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Post-Adoption Contact, Adoption Communicative Openness, and Satisfaction with Contact as Predictors of Externalizing Behavior in Adolescence and Emerging Adulthood

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Abstract

Background—This study examined the relation between three variables related to adoptive family relationships (post-adoption contact between adoptive and birth family members, adoption communicative openness, and satisfaction with contact) and adoptee externalizing behavior in adolescence and emerging adulthood.

Method—The study included 190 families of infant-placed, domestic adoptees during childhood, adolescence, and emerging adulthood. Structural equation modeling (SEM) was used to analyze predictors of externalizing behavior from contact (adoptive parents and adolescent reports), adoption communicative openness (adoptive mothers), and satisfaction with contact (adoptive parents and adolescent).

Results—Externalizing behavior showed moderate stability across childhood, adolescence, and emerging adulthood. Contact and adoption communicative openness were related to each other, but not to externalizing behaviors in adolescence or emerging adulthood. Controlling for the effect of Childhood Externalizing, adoptive families most satisfied with contact reported relative declines in adoptee externalizing behavior during adolescence compared to those in less satisfied families. Satisfaction was also indirectly associated with Emerging Adult Externalizing, through its effect on Adolescent Externalizing.

Conclusions—Although contact and adoption communicative openness were highly correlated with each other, neither was related to adoptees' externalizing behavior in adolescence or emerging adulthood. Family level satisfaction with contact was more predictive of externalizing outcomes.

Keywords

adoption; post-adoption contact; family communication; externalizing behavior; satisfaction; adolescence; emerging adulthood

Understanding the origins and predictors of antisocial behavior is important because of the negative consequences of physical aggressiveness, bullying, gang violence, and other forms of externalizing behavior to perpetrators, victims, and broader society. There has been much debate about whether a higher rate of externalizing behavior is found among adopted adolescents than their nonadopted agemates (cf. Feigelman, 2001; Haugaard, 1999; Juffer &

van IJzendoorn, 2005; Keyes, Sharma, Elkins, Iacono, & McGue, 2008; Wierzbicki, 1993). A fairly consistent, but low magnitude difference in externalizing behavior has been found across several studies; however, the reasons for this difference are poorly understood.

Differences in rates of externalizing between adoptees and nonadoptees may be due to heterogeneity within the population of adopted adolescents (Grotevant, van Dulmen, Dunbar, Nelson-Christinedaughter, Christensen, Fan, & Miller, 2006) that results in a small number of extreme cases that affect the sample characteristics (Brand & Brinich, 1999). Some adopted children had healthy beginnings, were born to women who had adequate prenatal care, and were placed in their adoptive homes soon after birth. Others began life in circumstances that increased their risk for externalizing behavior, including removal from their birth families because of abuse, neglect, chemical dependency, or major mental disorders that made it impossible for their parents to meet their developmental needs; some of these children lived in these conditions for a number of years before being placed for adoption.

Although some variation in externalizing appears to be explained by such prenatal or preplacement factors (e.g., Grotevant, et al., 2006), some scholars have speculated about possible contributions made by postplacement factors such as connections between the child and his or her birth relatives (Kraft, Palombo, Mitchell, Woods, Schmidt, & Tucker, 1985). In recent years, domestic adoptions of infants in North America have increasingly involved contact between the child's families of adoption and birth (Grotevant & McRoy, 1998). Several hypotheses about connections between contact and psychological outcomes have been advanced. The first involves the type and degree of contact being experienced by the child and his or her birth relatives. When contact was becoming more prevalent in the 1980s, some practitioners suggested that children would become confused about who their real parents were, causing problems with self-esteem and identity that might lead to psychological adjustment problems (Kraft, Palombo, Mitchell, Woods, Schmidt, & Tucker, 1985). The second hypothesis focuses on the openness with which adoption and contact are discussed within the adoptive family, or adoption communicative openness. Brodzinsky (2005, 2006) suggested that even when contact is impossible, adoptive parents' openness in communicating with their child about their adoption would make significant contributions to child and adolescent well-being. A third hypothesis focuses on adoptive family members' interpretations of their contact situation and their satisfaction with it rather than on the actual levels of contact or communication, emphasizing how adoptees make meaning of their contact, and how this interpretive process affects well-being and adjustment. According to this hypothesis, good psychological adjustment of the adoptee occurs when adoptive family members are satisfied with the contact they have, regardless of the particulars of their situation.

