.05

Note: $N = 53$.
 * $p < .05$; ** $p < .01$; *** $p < .001$.

being tested for statistical significance for the primary hypotheses of the study is actually quite small (generally 1 to 2 *df* per analysis for primary hypotheses; Tanaka, 1987). Analyses were conducted using maximum likelihood analyses conducted with LISREL VII statistical software (Jöreskog & Sörbom, 1988). For descriptive purposes, results of simple correlations within Time 1 and Time 2 are also presented (in Table 3) for their potential value in helping interpret results of structural equations models.

Two different models were examined, representing: (a) predictions of later hostility from adolescents' lack of positive displays of autonomous relatedness at Time 1; and (b) predictions of later hostility from adolescents' autonomy-undermining behavior at Time 1. Only the latter predictions (from autonomy-undermining behavior) were significant. The model depicting these is described below.

Preliminary analyses examined whether different models were needed to explain adolescents' behaviors toward fathers and toward mothers. Comparison of models in which relations with father and with mother were presumed not to differ versus allowed to vary revealed no significant gain in explained variance from permitting models to vary across parent (Model Assuming No Difference Between Parents: GFI = .936, $\chi^2 = 12.16$; Model Assuming Relations for Mothers and Fathers Differ: GFI = .958, $\chi^2 = 8.16$; Test of Improvement to Model from Allowing Paths with Mother and Father to Vary: $\chi^2(4) = 4.00$ n.s.). This means that the observed relations reported below did not differ significantly depending upon whether interactions with mother versus with father were being considered, and there was no significant gain to models from allowing these parameters to differ. Similar analyses also revealed that prior psychiatric history did not alter any of the relations obtained in the model ($\chi^2(6) = 0.60$, n.s.). Given these findings, a single overall model was tested for adolescents' interactions with fathers and with mothers for the entire sample. This model, which fit the data well

(GFI = .936, $\chi^2 = 12.16$, $p = .433$), is depicted in Figure 1.

As Figure 1 depicts, future levels of adolescent hostility toward parents were best predicted by adolescents' own behaviors actively undermining autonomy in these relationships at age 14 years (e.g., recanting positions prematurely or pressuring a parent to do so, or overpersonalizing disagreements with parents), even when accounting for prior levels of adolescent hostility. Psychiatric history was significantly related to adolescents' hostility toward parents at Time 1 (teens who had been hospitalized were more hostile), but did not have any effects on subsequent levels of hostility.

For exploratory purposes, alternative models were also examined to determine whether any behaviors by parents (either at Time 1 or Time 2) would predict adolescents' future hostility. Each parental behavior was examined as a predictor of Time 2 adolescent hostility in a model also including Time 1 adolescent hostility and prior psychiatric history. No significant improvement in explained variance was obtained by including any of these measures in the model, nor were any paths from these additional behaviors to later adolescent hostility significant either in isolation or as a group. Nor were observed predictions mediated by pathways through adolescent behavior undermining autonomy at Time 2. These findings indicate that adolescents' behaviors undermining autonomy at age 14 years were a moderately strong predictor of later adolescent hostility (whereas prior levels of hostility were not) and did not have their relation to later hostility mediated by other observed interactive behaviors.

Predictions from marital hostility to adolescents' behaviors in the family

The second major question considered in this study was whether parents' hostile marital conflict when their adolescent was 14 years of age would predict changes in adolescents' behaviors toward parents by age 16. In particular, it was predicted that hos-

Table 3. Within-time correlations of autonomy and relatedness in adolescent family interactions at age 14 and age 16 years

	Adolescent to Mother			Adolescent to Father			Mother to Father Hostility	Father to Mother Hostility	History of Psychiatric Hospitalization at 14
	Autonomous-Relatedness	Undermining Autonomy	Hostility	Autonomous-Relatedness	Undermining Autonomy	Hostility			
Adolescent to mother									
Autonomous-relatedness	—	-.21	-.25	.72***	-.16	-.31*	.11	.00	-.46***
Undermine autonomy	.12	—	.38**	-.36**	.60***	.25	.19	.28*	.15
Hostility	.03	.38**	—	-.36**	.24	.73***	.33*	.56***	.32*
Adolescent to father									
Autonomous-relatedness	.69***	-.26	-.22	—	-.17	-.29*	-.02	-.02	-.56***
Undermine autonomy	-.20	.47***	-.01	.01	—	.27	.12	.14	.15
Hostility	-.17	.06	.53***	-.15	.17	—	.12	.44***	.24
Mother to father									
Hostility	-.05	.29*	.43**	-.14	.08	.19	—	.53***	.07
Father to mother	.23	.25	.39**	.09	.05	.18	.25	—	-.01
History of psychiatric hospitalization at 14	-.45***	.01	.15	-.47***	.04	.15	.05	-.10	—

