Published in final edited form as:

Fam Process. 2017 March ; 56(1): 171–188. doi:10.1111/famp.12166.

Parents' Differential Treatment of Adolescent Siblings in African American Families

Anna R. Solmeyer and

Postdoctoral Researcher, Department of Human Development and Family Studies, The Pennsylvania State University, anna.r.soli@gmail.com

Susan M. McHale

Professor of Human Development and Family Studies and the Director of the Social Science Research Institute, The Pennsylvania State University, x2u@psu.edu

Abstract

Research on European and European American families suggests that parents' differential treatment of siblings has negative implications for youths' adjustment, but few studies have explored these dynamics in minority samples. This study examined parents' differential acceptance and conflict in a sample of mothers, fathers, and two adolescent siblings in 179 African American families who were interviewed on 3 annual occasions. In an effort to replicate findings from European and European American samples, we assessed the longitudinal associations between differential treatment and adolescent adjustment and tested three sibling characteristics (birth order, gender, and dyad gender composition) as potential moderators of these linkages. To illuminate the sociocultural context of differential treatment and its implications we also explored parents' cultural socialization practices and experiences of financial stress as potential moderators of these links. Multilevel models revealed that, controlling for average parent-child relationship qualities, decreases in parental acceptance and increases in parent-youth conflict over time—*relative to the sibling*—were associated with increases in youths' risky behavior and depressive symptoms. Links between differential treatment and adjustment were not evident, however, when mothers engaged in high levels of cultural socialization and in families under high financial stress. The discussion highlights the significance of sociocultural factors in family dynamics.

Keywords

African American families; parents' differential treatment; siblings; adolescent adjustment

Parents' differential treatment (PDT) of siblings is a pervasive family dynamic that persists throughout the life course (Shanahan, McHale, Crouter, & Osgood, 2008; Sutor & Pillemer, 2000). Although parents may have legitimate reasons for their behaviors, such as siblings' maturity levels or needs, differential treatment is generally linked with more adjustment problems for the less favored sibling (Feinberg, Neiderhiser, Simmens, Reiss, & Hetherington, 2000; Shanahan et al., 2008), particularly when it is perceived as unfair

(Kowal, Kramer, Krull, & Crick, 2002). In this paper, we built on this evidence and other research and theory suggesting that PDT is a common family dynamic (Ansbacher & Ansbacher, 1956; McHale & Crouter, 2003), to address several gaps in this literature.

First, most studies on differential treatment have been limited to European and European American families even though children from other sociocultural groups in the US have more siblings, on average (Hernandez, 2004), and siblings spend substantial time together (Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). Accordingly, our first goal was to examine the longitudinal associations between PDT and youths' risky behaviors and depressive symptoms across adolescence in an African American sample. By investigating PDT as a common family process, we also contributed to the literature on African American families, which has focused on family pathology and dysfunction (McLoyd, 1998).

Second, we explored family structure and sociocultural moderators of the links between PDT and youth adjustment. An ecological perspective (Bronfenbrenner, 1979) holds that family dynamics like PDT do not have universal implications; instead, their effects may vary as a function of both individual and contextual factors. We sought to replicate previous research on family structure moderators of PDT in European American families with respect to sibling characteristics (birth order, gender, and dyad gender constellation), and we extended this research by exploring two sociocultural factors, parents' cultural socialization practices and their experiences of financial stress, as potential moderators of PDT-youth adjustment associations in African American families. In the following pages we elaborate on the conceptual and empirical underpinnings of these study goals.

Parents' Differential Treatment and Adolescent Adjustment

Social comparison theory (Festinger, 1954) holds that individuals evaluate themselves based on comparisons with others, with an underlying motive of enhancing self-esteem. Sisters and brothers represent prime candidates for social comparison because of their proximity, shared experiences and characteristics, and the fact that they are a focus of comparison by others, such as their parents. Consistent with social comparison theory, Adler suggested that siblings are sensitive to parents' treatment and compare the quality of their own versus their sibling's relationships with a parent (Ansbacher & Ansbacher, 1956). Falling short in the sibling comparison can result in poor self-evaluations, leading to low self-worth or acting out in an attempt to gain parents' attention (Feinberg & Hetherington, 2001; Richmond, Stocker, & Rienks, 2005; Shanahan et al., 2008).

Research on differential treatment in European American families has found that being the less favored sibling has negative implications. For instance, longitudinal studies demonstrated that decreases in parental acceptance and increases in parental negativity relative to a sibling were associated with increases in depressive symptoms and externalizing problems (Richmond et al., 2005; Shanahan et al., 2008). Importantly, the links between PDT and youths' adjustment remained after taking into account dyadic parent-child relationship quality, a third variable that could explain both PDT and youths' well-being (Feinberg & Hetherington, 2001; Shanahan et al., 2008; Tamrouti-Makkink et al., 2004). These processes have not been tested in African American families, however, and thus our

goal was to replicate findings from European American samples using a longitudinal design and assessing the links between PDT and siblings' risky behavior and depressive symptoms.

