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Family Functioning, Identity, and Problem Behavior in Hispanic Immigrant Early Adolescents

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Abstract

The present study investigated the role of identity in the relationship between family functioning and behavior problems in a sample of Hispanic immigrant early adolescents and their families. The sample consisted of 181 Hispanic immigrant adolescents (92 males, 89 females) and their participating caregivers (who were mostly mothers). Identity was measured using adolescent reports, whereas family functioning and early adolescent behavior problems were measured using both adolescent and parent reports. Correlational analyses indicated that previously obtained relationships among family functioning, identity, and behavior problems were replicated in the present sample. Structural equation models indicated that 20% of the relationship between family functioning and behavior problems operated indirectly through identity, and identity confusion partially mediates the relationship between family functioning and early adolescent behavior problems. Implications for intervention are discussed.

Keywords

Hispanic; family; identity; behavior problems; structural equation modeling

Adolescence is a time when both positive and negative developmental trajectories begin to take shape. Positive outcomes, such as the formation of a coherent sense of identity (Erikson, 1950; Marcia, 1980), begin to appear prominently during the adolescent years. On the other hand, behavior problems also tend to appear and increase during adolescence (Loeber, Farrington, Stouthamer-Loeber, Moffitt, & Caspi, 1999). Although there is some evidence that these positive and negative developmental processes may be related (e.g., Adams et al., 2001; Wires, Barocas, & Hollenbeck, 1994), studies investigating these relationships have generally not attended to ecological factors (e.g., family functioning) that may be related to both identity and behavior problems in adolescence.

Identity is one of the pivotal developmental tasks of adolescence (Erikson, 1950, 1968) and is a central positive process during this stage. A coherent sense of identity helps to organize and give meaning to one's experiences and to guide one's decisions and behaviors, whereas a

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fragmented, confused, or poorly structured sense of identity may render one especially susceptible to external events (Côté & Levine, 2002; Erikson, 1950). Ultimately, some degree of both identity synthesis and identity confusion is adaptable, provided that identity synthesis predominates over identity confusion (Erikson, 1950).

Both identity and behavior problems may be, to some extent, a function of family processes and environment. The effects of family functioning on adolescent identity (e.g., Adams, Dyk, & Bennion, 1987; Grotevant & Cooper, 1986) and on adolescent behavior problems (Dishion, Capaldi, & Yoerger, 1999; Olson, Bates, Sandy, & Lanthier, 2000; Pettit, Bates, & Dodge, 1997) have been widely (and separately) studied. What has generally been found is that adaptive family functioning (e.g., family cohesion and positive communication, parental involvement with the adolescent) is positively related to a coherent sense of identity and negatively related to behavior problems. Identity synthesis has also been found to relate negatively to behavior problems (e.g., Adams et al., 2001; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Glider, 1989). However, to date, no published research has evaluated the relationships of family functioning to identity and behavior problems in a single study. Such research would permit examination of the role of identity in the relationship between family functioning and behavior problems. Dodge and Pettit (2003) have suggested that contextual processes influence processes internal to the adolescent, which in turn modify her or his predisposition toward certain types of behaviors. Therefore, given that family functioning and identity have both been found to relate negatively to behavior problems in adolescence, and especially in light of Erikson's (1950) contention that identity helps to interpret external events and guide behavior, it may be plausible that identity may play a role in the relationship between family functioning and behavior problems.

The present study represents an examination of the role of identity in protecting Hispanic immigrant adolescents against behavior problems. Accordingly, the present study was guided by two primary purposes. First, we sought to examine the extent to which previous correlational findings obtained with largely White samples replicate with Hispanic immigrant adolescents. Such replication is an important prerequisite to evaluating the role of identity in the relationship between family functioning and behavior problems in this population. Second, provided that previously obtained relationships were replicated, we sought to examine the contribution that the early adolescent's emerging self-definition might make to explaining the mechanisms by which family functioning is related to problematic adolescent behavior. The present study examined this set of relationships in Hispanic immigrant early adolescents, a substantial and growing population. We focused on early adolescence because it is the time when identity begins to emerge (Archer, 1982; Archer & Waterman, 1983) and when behavior problems escalate (Broidy et al., 2003). We focused on Hispanics because of both (a) the size, youthfulness, and growth rates of this population (Marotta & Garcia, 2003) and (b) the elevated rates of problem behavior among Hispanic adolescents (Snyder & Sickmund, 1999). These elevated rates of problem behavior may be due to the fact that Hispanic immigrant adolescents and their parents often experience intergenerational-intercultural conflict as adolescents Americanize and parents continue to adhere to Hispanic cultural values and practices (e.g., Pantin, Schwartz, Sullivan, Coatsworth, & Szapocznik, 2003).

Although Erikson originally used the term *identity synthesis*, in the present article, we adopt the term *identity coherence*. Identity synthesis, reflecting a well thought out and consolidated sense of identity, may not apply in a study of early adolescents who are first beginning to address the task of developing a sense of identity. Rather, a coherent sense of identity, in which the various aspects of self are reasonably consistent with one another, may be a more reasonable expectation. Therefore, although the identity literature has tended to be faithful to Erikson's original terminology, we sought to use descriptors that would be more applicable to early adolescents. The term *coherence* is borrowed from the attachment (Zimmermann, 2004) and

self-concept (Harter, 1998) literatures, in which it refers to the ability to bring together disparate elements into an organized and well-functioning whole. We define identity coherence as a workable and internally consistent sense of identity. To remain as faithful to Eriksonian and neo-Eriksonian identity literature as possible (cf. Schwartz, 2001), we use the term *identity synthesis* when referring to Erikson's work or to previous work conducted by subsequent identity theorists and researchers. In referring to identity generally or with regard to early adolescence, we use the term *identity coherence*.

The remainder of this introductory section is divided into five parts. First, we outline reasons for studying identity as a positive developmental process. Second, we discuss the influence of family functioning on identity and behavior problems in adolescence. Third, we discuss the role of identity vis-à-vis behavior problems in adolescence. Fourth, we explore the importance of studying family functioning, identity, and behavior problems in Hispanic immigrant adolescents. Finally, we outline the research questions and hypotheses to be addressed in the present study.