Four recent studies have provided partial or contradictory evidence concerning links between various aspects of contact and adjustment. Von Korff, Grotevant, & McRoy (2006) compared two highly contrasting contact groups: one in which there had been no contact or information shared from infancy into mid-adolescence, and the other in which there had been ongoing and frequent direct contact with face-to-face meetings between adopted children and their birth mothers from childhood into adolescence. Adoptive parents' reports on the Child Behavior Checklist (CBCL: Achenbach & Rescorla, 2001) indicated no significant associations between contact and adolescent externalizing behavior. Neil (2009) examined correlations among contact, adoption communicative openness, and externalizing behavior in a sample of 62 UK children ages 5 - 13 ($M = 8.5$ yrs). Adoption communicative openness (ACO) was assessed from ratings of interviews conducted with adoptive mothers; contact was a dichotomous variable indicating whether the child had direct face-to-face contact with a birth relative or not. Externalizing behavior was assessed using adoptive

mothers' reports on the CBCL. No relation was found between externalizing and either contact or ACO; however, contact and ACO were positively related. Brodzinsky (2006) examined correlations among contact, adoption communicative openness, CBCL total problems, and self-esteem in a sample of 73 US children ages 8 - 13 ($M = 11.1$ years). Unlike Neil's study, the measure of ACO was the child's report of how open they felt the family atmosphere was in terms of discussing adoption with their parents. Contact was assessed by parent report of activities engaged with the child's birth relatives. Child-reported ACO was negatively correlated with CBCL total problem behaviors and positively correlated with child self-esteem. Contact was positively correlated with self-esteem and negatively (but not significantly) correlated with problem behavior. As in Neil's study, contact and ACO were positively correlated. Finally, in an Israeli sample of 28 year old adoptees (Levy-Shiff, 2001), "openness to adoption," was defined as "the extent to which the adoptees feel open to enquiry and discussion of adoption-related issues with their adoptive parents" (p. 100). In this study, "openness to adoption" was positively associated with self-concept and negatively associated with psychopathology, consistent with Brodzinsky.

Taken together, this set of findings suggests that neither contact nor adoption communicative openness (measured from the parental perspective) is strongly related to children's externalizing outcomes. Brodzinsky's finding that adoption communicative openness measured from the child's perspective is related to adjustment may be due to the nature of the questions on the measure. Many of the items indicate the respondent's satisfaction or comfort with communication with parents (e.g., "I am very satisfied about how my parents and I talk together concerning my feelings about being adopted" and "I feel very uncomfortable discussing my birth parents with my adoptive parents".) This suggests that the adoptee's satisfaction with contact merits further investigation.

In an earlier study with a small sample of adoptive kinship networks that either ceased or increased contact between childhood and adolescence, we found that parents' satisfaction with contact was associated with their feelings of control over the contact (Dunbar et al 2006). It is possible that adolescents' externalizing behavior, which involves rule-breaking and aggressive behavior of various sorts, may be triggered when adolescents feel they do not have control over how their adoptions are being handled. Perhaps their adoptive parents are blocking them from obtaining desired information, or are encouraging more frequent contact than they would like to have. Or there may be discrepancies between the type of birth family contact they want and that appears to be possible. For example, dissatisfaction with contact typically occurred when adoptive family members wanted more contact than they had, but were unable to bring it about (Grotevant, et al., 2007).

The present study was designed to clarify these contradictory findings by including measures of contact, adoption communicative openness, and satisfaction with contact. It extends prior work in several ways: externalizing behavior was assessed using latent variables with youth and both adoptive parents' reports as indicators; the analyses controlled for childhood externalizing, age and gender; and included ratings of satisfaction with contact from adoptive parents and their adolescents.

We hypothesized that externalizing behavior is moderately stable from childhood to adolescence to emerging adulthood. Further, we expected that neither contact nor adoption communicative openness predicts changes in externalizing behavior from childhood to emerging adulthood, but satisfaction with contact is negatively associated with changes in externalizing behavior from childhood to emerging adulthood.