Moderators of Associations Between Differential Treatment and Adolescent Adjustment

Sibling characteristics and contextual factors moderate PDT's effects on youths' adjustment. For example, several studies found stronger associations between less favored status and adjustment problems for older, as compared to younger siblings (Feinberg & Hetherington, 2001; Feinberg et al., 2000; Tamrouti-Makkink et al., 2004), possibly because older siblings' higher and more privileged family status is threatened by a later-born sibling. Gender and dyad gender constellation moderation also was evidenced in stronger associations between PDT and adjustment for girls than boys, and for same-gender compared to mixed-gender sibling pairs (McHale, Updegraff, Jackson-Newsom, Tucker, & Crouter, 2000; Shanahan et al., 2008; Tamrouti-Makkink et al., 2004). Maccoby (1998) suggested that girls become more relationship-oriented through adolescence and engage in social comparisons to a greater extent than boys. Further, because social comparisons are more common when the target is similar to oneself (Bandura, 1977), youths are more likely to compare themselves to a same-gender sibling than to a sibling of the other gender.

In addition to sibling structure characteristics, contextual factors can shape youths' reactions to PDT. These factors include those that reflect cohesive family ties (e.g., familism values) and those that impair family cohesion (e.g., marital discord, parental hostility). In a study of Mexican American families, McHale et al. (2005) found that less favored treatment was linked to adjustment problems only in youth who did not report strong familism values. A more collectivistic orientation may make siblings with stronger familism values less inclined toward social comparison and less likely to interpret unequal treatment as an indication of personal shortcomings or parental preferences. Factors that inhibit a sense of family solidarity such as relationship discord, on the other hand, have been found to exacerbate PDT's negative effects on adolescent adjustment (Feinberg & Hetherington, 2001; Richmond & Stocker, 2008).

We extended work on contextual moderators by exploring two sociocultural factors relevant to African American families—parents' cultural socialization practices and experiences of financial stress—as potential moderators of PDT. Cultural socialization refers to parental practices aimed at fostering youths' appreciation of and identification with African American culture and practices (Hughes & Chen, 1997). In contrast to familism, which is a personal value, cultural socialization is a parenting practice, but both of these sociocultural factors reflect a collectivistic orientation that emphasizes group belonging and identity—in contrast to an individualistic orientation wherein the interests and needs of the self are predominant. We expected that cultural socialization would act as familism values did in McHale et al.'s (2005) study of Mexican American siblings, serving as a protective factor that mitigates the negative effects of less favored treatment on adolescent adjustment.

We explored financial stress as a second potential contextual moderator. African American households may be particularly prone to financial stress, given that their financial assets

amount to only 1/20 of those of non-Hispanic White households, on average (Kochar, Fry, & Taylor, 2011). Another unique feature of African American families is that those with regular incomes are often called upon to provide support for extended family members who are in financial difficulties, and these responsibilities may be a consistent drain on the family income and contribute to financial stress (Chiteji & Hamilton, 2002). Accordingly, we tested financial stress as a potential moderator of the links between PDT and youth adjustment, hypothesizing that financial stress would function like family discord, intensifying the negative implications of siblings' less favored treatment. This hypothesis is consistent with a cumulative risk model (Rutter, 1979), which suggests that the combination of being a less favored sibling in a family under financial pressure will be associated with the poorest outcomes.

The Current Study

In sum, this paper builds on previous research, using a longitudinal design to examine the role of PDT in youths' adjustment across adolescence in two-parent African American families. We first examined the time-varying associations between mothers' and fathers' differential treatment and youths' risky behavior and depressive symptoms, controlling for dyadic parent-youth relationship quality (Feinberg & Hetherington, 2001) and youths' perceived fairness of PDT (Kowal et al., 2002; McHale et al., 2000). Because of data showing that siblings who did not share the same biological parents and those whose parents were divorced were more likely to experience PDT (Mekos, Hetherington, & Reiss, 1996), we controlled for siblings' biological relatedness and parents' marital status in all models. Next, we explored two sets of potential moderators of PDT-adjustment linkages: sibling structure characteristics (birth order, gender, and dyad gender constellation), and sociocultural factors (parents' cultural socialization practices and financial stress). We expected to replicate work on European American families showing that less favored status is associated with more risky behaviors and depressive symptoms particularly for older siblings, girls, and same-gender dyads (Feinberg & Hetherington, 2001; Feinberg et al., 2000; McHale et al., 2000; Shanahan et al., 2008; Tamrouti-Makkink et al., 2004). In addition, by examining cultural socialization practices and financial stress as moderators, we aimed to shed light on how the sociocultural context shapes the implications of PDT in African American families. Importantly, we controlled for income to isolate the effects of experienced hardship, as opposed to objective financial resource availability.

Method

Participants

Participants were mothers, fathers, and two siblings in 179 families that participated in a three-year longitudinal study of family relationships and youth development. Given the goals of the larger investigation, we did not seek a representative sample but instead targeted families who self-identified as Black or African American and included a mother and father who were living together and raising at least two children in middle childhood or adolescence. Participants lived in two contiguous urban centers with substantial African American populations on the Eastern Seaboard (see McHale, Crouter, Kim, Burton, Davis,

et al., 2006, for details on recruitment). Approximately half of the sample was recruited through community groups and churches. We also obtained from a marketing firm the names and address of African American students in grades 4 through 7 and mailed these families a recruitment letter. Data collection began in 2003 and was conducted on an annual basis. Over the course of the three-year study, 11 families stopped participating, an attrition rate of 5%.

