Published in final edited form as:
Child Dev. 2001 ; 72(1): 220–235.

Autonomy and Adolescent Social Functioning: The Moderating Effect of Risk

Kathleen Boykin McElhaney and **Joseph P. Allen**
Department of Psychology, University of Virginia, 102 Gilmer Hall, P.O. Box 400400, Charlottesville, VA 22903-4400

The University of Virginia.

Abstract

This study examined the moderating effect of risk on the relation between autonomy processes and family and adolescent functioning. The present sample comprised 131 adolescents from either a low-risk or high-risk social context, their mothers, and their peers. Observational ratings of autonomy processes within the mother-adolescent dyad were obtained, along with adolescent reports of the quality of the mother-adolescent relationship, and both adolescent and peer reports of the adolescent's functioning. Consistent with past research, in low-risk families, behavior undermining autonomy was negatively related to relationship quality, and adolescents' expressions of autonomy were linked with positive indices of social functioning. In high-risk families, however, undermining of autonomy was *positively* linked with mother-adolescent relationship quality, and adolescents' expressions of autonomy were linked with negative indices of social functioning. Results are interpreted as demonstrating the ways in which the developmental task of attaining autonomy in adolescence is systematically altered depending on the level of risk and challenge in the adolescent's social context.

INTRODUCTION

The ways that parents handle adolescent strivings for autonomy have been consistently linked to both the quality of parent-adolescent relationships and to numerous aspects of adolescent adjustment (Allen, Hauser, Bell, & O'Connor, 1994; Allen, Hauser, Eickholt, Bell, & O'Connor, 1994; Collins, 1990; Steinberg, 1990). Whether autonomy is defined in cognitive terms such as encouraging expression of individual viewpoints or in more behavioral terms such as participating in family decision making, adolescents appear to benefit in numerous ways from an approach to autonomy that allows them to assert a moderate degree of influence within the context of a positive parent-adolescent relationship. Research and theory on the development of adolescent autonomy, however, has only just begun to take into account the potential moderating effects of social contextual factors on this process because most research has focused on middle-class samples that are characterized by relative homogeneity in the level of potential risk and challenge in adolescents' social environments (Allen, Kuperminc, & Moore, 1997; Collins, 1990; Steinberg, 1990).

In White middle-class samples, generally characterized as living in low-risk environments, observational research focusing on cognitive autonomy development has shown that a range of outcomes including higher levels of adolescent ego development and self-esteem and lower levels of hostility and depression are linked to family communications that promote or display autonomy (e.g., explaining and discussing reasons for disagreements) and inversely related to statements that undermine autonomy (e.g., overpersonalizing or pressuring statements; Allen,

Corresponding author: e-mail: kbmcelhaney@juno.com..

Hauser, Bell, et al., 1994; Grotevant & Cooper, 1985; Hauser et al., 1984). In addition, self-report research on behavioral autonomy has demonstrated that authoritative parenting, which involves balancing granting sufficient autonomy with appropriate amounts of firm control and acceptance, is positively related to outcomes such as success in school and positive self-concept (Baumrind, 1991; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Paulson, 1994; Steinberg, Elmen, & Mounts, 1989; Steinberg, Mounts, Lamborn, & Dornbusch, 1991).

Although past research clearly demonstrates that parental approaches to autonomy have important implications for adolescent functioning, it does not consider how sociocontextual factors might affect the autonomy process. Extensive anthropological theory and research suggests that parents' behaviors in socializing their children are strongly influenced by awareness of the traits that are considered necessary for survival and success (Barry, Child, & Bacon, 1959/1967; Harkness & Super, 1995; Harrison, Wilson, Pine, Chan, & Buriel, 1990; Kohn, 1963,1979; Levine, 1980, 1988; Ogbu, 1981,1988; Okagaki & Divecha, 1993). To the extent that these traits vary across ecological contexts, appropriate parental approaches to numerous aspects of the socialization process, including handling of adolescents' autonomy strivings across both behavioral and cognitive realms, are also likely to vary.

Across all environments, parental responses to adolescent autonomy strivings require balancing the need to set limits on behavior and the need to provide adolescents with sufficient freedom to try out new behaviors and learn from mistakes (Allen et al., 1997; Holmbeck, Paikoff, & Brooks-Gunn, 1995). The appropriate balance, however, between limit setting and encouragement of exploration depends on the level of complexity, challenge, and danger in the adolescent's environment (Bradley, 1995). Thus, the same parental behaviors may be more or less appropriate depending on the environmental context in which they occur. For example, parental inhibition of autonomy—whether it is defined in behavioral terms (e.g., strict rules and consequences) or in cognitive terms (e.g., discouragement of individual expression)—may be entirely appropriate in dangerous environments that pose multiple threats to the adolescent's well-being (Dubrow & Garbarino, 1989; Furstenberg, 1993). In less risky contexts, however, these same autonomy-inhibiting behaviors might be more likely to reflect a maladaptive parental reluctance to allow normative autonomy development to proceed (Baldwin, Baldwin, & Cole, 1990).

Research focusing on behavioral approaches to autonomy confirms that in high-risk contexts, parents are more likely to use strategies emphasizing conformity and obedience rather than those that promote independence and autonomy (Bartz & Levine, 1978; Dubrow & Garbarino, 1989; Harkness & Super, 1995; Kelley, Sanchez-Hucles, & Walker, 1993). Similarly, initial evidence from survey-based studies also suggests that parental approaches to behavioral autonomy have different consequences for adolescent development in high-risk contexts. Although results of this research have been somewhat mixed (Steinberg et al., 1991), several studies have found that adolescent reports of parents' authoritative parenting are *not* necessarily linked with positive outcomes in non-White, non-middle-class samples, whereas parenting styles involving a greater restriction of autonomy (i.e., authoritarian styles) are related to more positive child adjustment in these groups (Baumrind, 1972; Dornbusch et al., 1987; Lamborn, Dornbusch, & Steinberg, 1996; Steinberg, Dornbusch, & Brown, 1992). Further, several recent surveys of parenting practices in primarily African American samples have demonstrated that the level of environmental risk moderates the links between parental restriction of autonomy and adolescent adjustment. In high-risk contexts within these samples, parental restriction of behavioral autonomy is linked with positive indices of adjustment, including higher levels of academic competence and decreased externalizing behaviors (Baldwin et al., 1990; Gonzales, Cauce, Friedman, & Mason, 1996; Mason, Cauce, Gonzales, & Hiraga, 1996).

The previously noted research has been limited to examining the links between *parents*' behaviors and adolescent outcomes. Adolescents' own behaviors, however—as well as their interpretations of parental behaviors—are also likely to be influenced by their socioenvironmental context. For example, adolescents living in a risky social context who assert their autonomy with parents may be taking on independent decision making in an environment that offers greater opportunity for involvement in problem behaviors. High levels of adolescent autonomy vis-à-vis parents may not be adaptive in these environments, even if these same behaviors would be adaptive in less dangerous contexts. Similarly, adolescents who might chafe and rebel when their autonomy is highly restricted in relatively safe environments might be more tolerant of such restrictions in higher risk environments. Unfortunately, research has not assessed adolescents' role in seeking autonomy vis-à-vis parents as it is moderated by the ecological context in which the adolescent is developing.