Note: N = 53. Correlations above the diagonal are within-time correlations at age 14; correlations below diagonal are within-time correlations at age 16. *p < .05; **p < .01; ***p < .001.

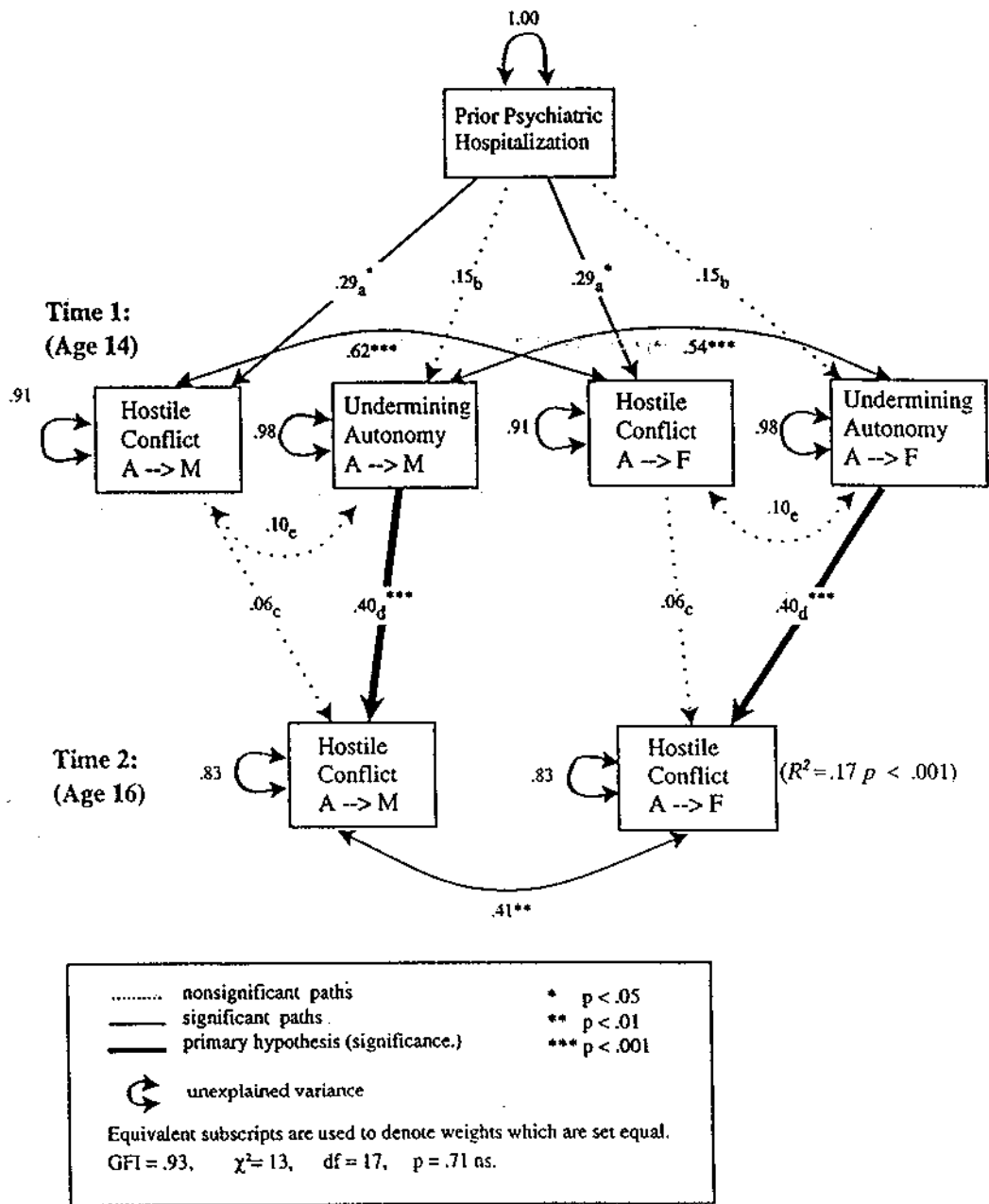


Figure 1. Prediction of adolescent hostility at age 16 from adolescent hostility and behaviors undermining autonomy with parents at age 14 years.