Identity as a Positive Developmental Process

The importance of identity as a positive developmental process has been acknowledged in the psychological literature for more than 50 years. Erikson (1950) posited identity formation as the primary developmental task of the adolescent years. The purpose of identity, Erikson said, was to transform the child from a passive recipient of parental introjects (e.g., beliefs, mannerisms, values, preferences) to a self-directed individual capable of guiding her or his own life trajectory. In Erikson's original conceptualization, identity synthesis, referenced here as identity coherence, denotes self-knowledge and agentic (self-directed) functioning, whereas identity confusion denotes lack of self-knowledge and reliance on others to guide one's life path. Adaptive identity development is represented by a predominance of identity synthesis or coherence over identity confusion (Erikson, 1968).

The quality and coherence of the identity that an adolescent forms is, to a large extent, determined by parental support for the adolescent (Grotevant & Cooper, 1985), communication with parents (Bhushan & Shirali, 1992), and the quality of parent-adolescent attachments and relationships (Schultheiss & Blustein, 1994). However, once the process of identity formation has been set in motion, the process is assumed to be agentic to some degree (Côté & Levine, 2002) and to play an important role in guiding one's behavior (Côté, 1996). That is, although ecological factors certainly shape and guide the identity formation process, the identity being formed may begin to contribute to its own developmental course and to the adolescent's behavior as well.

Accordingly, there is some evidence that adolescents with a less coherent sense of identity may be especially prone to behavior problems (Adams et al., 2001). It has been hypothesized that identity confusion increases adolescents' proneness to aggression, delinquency, and other forms of deviant behavior (Jones, 1992, 1994). These expectations have been supported in past research (e.g., Jones & Hartmann, 1988; Jones et al., 1989).

The way in which identity is measured may have important implications for its role in the relationship between family functioning and behavior problems during early adolescence. The identity status model (Marcia, 1966, 1980; see Berzonsky & Adams, 1999; Waterman, 1999, for recent reviews) is by far the most widely accepted and studied empirical extension of Erikson's identity stage. Identity status theory is concerned with the extent to which an adolescent has explored and committed to identity alternatives in content domains such as political preferences, religious beliefs, occupational goals, and personal values (see Schwartz, 2001, for an extended discussion). Although these content domains appear to be applicable to older adolescents and to adults, their relevance to early adolescents has been questioned (e.g.,

Archer & Waterman, 1983). For example, Archer (1982) found little identity development activity among middle schoolers. Allison and Schultz (2001), reviewing Archer's findings, concluded that the content domains surveyed by identity status theory and measures, especially ideological content domains, such as politics and occupation, may not be appropriate for use with early adolescents. Measures such as the Erikson Psychosocial Stage Inventory (Rosenthal, Gurney, & Moore, 1981), the Ego Identity Scale and Identity Confusion Inventory (Côté, 1984), and the Ego Identity Scale (Tan, Kendis, Fine, & Porac, 1977) measure the two core aspects of Erikson's identity stage (i.e., identity coherence and identity confusion) at the overall level. Use of such measures may permit examination as to whether early adolescence is characterized by a lack of identity development or whether identity activity is present but has not been detected in studies using identity status measures. If identity development does indeed occur in early adolescence, then the potential exists for identity to play a role in the relationship between family functioning and behavior problems during this developmental period.

Ecological Influences on Identity and Behavior Problems

Research has indicated that factors in the adolescent's social ecology help to direct the adolescent toward either positive (e.g., self-directedness, future orientation) or negative (e.g., behavior problems) outcomes. It has been argued that the family context exerts the most powerful social influences on adolescent development (Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000; Szapocznik & Coatsworth, 1999). Parents have a lifelong history with their children and maintain a significant amount of influence as children pass into adolescence (Steinberg, 2001).

Accordingly, interactions with parents (Adams et al., 1987; Jackson, Dunham, & Kidwell, 1990) have been shown to be related to adolescents' sense of identity. Adolescents whose relationships with parents are positive tend to develop a more coherent and integrated sense of identity, whereas those adolescents whose family relationships are distant or conflicted tend to develop a more fragmented sense of identity. Similarly, family processes, including parental involvement and support, positive parenting, and poor parent-adolescent communication, are closely related to adolescent delinquency and conduct problems (Demuth & Brown, 2004; Loeber et al., 1999; Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikström, 2002) as well as to other related negative outcomes, such as substance use (Brook et al., 2001; Vakalahi, 2002).

Although most studies examining the relationship between family functioning and behavior problems have not examined boys and girls separately, some studies have found that the relationship between family functioning and adolescent behavior problems is moderated by gender. For example, Crosnoe, Erickson, and Dornbusch (2002) found that parental involvement was protective against cigarette smoking for boys, but not for girls, who associated with deviant friends. Using an inner-city minority sample, Griffin, Botvin, Scheier, Diaz, and Miller (2000) found that parental monitoring and supervision was associated with decreased alcohol use for boys but with increased alcohol use for girls. Regarding the relationship between family functioning and identity, Schultheiss and Blustein (1994) found that closeness to family was significantly more strongly related to identity development in college men than in college women. The moderating role of gender in the relationship between identity and behavior problems has not been evaluated in the published literature. The present study, therefore, examined gender as a potential moderator of all three sets of relationships (i.e., family functioning with identity, identity with behavior problems, and family functioning with behavior problems). We also examined gender differences in the role of identity in the relationship between family functioning and behavior problems.

The Importance of Studying Family Functioning, Identity, and Behavior Problems in Hispanic Immigrant Adolescents

The neo-Eriksonian identity literature primarily consists of studies conducted on non-Hispanic Whites (Sneed, Schwartz, & Cross, in press). With the exception of research on ethnic or racial identity, the applicability of Eriksonian and neo-Eriksonian identity theory to non-White populations has been sparsely studied. Much of the research on family functioning and adolescent behavior problems has also focused on non-Hispanic Whites. However, given the increasing diversity of the U.S. population (minorities now compose approximately one third of the U.S. population; Day, 1996), it is important to explore the interrelationships among ecological context, identity, and behavior problems in minority samples. The present study represents an attempt to generalize the associations between family functioning and identity, between family functioning and behavior problems, and between identity and behavior problems to an understudied but growing and important minority population. Hispanics compose the largest and fastest growing minority group in the United States, composing 13% of the U.S. population and increasing 58% during the 1990s (Marotta & Garcia, 2003). Moreover, the Hispanic population is expected to continue growing; Hispanics are projected to compose 16% of the U.S. population in 2020, 20% in 2030, and 25% in 2050 (Day, 1996).