In addition, although self-report data and several bodies of theory have converged on the notion that autonomy processes in adolescence will be substantially different in more versus less risky social contexts, the few existing studies of the effects of level of risk on adolescent-parent interactions have primarily used behavioral measures of the autonomy process, thereby leaving open the question of whether context also effects other aspects of the autonomy process. In addition, such studies have relied primarily on adolescents as reporters. Extensive evidence exists concerning the biased and unreliable nature of self-reports of qualities of social interactions in which one is a participant (Nisbett & Wilson, 1977). Sole reliance on adolescent self-report data confounds the perspective of the adolescent in a given context with the actual behaviors of that adolescent and his or her parent. This confound is particularly important here because we would predict that the same parental behaviors may have very different meanings to adolescents in high- versus low-risk environments (Hill, 1995; Nucci, 1994)—meanings that are impossible to disentangle from actual behaviors if the same adolescent is reporting on both.

This study extends previous research on the effects of contextual risk on the autonomy process by using observational and multireporter methods to examine how level of risk interacts with familial approaches to cognitive autonomy promotion. Specifically, both mothers' behaviors undermining autonomy and adolescents' behaviors exhibiting autonomy during a family discussion are examined in terms of how they relate to adolescent adjustment across both low- and high-risk settings. Adolescents' adjustment is considered both in terms of the quality of the parent-adolescent relationship and their psychosocial functioning outside of the home (as indicated by degree of involvement in problem behaviors and level of competence with peers).

On the basis of past studies of cognitive autonomy processes in White, middle-class samples, in this study it is hypothesized that in low-risk contexts, maternal undermining of autonomy will be related both to lower parent-adolescent relationship quality and to indices of maladaptive functioning outside the home. Similarly, adolescent exhibition of autonomy in low-risk settings is hypothesized to be linked to adaptive social functioning both within and outside of the parent-adolescent relationship. On the basis of both theoretical notions of parenting in risky environments and the few self-report studies of risk and behavioral autonomy processes, the opposite pattern is hypothesized for high-risk contexts in which parents and adolescents are coping with a heightened level of dangerousness and challenge. These hypotheses are examined by using a sample selected to allow these questions to be addressed within a maximally meaningful range of psychosocial functioning, including substantial numbers of adolescents functioning both adequately and poorly.

METHOD

Sample

Adolescents and mothers—The sample comprised 131 ninth and tenth graders, *mean* age = 15.9, *SD* = 0.8; 47% female, 61% white, and their mothers. Adolescents were selected from two different school districts on the basis of the presence of *any* of four possible academic risk factors in their academic records: failing a single course for a single marking period, any lifetime history of grade retention, 10 or more absences in one marking period, and a history of school suspension in the current academic year. These broad selection criteria were established to sample a sizeable range of adolescents who could be identified from academic records as having the potential for future academic and social difficulties, including both adolescents already experiencing serious difficulties and those who are performing adequately with only occasional, minor problems. As intended, these criteria identified approximately one-half of all 9th- and l0th-grade students as eligible for the study.

This sample was then divided into two subsamples according to the level of risk present in the adolescents' social environment. Two indicators were used together to determine high- versus low-risk status: location of residence and family income. Location of residence was determined by the adolescents' reports of whether they attended a high school drawing from within the local city boundaries versus the one serving the more rural surrounding county. Information on family income was collected through mothers' self-reports of household income. Families were identified as living in a high-risk context if their residence was in the city district *and* their income fell at or below 200% of the Federal poverty line (as determined by a Federal income-to-needs ratio that compares household income with number of persons in household supported by this income).

The income cut-off was chosen on the basis of past research on the effects of poverty, which frequently uses the 200% marker as a cut-off (as opposed to income levels right at the poverty threshold) to designate "poor" and "nonpoor" samples (e.g., Axinn, Duncan, & Thornton, 1997). Families whose income falls between 100% and 200% of the poverty line are classified as "near poor" and are eligible for services from a variety of federal programs (e.g., free or reduced-cost school lunch programs) (Brooks-Gunn, Duncan, & Maritato, 1997). In addition, there is substantial evidence that compared with children living above 200% of the poverty line, children living in near-poor families experience a range of maladaptive physical and social outcomes such as stunted growth, lower academic achievement, and higher rates of teenage motherhood (Conger, Conger, & Elder, 1997; Haveman, Wolfe, & Wilson, 1997; Hauser & Sweeney, 1997; Korenman & Miller, 1997; Smith, Brooks-Gunn, & Klebanov, 1997; Teachman, Paasch, Day, & Carver, 1997).

The two indicators used to designate risk in this study (location of residence and family income) may serve as surrogates for many different kinds of risk; however, they were used together to take into account both the multiplicative effects of risk factors and the fact that a substantial body of research has documented that living in poverty in urban areas makes a family particularly prone to exposure to higher levels of criminal activity (Brooks-Gunn, Klebanov, Liaw, & Duncan, 1995; Krivo & Peterson, 1996). In the current study, the rate of index offenses within the city was approximately 2.6 times the rate in the surrounding county (Virginia Department of State Police, 1995). In addition, the rate of drug-related arrests for both possession and sale/manufacturing of drugs was approximately 2–3 times greater in the city versus the surrounding county (Virginia Department of State Police, 1995). Further, the population density in the city was approximately 1,543.0 people per square kilometer, versus 38,4 people per square kilometer in the county (Slater & Hall, 1996). Thus, teens living in the city were likely to have easier access to peers even without parental assistance (e.g., transportation) outside of school. This easier access may serve to decrease parental control

and, coupled with the increased crime rates within city boundaries, means that these teens' exposure to risky, delinquent activities (as either perpetrators or victims) are likely to be greater than that of their counterparts living in the county.

Using these two indicators in combination resulted in 43 (33%) of the families in the study being classified as living in a high-risk environment. The remaining 88 (67%) of families were classified as living in a low-risk environment because they experienced no risk factors or only a single risk factor in isolation (the low-risk group included 13 families that had incomes below the study cutoff but lived in rural areas and 39 families that lived within city boundaries but had incomes above the poverty line). Demographic data for the high- and low-risk samples is presented in Table 1.

Although adolescents' age and gender composition were approximately the same across the two groups, there were associations in the expected directions between high-risk status and family income and mothers' level of education. In addition, there were relatively more adolescents living with both biological parents in the low-risk sample than in the high-risk sample. There was also a significant association between ethnicity and level of risk, with the high-risk sample containing a greater proportion of African American families. This association was considered further in analyses described later. Notably, comparison of the two groups indicates that there were no significant differences between the high- and low-risk samples in the number of academic risk factors at the time of selection into the study.

Peer sample—The teens in the study were asked to provide names and phone numbers of up to five friends who "knew them well" to participate in a peer interview. Up to two of these friends were contacted and brought into our offices to be interviewed. In cases in which data were gathered from two peers, their ratings of the teen in the study were averaged to create one peer variable, A total of 193 peers were interviewed, *mean* age = 16.29, *SD* = 1.3; 54% female, 60% white. Peers reported that they had known the teens in the study an average of 4.6 years (*SD* = 3.6).

Procedure

After adolescents who met study criteria were identified, letters explaining the study were sent to each family of a potential participant. Interested families sent back post cards containing information about how to contact them by phone. Approximately 67% of the families contacted by phone agreed to participate in the study. Families came in for two 3-hr visits and were paid $105.00 for their participation. At each session, active, informed consent was obtained from both parents and teens, who were interviewed separately and assured confidentiality for all data collected. Peers were contacted by phone and came in separately for one 45-min session; they were paid $10 for participation in this session. Active consent was also obtained from both the peers and their parents, and peers were assured complete confidentiality. All data in the study were covered under a Department of Health and Human Services Confidentiality Certificate, which protects data against subpoena by federal, state, or local courts and other agencies.