Methods

Participants

Data for this report come from 190 adoptive families participating in the Minnesota / Texas Adoption Research Project (MTARP). This study draws on the three waves of a longitudinal study that covers childhood through emerging adulthood: Wave 1 (W1: 1986 – 1992; adopted child M age = 7.81 years, SD = 2.14, range = 4 to 12 years); Wave 2 (W2: 1996 – 2001; adopted adolescent M age = 15.73 years, SD = 2.08, range = 11 to 20 years); Wave 3 (W3: 2005-2008; adopted young adult M age = 24.95 years, SD = 1.88, range = 20 – 30 years). In terms of race / ethnicity, 182 adoptees were White, 7 were Latino, and 1 was Black. Originally, the adoptive families were recruited through 35 private (i.e., non-governmental) adoption agencies in 23 states representing all regions of the U.S. All infants had been voluntarily placed for adoption by their birth parents. Recruitment criteria included: each family had at least one adopted child (the “target child”) aged 4 to 12 years at W1; the target child had been adopted through a private agency before his or her first birthday; the adoption was not transracial, international, or special needs; and the adoptive parents had been married to each other since the adoption. The children were placed in very early infancy (mean age of placement = 4 weeks; median = 2 weeks).

At W1, adoptive mothers ranged from age 31 to 50 years (M = 39.14 years, SD = 3.65). Fathers were 32 to 53 years old (M = 40.73 years, SD = 3.86). Most adoptive parents had at least a college degree (mothers, 74%; fathers, 88%). Almost all were Caucasian (97%) and middle to upper-middle class. Virtually all adoptive parents in the study had adopted because of infertility. These adoptive couples reflect the population of parents who formally adopted unrelated children from birth mothers who voluntarily placed their infants for adoption in the late 1970s and early 1980s in the United States (Bachrach, Adams, Sambrano, & London, 1990). At W2, participants included the adoptive parents and target adopted adolescents from 177 of the original 190 adoptive families: 173 adoptive mothers, 162 adoptive fathers, and 156 adopted adolescents (75 males and 81 females). At W3, participants included 169 young adults (87 males, 82 females), 151 adoptive mothers, and 134 adoptive fathers representing 181 of the original 190 adoptive families.

Procedures and Measures

At Waves 1 and 2, adoptive families were seen in their homes during a single session that typically lasted 3 to 5 hours. The session included individual interviews with each parent and the target adopted child, administration of several questionnaires, a couples interview (W1) and a family interaction task (W2). Some participants were interviewed by telephone at W2 when it was impossible to gather everyone for the home visit (e.g., living outside the U.S.) The W3 measures for young adult adoptees were administered online via a secure internet site. Interviews were transcribed verbatim from audiotape; names and identifying information were changed in order to protect participant confidentiality.

The semi-structured W2 interview for adoptive parents tapped a wide range of topics related to adoption, including their experiences with being an adoptive family, the relationship with the target child, the family's experiences with birth family members, views about various contact arrangements, and hopes for the future regarding their relationships with birth family members. The W2 (adolescent) and W3 (emerging adulthood) interviews elicited discussion of the adoptee's experiences, feelings, knowledge and attitudes about his or her adoption, adoptive identity, adoptive family situation, and birth parents. Discussion of contact included the breadth and diversity of persons within the adoptive kinship network with whom the child has or has had contact, changes in intensity of contact, withholding of

information or contact by adoptive parents, and feelings regarding birth family members, such as satisfaction with contact and desired future contact.

All procedures were reviewed and approved by the Institutional Review Board at the University of Texas at Austin (W1) or the University of Minnesota (W2, W3). At all time points, participants were given information about the study and completed informed consent forms.

Key Variables

Contact—Contact was coded from adoptive parents' and adolescents' interviews at W2 (Grotevant, Wrobel, Von Korff, Skinner, Newell, Friese, & McRoy, 2007). Discrepancies across respondents were reconciled case-by-case. Four levels of contact were identified: no contact with birth relatives and no information shared beyond 6 months post-placement (N=51); stopped contact (N=40); ongoing contact without face-to-face meetings between the adolescent and birth relatives (N=34); ongoing contact with meetings that included the adopted adolescent (N=52). The scale is best seen as ordinal or quasi-interval, along a dimension of directness of contact.