tility expressed by a parent toward their spouse would predict the adolescent displaying relatively lower levels of autonomous relatedness in interactions with that parent over time. Once again, results for adolescents' behaviors toward mothers versus fathers or for relations in the psychiatric

versus high school sample did not differ significantly (test of Improvement to Model from Allowing Paths for Mother and Father to Vary: $\chi^2(4) = 2.20$, n.s.; Test of Different Relations in High School versus Psychiatric Sample $\chi^2(5) = 0.39$, n.s.), indicating that the model presented below was applica-

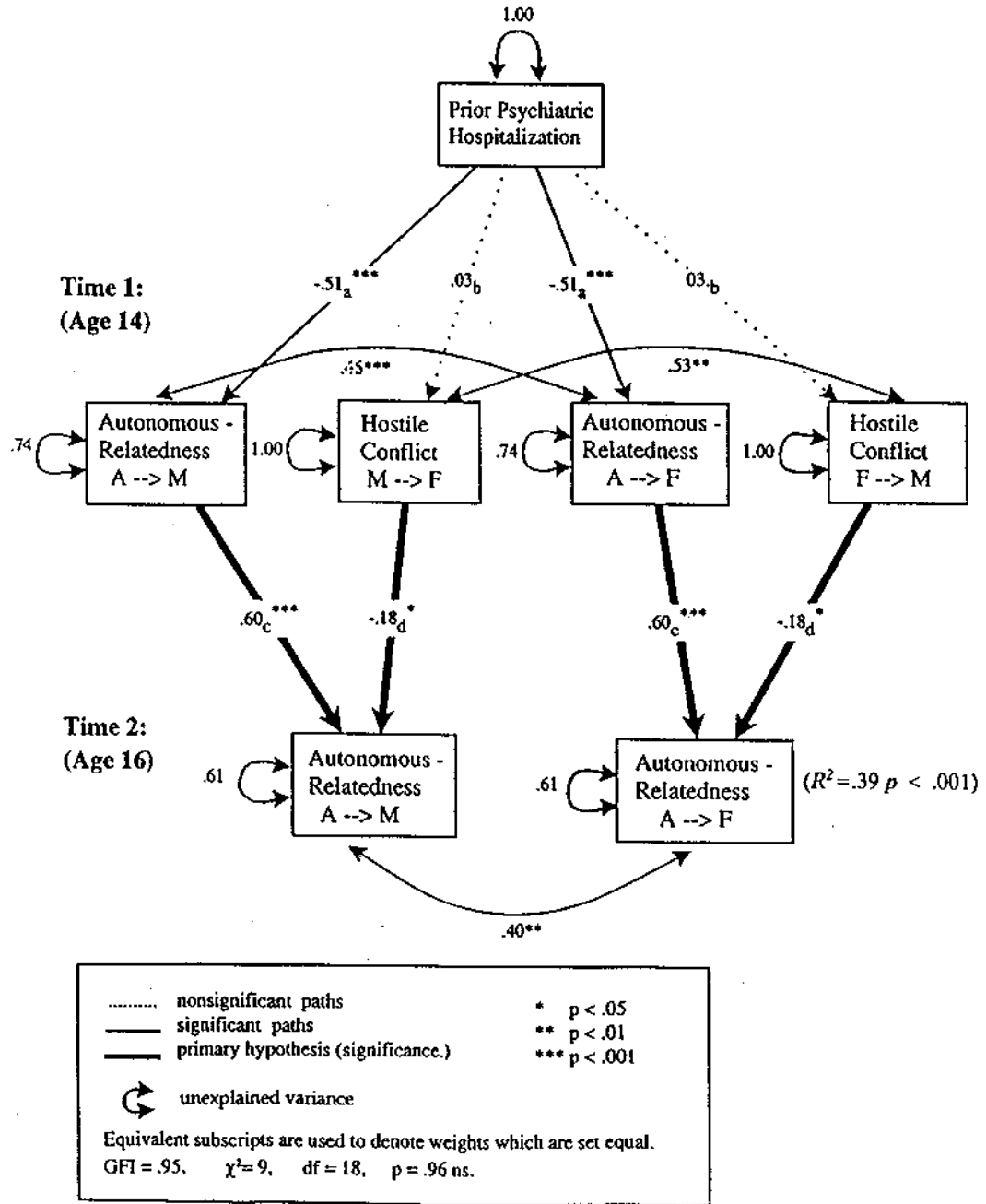


Figure 2. Prediction of adolescents' lack of autonomous relatedness with parents at 16 from parents' marital hostility at adolescent age 14 years.

ble to both parents and to the entire sample. As depicted in Figure 2, parents' marital hostility predicted relatively decreased levels of adolescent displays of autonomy and relatedness in interactions with that parent

over time, even after accounting for the prior levels of adolescent autonomy and relatedness with each parent (GFI = .957, $\chi^2 = 8.33$, $p = .872$). This indicates that adolescents' did indeed come to express rela-

tively less autonomy and relatedness toward a parent who was seen by the adolescent behaving hostilely toward the other parent in interactions 2 years earlier. Psychiatric history was significantly related to adolescents' lack of autonomous relatedness toward parents at Time 1, but did not have any additional effects upon adolescent autonomous relatedness toward parents at Time 2.

Tests for possible mediators of effects of marital hostility

To test the possibility that predictions from marital hostility to relatively decreased adolescent autonomous relatedness were mediated by parental behavior toward the adolescent at the time of the conflict, separate models were also examined that included indirect paths from parental hostility to adolescents' autonomous relatedness via: (a) parents' display of autonomous relatedness toward the adolescent; (b) parents' behaviors undermining autonomy in discussions with their adolescent; and (c) parents' hostile conflict with their adolescent, all assessed at Time 1. Each of these three models thus tested the possibility that the predictive value of parental hostility was mediated by concurrent parental behaviors toward their adolescent. None of these paths were significant nor did they produce significantly better fitting models. This indicates that although hostility displayed toward a spouse predicted the adolescents' eventual withdrawal from the hostile parent, this prediction was not mediated by parents' observed behaviors toward their adolescent. The predictions depicted in Figure 2 were also not found to be mediated by pathways through marital behaviors at Time 2, indicating that the predictions observed were not simply a result of a concurrent association between marital hostility and adolescent lack of autonomous relatedness at 16 years when these were added to the model in Figure 2.