All youths self-identified as African American or Black, as did 96% of the mothers and 99% of the fathers. Most families were working and middle class, with an average family income of \$90,039 ($SD = \$57,465$; range = \$3,000 – \$275,000) in Year 1. This figure is higher than the national average, in part because nearly all of the families were urban and suburban, dual-earner families (87% of mothers and 95% of fathers were employed). On average, mothers had completed 14.68 years of education ($SD = 1.82$) and fathers, 14.31 years ($SD = 2.37$), with 12 years equivalent to a high school degree and 16 years equivalent to a college degree. In Year 1, 88% of couples were married, and the rest were cohabiting. Over the course of the study, 24 couples (13%) separated or divorced. In Year 1, older siblings averaged 13.81 ($SD = 1.73$, range = 10.03 – 17.91) and younger siblings averaged 10.37 ($SD = 1.08$, range = 7.84 – 13.11) years of age, with an average age gap of 3.47 years ($SD = 1.76$). In 82% of families, siblings shared the same biological parents; the remaining 33 pairs were half- or step-siblings. In the analysis, biological relatedness was dichotomized such that 1 = siblings who shared the same biological parents and 0 = all other siblings. Nearly all (98%) of the sibling pairs were consecutive in birth order and the majority (75%) were first- and second-borns. Dyad gender constellation was approximately evenly distributed, and average family size was 4.82 ($SD = 1.15$, range = 4 – 10 family members).

Procedures

Data were collected through home interviews conducted separately with mothers, fathers, and each sibling by a pair of interviewers, nearly all of whom were African American. Following informed consent procedures, family members answered questions about their family relationships and personal characteristics. Youth interviews lasted approximately 1 hour and parent interviews were 2 to 3 hours. After completing their home interviews, each family received an honorarium of between \$200 and \$300 depending on the study year.

Measures

In Years 1, 2, and 3, youths reported on *parental acceptance* using an 8-item (e.g., “My mother/father understands my problems and worries”), 4-point scale (1 = *really unlike*, 4 = *really like*) from the Child’s Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965; Schwarz, Barton-Henry, & Pruzinsky, 1985). Parents rated their acceptance of each sibling using the parent version of the CRPBI. Parents responded to eight items (e.g., “I understand my child’s problems and worries”) using a 5-point scale (1 = *not at all*, 5 = *very much*). This measure is widely used and has been demonstrated to have good discriminant validity, convergent validity, and reliability ($\alpha = .73-.89$; Schwarz et al., 1985). Items were averaged, and Cronbach’s α s for youth and parent reports ranged from .78 to .94 across the three years.

Parent-youth conflict was measured with a scale adapted from Smetana (1988). Youths rated conflict frequency with their mother/ father in nine domains (e.g., chores, social life) on a 6-point scale (1 = *not at all*, 6 = *several times a day*). Parents were asked the same questions about their experiences with each sibling. A principal components analysis showed that all items loaded on to a single factor, and that there was adequate reliability ($\alpha = .77-.90$; Shanahan, McHale, Osgood, & Crouter, 2007). Thus, items were averaged, and α s ranged from .77 to .92.

Differential treatment scores were calculated separately for mothers and fathers using a directional difference score created using youth reports. For older siblings, we subtracted younger siblings' reports of parental acceptance or conflict from older siblings' reports; for younger siblings, the opposite was done. Thus, a negative score meant the target youth reported lower levels as compared to the sibling ("sibling more"), a score of zero meant "equal" treatment, and a positive score meant the target youth reported higher levels of a given form of treatment than the sibling ("self more"). We used parent reports of acceptance and conflict to control for dyadic parent-youth relationships, avoiding correlated self-reports because youth-reported variables (from two siblings) comprised the difference scores and parent reports comprised the dyadic control variables (see Shanahan et al., 2008, for prior use of this approach).

Siblings' perceptions of the *fairness of differential treatment* were measured in Year 1 with a scale from McHale et al. (2000). Youths rated their parents' fairness in eight domains (e.g., parental discipline, parental involvement, allocation of privileges) on a 5-point scale (1 = *very unfair*, 5 = *very fair*). Responses were averaged, and α s were .78 for older and .77 for younger siblings.

Risky behavior was assessed in Years 1, 2, and 3 for older siblings and Years 2 and 3 for younger siblings. (Because of their young age, younger siblings did not report on risky behavior in Year 1.) Items assessed participation in 18 behaviors (e.g., smoked cigarettes, skipped a day of school, disobeyed parents on an important issue) in the past year (1 = *never*, 4 = *more than ten times*; Eccles & Barber, 1990). Items were summed, with α s ranging from .79 to .87, and a log transformation was applied to correct for positive skew.