Measures

Demographic information—Both mothers, adolescents, and peers were asked to provide basic demographic information such as gender, age, and race/ethnicity. Mothers were also asked to provide information regarding their level of education, family and marital status, annual household income, and number of persons supported by this income. Adolescents and peers were also asked to report on which local high school they attended, and peers reported on the number of years or months that they had known they adolescent in the study.

Inventory of Parent and Peer Attachment—Adolescents' perceptions of the current degree of trust, communication and alienation, in their relationships with their mothers were assessed by using this 25-item inventory (Armsden & Greenberg, 1987). Teens were asked to rate how true each item was with respect to their mothers on a 5-point scale from "never" to "almost always." Sample items included "I trust my mother" (trust), "My mother encourages me to talk about my difficulties" (communication), and "I feel alone or apart when I am with my mother" (alienation). Cronbach's as measuring internal consistency for the three subscales were .91, .88, and .86, respectively. This questionnaire has been shown to have good test-retest reliability and has been related to other measures of family environment and teen psychological functioning (Armsden & Greenberg, 1987).

Child Report of Parenting Behavior Inventory—In addition, information was gathered by using two scales of the shortened 30-item version of the 108-item Child Report of Parenting Behavior Inventory: Acceptance versus Rejection and Psychological Control versus Autonomy (Schaefer, 1965; Schluderman & Schluderman, 1970). Teens were asked to say whether each item was "not," "somewhat," or "a lot" like their mothers, and the resulting answers were summed for each subscale. Sample items included "My mother gives me a lot of care and attention" (acceptance versus rejection) and "My mother says, if I really cared for her, I would not do things that cause her to worry" (psychological control versus autonomy). Each scale was found to be internally consistent, with Cronbach's as equal to .94 and .82. Past research has found these scales to have good test-retest reliability and to be significantly related to a variety of other aspects of family functioning, as well as to adolescent outcomes such as academic performance (Collins, 1990; Schaefer, 1965; Schluderman & Schluderman, 1970; Steinberg et al., 1989, 1992).

Autonomy and Relatedness Coding System—Adolescents and their mothers participated in a revealed differences task in which they discussed a family issue about which they disagreed. Typical topics of discussion included money (19%), grades (19%), household rules (17%), friends (14%), and brothers and sisters (10%); other possible areas included communication, plans for the future, alcohol and drugs, religion, and dating. These interactions were videotaped, and then transcribed.

Both videotapes and transcripts were used to code the mother-adolescent interactions for behaviors exhibiting and/or undermining autonomy, using the Autonomy and Relatedness Coding System (Allen, Hauser, Bell, Boykin, & Tate, 1995). Concrete behavioral guidelines were used to code both mothers' and adolescents' individual speeches on one or more of 10 subscales. Two of these subscales (stating reasons and exhibiting confidence) are combined to yield the Exhibiting Autonomy scale, and three others are used for the Undermining Autonomy scale (overpersonalizing, pressuring, or recanting one's own position). Conceptually, all of these scales capture the degree to which autonomy is promoted versus undermined within the dyadic relationship. For example, stating one's reasons promotes autonomy within the relationship to the extent that this behavior facilitates the discussion of reasons by *both* parties. Similarly, one can achieve a high score on undermining autonomy both by attempting to undermine the other person's autonomy (overpersonalizing and pressuring), or by undermining one's own autonomy (recanting). In both cases, these behaviors limit the discussion of reasons and focus instead on characteristics of the individuals and their relationship with each other. Although the behaviors captured by these subscales obviously differ in important respects, what they share in common is their *function* in promoting or undermining autonomy within the dyad.

Two raters coded each interaction, and interrater reliability for these scales was calculated by using Spearman-Brown correlations. Reliability coefficients for the two scales used in these analyses (adolescents exhibiting autonomy and mothers undermining autonomy) were .86 and .

71, respectively. Copies of this coding manual are available on request. Past research using this coding system has found it to be a reliable predictor of both family and adolescent functioning (Allen, Hauser, Bell, et al., 1994; Allen, Hauser, Eickholt, et al., 1994).

Problem Behavior Inventory—Adolescents' reports of their delinquent activity were gathered by using this 37-item inventory (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983), a well-validated interview that yields a scale summing the total frequency of delinquent acts in the past 6 months (Cronbach's $\alpha = .77$). Examples of items included in this scale are as follows: (How often in the past six months have you) "Taken a vehicle for a ride or drive without the owner's permission?", "Stolen or tried to steal things worm between $5 and $50?", and "Purposely damaged or destroyed property that did not belong to you?" Because sums of these frequencies were found to be highly negatively skewed, this scale was log-transformed before its use in these analyses.

Adolescent Self-Perception Profile—The adolescents' peers each answered questions regarding the teens' social acceptance and close friendships by using a modified version of the Adolescent Self-Perception Profile (Harter, 1985). The same items were used as in the original measure but were modified to allow peer ratings of the adolescent, rather than self ratings. Peers rated how true of the teen each item was on a 4-point scale from "not true at all" to "very true." The two peers' responses were averaged to create a single peer rating for each scale. For the purposes of this study, the five-item social acceptance scale and the five-item close friendship scale were combined to create an overall measure of social or "friendship" competence. Examples of items from this scale included "Some people are popular with others their age, but other people are not very popular" (social acceptance) and "Some people do not have a really close friend to share things with, but other people do have a close friend to share things with" (close friendship). Pearson correlation coefficients between the two peers' ratings of social acceptance and close friendship were .44 and .24, respectively. The coefficient indicating degree of agreement between the two peers on the overall friendship competence scale was .40. Both the social acceptance and close friendship scales showed good internal consistency, with Cronbach's αs equal to .83 and .81, respectively; similarly the overall friendship competence scale yielded a Cronbach's α of .88.

RESULTS

Preliminary Analyses

Descriptive statistics—Means and standard deviations for all predictor and outcome variables are presented separately for low-risk versus high-risk adolescents in Table 2. To examine group differences between these two samples on the variables in question, *t* tests were conducted. The results of these analyses are also presented. As indicated, low-risk adolescents exhibited higher levels of exhibiting autonomy during the interaction task (see Table 2). Low-risk adolescents also reported higher levels of alienation in their relationships with their mothers. Finally, the peers of high-risk adolescents rated those adolescents as *more* competent in friendships than the low-risk adolescents' peers.

Zero-order correlations among both independent and dependent variables, including both level of risk and ethnicity, are presented in Table 3.

Primary Analysis

Both adolescent gender and level of risk in the environment were included as predictors in all regression analyses presented here. Interaction terms were created by standardizing the independent variables and multiplying them together. The independent variables and their

corresponding interaction terms were entered into the equations following gender and level of risk.

Although no significant interactions were found for gender, a number of significant interactions were found for level of risk. As can be seen in Table 4, significant interactions between negotiation of autonomy and level of risk were found in four out of six models tested for mothers' behaviors undermining autonomy, and in three out of six models tested for adolescents' behaviors exhibiting autonomy.

When significant interaction effects were found, additional regression analyses were conducted to examine the relation between the independent and dependent variables separately for the two risk groups. Again, models included main effects of gender as well as gender interaction effects, and no such effects were found. Given prior reports suggesting potential moderating effects of race/ethnicity (Lamborn et al., 1996) and its relation with risk status in this sample, fuller consideration of analyses of moderating effects of adolescents' race/ethnicity follows.