Hostility between spouses was not predictive of changes in either adolescents' hostility or behaviors undermining autonomy

with parents over time in either path models or in simple regression equations.

Discussion

This study provided data on stability and change in observed adolescent-family interactions and identified several theoretically predicted connections between hostile family conflict and adolescent difficulty meeting the developmental challenge of establishing autonomy and relatedness in interactions with parents. Adolescent behaviors displaying autonomous relatedness displayed strong stability over 2 years, whereas hostile behavior displayed little stability. Rather, adolescents' hostility toward parents at age 16 was predicted by difficulties at age 14 handling a disagreement without undermining autonomy in interactions. Hostility in the marital dyad when adolescents were 14 predicted relative decreases in adolescents' displays of autonomy and relatedness with parents by age 16 years. Implications and limitations of each of these findings are discussed below.

As predicted, adolescents who actively undermined autonomy within the family when discussing disagreements with parents at age 14 years—for example, by overpersonalizing disagreements or by recanting their position prior to discussing it—displayed more hostility toward parents by age 16 than did other adolescents, even after accounting for hostility displayed at age 14 years. By accounting for effects of age 14 hostility, we also accounted for any shared variance between measures of hostility and of autonomy-undermining behavior at age 14 (the two measures were moderately correlated), assuring that predictions to later hostility were not capitalizing at all on any empirical overlap between the two constructs at age 14 years. In contrast, simple homotypic continuity in observed adolescent hostility from age 14 to age 16 years was not found; stability coefficients for adolescent hostility were small and nonsignificant. These findings suggest the importance of a developmental perspective that recognizes that

emerging hostility in midadolescence may be predicted not by prior hostility, but by failures in critical stage-salient tasks at earlier points in development (Sroufe & Jacobvitz, 1989). In essence, there was evidence as hypothesized of heterotypic continuity in hostility; a maladaptive evolution occurred from adolescent behavior reflecting difficulties with autonomy at age 14 to overtly hostile behavior at age 16 years.