Youths reported on their *depressive symptoms* in Years 1, 2, and 3 using the 10-item version of the Children's Depression Inventory (CDI; Kovacs, 1981). Each item consisted of three sentences, and youths were asked to indicate which sentence best described their feelings in the past two weeks (e.g., 0 = "*I am sad once in a while*," 1 = "*I am sad many times*," 2 = "*I am sad all the time*"). The CDI is a commonly used scale with well-established validity and reliability (Saylor, Finch, Spirito, & Bennett, 1984). Responses were summed, and α s ranged from .68 to .82.

Mothers and fathers reported on their *cultural socialization* practices with each sibling separately in Year 1 using five items (e.g., "I've read or provided Black history books to my child") from a measure developed by Hughes and Chen (1997). A study by Hughes and Johnson (2001) demonstrated the scale's adequate reliability and validity. Responses were

scored on a 6-point scale (1 = *never*, 6 = *very often*) and were summed; α s ranged from .77 to .85.

Financial stress was measured in Year 1 with mother and father reports on items adapted from Conger and Elder (1994). Parents responded “yes” (= 1) or “no” (= 0) to nine questions about financial adjustments in the past year (e.g., “Have you changed food shopping or eating habits to save money?”), and items were summed. Parents also rated “How difficult has it been for you to pay your family's bills each month?” (1 = *not difficult*, 5 = *very difficult*), “How much money did you have left over each month after paying your bills?” (1 = *more than enough*, 5 = *not enough to make ends meet*), and “How satisfied are you with your family's total financial situation?” (1 = *very satisfied*, 9 = *very unsatisfied*). Scores for financial adjustments and hardships were standardized and averaged, with higher values indicating more financial stress. Because mother and father reports were correlated ($r = .57$, $p < .001$) and to simplify the analyses, we used the mother-father mean in the analyses, and α for the overall scale was .85.

Parents reported background information, including sibling age, gender, and biological relationship, annual family income, and marital disruption over the course of the study.

Results

Preliminary Analysis

Table 1 presents the means and standard deviations for study variables. Youths in this sample were well-adjusted, with scores on the low ends of the risky behavior (possible range: 18 – 72) and depressive symptom (possible range: 0 – 20) measures. Differential treatment scores suggested that, on average, firstborns reported lower acceptance and more conflict with their parents than did second-borns and that PDT was generally minimal. In addition, parents reported generally positive dyadic relationships with their children (above the scale midpoint for acceptance; below the scale midpoint for conflict). Although the sample was fairly well-off in terms of earned income on average, there was variability in perceived financial stress. For example, 14% of parents reported making three or more adjustments in their behavior to save money in the past year, and 25% said they had some trouble making ends meet at the end of the month. Family income was moderately correlated with financial stress, $r = -.40$, $p < .001$.

Analysis Plan

The data were suited to multilevel modeling (MLM) because they were nested (i.e., siblings from the same family were repeatedly assessed) and unbalanced (i.e., siblings were assessed at different ages; Raudenbush & Bryk, 2002). We estimated 3-level models (Level 1 = within-individual; Level 2 = between-sibling; Level 3 = between-family), testing separate models for maternal acceptance, paternal acceptance, mother-youth conflict, and father-youth conflict, each predicting risky behavior and depressive symptoms (eight models). Analyses were conducted using SAS Version 9.2. For the risky behavior models, we used the MIXED procedure to estimate linear MLMs. To account for positive skew of depressive symptoms scores we used the GLIMMIX procedure and specified a negative binomial

distribution and a log link function; coefficients represented the change in the log of the expected number of depressive symptoms associated with a one-unit change in the independent variable.

We began by modeling the developmental course of risky behavior and depressive symptoms by estimating an unconditional growth curve model for each dependent variable. We used youths' ages as the metric of time and included a linear age term, centered at age 13 (the average age across siblings and time points), as a time-varying covariate at Level 1. Deviance tests comparing the log likelihoods of nested models were used to determine which random variances to include for each outcome. Then, we tested a conditional growth curve model that added birth order, gender, and dyad gender constellation and their interactions with age to test for variability in the developmental trajectories by these variables. All subsequent models built on the conditional growth curve models.

In analyzing the links between PDT and youths' adjustment, we separated between- from within-person effects by using two indices of PDT. At Level 1, PDT was indicated by a time-varying, group-mean centered (i.e., centered at each individual's cross-time average) variable; at Level 2, PDT was indicated by the grand-mean centered (i.e., centered at the sample average), cross-time average. The Level 1 variable captured within-person variation, or how a sibling deviated from his/ her "usual" level of PDT at each time point. The Level 2 variable controlled for stable individual differences in PDT and captured between-person variation, or how a sibling differed from the rest of the sample. Dyadic parent-child relationship control measures were entered as grand-mean centered, time-varying effects at Level 1, youths' fairness ratings (collected at only one point in time) as well as youth gender and birth order were entered at Level 2, and family-level factors, (dyad gender constellation, as well as parental separation, siblings' biological relatedness, and family income) were entered at Level 3. We interpreted effects at $p < .10$.