Negotiating autonomy and the mother–adolescent relationship—The first set of models examined the relation between maternal behaviors undermining autonomy and adolescents' perceptions of the mother–adolescent relationship. In examining adolescents' perceptions of trust and acceptance in their relationships with their mothers, significant moderating effects were revealed within overall significant models (see Table 5). Specifically, regression analyses conducted separately for each group revealed that high-risk teens saw highly autonomy-undermining mothers as *more* trustworthy, $\beta = .37$, $p < .05$, and *more* accepting, $\beta = .44$, $p < .01$. These relations were nonsignificant for low-risk teens; Trust: $\beta = -.03$, $p > .20$; Acceptance: $\beta = -.16$, $p > .10$. These effects are depicted in Figure 1.

In addition, significant moderating effects of level of risk were also revealed when examining adolescents' perceptions of the degree of psychological control and alienation in their relationships with their mothers (see Table 6). Regression analyses conducted separately for each group revealed that low-risk teens with mothers who undermined their autonomy during the interaction task rated their mothers as granting them less psychological autonomy, $\beta = .30$, $p < .01$, whereas this link was nonsignificant for high-risk teens, $\beta = -.15$, $p > .20$. Although separate regression analyses did not reveal significant effects for either group for alienation (see Table 6), examination of Figure 2 indicates that the interaction effect was for high-risk adolescents to feel relatively less alienated from mothers who undermined their autonomy, whereas low-risk adolescents felt relatively more alienated from mothers who engaged in such behaviors. Both of these interactions are depicted in Figure 2.

Further evidence that the link between negotiation of autonomy and mother–adolescent relationship quality differed across level of risk came from examining adolescents' behaviors exhibiting autonomy during the interaction task. A significant interaction effect was found for level of risk, and separate regressions demonstrated that in high-risk families, adolescents' behaviors exhibiting autonomy were related to teens feeling more alienated from their mothers, $\beta = .43$, $p < .01$. This relation was nonsignificant in low-risk families, $\beta = -.02$, $p > .20$. This interaction effect is depicted in Figure 3.

In sum, the links between negotiating autonomy and the quality of the mother–adolescent relationship were moderated by the level of risk present in the environment, particularly with regard to *mother's* behaviors undermining autonomy. In high-risk families, teens felt closer to mothers who undermined their autonomy, whereas low-risk teens saw these mothers as psychologically controlling. In addition, higher levels of adolescents' exhibition of autonomy were linked to increased mother-teen alienation only for high-risk adolescents.

Negotiating autonomy and adolescent adjustment—Regression analyses also demonstrated that negotiation of autonomy had different consequences outside of the home according to the level of risk, particularly for teens' level of delinquency and their social competence. In examining the link between adolescents' behaviors exhibiting autonomy and their self-reported delinquent activity, a significant moderating effect of level of risk was revealed within an overall significant model (see Table 7).

Regressions conducted separately for each group indicated that adolescents' behaviors exhibiting autonomy were related to increased levels of self-reported delinquency for high-risk teens, $\beta = .44$, $p < .01$, whereas this link was nonsignificant for low-risk teens, $\beta = .03$, $p > .20$. A graph of this interaction effect can be found in Figure 4.

A similar pattern of findings was also found for friendship competence, although the interaction term was significant only at the trend level (see Table 6). Separate analyses were nevertheless conducted across groups because Cohen has suggested that use of a slightly less conservative test for interaction terms may be appropriate given that the follow-up analyses done separately across groups still provide substantial protection against Type I errors (Cohen & Cohen, 1975). Specifically, it was found that adolescents' exhibition of autonomy with their mothers was related to greater friendship competence for low-risk adolescents, $\beta = .28$, $p < .05$, but not for high-risk adolescents, $\beta = -.08$, $p > .20$ (see Figure 4).

In sum, adolescents' behaviors exhibiting autonomy were found to have negative correlates for high-risk adolescents in the form of increased alienation from their mothers and increased levels of delinquent activity. These same behaviors were found to have positive correlates for low-risk adolescents, in the form of increased competence with peers; however, the expected links between *mothers*' behaviors negotiating autonomy and adolescent adjustment outside of the home were not found.

Effects of race/ethnicity—As was mentioned previously, given that level of risk and ethnicity were confounded in this sample, the entire set of analyses described here was conducted by examining moderator effects of race/ethnicity in the place of level of risk. Neither the main effects of race nor the interaction terms including race were significant in any model. For the main effects of race/ethnicity βs ranged from .01 to .13, all $p > .15$; βs for the interaction terms ranged from .04 to .15, all $p > .10$, not depicted).

Next, both the main effect of race/ethnicity and interaction effects were included in each of the models examining the effects of risk as discussed previously. Although adding race as a covariate slightly reduced the significance of some of the findings (which was not surprising given that it was significantly correlated with risk and thus increased the collinearity of regression models when it was included), neither the direction nor the nature of the findings were altered and significance levels declined only slightly (three models dropped to the trend level overall, all $p < .07$). Models that dropped to a trend level included those examining effects of autonomy negotiation on levels of trust, acceptance, and adolescent delinquent behavior. In no case did adolescents' race/ethnicity contribute to predictions either before or after including the effects of risk.

DISCUSSION

This study found substantial evidence that the level of risk experienced by adolescents and their families altered the process of autonomy negotiation within the mother–adolescent dyad. When considered in low-risk versus high-risk samples of adolescents and their families, adolescent autonomy strivings and maternal responses to them were linked in different (and often opposite) ways to both the adolescent's perception of the mother–adolescent relationship

and to engagement in delinquent activity and social competence. A slightly different pattern of effects was revealed when considering mothers' versus adolescents' behaviors with regard to autonomy across risk settings, as is discussed subsequently. Overall, these findings are consistent with the hypothesis that autonomy-related behaviors would have different meanings for the parent-adolescent relationship when examined across contexts that vary in the level of risk posed to the adolescent.

The process by which mothers negotiated autonomy was closely linked to adolescents' perceptions of the quality of the parent-adolescent relationship, and these linkages varied substantially according to level of risk. In low-risk families, the quality of the parent-adolescent relationship was lower when mothers engaged in behaviors that tended to undermine autonomy within the dyad by pressuring, overpersonalizing, or recanting their positions prematurely. These autonomy-undermining behaviors were specifically linked to adolescents perceiving their mothers as psychologically controlling and feeling relatively more alienated from them. Unlike low-risk teens, however, high-risk teens did *not* view mothers who undermined autonomy during the interaction task as over-controlling. On the contrary, when high-risk mothers engaged in these behaviors, their adolescents rated their mothers as *more* trustworthy and reported feeling more accepted by them. Although adolescents' own autonomy negotiation was largely unrelated to most facets of their perception of the mother–adolescent relationship, levels of adolescents' reported alienation from mothers was linked to increased displays of autonomy for high-risk adolescents but not for low-risk adolescents.