Heightened vulnerability to behavior problems among Hispanic adolescents may also argue for the study of predictors and correlates of behavior problems in this group. Hispanic adolescents are more likely than non-Hispanic White adolescents to live below the poverty line (Procter & Dalaker, 2003); in turn, poverty often exposes children and adolescents to harsh and unsupportive parenting (Pettit et al., 1997). Moreover, as noted earlier, the compounding of intergenerational and intercultural conflicts may reduce the supportiveness, involvement, and warmth with which Hispanic immigrant parents interact with their adolescents (Merali, 2004). In addition to parent-adolescent acculturation discrepancies, parents' immigration and occupational stressors also compromise family functioning in Hispanic immigrant families (Pantin, Schwartz, et al., 2003; Pantin, Schwartz, Sullivan, Prado, & Szapocznik, 2004). Compromised family functioning represents a significant risk factor for behavior problems and may add to the risks posed by other risk factors, such as association with Americanized peers and lack of parental involvement in school.

Given the assumption that the effects of contextual processes operate through intrapersonal processes (Dodge & Pettit, 2003), compromised family functioning may relate to behavior problems partially through a confused and poorly organized sense of identity, whereas adaptive family functioning may protect against behavior problems partially through a coherent sense of identity. The present study can be conceptualized as an examination of this possibility and perhaps as a precursor to intervention efforts, targeting both family functioning and identity development, which can be used to prevent or reduce behavior problems in Hispanic immigrant early adolescents.

Theoretical Approach Guiding the Present Study

Although the literatures linking (a) family functioning to identity, (b) identity to behavior problems, and (c) family functioning to behavior problems have been considered separately, it may be possible to formulate an integrative theoretical model based on these respective literatures. Provided that these linkages replicate with Hispanic immigrant adolescents, such a model could then be tested empirically and could therefore facilitate examination of the role that identity plays in the relationship between family functioning and behavior problems in early adolescence. Adaptive family functioning is positively related to a coherent sense of identity (e.g., Mullis, Brailsford, & Mullis, 2003; Schultheiss & Blustein, 1994), a coherent sense of identity has been shown to relate inversely to adolescent behavior problems (e.g.,

Adams et al., 2001; Jones et al., 1989), and a robust literature has demonstrated the inverse relationship between adaptive family functioning and adolescent behavior problems (e.g., Demuth & Brown, 2004; Loeber et al., 1999; Stouthamer-Loeber et al., 2002). Given Erikson's conceptualization of identity synthesis versus identity confusion (reframed by Marcia, 2002, as identity synthesis *with* identity confusion, indicating that some degree of both coherence and confusion is appropriate in adolescence), it may be justifiable to conceptualize identity coherence and identity confusion as separate variables. Such a conceptualization may be especially defensible in early adolescence, when multiple aspects of self may be inconsistent with one another (e.g., Harter, 1999).

Putting these pieces together would yield a theoretical model such as that depicted in Figure 1. The path between family functioning and identity coherence would be assumed to be positive, the path between family functioning and identity confusion would be assumed to be negative, the path between identity coherence and behavior problems would be assumed to be negative, the path between identity confusion and behavior problems would be assumed to be positive, and the path between family functioning and behavior problems would be assumed to be negative. These propositions were tested at the bivariate level to ensure that previously obtained findings replicate with the present sample and, at the multivariate level, to examine the role of identity in the relationship between family functioning and behavior problems. The model depicted in Figure 1 represents the primary hypothesis to be tested at the multivariate level, with the specific paths outlined here representing hypothesized relationships within the model. There is insufficient guidance, either theoretically or in the extant literature, to speculate on the extent to which the relationship between family functioning and behavior problems would be direct or indirect (i.e., through identity processes), including the possibility of partial mediation through identity. This issue was treated as a research question in the present study.

METHOD

Participants

Participants in the present study were 181 Hispanic immigrant adolescents (92 males, 89 females; mean age 12.7 years, *SD* = 0.69) and their primary caregivers (18 males, 163 females; mean age 40.7 years, *SD* = 6.5) enrolled in an HIV prevention study. Each adolescent participated in the study with the parent or parent figure who self-identified as the adolescent's primary caregiver. Data for the present analyses were taken from the baseline assessment for the larger prevention study. This baseline assessment was conducted before participants were randomized to condition. Participating families' median annual family income was between $15,000 and $20,000. Twenty percent of participating parents reported having resided in the United States for fewer than 5 years. The sample was primarily of Nicaraguan (29%) and Cuban (28%) origin, with the remainder of families originating from Honduras (16%), Colombia (4%), Argentina (4%), and other Hispanic nationalities (19%). The predominance of female caregivers is consistent with many Hispanic cultures in which women are primarily responsible for child-rearing functions (Gomez & Marin, 1996).

As per the inclusion criteria for the larger prevention study, all participating adolescents were being promoted to the eighth grade, attended one of three middle schools in low-income areas of Miami, had at least one parent who had been born in a Hispanic country, and had never been hospitalized for psychiatric reasons. The parents and adolescents were selected for inclusion in the larger trial because of risk factors inherent in the Hispanic immigrant experience and not because the adolescents were displaying any academic or behavioral problems (see Pantin et al., 2004, for more information on participant selection).

Measures

Demographics—Parents completed a 19-item demographic form on which they provided their date and country of birth, number of years lived in the United States and South Florida, primary language spoken in the home, national origin, marital and employment status, years of education completed, occupation, household income, and amount of government assistance received.

Family functioning—Family functioning was assessed using both parent and adolescent reports. It was operationalized in terms of parental involvement with, positive parenting toward, support for, and communication with the adolescent. Parent and adolescent reports of parental involvement (parent report contains 12 items, $\alpha = .80$; adolescent report contains 12 items, $\alpha = .76$) and positive parenting (parent report contains 6 items, $\alpha = .77$; adolescent report contains 6 items, $\alpha = .87$) were obtained using the Parenting Practices Scale (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996). Parent and adolescent reports of effective communication (parent report contains 20 items, $\alpha = .84$; adolescent report contains 20 items, $\alpha = .87$) were obtained using the Parent-Adolescent Communication Scale (Barnes & Olson, 1985). Parent and adolescent reports of parental support for the adolescent (parent report contains 6 items, $\alpha = .50$[1]; adolescent report contains 6 items, $\alpha = .76$) were obtained using the Family Relations Scale (Tolan, Gorman-Smith, Zelli, & Huesmann, 1997). Sample adolescent-reported[2] items from the Parenting Practices Scale include “When was the last time you discussed with your parent your plans for the coming day?” (extent of involvement) and “When I do something my parent likes, s/he gives me a wink or a smile” (positive parenting). Adolescent-reported items from the Parent-Adolescent Communication Scale include “I can discuss my beliefs with my child without feeling restrained or embarrassed.” Adolescent-reported items from the Family Relations Scale Support subscale include “My family doesn’t let me be myself” (reverse scored).