One explanation of this evolution is that adolescents who made autonomous discussion of disagreements with parents more difficult at age 14 years did so because they were unable to handle autonomous relationships with parents. These adolescents may have eventually become hostile to distance themselves from parental relationships in which they were unable, unwilling, or afraid to have autonomous discussions (Allen et al., 1990; Steinberg, 1990). This hostile distancing may have been a frustrated and potentially destructive effort to meet needs for autonomy by escaping from a relationship in which the adolescent could not establish autonomy in a more direct fashion. Alternatively, it may be that hostility manifests itself in different ways at different ages and that autonomy-undermining behaviors, such as personalizing disagreements and making them difficult to discuss at age 14 may be a more subtle and indirect manifestation of the outright hostility seen at 16 years. Clearly, heterotypic continuity exists across time in behaviors linked to both hostility and autonomy difficulties. Further research may help clarify this link by examining *why* adolescents' undermined autonomous discussion at age 14 years—whether due to their own internal discomfort with establishing their autonomy vis-à-vis parents, as a reaction to prior parental behaviors restricting autonomy, or due to other unassessed factors.

Adolescents' positive displays of autonomy and relatedness with parents at age 14 years were found to be quite stable over time. Adolescents who could discuss disagreements directly while remaining attentive to parents' thoughts and feelings clearly maintained this capacity over time, and ad-

olescents' who failed to establish this quality of autonomous relatedness by age 14 continued to display lower levels of it at age 16 years. Overall, the patterns of stability and change observed in this study suggest the presence of several different developmental pathways by which adolescents handle strivings to establish autonomy vis-à-vis parents. Optimally, autonomy may become established in the context of a positive relationship with parents (stable, high autonomous relatedness). Alternatively, and more pathologically, adolescents who actively undermine autonomy when discussing disagreements with parents at age 14 years display increasingly hostile behavior over time, perhaps as they try to meet autonomy needs by distancing themselves from interactions with parents. Finally, adolescents who are initially withdrawn from the parent-adolescent relationship (low autonomous relatedness) are quite likely to remain withdrawn, though nonhostile, over time. These findings are consistent with recent evidence suggesting that when autonomy is defined as self-governance in behavior and independence of thought it predicts better parent-adolescent relationships and better outcomes (Hagan et al., 1992). In contrast, when autonomy is defined in terms of alienation from parents or in terms of hostility, it predicts negative outcomes (Lamborn & Steinberg, 1993; Ryan & Lynch, 1989; Steinberg, 1990; Steinberg & Silverberg, 1986). The central issue for normal development may not be whether adolescents can establish autonomy at any costs, but whether they can establish autonomy *within* a positive adolescent-parent relationship or only by undermining or withdrawing from the relationship (Allen et al., 1990; Bowlby, cited in Murphy et al., 1963).

These findings also suggest a distinction between behaviors that actively undermine autonomy or relatedness (i.e., actively negative behaviors), and the simple absence of any positive indicators of autonomy and relatedness. Both types of behavior are clearly related to the developmental task at hand. But active negative behaviors appear to change form over time (i.e., the hetero-

typic continuity from autonomy-undermining to hostile behavior), whereas the presence versus absence of most positive displays of autonomy and relatedness appears relatively stable over time. At a minimum, these findings suggest that examination of family behaviors must carefully consider their developmental relevance to the adolescent. Although hostility may be assessed in the same way at 14 and 16 years, it may well have very different functions and correlates at these two ages, a finding which longitudinal research has begun to document (Allen et al., 1994b). Yet, while outwardly hostile behavior at age 16 years may not reflect the same process as such behavior at 14, it does appear to have important features in common with autonomy-undermining behavior at 14 years that also warrant further exploration.