These findings support the notion that the increased level of risk present in high-risk contexts alters the meaning of autonomy processes vis-à-vis the parent–adolescent relationship. For example, in high-risk contexts, maternal behaviors that undermine autonomy by cutting off discussion through pressuring adolescents to change their positions may promote a more positive relationship by making the teens feel protected. Similarly, high-risk mothers who engage in overpersonalizing behaviors (e.g., saying "I will just be too worried about you if you are out too late") may be sending a *positive* message to their adolescents—one that says that these mothers are highly caring and invested in what happens to the teens in a potentially risky environment. These same behaviors in a low-risk context, however, might communicate overprotection and be seen by the adolescent as manipulative and guilt-invoking, in part because they might well *be* overprotective for adolescents in such contexts.

In terms of functioning outside of the home, again the pattern of relations between the negotiation of autonomy and adolescent outcomes was found to vary systematically according to level of risk. In this case, however, findings were limited to links between *adolescents*' displays of autonomy and indices of adolescent adjustment. Specifically, low-risk adolescents who exhibited their autonomy in their relationship with their mothers by stating their positions clearly and confidently during a disagreement were more socially competent outside of the family. Friends of these adolescents reported that they were more socially accepted and more successful in forming relationships with their same-age peers. In contrast, high-risk adolescents who exhibited higher levels of autonomy with their mothers were not viewed as more socially competent and in fact reported engaging in increased levels of delinquent activity outside of the home. Thus, whereas a style of displaying autonomy involving questioning of parental authority in a verbal interaction is related to positive social adjustment in middle-class samples (Allen, Hauser, Bell, et al., 1994; Allen, Hauser, Eickholt, et al., 1994; Grotevant & Cooper, 1985; Hauser et al., 1984), this same negotiation style appears to be linked to negative outcomes for poor teens living in high-risk areas.

The finding that assertion of cognitive autonomy is problematic for adolescents in high-risk contexts is consistent with and extends past research that has indicated that higher levels of *behavioral* autonomy also have detrimental effects for high-risk teens. Such research has

suggested that in high-risk contexts, attempting to break away from parental control during midadolescence may lead to maladaptive outcomes (Baldwin et al., 1990; Gonzales et al., 1996; Mason et al., 1996). Adolescents living in high-risk contexts have increased accessibility to peers—as well as to older adolescents—who may be involved in illegal or dangerous activities (Krivo & Peterson, 1996). Thus, teens in these contexts who are highly autonomous at age 16 are attempting to take control of their activities in an environment that offers increased opportunity for getting involved in deviant behavior. Alternatively, teens who are highly motivated to establish their autonomy may be at a greater risk in a poor urban environment because of a limitation in socially acceptable opportunities to gain autonomy. In other words, such teens may have fewer opportunities to gain autonomy by means of a part-time job, scholastic success, or extracurricular activities, and problematic behavior may be one easily accessible arena through which they can assert themselves and gain independence. The current findings suggest that it is not simply that behavioral autonomy may be different in risky environments but also that the correlates of the development of cognitive autonomy may be altered as well.

The overall pattern of these findings indicates that mothers' behaviors with regard to autonomy have consequences for adolescents' perceptions of the mother–adolescent relationship, whereas adolescents' approaches to autonomy negotiation appear to be more relevant in predicting adolescents' behaviors outside of the home environment. This pattern differs somewhat from past research (using both cognitive and behavioral measures) that *has* linked maternal autonomy negotiation to adolescent outcomes. A closer examination of past research provides several possible explanations for the discrepancies between this study and previous ones. First, whereas this study focused on delinquency and social competence, past research using similar observational measures of cognitive autonomy processes has most often found links between mothers' approaches to autonomy and measures of internalizing symptoms (e.g., low self-esteem). Thus, it may be that mothers' undermining of cognitive autonomy is more closely related to such symptoms than to other domains of social functioning.

Second, past research finding links between autonomy-undermining behaviors and adolescent externalizing behavior has relied on measures of behavioral autonomy, which may reflect the outcomes of mothers' behaviors rather than the goals of those behaviors. In other words, when adolescents report that their mothers undermine their autonomy, by definition they are reporting that their behavior has been affected. It is not surprising, then, that such studies have found links between reports of mothers' behaviors with regard to autonomy and adolescent behaviors outside the home. The current measure of autonomy focuses more on maternal attempts to undermine their adolescents' cognitive autonomy, whether or not they are ultimately successful. Our results indicate that the effects of mothers' attempts to undermine adolescents' autonomy in the cognitive realm are limited to disruption of the mother–adolescent relationship and suggest that these attempts may not necessarily relate to mothers' success in controlling adolescents' activities outside of the home. Future research that examines both cognitive and behavioral autonomy negotiation within the same sample would be helpful to expand our knowledge of how these behaviors work together to affect adolescents' functioning.

In contrast to several prior studies that have examined level of environmental risk within almost exclusively African American samples (Baldwin et al., 1990; Gonzales et al., 1996; Mason et al., 1996), this study examined the moderating effect of risk in a sample containing both European American and African American adolescents. Although no main effects nor interactions of race/ethnicity were found, the moderating effects of a risky context could not be examined separately within racial/ethnic groups in this study (as past research has done) because of limited sample size. In addition, this study relied on self-described race as an index of race/ethnicity; other authors have noted other, more complex indicators of race/ethnicity

that may be more relevant with respect to assessing family interactions in adolescence (Phinney, 1996; Phinney & Rosenthal, 1992; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) Given these issues, the fact that some past research has noted moderating effects of race/ethnicity and that the effects of risk may be more salient for some ethnic groups (e.g., Lamborn et al., 1996), future research on larger samples that includes a more comprehensive assessment of race/ethnicity might profitably examine the complex linkages among family relationships, ethnicity, environmental risk, and adolescent adjustment.

Although recent research has begun to address the complex role that contextual variables play in moderating the links between parenting and child outcomes (Gonzales et al., 1996; Lamborn et al., 1996; Mason et al., 1996), research on autonomy processes per se has yet to examine the effects of contextual variables such as environmental risk. By examining autonomy processes across two contexts known to differ on major indices of environmental risk (e.g., crime rates and drug arrests), this study suggests that the risk level present in an adolescent's environment represents a key contextual variable in understanding how family processes serve to help or hinder healthy adolescent functioning. Because risky contextual variables do not occur in isolation and because multiple variables are likely to pose risks to adolescents and their families, it will be important for future research to continue to explore how aspects of the socioeconomic environment work together to create varying levels of risk versus opportunity. Further, this study goes beyond past research on the effects of risk on parenting processes by examining the links between autonomy negotiation and *both* mother–adolescent relationship quality and adolescent outcomes. Thus, this study furthers our understanding of how the social environment may alter the meaning and function of family processes as well as our understanding of how and when such processes are related to adolescent adjustment. Finally, this study examined the moderating effects of environmental risk by using observational data and data from multiple reporters, thus extending and validating similar research that has used survey methods (Gonzales et al., 1996; Lamborn et al., 1996; Mason et al., 1996).

It is important to note that these data were gathered from a moderately at-risk sample; thus these adolescents cannot be taken as representative of all adolescents in high- or low-risk environments, and results should not be generalized until further replications are completed. The consistency of findings regarding low-risk adolescents with findings from other samples of low-risk adolescents does, however, offer some hope in this regard (Allen, Hauser, Bell, et al., 1994; Allen, Hauser, Eickholt, et al., 1994; Baumrind, 1991; Dornbusch et al., 1987; Lamborn et al., 1991; Paulson, 1994; Steinberg et al., 1989,1991). Also, these data focused exclusively on the role that autonomy processes play in *mother*–adolescent relationships, and unlike some past research (e.g., Allen, Hauser, Bell, et al., 1994; Allen, Hauser, Eickholt, et al., 1994) did not find links between mothers' behaviors with regard to autonomy and indices of adolescent adjustment. Past research examining links between parental undermining of autonomy and adolescent adjustment has suggested, however, that *fathers* may play a greater role in the autonomy process than mothers (Allen, Hauser, Bell, et al., 1994; Allen & Hauser, 1991). Future research should continue to explore the relative roles that mothers' and fathers' behaviors with regard to autonomy play in facilitating healthy adolescent functioning. In addition, these data are cross sectional and because many factors influence and co-occur with the risk level in families' environments, no inferences about the nature of causal relations among level of risk, autonomy-behaviors, and outcomes can be drawn.