To test moderators of PDT-adjustment links we added interactions between the within-person PDT terms and sibling structure characteristics and contextual factors. As described in Aiken and West (1991), we probed significant interactions by comparing a group of families whose scores were 1 *SD* above or below the sample average (in the case of the continuous moderators, cultural socialization and financial stress) or changing the reference group (in the case of the categorical moderators, birth order, gender, and dyad gender constellation). For interactions with categorical variables, we ran two models that were identical except for the reference groups and compared the simple slopes for the main effects of PDT in the two models. Only interactions at $p < .05$ were retained in the final models.

Because of the moderate correlation between family income and financial stress, we conducted a sensitivity analysis to assess whether multicollinearity affected the results. We tested a set of models that included family income as a control variable, and a set that did not. If multicollinearity was an issue, we would expect that removing family income would result in substantial changes in the regression coefficients and their statistical significance. Although there were minor changes in the coefficients, however, removing family income did not change the direction or statistical significance of the main effects or interactions

(results available from the first author). Accordingly, we included family income in the final models to maintain the conceptual distinction between it and financial strain.

Growth Curve Models

Based on a series of preliminary MLMs and deviance tests, the most appropriate unconditional growth curve models for risky behavior and depressive symptoms included random intercepts at Levels 2 and 3 (Table 2). The fixed effects for age showed that risky behavior increased with age but that there were no systematic changes in depressive symptoms.

The conditional model for risky behavior revealed that the effect for age was qualified by a trend-level interaction with gender. Follow-ups showed that girls started out at a lower level of risky behavior at age 9, but increased at a faster rate, $\gamma = 0.03$, $SE = 0.01$, $p < .001$, compared to boys, $\gamma = 0.02$, $SE = 0.01$, $p = .009$. The gender gap closed with age and was no longer significant by age 16. There was a trend-level effect for birth order, which indicated that at age 13 (the centering point), risky behavior was higher among older, $M = 3.19$, $SE = 0.01$, compared to younger siblings, $M = 3.15$, $SE = 0.02$. The conditional model for depressive symptoms revealed no significant effects for any of the independent variables.

Links Between Differential Treatment and Risky Behavior

Parents' differential acceptance—Beginning with the between-person variables, a significant, negative between-person effect emerged for differential maternal acceptance (Table 3, Column 2), indicating that, averaged across time, youths who reported relatively more maternal acceptance than their siblings reported less risky behavior. The between-person effect for differential paternal acceptance was not significant.

The main effect for within-person maternal differential acceptance was qualified by two interactions, one with birth order and one with dyad gender constellation. Follow-ups revealed that changes in differential maternal acceptance were negatively associated with changes in risky behavior for older, $\gamma = -0.07$, $SE = 0.02$, $p = .004$, but not younger siblings, $\gamma = 0.02$, $SE = 0.03$, ns, and for same-gender, $\gamma = 0.07$, $SE = 0.03$, $p = .01$, but not mixed-gender dyads, $\gamma = 0.02$, $SE = 0.03$, ns. In other words, on occasions when older siblings reported relatively more maternal acceptance compared to their younger siblings than they usually experienced, older siblings also reported fewer risky behaviors than usual. And, for same-gender but not mixed-gender dyads, relatively more maternal acceptance than usual was associated with higher levels of risky behavior than usual. A significant within-person effect for paternal differential acceptance also emerged, showing that adolescents who reported relatively more acceptance from their fathers than they usually experienced engaged in fewer risky behaviors than usual at the same occasion.

Parents' differential conflict—Results for differential maternal and paternal conflict revealed significant between-person effects in the expected direction: Youths who reported higher levels of conflict with their parents (averaged across time), relative to their siblings' reports, also engaged in more risky behavior. The same pattern emerged at the trend level for the within-person effect paternal differential conflict.

The effect for within-person maternal differential conflict was qualified by two interactions, one with financial stress (Figure 1) and one with cultural socialization. Both moderation effects showed the same pattern: In families under low financial stress and those in which mothers engaged in lower levels of cultural socialization, the expected positive association with PDT emerged ($\gamma = 0.03$, $SE = 0.01$, $p = .008$; $\gamma = 0.03$, $SE = 0.01$, $p = .02$, respectively) indicating that adolescents who experienced relatively more conflict with their mothers reported higher levels of risky behavior. In contrast, in families under high financial stress and in families in which mothers engaged in more frequent cultural socialization, there were no links between PDT and risky behavior, $\gamma = -0.01$, $SE = 0.01$, ns; $\gamma = -0.01$, $SE = 0.01$, ns, respectively. The effect for cultural socialization was consistent with our hypothesis, but the effect for financial stress was opposite from the expected direction.

Links Between Differential Treatment and Depressive Symptoms

Parents' differential acceptance—Replicating findings from research on European and European American samples, significant effects emerged at the between-person level for both maternal and paternal differential acceptance, suggesting that higher levels of parental acceptance, relative to a sibling, were associated with fewer depressive symptoms (Table 4, Columns 2 and 3). The same pattern held at the within-person level for mothers and fathers, but fathers' differential acceptance was qualified by an interaction with financial stress (not shown, but see Figure 1 for a similar pattern). In families under low financial stress, the usual effect of PDT emerged: On occasions when adolescents experienced their fathers as relatively less accepting compared to their sibling, they also reported more depressive symptoms than usual, $\gamma = -0.32$, $SE = 0.09$, $p < .001$. In families under high financial stress, however, there was no within-person association between fathers' differential acceptance and youths' depressive symptoms, $\gamma = -0.01$, $SE = 0.09$, ns.