Findings regarding marital hostility suggest yet another connection of family hostility to adolescent development. Hostile behavior by a parent toward a spouse predicted the adolescent's withdrawal from the hostile parent in interactions 2 years later, as seen in relatively lower levels of adolescent displays of autonomous relatedness in interactions. This prediction, though modest in magnitude, was obtained from independent ratings of interactions over a 2-year period and across different individuals (from parents' behaviors to adolescents' behaviors). One explanation for this finding is that the adolescent may withdraw from a hostile parent—failing to discuss disagreements, and not attending to the parents' thoughts or feelings—as a result of heightened emotional insecurity or out of a sense of loyalty to the nonhostile parent (Davies & Cummings, 1994; Grych & Fincham, 1990). In either case, it appears that the hostile parent may have difficulty providing a safe base from which the adolescent can explore his or her own autonomy needs. Further research might profitably explore the ways in which this withdrawal from parents may mediate the link from marital hostility to the numerous negative adolescent outcomes that have been previously associated with it (Anderson, Lindner, &

Bennion, 1992; Camara & Resnick, 1988; Davies & Cummings, 1994; Fauber et al., 1990; Grych & Fincham, 1990).

Our finding no evidence of parental behaviors toward the adolescent that mediate the effects of marital hostility upon the adolescent adds an important observational data point to the conflicting findings in the literature in which the effects of marital hostility sometimes appear mediated by parental behavior toward the child/adolescent and other times appear more direct (Anderson et al., 1992; Crockenberg & Covey, 1991; Fauber et al., 1990; Peterson & Zill, 1986). Our findings do not preclude the possibility that the effects of marital hostility were mediated by unmeasured parent behaviors.

A history of psychiatric hospitalization was a significant predictor of both adolescents' lack of autonomous relatedness and of hostility toward parents at Time 1. This finding provides further evidence that establishing autonomy and relatedness is critical to adaptive social development, and that major difficulties displayed in this task do in fact mark a less adaptive pathway through adolescence. This in turn gives further import to the finding that marital hostility predicts decreased adolescent autonomy and relatedness toward the hostile parent over time. These findings are consistent with prior observational studies with this sample that have related adolescents' success or difficulty establishing autonomy and relatedness with parents to external markers of functioning including, depression, externalizing behaviors, self-esteem, and ego development (Allen et al., 1994a, 1994b).

All of these findings converge on the notion that hostile family conflict is integrally linked to adolescent difficulty establishing autonomy and relatedness in interactions with parents. By observing adolescents' behaviors in this domain in a brief family interaction, it appears possible to tap into the adolescent's progress and level of sophistication in pursuing this task. This appears to provide both an indicator of the adolescent's current progress in a task with significant developmental implications, and

also a predictor of future outcomes. The multiple findings of this study can perhaps best be summarized as demonstrating that hostility is a marker of significant difficulties in a family's handling of autonomy processes during adolescence. Marital hostility may function as a signal of such difficulties to the adolescent, perhaps undermining the adolescent's security in pursuing autonomy vis-à-vis the hostile parent. Hostile adolescent behaviors, in turn, appear as sequelae of a particular type of difficulty handling autonomy issues at an earlier point in development. Most importantly, these observational findings over a 2-year span in middle adolescence address aspects of autonomy processes that previously have been linked to aspects of adolescent functioning ranging from depression to levels of ego development to externalizing behaviors (Allen et al., 1994a, 1994b).

All of the findings of this study were consistent across adolescents and parents of different genders and across both a sample selected for presence of significant pathology and a high school sample. Although prior psychiatric hospitalization was linked to family interaction behaviors at Time 1 in expected directions, prior hospitalization did not predict future changes in family behaviors, nor did it moderate (i.e., interact with) any of the other findings reported. Given the relatively small sample of this study, it remains possible, however, that there was simply not adequate power to detect more subtle differences across groups, and such potential group differences may well warrant further exploration. However, while these findings do not prove the null hypothesis of no differences in processes across the two subgroups examined, they do show that the developmental predictions observed were robust enough to emerge even across both a normal high

school sample, and a severely impaired sample of adolescents.

Although the results of this study are both promising and consistent with predictions from existing literature, several limitations should be kept in mind. The unusual nature of the sample, consisting of not only psychiatric and high school samples, but also of adolescents drawn solely from two-parent families and from caucasian, middle and upper-middle class backgrounds, with moderate attrition from Time 1 to Time 2, all limit the generalizability of the findings. Replication across other family types, across broader demographic groups, and in larger samples is needed.