Adoption Communicative Openness (ACO)—ACO was rated from adoptive mothers' W2 interviews using a coding scheme developed by Neil, Grotevant, and Young (2006). The coding system included five sub-scales, each rated on a scale of 1 (low) to 5 (high): communication with the child about adoption, promotion of the child's dual connection to their birth and adoptive families, empathy with and tolerance of the child's feelings about adoption, communication with the birth family, and empathy for birth relatives. Because the five scales were highly correlated ($r = .57$ to $.81$), a total score was used, with a possible range of 5 – 25. Weighted kappas assessed inter-rater reliability because they correct for chance agreement while adjusting for the degree of disagreement between coders (Cohen, 1968). CO kappas ranged from .42 to .65 with a mean of .58; kappas between .41 to .60 are considered moderate, and .61 and higher are considered substantive (Landis & Koch, 1977). Coders met to compare ratings and resolve disagreements through discussion for the transcripts that were double-coded. Final ratings were determined in consensus discussions between the two coders. The codebook is available from the first author upon request.

Satisfaction with Contact (SAT)—SAT was defined as adoptive family members' satisfaction with the contact they had with their child's birth mother, regardless of the type of contact that existed. High ratings of satisfaction were given when respondents said that the type and amount of contact they were having was congruent with what they wanted. To create the satisfaction ratings for each respondent, all relevant information from adolescent, mother, and father W2 interviews were each coded globally and independently by two raters using the following scale: 0 = very dissatisfied, 1=dissatisfied, 2=neutral, 3=satisfied, and 4=very satisfied. Coding differences were resolved in consensus discussion. SAT was constructed as a latent factor with three indicators (Adolescent's Satisfaction: $\lambda = .45$, Mothers' Satisfaction: $\lambda = .54$, Father's Satisfaction, $\lambda = .42$).

Externalizing Behavior—The Childhood Externalizing Behavior and the Adolescent and Emerging Adult Externalizing Behavior measures each assessed aggressive, rule breaking, and intrusive behavior. Childhood Externalizing was assessed at W1 using adoptive parents' reports from the Child Adaptive Behavior Inventory (CABI; Miller, 1987) scales. Using a 4-point scale (0 = very much like my child to 3 = not at all like my child), adoptive parents independently responded to 11 items, including, for example, "Argues; quarrels," "Gets into fights with other children," "Tends to disobey or break rules," "Is stubborn or irritable,"

“Doesn’t always tell the truth,” and “Sometimes takes things that don’t belong to him/her.” Items were reverse coded, summed and averaged (adoptive mothers’ reports $\alpha = .84$, adoptive fathers’ $\alpha = .84$). The resulting two scales were used as indicators of the Childhood Externalizing Behavior latent factor (mothers’ $\lambda = .86$, fathers’ $\lambda = .69$).

Adolescent Externalizing Behavior was assessed at Wave 2 using adoptee and adoptive parents’ reports. Adolescents completed the Youth Self Report (YSR; Achenbach & Rescorla, 2001), and parents independently completed the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001). For both measures, respondents rated problem behaviors such as aggressiveness and rule breaking (35 externalizing items on CBCL; 32 items on YSR) using a 3-point scale (0 = not true to 2 = very true or often true). Each set of responses was summed and used as indicators of the Adolescent Externalizing Behavior latent factor (Mother: $\lambda = .97$, Father: $\lambda = .78$, Adoptee: $\lambda = .56$).

Emerging Adult Externalizing Behavior was assessed at Wave 3 using adoptee and adoptive parents’ reports. Young adults completed the Adult Self Report (ASR; Achenbach & Rescorla, 2003), and parents independently completed the Adult Behavior Checklist (ABCL; Achenbach & Rescorla, 2003). As with the adolescent externalizing behavior measure, problem behaviors were responded to on a 3-point scale (0 = not true to 2 = very true or often true). The ABCL and ASR items cover aggressive, rule breaking, and intrusive behavior (35 externalizing items on each measure). Each set of responses was summed and used as indicators of the Emerging Adult Externalizing Behavior latent factor (Mother: $\lambda = .92$, Father: $\lambda = .85$, Adoptee: $\lambda = .46$).