In the larger study from which these data were drawn, adolescents rated their relationships with their mothers. The only family variable in the present study that referred to perceptions of the overall family environment was family support, as measured by the Family Relations Scale. As a result, most of the adolescents in the study provided data only on their relationships with their mothers.

Identity—Adolescent identity was measured using the 12-item identity subscale of the Erikson Psychosocial Stage Inventory (Rosenthal et al., 1981), which measures the extent to which participants have a clear sense of who they are and what they believe in. Six items are worded in a positive direction (i.e., toward identity coherence), and 6 items are worded in a negative direction (i.e., toward identity confusion). Sample items from this measure include “I’ve got a clear idea of what I want to be” (identity coherence) and “I don’t really know who I am” (identity confusion). Rosenthal et al. (1981) have presented some reliability and validity data for the single 12-item scale. Alpha coefficients for both boys and girls were more than . 70, and scores on the identity scale were positively related to the Identity subscale from the Personal Maturity Inventory ($r = .56$; Greenberger & Sorensen, 1974). Moreover, in a longitudinal study following adolescents from their sophomore to senior year of high school, Reis and Youniss (2004) found that the most progressive changes in Erikson Psychosocial Stage Inventory identity scores (i.e., increases in identity coherence and decreases in identity confusion) across adolescence were associated with positive relationships (e.g., adaptive communication, high support, low avoidance, low conflict) with parents and peers. Less

[1]Because of the low reliability coefficient for parent-reported family support, we estimated all structural equation models both with and without this indicator. The two sets of models provided equivalent fit indices and conclusions.
[2]In the parent-reported items, “I” is replaced with “my child,” and “my parent” is replaced with “I.”

progressive changes in identity scores with time were associated with less positive relationships with parents and peers reported. These findings provide further evidence for the construct validity of Erikson Psychosocial Stage Inventory scores.

A search of the PsycInfo literature database from January 1990 through October 2004 yielded no published studies using the Erikson Psychosocial Stage Inventory with Hispanic adolescents. The measure was designed to yield a single scale score for identity (Rosenthal et al., 1981). However, given Erikson's (1950) conceptualization of identity coherence and identity confusion as separate but overlapping aspects of the identity stage (and given Marcia's [2002] recasting of the identity stage as identity synthesis with identity confusion), there was reason to expect that identity coherence and identity confusion might represent separate factors. Therefore, we factor analyzed the 12 items. The exploratory factor analysis yielded two factors, one representing the identity coherence items (eigenvalue 3.68; 30.66% of variability explained) and the other representing the identity confusion items (eigenvalue 2.32; 19.29% of variability explained). As a result, two subscales were created to represent identity in the present study: Identity Coherence ($\alpha = .83$) and Identity Confusion ($\alpha = .69$).

Early adolescent behavior problems—Early adolescent behavior problems were measured using both parent and adolescent reports. Adolescent reports were gathered using shortened versions of the Aggressive Behavior (11 items, $\alpha = .70$) and Attention Problems (9 items, $\alpha = .76$) subscales from the Youth Self-Report. Sample items from these scales include "I am mean to others" (Aggressive Behavior) and "I have trouble paying attention" (Attention Problems). Parent reports were gathered using the Conduct Disorder (22 items, $\alpha = .95$), Socialized Aggression (delinquency in the company of peers; 17 items, $\alpha = .96$), and Attention Problems (16 items, $\alpha = .93$) subscales from the Revised Behavior Problem Checklist (Quay & Peterson, 1987). Sample items from these scales include "Disruptive; annoys or bothers others" (Conduct Disorder), "Steals in the company of others" (Socialized Aggression), and "Short attention span or poor concentration" (Attention Problems).

Procedure

Parental informed consent and youth assent were obtained prior to assessment. All assessments were conducted at the research center that housed the larger prevention trial or in one of the three target middle schools. Measures were provided in both English and Spanish, such that each parent and adolescent completed the measures in her or his preferred language. All assessors who administered measures to parents were Spanish speakers, and all assessors who administered measures to adolescents were bilingual in English and Spanish. All parents completed their assessments in Spanish, whereas the majority of adolescents (78%; $n = 141$) completed their assessments in English. We did not have a sufficient number of adolescents completing measures in Spanish ($n = 40$) to empirically assess measurement equivalence across languages. At a minimum, measurement equivalence analyses require 5 participants per parameter (Kline, 1998; Vandenberg & Lance, 2000). All measures used in the present study consisted of at least 12 items; with two parameters per questionnaire item, assessing measurement equivalence empirically would have required at least 120 participants for each assessment language. In research on Hispanics, it is common practice to pool participants across language of assessment (e.g., Marsiglia, Kulis, & Hecht, 2001; Newcomb, Locke, & Goodyear, 2003; Pantin, Coatsworth, et al., 2003). Nonetheless, empirically establishing measurement equivalence between Spanish and English versions of measures used with Hispanics is an important research need. Such empirical work can provide maximum confidence that the meaning and valence of the items and response scales are comparable across languages.

Adolescent-report measures were completed via an audio computer-assisted self-interviewing system, heretofore referred to as audio-CASI (see Turner et al., 1998, for an in-depth description of the audio-CASI system). Each questionnaire item, along with the response scale, is read to the adolescent through a set of headphones while the adolescent sits in front of a laptop computer screen. The adolescent indicates her or his response by entering the appropriate response on the laptop (using either the keyboard or the mouse), after which the system proceeds to the next questionnaire item. Parent measures were completed in interview form, with the interviewer recording the parent's responses to each questionnaire item on a standardized answer sheet. Different methods were used to collect adolescent versus parent data because many parents expressed considerable discomfort when approached about the possibility of completing their assessments in computerized form.

RESULTS

Bivariate Correlations

As stated above, the first objective of the present study was to examine the extent to which relationships previously obtained with non-Hispanic White samples replicated with a Hispanic immigrant sample. Bivariate correlations among all study variables are displayed in Table 1. Correlations are displayed separately for boys and for girls. Statistically significant within-reporter correlations emerged between family functioning and behavior problems, between family functioning and identity, and between identity and behavior problems. Cross-reporter correlations tended to be somewhat lower in magnitude. Of particular note are the relationships of identity confusion primarily to adolescent-reported indices, rather than parent-reported indices, of family functioning and behavior problems. Identity coherence was significantly related to adolescent and parent reports of family functioning and behavior problems for boys, whereas for girls, it was significantly related only to adolescent reports of family functioning and behavior problems.