Also, even longitudinal path analyses do not establish causal relationships; it remains possible that unmeasured factors account for the path models obtained. Nevertheless, this study did depart from much past research in predicting a measure of relative change in relationships over time (i.e., future qualities of relationships after accounting for present qualities). This approach accounts for both common method variance and baseline levels of observed constructs prior to predicting their future levels.

Within these limits, the results presented suggest the value of conceptualizing hostile conflictual behavior as both reflecting and predicting difficulties in adolescents' strivings to attain autonomy while maintaining positive relationships in interactions with parents. Significant evidence has linked hostile family conflict to problems in adolescent functioning (Emery, 1982; Fauber et al., 1990; Gehring et al., 1990). Continuing to increase our understanding of how such conflict intersects with the developmental tasks of the adolescent-parent relationship appears essential for guiding interventions to reduce both the occurrence and the outcomes of this hostile conflict.

References

- Allen, J. P., Aber, J. L., & Leadbeater, B. J. (1990). Adolescent problem behaviors: The influence of attachment and autonomy. *Psychiatric Clinics of North America*, 13, 455-467.
- Allen, J. P., Hauser, S. T., Bell, K. L., & O'Connor, T. G. (1994a). Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as predictors of adolescent ego development and self-esteem. *Child Development*, 65, 179-194.
- Allen, J. P., Hauser, S. T., Eickholt, C., Bell, K.