Analysis Plan

In this study, we were interested in determining associations among three dimensions of adoptive family relationships (contact, ACO, and SAT) and relative change in Externalizing Behavior across childhood, adolescence, and emerging adulthood (see Figure 1). All associations were estimated using structural equation modeling (SEM) with maximum likelihood estimation using Mplus 6 software (Muthén & Muthén, 1998 - 2010).

Ideally, study hypotheses would be tested by regressing Externalizing Behavior simultaneously on all three dimensions of adoptive family relationships in a single model. However, preliminary analyses revealed substantial correlations between contact and ACO ($r = .71, p < .05$), and between contact and SAT ($r = .68, p < .05$). To avoid problems with multicollinearity, we estimated a series of models, separating the highly correlated family dimensions. The Base Model (see Figure 1) estimated the associations between Childhood, Adolescent and Emerging Adult Externalizing, thereby establishing the extent of stability in Externalizing Behavior over time. To account for stability in Externalizing Behavior, this association was specified in all subsequent models. In Model 2, contact was added to the Base Model as a predictor of Adolescent and Emerging Adult Externalizing. Model 2 also regressed contact on Childhood Externalizing. Model 3 was identical to Model 2 except that ACO replaced contact. Model 4 built on Model 3 by adding SAT as a predictor of Adolescent and of Emerging Adult Externalizing and by regressing SAT on Childhood Externalizing.

Preliminary model tests included the adopted child’s sex (0 = male, 1 = female) and age as controls for each model factor. Sex was associated only with Childhood (W1) Externalizing ($\beta = -.25, t = -3.19$). Age was not associated with any model factor. To preserve statistical power, only the association between child sex and Childhood Externalizing was estimated in the study models.

Preliminary tests also included correlations among all residual errors for indicators reported by the same person (e.g., adoptee report of Adolescent Externalizing with adoptee report of Emerging Adult Externalizing). To preserve analytical power, only statistically significant residual correlations were estimated in the study models. These included the following father externalizing indicators: W1 with W2 ($r = .21$, $t = 2.16$), W1 with W3 ($r = .30$, $t = 2.66$), W2 with W3 ($r = .51$, $t = 5.04$), and the following adoptee externalizing indicators: W2 with W3 ($r = .43$, $t = 5.82$), W2 with adoptee SAT ($r = -.20$, $t = -2.38$).

Good-fitting SEMs were required to produce a preponderance of adequate fit measures, including a statistically non-significant χ^2 (Bollen, 1989), a comparative fit index (CFI) and Tucker-Lewis index (TLI) above .90, a standardized root mean square residual (SRMR) less than .08, and root mean square error of approximation (RMSEA) less than .06 (Hu & Bentler, 1999).

Missing Values Analysis

Data from 190 families were available for these analyses. These data were collected at three time points, each approximately 8 years apart. As with any longitudinal study, this study included missing data; 67 of the 190 families had complete data on all study variables. The majority of missing data was due to nonparticipating fathers. Current research indicates that when missing data are missing at random, recovering missing data using a reliable estimation procedure is preferable to case deletion (Schafer & Graham, 2002). T test and chi square results showed no statistically significant differences between adoptive family members with complete data and those with missing data on parental income, marital status, or any study variable. However, fathers with complete data were likely to be more educated than those with missing data.

Mplus handles missing data by adjusting model parameter estimates using full-information maximum-likelihood estimation (FIML; Muthén & Shedden, 1999; Schafer & Graham, 2002). To obtain reliable estimates, Mplus requires that the proportion of available data for each study variable and between each pair of variables be at least .10. These proportions ranged from .53 to 1.00, with the majority above .70. Therefore, we used the FIML option to deal with missing data.

Results

Table 1 presents the correlations among all observed and latent model variables. These correlations provide support for our hypothesis that Contact and Adoption Communicative Openness are strongly related ($r = .71$, $t = 13.44$). Also as expected, Contact and Satisfaction with Contact were highly correlated ($r = .68$, $t = 12.05$). Of interest are the correlations between each openness dimension and Externalizing Behavior. As shown in Table 1, only Satisfaction with Contact produced a statistically significant association with Adolescent Externalizing ($r = -.38$, $t = -2.99$).