When we compared the correlations by gender using the *z*-test for independent correlation coefficients and the *q* index of effect size (Cohen, 1988), only 8 of the 105 comparisons (7.6%) were statistically significant. This is only slightly above what would be expected by chance at $\alpha = .05$. In all 8 cases, the correlation was significantly stronger for girls. Seven of the 8 significant correlation differences involved pairs of indicators loading on a single latent construct (i.e., family functioning or behavior problems). Five of these differences were in correlations between indicators of family functioning: adolescent-reported support with adolescent-reported communication, $z = 2.66$, $p < .01$, $q = .41$; adolescent-reported support with parent-reported communication, $z = 2.14$, $p < .05$, $q = .33$; adolescent-reported support with adolescent-reported parental involvement, $z = 2.83$, $p < .01$, $q = .44$; adolescent-reported support with adolescent-reported positive parenting, $z = 2.97$, $p < .01$, $q = .46$; and adolescent-reported parental involvement with adolescent-reported positive parenting, $z = 2.71$, $p < .01$, $q = .42$. Two additional significant differences emerged between parent-reported indicators of behavior problems: conduct disorder with socialized aggression, $z = 2.05$, $p < .05$, $q = .32$; and socialized aggression with attention problems, $z = 3.00$, $p < .01$, $q = .46$. The remaining difference was between adolescent-reported family support and adolescent-reported aggressive behavior, $z = 2.92$, $p < .01$, $q = .46$.

Measurement Models

The second objective of the present study was to use structural equation modeling to examine the role of identity in the relationship between family functioning and behavior problems. Measurement models were estimated to ensure that the various indicators of family functioning and of adolescent behavior problems could be collapsed into latent variables. Measurement models were estimated using AMOS 5.0 (Arbuckle & Wothke, 2004). Model fit was evaluated

using the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). The CFI represents the specified model's degree of improvement over a null model with no paths or latent variables, whereas RMSEA represents the extent to which the covariance structure specified in the model differs from the covariance structure observed in the data. The RMSEA index is adjusted for sample size and model complexity, whereas the chi-square statistic is not. Therefore, because the chi-square statistic often indicates significant differences between the observed and model covariances even when such deviations are quite small (Kline, 1998), it is reported but is not used in interpretation. Rather, we used the ratio of the chi-square statistic to the number of degrees of freedom (χ^2/df) as an index of model fit. Following Kline (1998), χ^2/df values below 3, CFI values of .95 or higher, and RMSEA values of .08 or lower were considered indicative of adequate model fit. A CFI value of .90 represents the lower bound for acceptable model fit (Quintana & Maxwell, 1999). Error terms among the parent-reported indicators and among the adolescent-reported indicators of family functioning and early adolescent behavior problems were allowed to correlate with one another because of the strong bivariate within-reporter intercorrelations observed within each construct. Reliability estimates for each latent construct were computed using the Fornell and Lacker (1981) formula, which posits reliability as the ratio of the variance explained by the construct to the total variance among the indicators.

Provided that each measurement model fit the data adequately, we tested the model for configural and metric invariance across gender. Configural invariance signifies that the same confirmatory factor analysis model fits the data adequately for boys and for girls. Metric invariance signifies that the factor pattern coefficient for each indicator on its assigned latent variable is equivalent across gender. We constrained one factor pattern coefficient at a time and compared the progressively constrained model to a model with all factor pattern coefficients free to vary across genders. A significant chi-square difference from one constraint to the next indicates that the factor pattern coefficient most recently constrained differs significantly by gender (Byrne, 2001). Indicators whose loadings on their respective latent variables were noninvariant across gender were left free to vary, whereas all other factor pattern coefficients were constrained equal between boys and girls (see Vandenberg & Lance, 2000, for an extended discussion of methods for assessing measurement invariance). The final constrained model retained in each confirmatory factor analysis was then entered into the larger structural equation model used to test the hypothesized model presented in Figure 1.

Family functioning—Although parent and adolescent reports of family processes often do not correlate strongly with one another, parent and adolescent reports of the same family processes are not statistically independent (i.e., parents and adolescents are nested within families). Accounting for such statistical nonindependence may be most important with regard to relational processes, such as family functioning (Newsom, 2002). Therefore, we created separate latent variables for parent-reported and adolescent-reported family functioning to represent the lack of convergence between the two sets of reports (e.g., Tein, Roosa, & Michaels, 1994), but we also created a second-order latent variable to account for the nesting of adolescents and parents within families.

The family functioning measurement model provided an adequate fit to the data, $\chi^2(11) = 8.77$, $p = .64$; $\chi^2/df = .80$; CFI = 1.00; RMSEA< .001. Adolescent-reported indicators all loaded on the adolescent-report latent factor at $\lambda = .51$ or higher, and parent-reported indicators all loaded on the parent-report latent factor at $\lambda = .39$ or higher. The model demonstrated configural invariance by gender, and it was metrically invariant by gender except for the factor pattern coefficient for parent-reported family support, $\Delta\chi^2(1) = 8.34$, $p < .001$. For boys, this factor pattern coefficient was $\lambda = .34$, whereas for girls, it was $\lambda = .99$. Reliability for the adolescent-reported family functioning construct was .82, and reliability for the parent-reported family functioning construct was .66.

Adolescent behavior problems—The measurement model for adolescent behavior problems provided an adequate fit to the data, χ^2 (8) = 2.95, p = .94; χ^2/df = 0.37; CFI = 1.00; RMSEA< .001. The standardized pattern coefficients for the adolescent-reported behavior problems scales were Aggressive Behavior, λ= .14, *ns*[3], and Attention Problems, λ= .30, p < .001. The standardized pattern coefficients for the parent-reported behavior problem indicators ranged from .78 to .99 (all *p*s < .001). The model was fully configurally and metrically invariant by gender, $\Delta\chi^2(8)$ = 1.66, *ns*. Reliability for the behavior problems construct was .74.

Test of the Study Hypothesis: Structural Equation Modeling

A structural equation model was estimated to evaluate the hypothesized model presented in Figure 1. Specifically, the test of the model was conducted to examine the role of identity in the relationship between family functioning and early adolescent behavior problems. For theoretical reasons (cf., Marcia, 2002) and because they emerged as independent factors in our analysis of the items from the Erikson Psychosocial Stage Inventory, identity coherence and identity confusion were considered as separate indicators of identity (as opposed to being combined into a latent variable). Overall model fit was ascertained using the same criteria used to evaluate the measurement models (CFI ≥ .95, RMSEA ≤ .08). As in the measurement models, error terms among the parent-reported indicators and among the adolescent-reported indicators of family functioning and of adolescent behavior problems were allowed to correlate with one another.