Parents' differential conflict—Results revealed significant between-person PDT effects for both parents in the expected direction, with relatively more maternal and paternal conflict associated with higher levels of depressive symptoms. Again, the same pattern was evident for differential maternal conflict at the within-person level, but the within-person effect for fathers' differential conflict was moderated by financial stress. Follow-ups revealed that in families under low financial stress, there was a significant positive association between fathers' differential conflict and depressive symptoms, $\gamma = 0.19$, $SE = 0.07$, $p = .007$, but no link in families under high financial stress, $\gamma = -0.04$, $SE = 0.06$, ns (not shown, but see Figure 1 for a similar pattern).

Discussion

Building on evidence that PDT has negative implications for European and European American youths' well-being (Feinberg & Hetherington, 2001; Richmond et al., 2005) and that the effects of PDT are moderated by sibling structure characteristics and sociocultural factors (Bronfenbrenner, 1979), we explored PDT's effects and its moderators in a longitudinal study of two-parent African American families. Using an MLM approach, we were able to control for stable individual differences in PDT and isolate the associations between increases and decreases PDT and increases and decreases in youths' adjustment

problems. A number of time-varying, within-person effects emerged, indicating that, even in this sample where PDT was generally low, on occasions when youths experienced less favorable treatment compared to a sibling, they also reported higher levels of risky behavior and depressive symptoms than usual, a pattern that is consistent with previous work on European and European American families (Shanahan et al., 2008; Tamrouti-Makkink et al., 2004). Although prior research highlighted birth order, gender, and dyad gender constellation as moderators of PDT's effects, we found limited support for such effects in this sample. Instead, the most consistent moderation effects emerged for parents' cultural socialization practices and financial stress. The pattern suggested that, in African American families wherein parents engaged in higher levels of cultural socialization or reported more financial stress, less favorable treatment was *not* associated with the expected increases in risky behavior and depressive symptoms.

Differential Treatment and Youths' Adjustment

The main effects for the links between PDT and adolescent adjustment were consistent both with social comparison (Festinger, 1954) and Adlerian (Ansbacher & Ansbacher, 1956) theories: On occasions when youths reported less parental acceptance or more conflict with their parents—as compared to their siblings—they also reported more risky behavior and depressive symptoms than usual. These main effects replicate work on European and European American families; however, the findings were robust across the sample and for the most part did not vary by birth order, gender, or dyad gender constellation as has been found in some prior studies. Although the lack of moderation by these characteristics may be indicative of racial/ethnic differences in PDT dynamics, a diverse sample that includes both European and African American families would be needed to formally test this idea.

The one exception was for differential maternal acceptance, which was moderated both by birth order and dyad gender constellation in the risky behavior model. The birth order effect suggested that mothers' differential acceptance was more strongly linked with older than with younger siblings' risky behavior, and is consistent with previous research (Feinberg & Hetherington, 2001; Feinberg et al., 2000; Tamrouti-Makkink et al., 2004). As others have argued, earlier-born siblings tend to have a higher status in the family and may be more reactive to less favorable treatment because they perceive it as a threat to their privileged family position.

The dyad gender constellation moderation effect suggested that differential maternal acceptance was linked with risky behavior for same-gender, but not mixed-gender pairs. This pattern is in line with past research (McHale et al., 2000) and with a social learning perspective (Bandura, 1977), which suggests that same-gender siblings are more likely to engage in social comparisons and more sensitive to discrepancies in parental treatment because they are more objectively similar to one another. The direction of this effect was the opposite of what we expected, however: For same-gender siblings, relatively *higher* maternal acceptance was linked with *more* risky behavior. This could be a child-driven effect, wherein mothers responded to youths' externalizing problems by attempting to draw the more troubled sibling closer (Conger & Conger, 1994). Alternatively, it may be evidence for a coalition between the mother and one sibling, a dysfunctional dynamic that has been linked

to children's problem behavior in prior research (Johnson, 2003). Because this was an isolated effect, however, and was in the opposite direction of the effects for between-person maternal differential acceptance and dyadic maternal acceptance, it should be viewed with caution until replicated.

It is important to consider two factors when interpreting these findings: how PDT was measured and the average level of PDT in the sample. In this study, PDT was indicated by a difference score between the two siblings' reports of parent-child relationships; it was *not* a direct measure of siblings' perceptions PDT. An advantage of the difference score approach is that it takes into account both siblings' experiences, which limits the possibility that correlations between PDT and adjustment are due to the same individual reporting on both measures. A limitation of this approach is that it does not capture the extent to which siblings viewed PDT as salient. Further, as noted, average levels of PDT were relatively low. The fact that PDT was linked to youth outcomes even when levels were low, however, underscores the importance of this family dynamic and more generally, including information about sibling experiences in studies of family socialization influences on youth. The findings, however, might look very different in a sample wherein high levels of parental favoritism were apparent, and thus should be replicated in other samples.