Table 2 presents the model fit indices for each study model; each model produced acceptable fit indices. The Base Model (see Figure 1), which estimated the associations between Childhood, Adolescent, and Emerging Adult Externalizing, showed moderate levels of stability in adopted Child Externalizing Behavior (Childhood to Adolescence: $\beta = .56$, $t = 7.71$, $R^2 = .31$, $t = 3.85$; Adolescent to Emerging Adult: $\beta = .59$, $t = 8.82$, $R^2 = .34$, $t = 4.41$). Model 2 added Contact to the Base Model, regressing Contact on Childhood Externalizing ($\beta = .10$, $t = 1.25$) and specifying Contact as a predictor of Adolescent ($\beta = -.08$, $t = -1.10$) and Emerging Adult Externalizing ($\beta = -.03$, $t = -0.35$). As expected, none of these associations was statistically significant. Also as expected, Model 3 associations between ACO and Childhood Externalizing ($\beta = .10$, $t = 1.08$), ACO and Adolescent ($\beta = -.08$, $t = -1.10$), and ACO and Emerging Adult Externalizing ($\beta = -.03$, $t = -0.35$) were not statistically significant.

001, $t = -.02$), and ACO and Emerging Adult Externalizing ($\beta = -.03$, $t = -0.33$) were not statistically significant.

Model 4 added SAT to Model 3. Model 4 results also supported our expectations. Externalizing behavior continued to show moderate stability (Childhood to Adolescent Externalizing: $\beta = .54$, $t = 6.96$); Adolescent to Emerging Adult Externalizing: ($\beta = .61$, $t = 7.82$). Controlling for the effect of Childhood Externalizing, adoptive families most satisfied with contact likely reported relative declines in adoptee externalizing behavior from childhood to adolescence compared to those in less satisfied families ($\beta = -.32$, $t = -2.96$). Satisfaction at W2 was also indirectly associated with Emerging Adult Externalizing, through its effect on Adolescent Externalizing ($\beta = -.19$, $t = -2.64$). W2 satisfaction was not associated with Childhood Externalizing ($\beta = -.04$, $t = -.31$) and ACO was not significantly associated with any Model 4 variable. Overall, Model 4 explained a substantial amount of the variance in Adolescent ($R^2 = .41$, $t = 4.36$) and Emerging Adult Externalizing ($R^2 = .34$, $t = 4.31$).

Discussion and Conclusions

These results suggest that neither contact with a child's birth mother nor an adoptive parent's openness to discuss adoption-related issues (ACO) can account for variance in adolescent externalizing behavior, but that adoptive family satisfaction with the contact does matter.

Neil (2009), Brodzinsky (2006), and the present study have all shown positive relations between contact and adoption communicative openness, despite differences in measurement. This suggests that, although children in confidential adoptions could grow up in an atmosphere of open communication about adoption, the occasions for discussing it are not as frequent or impactful as when birth family members are actively involved in the child's life. For example, in another study using the present data set, Von Korff (2008) found a significant association between contact and the frequency of adoption-related conversation taking place between adoptive parents and adolescents in the past year. Furthermore, frequency of adoption-related conversation mediated the association between contact and adoptive identity. In confidential adoptions, the family's information about the child's birth relatives is typically frozen at the time of placement. The lack of new information discourages ongoing communication. However, it is not the case that all confidential adoptions lack open communication or that all open adoptions have extensive adoption communication.

Although Neil (2009) and Brodzinsky (2006) hypothesized that adoption communicative openness would be more predictive of externalizing behavior than the actual amount or type of contact taking place, the most variance in the present study was accounted for by the family's satisfaction with the contact. The correlational pattern involving satisfaction with contact suggests an explanation involving the family dynamic surrounding contact. Recall that satisfaction with contact was strongly correlated with contact but not with adoption communicative openness. In another paper, we highlighted mean differences in satisfaction with contact for adolescents, adoptive mothers, and adoptive fathers during W2 (Grotevant et al, 2007). For all three parties, the groups having birth parent contact with meetings had the highest levels of satisfaction with contact. Even within the group having contact with meetings, the type of contact, frequency, and persons involved varied widely. We have theorized that the type of contact in each adoptive kinship network evolves over time by means of a process of emotional distance regulation, in which kinship network members evaluate present and anticipated relationships with one another and develop a mutually agreeable contact level (Grotevant, 2009). The adoptee is undoubtedly a part of this family

process, and his or her wishes can have a major impact on the way that contact is practiced. We hypothesize that the level of control over the contact is one that characterizes the most open adoptions, contributes to satisfaction, and buffers against the development of externalizing behavior.