As in the confirmatory factor analysis for family functioning, parent and adolescent reports of family functioning were posited as separate latent variables, and both of these latent variables were patterned onto a second-order latent factor to control for the nesting of adolescents and parents within families.[4] In examining the relationship of family functioning to identity and behavior problems, we estimated separate path coefficients from parent and adolescent reports of family functioning. Such a strategy may be defensible given the low level of overlap (as evident in the correlations displayed in Table 1) between parent and adolescent reports of family functioning. We did not estimate separate latent variables or account for nonindependence of parent and adolescent reports for behavior problems.

We also estimated the extent to which the structural paths among the three study constructs (family functioning, identity, and behavior problems) were invariant across gender. As was done in the confirmatory factor analyses, one path coefficient at a time was constrained across gender. Path coefficients not differing significantly by gender were constrained equal, whereas any path coefficients that differed significantly by gender would be left unconstrained.

To examine the extent to which the relationship between family functioning and adolescent behavior problems operated indirectly through identity, we computed estimates of indirect relationships by multiplying the two standardized path coefficients that composed each indirect pathway. For example, to examine the extent to which the relationship of adolescent-reported family functioning to behavior problems operates through identity confusion, we multiplied the standardized path coefficients (a) between adolescent-reported family functioning and identity confusion and (b) between identity confusion and behavior problems. To test for partial mediation, we used the asymmetrical distribution of products test (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). This test is based on the distribution of the product of the two unstandardized paths that determine the mediating pathway. If the 95% confidence interval for this product does not include zero, then partial mediation is assumed. This approach was used, in lieu of the traditional Baron and Kenny (1986) approach for three reasons: (a) We

[3]Although the factor pattern coefficient for adolescent-reported aggressive behavior was not statistically significant in the confirmatory factor analysis, it was significant in the full model. As a result, this indicator was retained.

[4]For ease of presentation, this second-order latent factor is not shown in Figure 2.

wanted to test multiple mediating pathways (i.e., through both identity coherence and identity confusion), (b) it is a more powerful test, and (c) it is more appropriate for structural equation models (MacKinnon et al., 2002). It is worth noting that MacKinnon et al. acknowledge only partial mediation and argue that full mediation does not exist.

The overall model provided an adequate fit to the data, χ^2 (70) = 123.16, $p < .001$; $\chi^2/df = 1.76$; CFI = .95; RMSEA = .065 (see Figure 2). Although the chi-square value was statistically significant, the other fit indices (including χ^2/df) suggested that model fit was adequate. The 95% confidence interval for the RMSEA index (.055 to .075) also suggested that the model fit the data adequately. The power to uncover significant nonfit of a structural equation model can be calculated based on the distribution of the RMSEA (MacCallum, Browne, & Sugawura, 1996). For the hypothesized model and a sample size of 181, there is approximately 84% power to detect a difference between near-perfect model fit (RMSEA = .05) and the upper limit for an acceptable RMSEA value (RMSEA = .08). An unconstrained multigroup model indicated adequate fit for both genders (although the CFI was somewhat lower than that of the single-group model), $\chi^2(150) = 228.29$, $p < .001$; $\chi^2/df = 1.52$; CFI = .93; RMSEA = .055, satisfying criteria for configural invariance (cf. Vandenberg & Lance, 2000). The confidence interval for the RMSEA index for the gender-separated multigroup model ranged from .046 to .061. Moreover, none of the path coefficients differed significantly by gender, $\Delta\chi^2(8) = 9.21$, *ns*, satisfying criteria for metric invariance.

In the full structural equation model (see Figure 2), adolescent-reported family functioning, but not parent-reported family functioning, was significantly related to both identity coherence (positively) and identity confusion (negatively). Family functioning, as reported by both parents and adolescents, was significantly and negatively associated with early adolescent behavior problems. The negative relationship between identity confusion and early adolescent behavior problems approached significance ($\beta = .17$, $p = .087$), but the relationship between identity coherence and early adolescent behavior problems did not approach significance.

Indirect effects and tests of mediation—We next examined the magnitude of the indirect relationships between family functioning and early adolescent behavior problems (operating through identity). Because the relationships between parent-reported family functioning and the identity variables did not approach significance, we examined indirect relationships only for adolescent-reported family functioning. The indirect path coefficient through identity coherence was −.04, compared to the direct path coefficient of −.45. The indirect path coefficient through identity confusion was −.07. To compute the percentage of the total relationship between adolescent-reported family functioning and behavior problems that operated indirectly through identity processes, we summed the direct and indirect path coefficients (−.45 + −.04 + −.07 = −.56) and divided each indirect path coefficient by this sum. Identity coherence accounted for 7%, and identity confusion accounted for 13%, of the relationship between adolescent-reported family functioning and early adolescent behavior problems. Taken together, the two identity variables, therefore, accounted for 20% of the total (direct and indirect) relationship between early adolescents' perceptions of family functioning and their levels of engagement in problematic behaviors.

Because identity confusion, but not identity coherence, was related to family functioning and approached significance in relation to early adolescent behavior problems, we examined identity confusion as a potential mediator. The confidence interval for the test of mediation did not include zero (product of unstandardized paths = −.037; 95% confidence interval ranged from −.073 through −.002). As a result, we concluded that identity confusion partially mediated the relationship between adolescent-reported family functioning and early adolescent behavior problems.

DISCUSSION

The present study was conducted to ascertain the role of identity in the relationship between family functioning and behavior problems in early adolescence. The study was conducted using a sample of Hispanic immigrant families, thereby allowing us to investigate these relationships in a rapidly growing population that may be at heightened risk for problematic family functioning and behavior problems. The study also represented an attempt to assess in a Hispanic sample the generalizability of findings previously obtained with non-Hispanic White samples.

Several noteworthy findings emerged from the present study. First, the items tapping identity within the Erikson Psychosocial Stage Inventory have been conceptualized as a single subscale (i.e., ranging from identity coherence to identity confusion; Rosenthal et al., 1981). In the present study, however, these items loaded on two separate factors: one representing identity coherence and the other representing identity confusion. The present findings support an interpretation of Erikson whereby identity coherence and identity confusion are considered as separate but related aspects of the identity stage (i.e., with the outcome of the identity stage predicated on which aspect predominates over the other). The findings were especially in line with Marcia (2002), who has characterized Erikson's identity stage as identity synthesis *with* identity confusion.