Consistent with an ecological perspective (Bronfenbrenner, 1979), the associations between PDT and adolescent adjustment were not universal, but instead, several depended on parents' cultural socialization and financial stress. The pattern for cultural socialization was as expected: When mothers exhibited more cultural socialization toward promoting youths' identity with their racial/ethnic group, adolescents who received relatively less acceptance compared to a sibling *did not* show the expected increase in risky behavior. This finding is similar to McHale et al.'s (2005) work showing that familism values mitigated the negative impact of PDT in Mexican American families, but extends this work to document that beyond youths' *values*, parenting *practices* can mitigate the negative effects of PDT. To the extent that cultural socialization fosters a sense of belonging and communal rather than more individualistic values, adolescents may be less likely to attend to or respond to PDT with jealousy and acting out.

We found three significant moderation effects for financial stress, all in the opposite direction of what we hypothesized, that is, that financial stress would exacerbate the negative implications of PDT. Instead, under conditions of high financial stress, PDT was not associated with adjustment problems. This is in contrast to other research that has found that families under financial strain tend to be at greater risk for problematic family dynamics and youth outcomes (Conger & Elder, 1994), and that other family stressors like marital discord tend to aggravate PDT and its effects (Crouter, McHale & Tucker, 1999; Mekos, et al., 1996; Richmond & Stocker, 2008). In this generally well-off sample, in contrast, financial stress functioned similarly to other factors that promote a sense of family and community solidarity, including cultural socialization and familism values (McHale et al., 2005).

Although we can only speculate about the mechanisms underlying this pattern of results, one possibility is that challenging financial circumstances promote a sense of family cohesion and discourage siblings' social comparisons. Consistent with this idea, in prior research with

this sample we reported that youths from families with lower income and parental education had closer sibling relationships (McHale, Whiteman, Kim, & Crouter, 2007). Adolescents in African American families under financial strain may be more tolerant of PDT, possibly because they attribute it to outside forces that their parents are not able to control. As suggested by Kowal et al. (2002), perceptions about the legitimacy of PDT and attributions about why it occurs play a role in siblings' experiences of PDT. For example, parents who must work long hours to make ends meet may have a limited amount of free time and be unable to divide their time and attention evenly among their children. Siblings who receive less positive parental attention could view this as a consequence of their parents' efforts to provide for the family, rather than interpreting it as a sign of preferential treatment.

It is important to note that financial stress emerged as a significant moderator, despite the fact that the average income in this sample was higher than the national average. This finding highlights the distinctions between perceived financial stress, income, and accumulated wealth. In the U.S. today, the median wealth of non-Hispanic White households is 20 times that of African American households, with wealth defined as the accumulated sum of assets (savings, stocks and mutual funds, legacies) minus the sum of debts (Kochar, Fry, & Taylor, 2011). Thus, wealth can be quite different than income, such that families with higher incomes may experience financial stress when they do not have accumulated assets to rely on for temporary fluctuations in income, jobs loss, or unexpected expenses (Zimmerman & Katon, 2005). Additional research is needed in samples with higher levels of economic hardship and lower incomes, to test whether these findings replicate across the income spectrum or if there are unique patterns depending on the average levels of actual and perceived hardship and to explore this and other potential processes underlying the effect.

A limitation of this study is that we did not measure the range of dynamics relevant to PDT, such as siblings' social comparisons or their perceptions of parents' reasons for PDT. Although we did assess the extent to which siblings felt that PDT was fair, it was only at the first time point. It would be important for future research to explore whether fairness moderates or mediates the effects of PDT, whether and how perceptions of fairness change across adolescence, and if fairness plays a different role in adjustment at different points in development. Such analyses could help to illuminate the processes underlying PDT-adjustment linkages.

Clinical Implications

This study contributes to a small body of research on common sibling and family dynamics in middle and working class African American families, and the findings may provide useful insights for practitioners working with this population. In general, the findings highlight the importance of considering the larger family context when working with adolescents who present with internalizing or externalizing problems. To successfully address issues around PDT, it may be necessary to actively engage multiple dyads (e.g., parent-child, child-child) or triads (parent-child-child). Although such systems dynamics may be addressed in the context of individualized family counseling and clinical services, group-based prevention and intervention programs for parents and families, such as parent education programs, tend

to focus on parent-child relationships and overlook sibling dynamics (e.g., Redmond et al., 2009). Indeed, with some important exceptions (e.g., Brotman et al., 2005) most research on evidence based programs for youth seems to be grounded in an assumption that studying the experiences of one child in a family is sufficient for understanding how families operate as social and socializing systems.

The results of research on PDT, however, underscore the importance of helping parents recognize that their behavior toward one child may be understood in reference to their behavior toward a sibling: As our findings suggested, even low levels of PDT can be apparent to children and have negative implications for their adjustment. Some research suggests that both encouraging parents to explain why they treat their children differently and helping siblings to understand those reasons (e.g., older siblings may have more privileges, but also more responsibilities; siblings have some unique needs) can legitimize PDT and create a shared understanding of what is “fair” (Kowal and Kramer, 1997). Parent educators also could help parents devise strategies to address their children’s concerns about PDT (e.g., spending time together with both siblings to promote a sense of solidarity).