Finally, this research raises, but does not answer, the important question of what ultimately happens to the autonomy-establishing process in high-risk teens. The results of this study suggest that the correlates of the process for achieving autonomy vary greatly across different levels of risk. Specifically, low-risk teens appear to negotiate and achieve their autonomy by means of specific types of interactions within the parent-adolescent relationship—namely, by challenging their parents' arguments and presenting their own reasons for their views. It may

be that this same type of interaction is less acceptable in parent-adolescent relationships in high-risk contexts, such that these teens may ultimately achieve their autonomy outside their relationship with their parents. In contrast, in high-risk contexts, a style of negotiating autonomy that undermines individual autonomy within the parent-adolescent relationship appears to be adaptive in maintaining close and supportive parent-adolescent relationships, at least at age 16. Further longitudinal research is now needed to begin to address whether and to what extent these patterns hold over time. Understanding the conditions under which autonomy strivings might promote versus inhibit healthy development during adolescence across different environments will add to our understanding of this developmental stage as a whole, which in turn can help both parents and adolescents manage the challenges of this transitional period as successfully as possible.

Acknowledgements

This study and its write-up were supported by grants from the Spencer and William T. Grant Foundations and National Institute of Mental Health to the second author.

References

Allen, J. P., & Hauser, S. (April, 1991). *Predictions of adult attachment representations, psychological distress, and competence from family interactions in adolescence.* Paper presented at the 1991 meeting of the Society for Research in Child Development Kansas City, MO.

Allen, J. P., Hauser, S., Bell, K. L., Boykin, K. A., & Tate, D. C. (1995). *Autonomy and relatedness coding system manual* Unpublished manuscript, University of Virginia at Charlottesville.

Allen JP, Hauser ST, Bell K, O'Connor TG. Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as predictors of adolescent ego-development and self-esteem. Child Development 1994;65:179–194. [PubMed: 8131646]

Allen JP, Hauser ST, Eickholt C, Bell KL, O'Connor TG. Autonomy and relatedness in family interactions as predictors of expressions of negative adolescent affect. Journal of Research on Adolescence 1994;4 (4):535–552.

Allen, J. P., Kuperminc, G. P., & Moore, C. W. (1997). Developmental approaches to understanding adolescent deviance. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J. Weisz (Eds.), *Developmental psychopathology: Perspectives on risk and disorder.* Cambridge, U.K.: Cambridge University Press.

Armsden GC, Greenberg MT. The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. Journal of Youth and Adolescence 1987;16:427–454.

Axinn, W., Duncan, G. J., & Thornton, A. (1997). The effects of parents' income, wealth, and attitudes on children's completed school and self-esteem. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor.* New York; Russell Sage Foundation.

Baldwin, A. L., Baldwin, C., & Cole, R. E. (1990). Stress-resistant families and stress-resistant children. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Wein-traub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 257–280). New York: Cambridge University Press.

Barry, H., III, Child, I. L., & Bacon, M. K. (1967). Relation of child training to subsistence economy. In C. S. Ford (Ed.), *Cross-cultural approaches: Readings in comparative research* (pp. 246–258). New Haven, CT: HRAF Press. (Original work published 1959)

Bartz KW, Levine ES. Childrearing by Black parents: A description and comparison to Anglo and Chicano parents. Journal of Marriage and the Family 1978;40:709–719.

Baumrind D. An exploratory study of socialization effects on Black children: Some Black-White comparisons. Child Development 1972;43:261–267. [PubMed: 5027666]

Baumrind D. The influence of parenting style on adolescent competence and substance use. In The work of John P. Hill: I. Theoretical, instructional, and policy contributions [Special issue]. Journal of Early Adolescence 1991;11(1):56–95.

Bradley, R. H. (1995). Environment and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (pp. 235–261). Mahwah, NJ: Erlbaum.

Brooks-Gunn, J., Duncan, G. J., & Maritato, N. (1997). Poor families, poor outcomes: The well-being of children and youth. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor*. New York: Russell Sage Foundation.

Brooks-Gunn, J., Klebanov, P., Liaw, F., & Duncan, G. (1995). Toward an understanding of the effects of poverty on children. In H. E. Fitzgerald, B. M. Lester, & B. S. Zuckerman (Eds.), *Children of poverty: Research, health, and policy issues* (pp. 3–41). New York: Garland.

Cohen, J., & Cohen, P. (1975), Applied multiple regression/correlation analysis for the behavioral sciences. Hills-dale, 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. Adams, & T. P. Gullotta (Eds.), *From childhood to adolescence: A transitional period? Advances in adolescent development* (Vol. 2, pp. 85–106). Newbury Park, CA: Sage.

Conger, R. D., Conger, K. J., & Elder, G. H. (1997). Family economic hardship and adolescent adjustment: Mediating and moderating processes. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor*. New York: Russell Sage Foundation.

Dornbusch SM, Ritter PL, Leiderman PH, Roberts DF, Fraleigh MJ. The relation of parenting style to adolescent school performance. Child Development 1987;58:1244–1257. [PubMed: 3665643]

Dubrow NF, Garbarino J. Living in the war zone: Mothers and young children in a public housing development. Child Welfare 1989;68(1):3–20. [PubMed: 2914517]

Elliott, D. S., Ageton, S. S., Huizinga, D., Knowles, B. A., & Canter, R. J. (1983). *The prevalence and incidence of delinquent behavior: 1976–1980* (The National Youth Survey Project Report No. 26). Boulder, CO: Behavioral Research Institute.

Furstenberg, F. F. (1993). How families manage risk and opportunity in dangerous neighborhoods. In W. J. Wilson (Ed.), *Sociology and the public agenda* (pp, 231–257). Newbury Park, CA: Sage.

Gonzales NA, Cauce AM, Friedman RJ, Mason CA. Family, peer; and neighborhood influences on academic achievement among African-American adolescents: One-year prospective effects. American Journal of Community Psychology 1996;24(3):365–387. [PubMed: 8864209]

Grotevant HD, Cooper CR. Patterns of interaction in family relationships and the development of identity exploration in adolescence. Child Development 1985;56:415–428. [PubMed: 3987416]

Harkness, S., & Super, C. M. (1995). Culture and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Biology and ecology of parenting* (Vol. 2, pp. 211–234). Mahwah, NJ: Erlbaum.

Harrison AO, Wilson MN, Pine C, Chan S, Buriel R. Family ecologies of ethnic minority children. Child Development 1990;61(2):347–362.

Harter, S. (1985). *The self-perception profile for children: Revision of the perceived competence scale for children.* Unpublished manual, University of Denver.

Hauser, R. M., & Sweeney, M. M. (1997). Does poverty in adolescence affect the life chances of high school graduates? In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor*. New York: Russell Sage Foundation.