Second, previously reported relationships among family functioning, identity, and adolescent behavior problems were replicated in the present sample of Hispanic immigrant adolescents. The relationships of family functioning to identity coherence (positive) and identity confusion (negative), as well as the positive relationship between identity confusion and early adolescent behavior problems, are consistent with theoretical expectations and with past research using primarily non-Hispanic White samples. The present results also lend support for the use of Erikson's theory of identity with Hispanic immigrant early adolescents. Given the need to conduct identity research with ethnic minority samples (Schwartz, Côté, & Arnett, in press; Sneed et al., in press), such consistency is an important finding.

Third, family functioning was negatively related to early adolescent behavior problems both (a) directly and (b) indirectly through identity processes. Identity processes accounted for 20% of the overall relationship between family functioning and adolescent behavior problems, with identity confusion emerging as a partial mediator. The finding that family functioning relates negatively to early adolescent behavior problems has been reliably reported in past research (e.g., Pettit, Laird, Dodge, Bates, & Criss, 2001; Smetana, Crean, & Daddis, 2002). Although mild degrees of both identity confusion and problematic behavior are normative in early adolescence (Archer, 1982; Maughan, Pickles, Rowe, Costello, & Angold, 2000), the present results suggest that poor family functioning may exacerbate both identity confusion and behavior problems in early adolescence and that well-functioning families may help to protect their early adolescents against both identity confusion and behavior problems. Moreover, in light of the fact that problematic behavior in childhood is likely to continue into early adolescence (Broidy et al., 2003), the present findings suggest that improvements in family functioning can help to suppress the continuity or escalation of behavior problems in early adolescence, both directly and through reducing identity confusion. Although these findings are consistent with previous research and theory, replication with other ethnic groups (as well as follow-up longitudinal studies) may help to increase their robustness.

A fourth noteworthy finding from the present study was that although some of the relationship between family functioning and early adolescent behavior problems operated through identity processes, only identity confusion partially mediated this relationship. This partial mediation is particularly remarkable in light of the fact that the behavior problems construct consisted of

both parent and adolescent reports. For the most part, early adolescents' reports of identity confusion were related to their own, but not their parents', perceptions of behavior problems. This suggests that had the behavior problems construct been composed exclusively of adolescent reports, the partial mediation obtained would have been stronger.

A fifth important finding was that the structural relationships among family functioning, identity, and early adolescent behavior problems were equivalent across adolescent gender. This finding is inconsistent with prior research reporting gender differences in relationships between family functioning and adolescent behavior problems (e.g., Crosnoe et al., 2002; Griffin et al., 2000). However, these prior studies examined substance use, whereas the present study examined attention problems, conduct problems, and delinquency in the company of peers. The present findings are also inconsistent with Schultheiss and Blustein (1994), who reported gender differences in the relationship between family closeness and identity development. It should be noted, however, that the Schultheiss and Blustein sample was comprised of largely non-Hispanic White college students, whereas the present sample was comprised of Hispanic immigrant early adolescents. The presence or absence of gender differences in the relationships between family functioning and identity, and between family functioning and behavior problems, may depend on the age and ethnic group studied as well as on the type of behavior problems considered.

Although the present research is cross-sectional and cannot speak directly to developmental processes, the present findings suggest that both family functioning and identity may both play important roles in steering young Hispanic adolescents toward or away from behavior problems. Moreover, the present results appear to argue for the simultaneous consideration of family context and the emerging self in relation to behavior problems in early adolescence.

The age of the adolescents in the present sample may be important to consider in interpreting the factor structure of the identity scores. Given that early adolescence is the time when individuals first begin to consider identity issues (Archer, 1982; Archer & Waterman, 1983), it is possible that early adolescents might feel knowledgeable about some aspects of their identities and confused about other aspects. Research designs that examine the relationship between identity coherence and identity confusion longitudinally or at different ages may have the potential to shed additional light on the unfolding of identity across adolescence. Additionally, further research should examine the factor structure of the Erikson Psychosocial Stage Inventory with early adolescents from other ethnic groups to determine the extent to which the partitioning of identity coherence and identity confusion into separate factors is specific to Hispanic immigrant early adolescents or applicable to early adolescents in general.

Limitations

The present findings must be considered in light of several limitations. Perhaps the most serious limitation is the cross-sectional design used in the present study. The cross-sectional design has helped to explore the relationships among family functioning, identity, and behavior problems in Hispanic immigrant early adolescents. However, to determine the direction in which these relationships operate, longitudinal follow-up studies will be necessary.

A second and similar limitation involves testing mediation in a cross-sectional study. Baron and Kenny (1986), in their classic definition of mediation, did not specify that mediation must be examined with time. However, more recent methodological sources (e.g., Cole & Maxwell, 2003; Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001) have stated that longitudinal designs provide the most rigorous tests of mediation. Although preliminary evidence for partial mediation emerged in the present study, longitudinal research is necessary to further examine this possibility.

A third limitation involves the sample of convenience used in the present study. Recruitment activities for the larger prevention study was targeted toward three middle schools in the Little Havana section of Miami, and participating families were recruited based on their interest in participating in a family-based community intervention. The present findings should be replicated using population-based samples to provide increased confidence in the generalizability of the findings. Such population-based studies might examine both generalizability to the population of Hispanic immigrant early adolescents and generalizability to the population of early adolescents as a whole.

The use of a prevention intervention sample raises a related concern. Parents who enroll in family-based prevention studies are generally those who are willing to participate in such studies (Spoth, Redmond, & Shin, 2000) and who come from more cohesive and better functioning families than those who do not enroll (Perrino, Coatsworth, Briones, Pantin, & Szapocznik, 2001). It is also possible that parents who enroll in family-based prevention programs are highly invested in and involved with their adolescents. Possible scores for the adolescent-reported and parent-reported Parental Involvement subscales both range from 12 through 38. In the present sample, the mean levels and frequency distributions for parental involvement, as reported by both parents ($\bar{X}$ = 29.23, *SD* = 2.92; 94% of scores between 24 and 32) and adolescents ($\bar{X}$ = 31.87, *SD* = 5.20; 81% of scores between 24 and 37) suggest that the parents in the present sample were comparatively highly involved with their adolescents. As a result, the present findings may not be generalizable to families in which parents are uninvolved with their adolescents or unwilling to participate in such research.