Even though satisfaction appears to be more important than contact or adoption communicative openness in predicting externalizing behavior, we have found that ACO plays an important role in promoting other outcomes, such as information seeking behavior among adoptees who do not have direct contact with birth relatives. Adoptive mothers who were more communicatively open had adolescents who more actively sought birth family information concurrently at W2; ACO at W2 also predicted information seeking in emerging adulthood, controlling for W2 levels of information seeking (Skinner-Drawz, Wrobel, Grotevant, & Von Korff, in press).

The present study had a number of strengths: the sample was relatively large, given the depth of data collection; the study included three longitudinal waves covering developmental periods from childhood into emerging adulthood; reports from adoptees, adoptive mothers, and adoptive fathers were included; and the sample was homogeneous in terms of pre-adoption history, yet heterogeneous in post-adoption contact arrangements. The study is somewhat limited in its generalizability, as all participating families were involved in same-race, domestic infant adoptions. It is inappropriate to generalize these findings to international adoptions, where there are significant cultural complications regarding contact, or to adoption of children from the public child welfare system, where the child's best interests might preclude contact with birth relatives who harmed them. Finally, it is acknowledged that there are many other biological, family, and contextual variables that contribute to externalizing behaviors; we have only measured a subset of them.

Future research will focus on the role of satisfaction in relationships, which provides an opportunity to see the adoption process as evaluated by the participant rather than in comparison to an external standard. It is possible that satisfaction with contact is related to one's feeling that the need for information about the adoption has been met. Furthermore, we will explore the role that perceived control over contact plays in satisfaction, and ultimately, in the expression of externalizing behavior among adoptees.

TEXT BOX WITH Key Points

- A higher level of externalizing behavior has been noted in the literature for adopted youth compared to nonadoptees.
- This study examined connections between aspects of post-adoption contact between the adoptive family and their child's birth mother and the adoptee's externalizing behavior in adolescence and emerging adulthood.
- Neither contact nor adoption communicative openness predicted externalizing, but family members' satisfaction with contact did.
- Clinicians dealing with adoptees who display externalizing behavior should explore family satisfaction with the contact occurring with the youth's birth relatives.

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Abbreviations

ACO	adoption communicative openness
SAT	satisfaction with contact
MTARP	Minnesota – Texas Adoption Research Project
CBCL	Child Behavior Checklist
YSR	Youth Self Report
ABCL	Adult Behavior Checklist
ASR	Adult Self Report
W1	Wave 1
W2	Wave 2
W3	Wave 3

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Figure 1.

Table 1

Correlations among observed and latent factors

	Externalizing			Contact	Adoption Communicative Openness	Satisfaction w/ Contact	Child sex
	Wave 1	Wave 2	Wave 3				
Externalizing:							
Wave 1 (Childhood)	1.00						
Wave 2 (Adolescence)	.56*	1.00					
Wave 3 (Emerging adult)	.38*	.60*	1.00				
Contact	.09	-.03	-.06	1.00			
Adoption Communicative Openness	.08	.05	-.01	.71*	1.00		
Satisfaction w/ Contact	-.10	-.38*	-.21	.68*	.18	1.00	
Child sex	-.26*	-.16*	-.17*	.01	.02	-.13	1.00

*
p < .05.

Table 2

Fit indices for each model

	$\chi^2(df)$	p-value	CFI	TLI	RMSEA	SRMR
Base Model	23.61 (21), .31		1.00	.99	.03	.04
Model 2	30.42 (27), .30		.99	.99	.03	.05
Model 3	32.00 (27), .23		.99	.98	.03	.05
Model 4	68.82 (52), .06		.97	.95	.04	.06