- L., & O'Connor, T. G. (1994b). Autonomy and relatedness in family interactions as predictors of expressions of negative adolescent affect. *Journal of Research on Adolescence*, 4, 535-552.
- Allen, J. P., Hauser, S. T., Borman, E., & Worrell, C. M. (1990). *The autonomy and relatedness coding system: A scoring manual*. Unpublished manuscript. University of Virginia, Charlottesville, VA.
- Anderson, E. R., Lindner, M. S., & Bennion, L. D. (1992). The effect of family relationships on adolescent development during family reorganization. In E. M. Hetherington & W. G. Clingempeel (Eds.), *Coping with Marital Transitions, Monographs of the Society for Research in Child Development*, 57(Serial Nos. 2-3, pp. 178-199).
- Camara, K. L., & Resnick, G. (1988). Interparental conflict and cooperation: Factors moderating children's post-divorce adjustment. In E. M. Hetherington & J. D. Arasteh (Eds.), *Impact of divorce, single parenting and stepparenting on children* (pp. 169-195). Hillsdale, NJ: Erlbaum.
- Collins, W. A. (1990). Parent-child relationships in the transition to adolescence: Continuity and change in interaction, affect, and cognition. In R. Montemayor, G. R. Adamas, & T. P. Gullotta (Eds.), *From childhood to adolescence: A transitional period? Advances in Adolescent Development, Volume 2* (pp. 85-106). Newbury Park: Sage.
- Connell, J. P., & Wellborn, J. G. (1993). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. *Journal of Personality and Social Psychology*, 65, 781-791.
- Crockenberg, S., & Covey, L. (1991). Marital conflict and externalizing behavior in children. In D. Cicchetti & S. Toth (Eds.), *Rochester Symposium on Developmental Psychopathology, Volume 3*. Rochester, NY: University of Rochester Press.
- Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*, 116, 387-411.
- Emery, R. E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin*, 92, 310-330.
- Fauber, R., Forehand, R., Thomas, A. M., & Wiersma, M. (1990). A mediational model of the impact of marital conflict on adolescent adjustment in intact and divorced families: The role of disrupted parenting. *Child Development*, 61, 1112-1123.
- Gehring, T. M., Wentzel, K. R., Feldman, S. R., & Munson, J. (1990). Conflict in families of adolescents: The impact of cohesion and power structures. *Journal of Family Psychology*, 3, 290-309.
- Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin*, 108, 267-290.
- Grotevant, H. D., & Cooper, C. R. (1985). Patterns of interaction in family relationships and the development of identity exploration in adolescence. *Child Development*, 56, 415-428.
- Hagan, M. S., Hollier, E. A., O'Connor, T. G., & Eisenberg, M. (1992). Parent-child relationships in nondivorced, divorced single-mother, and remarried families. In E. M. Hetherington & W. G. Clingempeel (Eds.), *Coping with marital transitions, Monographs of the Society for Research in Child Development*, (Vol. 57, Nos. 2-3, pp. 178-199).
- Hauser, S. T., with Powers, S. I., & Noam, G. G. (1991). *Adolescents and their families: Paths of ego development*. New York: Free Press.
- Hauser, S. T., Powers, S. I., Noam, G. G., Jacobson, A. M., Weiss, B., Follansbee, D. J. (1984). Familial contexts of adolescent ego development. *Child Development*, 55, 195-213.
- Henggeler, S. W., Hanson, C. L., Borduin, C. M., Watson, S. M., & Brunk, M. A. (1985). Mother-son relationships of juvenile felons. *Journal of Consulting and Clinical Psychology*, 53, 942-943.
- Hill, J. P. (1988). Adapting to menarche: Familial control and conflict. In M. Gunnar & W. A. Collins (Eds.), *Minnesota symposia on child development* (Vol. 21, pp. 43-77). Hillsdale, NJ: Erlbaum.
- Hill, J. P., & Holmbeck, G. N. (1986). Attachment and autonomy during adolescence. *Annals of Child Development*, 3, 145-189.
- Hollingshead, A. F. (1975). *Four-factor index of social status*. Working paper, Department of Sociology, Yale University.
- Jöreskog, K. G., & Sörbom, D. (1988). *LISREL-VII Program Manual*. Chicago: International Educational Services.
- Kenny, M. E. (1987). The extent and function of parental attachment among first-year college students. *Journal of Youth and Adolescence*, 16, 17-29.
- Kobak, R., & Cole, C. (1994). Attachment and meta-monitoring: Implications for adolescent autonomy and psychopathology. In D. Cicchetti (Ed.), *Rochester symposium on development and psychopathology Vol. 5: Disorders of the self* (pp. 267-297). Rochester, NY: Rochester University Press.
- Kobak, R., & Ferenz-Gillies, R. (1995). Emotion regulation and depressive symptoms during adolescence: A functionalist perspective. *Developmental Psychology*, 7, 183-192.
- Lamborn, S. D., & Steinberg, L. (1993). Emotional autonomy redux: Revisiting Ryan and Lynch. *Child Development*, 64, 483-499.
- Moore, D. (1987). Parent-adolescent separation: The construction of adulthood by late adolescents. *Developmental Psychology*, 23, 298-307.
- Murphey, E. B., Silber, E., Coelho, G. V., Hamburg, D. A., & Greenberg, I. (1963). Development of autonomy and parent-child interaction in late adolescence. *American Journal of Orthopsychiatry*, 33, 643-652.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports of mental processes. *Psychological Review*, 84, 231-259.
- Noller, P., & Callan, V. J. (1988). Understanding parent-adolescent interactions: Perceptions of family members and outsiders. *Developmental Psychology*, 24, 707-714.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.
- Peterson, J. L., & Zill, N. (1986). Children's impressions of other persons: The effects of temporal separation of behavioral information. *Child Development*, 57, 872-878.
- Ryan, R. M., & Lynch, J. H. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development*, 60, 340-356.
- Smetana, J. G. (1989). Adolescents' and parents' reasoning about actual family conflict. *Child Development*, 60, 1052-1067.

- Sroufe, L. A., & Jacobvitz, D. (1989). Diverging pathways, developmental transformations, multiple etiologies and the problem of continuity in development. *Human Development, 32*(3-4), 196-203.
- Steinberg, L. (1990). Interdependency in the family: Autonomy, conflict, and harmony in the parent-adolescent relationship. In S. Feldman and G. Elliott (Eds.), *At the threshold: The developing adolescent*. Cambridge, MA: Harvard University Press.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841-851.
- Strodtbeck, F. (1951). Husband-wife interaction over revealed differences. *American Sociology Review, 16*, 463-473.
- Tanaka, J. S. (1987). "How big is big enough?": Sample size and goodness of fit in structural equation models with latent variables. *Child Development, 58*, 134-146.
- Tschann, J. M., Johnston, J. R., Kline, M., & Wallerstein, J. (1989). Family process and children's functioning after divorce. *Journal of Marriage and the Family, 51*, 431-444.