A final limitation is the inability to empirically demonstrate measurement equivalence between the English and Spanish versions of the measures used in the present study. Although it is common practice in research on Hispanics to pool data across language of assessment (e.g., Marsiglia et al., 2001; Newcomb et al., 2003; Pantin, Coatsworth, et al., 2003), and to maximize the validity of research results it may be important to empirically assess linguistic measurement equivalence. Further studies should attempt to sample large enough numbers of participants completing assessments in each language to provide adequate statistical power for tests of linguistic measurement equivalence.

Despite these limitations, the present study has explored the combined relationship of family functioning and identity to behavior problems in early adolescence. The present results suggest that interventions focusing on both self and context may be efficacious in preventing or reducing behavior problems in Hispanic immigrant early adolescents. Longitudinal research is needed to further examine the role of identity in the relationship between family functioning and adolescent behavior problems, and the design and implementation of intervention programs addressing both family functioning and identity is needed to examine the extent to which these two domains of influence can be targeted together to prevent or reduce behavior problems in early adolescence.

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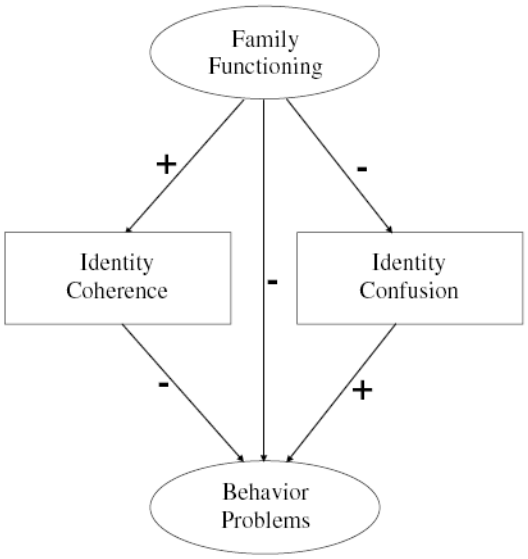

Figure 1.
Theoretical model.

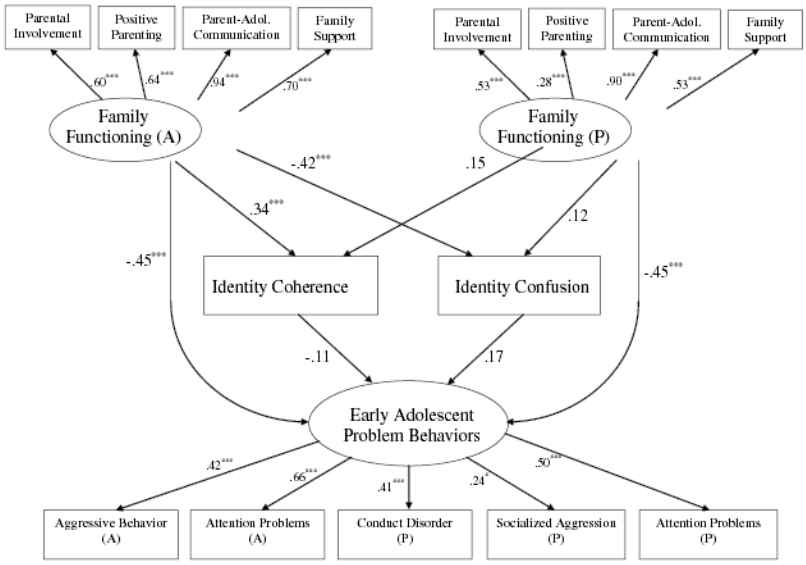

Figure 2. Structural equation model examining relationships among family functioning, identity, and early adolescent problem behaviors.

a. For ease of presentation, error terms and the second-order family functioning factor are not included in the figure.

b. Because none of the paths differed significantly by gender, the overall path coefficients (collapsed across gender) are presented.

TABLE 1

Bivariate Correlations Among Study Variables, Separately by Gender[a]

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
Family functioning															
1. Communication (A)	—	.10	.51***	−.01	.46***	.26*	.52***	.14	.23*	−.38***	−.24*	−.43***	−.16	−.02	−.29**
2. Communication (P)	.27*	—	−.02	−.30**	.09	−.38***	.12	.22*	−.33**	.03	−.08	−.23*	−.50***	−.39***	−.46***
3. Support (A)	−.75***	.30**	—	−.05	.18	.05	.26*	.07	−.07	−.30**	−.06	−.32**	−.15	−.18	−.31**
4. Support (P)	.06	.17	.06	—	.19	.38***	.04	.15	.20	.16	−.09	−.15	−.16	−.12	−.24*
5. Extent of involvement (A)	−.66***	.30**	−.55***	.07	—	−.34***	−.61***	.28**	−.29**	−.13	−.24*	−.17	−.03	−.01	−.23*
6. Extent of involvement (P)	.16	−.56***	.07	.23	.26*	—	.20	−.43***	.00	−.02	−.18	−.16	−.24*	−.02	−.25*
7. Positive parenting (A)	−.66***	.34**	−.62***	.16	−.81***	.21*	—	.32**	.23*	−.12	−.28**	−.19	−.03	−.01	−.20
8. Positive parenting (P)	.07	.34**	.08	.14	.07	−.46***	.16	—	.03	.04	−.06	−.05	−.10	.04	−.14
Identity															
9. Identity coherence	−.47***	.17	−.31**	−.16	−.43***	.09	−.40***	.08	—	−.02	−.22*	−.27**	−.22*	−.23*	−.28**
10. Identity confusion	−.35***	.01	−.37***	−.01	−.14	.06	−.27*	−.20	−.06	—	.10	.28**	−.10	−.09	−.01
Problem behavior															
11. Aggressive behavior (A)	−.42***	−.19	−.47***	−.11	−.23*	−.18	−.30**	−.18	−.25*	.29**	—	.54***	.11	.01	.17
12. Attention problems (A)	−.49***	−.31**	−.56***	−.13	−.23*	−.12	−.36***	−.12	−.30**	.31**	.55***	—	.28**	.19	.36***
13. Conduct disorder (P)	−.11	−.44***	−.07	−.18	−.25*	−.32**	−.21	−.08	−.13	.02	.09	.17	—	.67***	.82***
14. Socialized aggression (P)	−.07	−.17	.00	−.14	−.22*	−.08	−.15	.03	−.16	−.03	.02	.14	.81***	—	.60***
15. Attention problems (P)	−.12	−.36***	−.08	−.17	−.14	−.15	−.10	.02	−.17	.03	.15	.28**	.87***	.82***	—

NOTE: A = adolescent report; P = parent report.

[a] Correlations for boys are above the diagonal, and correlations for girls are below the diagonal.

* $p < .05$.

** $p < .01$.

*** $p < .001$.