Hauser ST, Powers SI, Noam GG, Jacobson AM, Weiss B, Follansbee DJ. Familial contexts of adolescent ego development. Child Development 1984;55:195–213. [PubMed: 6705622]

Haveman, R., Wolfe, B., & Wilson, K. (1997). Childhood poverty and adolescent schooling and fertility outcomes: Reduced-form and structural estimates. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor*. New York: Russell Sage Foundation.

Hill NE. The relationship between family environment and parenting style: A preliminary study of African American families. Journal of Black Psychology 1995;21(4):408–423.

Holmbeck, G. N., Paikoff, R. L., & Brooks-Gunn, J. (1995). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 1. Children and parenting* (pp. 91–118). Mahwah, NJ: Erlbaum.

Kelley ML, Sanchez-Hucles J, Walker R. Correlates of disciplinary practices in working- to low-risk African American mothers. Merrill-Palmer Quarterly 1993;39:252–264.

Kohn ML. Social class and parent-child relationships; An interpretation. American Journal of Sociology 1963;68:471–480.

Kohn, M. L. (1979). The effects of social class on parental values and practices. In D. Reiss & H. A. Hoffman (Eds.), *The American family: Dying or developing* (pp. 45–68). New York; Plenum.

Korenmann, S., & Miller, J. E. (1997). Effects of long-term poverty on physical health of children in the National Longitudinal Survey of Youth. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor.* New York: Russell Sage Foundation.

Krivo LJ, Peterson RD. Extremely disadvan-taged neighborhoods and urban crime. Social Forces 1996;75 (2):619–650.

Lamborn SD, Dornbusch SM, Steinberg L. Ethnicity and community context as moderators of the relations between family decision making and adolescent adjustment. Child Development 1996;67:283–301.

Lamborn SD, Mounts NS, Steinberg L, Dornbusch SM. Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful homes. Child Development 1991;62:1049–1065. [PubMed: 1756655]

Levine, R. A. (1980). A cross-cultural perspectives on parenting. In M. D. Fantini & R. Cardenas (Eds.), *Parenting in a Multicultural Society* (pp. 17–26). New York: Longman.

Levine, R. A. (1988). Human parental care: Universal goals, cultural strategies, individual behavior. In R. A. Levine, P. M. Miller, & M. M. West (Eds.), *New directions for child development: No. 40. Parental behavior in diverse societies* (pp. 3–11). San Francisco: Jossey-Bass.

Mason CA, Cauce AM, Gonzales N, Hiraga Y. Neither too sweet nor too sour: Problem peers, maternal control, and problem behavior in African-American adolescents. Child Development 1996;67:2115–2130. [PubMed: 9022233]

Nisbett RE, Wilson TD. Telling more than we can know: Verbal reports of mental processes. Psychological Review 1977;84:231–259.

Nucci, L. P. (1994). Mother's beliefs regarding the personal domain of children. In J. G. Smetana (Ed.), *New directions for child development: No. 66. Beliefs about parenting* (pp. 81–97). San Francisco: Jossey-Bass.

Ogbu JU. Origins of human competence: A cultural-ecological perspective. Child Development 1981;52 (2):413–429.

Ogbu, J. U. (1988). Cultural diversity and human development. In D. T. Slaughter (Ed.), *New directions for child development: No. 42. Black children and poverty: A developmental perspective* (pp. 11–28). San Francisco: Jossey-Bass.

Okagaki, L., & Divecha, D. J. (1993). Development of parental beliefs. In T. Luster & L. Okagaki (Eds.), *Parenting: An ecological perspective* (pp. 35–67). Hillsdale, NJ: Erlbaum.

Paulson SE. Relations of parenting style and parental involvement with ninth-grade students' achievement. In Middle grades schooling and early adolescent development: I. Early adolescents' psychological characteristics, relationship with others, and school performance [Special issue]. Journal of Early Adolescence 1994;14(2):250–267.

Phinney JS. When we talk about American ethnic groups, what do we mean? American Psychologist 1996;51(9):918–927.

Phinney, J. S., & Rosenthal, D. A. (1992). Ethnic identity in adolescence: Process, context, and outcome. In G. R. Adams & T. P. Gllotta (Eds.), *Adolescent identity formation. Advances in adolescent development* (Vol. 4.) Newbury Park, CA: Sage.

Schaefer ES. Children's reports of parental behavior: An inventory. Child Development 1965;36:413–424. [PubMed: 14300862]

Schluderman E, Schluderman S. Replicability of factors in children's reports of parent behavior (CRPBI). Journal of Psychology 1970;76:239–249.

Sellers RM, Rowley SAJ, Chavous TM, Shelton JN, Smith MA. Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. Journal of Personality & Social Psychology 1997;73(4):805–815.

Slater, C., & Hall, G. (1996). *County and city extra: Annual metro, city, and county data book.* Lanham, MD: Bernan Press.

Smith, J. R., Brooks-Gunn, J., & Klebanov, P. K. (1997). Consequences of living in poverty for young children's cognitive and verbal ability and early achievement. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor.* New York: Russell Sage Foundation.

Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman & G. R. Elliot (Eds.), *At the threshold: The developing adolescent* (pp. 255–276). Cambridge, MA: Harvard University Press.

Steinberg L, Dornbusch SM, Brown; BB. Ethnic differences in adolescent achievement: An ecological perspective. American Psychologist 1992;47:723–729. [PubMed: 1616171]

Steinberg L, Elmen JD, Mounts NS. Authoritative parenting, psychosocial maturity, and academic success among adolescents. Child Development 1989;60:1424–1436. [PubMed: 2612251]

Steinberg L, Mounts NS, Lamborn S, Dornbusch SM. Authoritative parenting and adolescent adjustment across varied ecological niches. Journal of Research on Adolescence 1991;1(1):19–36.

Straus MA. Measuring intrafamily conflict and violence: The Conflict Tactics Scales. Journal of Marriage and the Family 1979;41:75–86.

Teachman, J. D., Paasch, K. M., Day, R. D., & Carver, K. P. (1997). Poverty during adolescence and subsequent educational attainment. In G. J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor*. New York: Russell Sage Foundation.

Virginia Department of State Police, Uniform Crime Reporting Section. (1995). *Crimes in Virginia.* Richmond, VA: Author.

Figure 1.
Observations of maternal undermining of autonomy and adolescents' ratings of trust and acceptance.

Figure 2.
Observations of maternal undermining of autonomy and adolescents' ratings of psychological control and alienation.

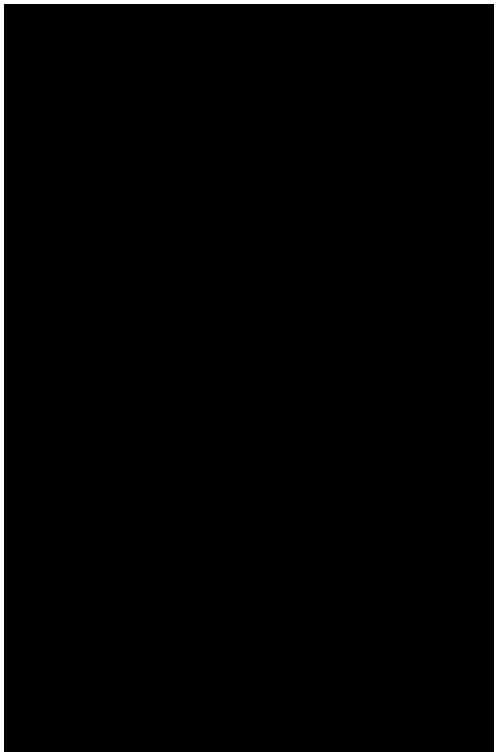

Figure 3.
Observations of adolescents' exhibiting autonomy and adolescents' ratings of alienation from mother.

Figure 4.
Adolescents' exhibiting autonomy and adolescents' social functioning.

Table 1

Demographic Variables in High- and Low-Risk Samples

	High Risk (*n* = 43)	Low Risk (*n* = 88)	*t*
Adolescents' age			
Mean (*SD*)	15.73 (.77)	15.95 (.80)	1.45
Family income			
Mean (*SD*)	14,878 (7,352)	40,833 (19,164)	11.03***
Number of academic risk factors			
Mean (*SD*)	1.46 (−57)	1,46 (.74)	−.00
			χ^2
Adolescents' gender			
Male	58%	50%	0.77
Female	42%	50%	
Race/ethnicity			
European American	26%	78%	33.91***
African American	74%	22%	
Family composition			
Intact (both biological parents)	17%	41%	7.55**
Non-intact	83%	59%	
Mothers' education			
Did not complete high school	33%	8%	21.44**
High school diploma	22%	18%	
≤ Two years of college	43%	47%	
Bachelors degree or beyond	2%	27%	

* $p < .05$

** $p < .01$

*** $p < .001$.

Table 2

Mean Differences between High-Risk and Low-Risk Samples on All Variables Examined

	High Risk *Mean (SD)*	Low Risk *Mean (SD)*	*t*
Autonomy variables			
Adolescent exhibiting autonomy	1.57 (.93)	2.06 (.84)	3.05**
Mother undermining autonomy	.87 (.50)	.89 (.49)	0.21
Relationship variables			
Psychological control	17.04(4.01)	16.50 (4.72)	−.74
Acceptance	22.96 (5.39)	21.81 (6.13)	−1.04
Trust	40.34(7.66)	37.66 (8.86)	−1.68+
Communication	34.16 (8.50)	33.06 (8.78)	−.67
Alienation	16.42 (6.49)	20.16 (6.24)	3.12**
Adolescent adjustment			
Peer-reported friendship competence	3.27 (.46)	3.03 (.61)	−2.05*
Self-reported delinquency	1.83 (1.53)	1.54(1.43)	−1.06

* $p < .05$;

** $p < .01$;

*** $p < .001$;

\+ $p < .10$.

Table 3

Intercorrelations among Predictor and Outcome Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Demographic variables											
1. Level of risk[a]											
2. Race/ethnicity[b]	.51										
Autonomy/control variables											
3. Teen exhibiting autonomy	−.26	−.36									
4. Mother undermining autonomy	−.02	.19	.06								
Relationship variables											
5. Psychological control	.06	.16	−.18	.16							
6. Acceptance	.09	−.00	−.08	.04	−.29						
7. Trust	.15	.04	−.03	.11	−.37	.81					
8. Communication	.06	−.00	−.13	.08	−.25	.82	.81				
9. Alienation	−.27	−.11	.20	−.01	.37	−.63	−.68	−.68			
Outcome variables											
10. Peer reported friendship competence	.19	.04	.16	−.06	−.05	.14	.11	.10	−.11		
11. Self reported delinquency	.09	.00	.13	.02	.26	−.15	−.19	−.26	.25	.01	

[a] Risk variable is coded as follows: 1 = high risk, 0 = low risk,

[b] Race/ethnicity is coded as follows: 1 = African American, 0 = European American.

Table 4

Interactions between Negotiating Autonomy and Level of Risk in Predicting Mother-Adolescent Relationship Quality and Adolescent Adjustment

	Mother-Adolescent Relationship Quality			Adolescent Adjustment		
	Trust β[a]	Acceptance β	Psychological Control β	Alienation β	Friendship Competence β	Delinquency β
Mothers' undermining autonomy	.17*	.27***	−.21*	−.18*	−.03	.00
Adolescents' exhibiting autonomy	−.05	−.06	−.05	.19*	−.17+	.19*

[a] β weights presented are from final model.

* $p < .05$;

** $p < .01$;

+ $p < .10$.

Table 5

Maternal Behaviors Undermining Autonomy and the Quality of the Mother-Adolescent Relationship

	r	β[a]	ΔR^2	R^2
Trust				
Level of risk	.15	.14		.02
Gender	−.16*	−.15+	.02+	.04+
Undermining autonomy	.11	.10	.01	.05+
Risk × undermining autonomy		.17*	.03*	.08*
$\beta_{High\ Risk} = .37^{**}$				
$\beta_{Low\ Risk} = -.03$				
Acceptance				
Level of risk	.09	.09		.01
Gender	−.13	−.13	.02	.02
Undermining autonomy	.04	.02	.01	.03
Risk × undermining autonomy		.27**	.07**	.10*
$\beta_{HighRisk} = .44^{**}$				
$\beta_{LowRisk} = -.16$				

[a] β weights are from final model.

* $p < .05$;

** $p < .01$;

+ $p < .10$.

Table 6

Maternal Behaviors Undermining Autonomy and the Quality of the Mother–Adolescent Relationship

	r	β[a]	ΔR^2	R^2
Psychological control				
Level of risk	.06	.05		.01
Gender	−.06	−.04	.00	.01
Undermining Autonomy	.16	.17^{+}	.03*	.03
Risk undermining autonomy*		−.21*	.04*	.08*
$\beta_{\text{High Risk}} = -.15$				
$\beta_{\text{Low Risk}} = -.30^{**}$				
Alienation				
Level of risk	−.27**	−.27**		.07**
Gender	.15^{+}	.14^{+}	.02	.09**
Undermining autonomy	−.01	−.01	.00	.09**
Risk undermining autonomy*		−.18*	.03*	.12**
$\beta_{\text{High Risk}} = -.24$				
$\beta_{\text{Low Risk}} = -.13$				

[a] β weights are from final model.

$^{*}p < .05$

$^{**}p < .01$

$^{+}p < .10$.

Table 7

Adolescents' Behaviors Exhibiting Autonomy, the Mother–Adolescent Relationship and Adolescent Adjustment

	r	β[a]	ΔR^2	R^2
Alienation				
Level of risk	−.27**	−.19*		.07**
Gender	.15+	.11	.02	.09**
Exhibiting Autonomy	.20**	.11	.02	.11**
Risk exhibiting autonomy*		.19*	.03*	.14**
$\beta_{High\ Risk}$ = .43**				
$\beta_{Low\ Risk}$ = −.02				
Self-reported delinquency				
Level of risk	.09	.16*		.01
Gender	−.08	−.10	.01	.02
Exhibiting Autonomy	.13	.16+	.02+	.04
Risk exhibiting autonomy*		.19*	.04*	.08*
$\beta_{High\ Risk}$ = .44**				
$\beta_{Low\ Risk}$ = .03				
Peer-reported friendship competence				
Level of risk	.20*	.23*		.04*
Gender	.22*	.21*	.05**	.09**
Exhibiting Autonomy	.16+	.19*	.03*	.12**
Risk exhibiting autonomy*		−.17*	.03+	.15**
$\beta_{High\ Risk}$ = −.08				
$\beta_{Low\ Risk}$ = .28*				

[a] β weights are from final model.

* $p<.05$

** $p<.01$

+ $p<.10$