The findings on cultural socialization and financial stress have less direct implications for practice, but they underscore the importance of considering sociocultural factors in clinical settings and when adapting manualized prevention and intervention programs to diverse cultural groups. For example, highlighting cultural socialization as a strength that many families possess could increase its salience for parents and adolescents. Further, encouraging parents to engage in cultural socialization practices may help to foster a stronger sense of family belonging, which could ameliorate sibling and PDT-related adjustment problems.

Conclusions and Future Directions

Our study had several limitations that imply important directions for future research. Although we were able to shed some light on PDT dynamics in African American families, the recruitment criteria for the larger study restricted the sample to one that was not nationally representative. By focusing on two-parent families, however, we were able to study both mothers’ and fathers’ differential treatment, and contribute to the literature on two-parent, working and middle-class African American families, a sorely under-researched group (McLoyd, 1998). Another advantage of this small, local sample was that we maintained a relatively high rate of participation across three years and collected in-depth data from four family members, allowing for longitudinal examination of this family system dynamic. Replication of these findings in other racial/ethnic groups and across a range of family structures, such as single-parent and step-families, is needed, however.

Another direction for future research is to include other measures of differential treatment, such as additional dimensions and direct perceptions of PDT. We limited our focus to differential acceptance and conflict because those are commonly studied dimensions in the literature, but other dimensions, such as parent-child shared time and differential resource allocation also should be examined (Tucker, McHale, & Crouter, 2003). Measures of PDT that capture siblings’ direct perceptions and understanding of parental favoritism would shed light on the meanings of PDT for youth.

Importantly, our study design and analysis approach allowed us to rule out some stable third variable explanations of the links between PDT and adjustment: We set up our MLMs to study the associations between *changes* in PDT and *changes* in youths' adjustment across adolescence, net of the average level of PDT and other stable individual differences (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002). Our analytic approach, however, did not rule out third variables that change over time. In addition, an important limitation was that it focused on examining concurrent covariation and did not allow us to establish causal pathways or direction of effect. Longitudinal studies that test time-lagged associations are needed. Another way to determine the causal effects of PDT would be an experimental design in which parents are randomly assigned to either a control or a treatment condition wherein they are trained to avoid PDT and to explain their reasons for it to their children (Feinberg, Solmeyer, & McHale, 2012). Such research would be a critical step toward understanding PDT's causal effects.

In sum, this study contributed to the literature on a family dynamic that has been shown to be common in European and European American families by establishing that it also operates in two-parent African American working and middle class families, a group that has received very little research attention. We replicated previous research on the negative implications of PDT for youths' adjustment and extended this work by exploring sociocultural moderators. These preliminary findings suggest that parents' cultural socialization and financial stress mitigated the negative effects of PDT, but replication in other samples and further explication of underlying mechanisms is needed. At the most general level, our results highlight the importance of studying families as systems and exploring how unique cultural processes and factors emanating from the world beyond the home can penetrate family dynamics in ways that have implications for youths.

Acknowledgments

Portions of this work were based on a doctoral dissertation by Anna R. Solmeyer. This research was funded by a grant from the National Institute of Child Health and Human Development (R01-HD32336) to Ann C. Crouter and Susan M. McHale, Co-Principal Investigators. We thank Megan Baril, Kelly Davis, Aryn Dotterer, Mami Kan, Ji-Yeon Kim, Jamie Marks, Ashleigh May, Carolyn Ransford, Cindy Shearer, Shawn Whiteman, Sandee Hemman, Kristen Johnston, and Temple University's Survey Research Center for their help in conducting this research and the participating families for their time and cooperation.

References

- Aiken, L.S., West, S.G. Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage; 1991.
- Ansbacher, H.L., Ansbacher, R.R. The individual psychology of Alfred Adler. New York: Basic Books; 1956.
- Bandura, A. Social learning theory. Englewood Cliffs, NJ: Prentice Hall; 1977.
- Bronfenbrenner, U. The ecology of human development: Experiments in nature and design. Cambridge, MA: Harvard University Press; 1979.
- Brotman LM, Dawson-McClure S, Gouley KK, McGuire K, Burraston B, Bank L. Older siblings benefit from a family-based preventive intervention for preschools at risk for conduct problems. *Journal of Family Psychology*. 2005; 19:581–591. [PubMed: 16402873]
- Chiteji NS, Hamilton D. Family connections and the Black-White wealth gap among middle-class families. *The Review of Black Political Economy*. 2002; 30:9–28.

- Conger KJ, Conger RD. Differential parenting and change in sibling differences in delinquency. *Journal of Family Psychology*. 1994; 8:287–302.
- Conger, RD., Elder, GH, Jr. *Families in troubled times: Adapting to change in rural America*. New York: Aldine De Gruyter; 1994.
- Crouter AC, McHale SM, Tucker CJ. Does stress exacerbate parental differential treatment of siblings? *Journal of Family Psychology*. 1999; 13:286–299.
- Eccles, J., Barber, B. The risky behavior scale. The University of Michigan; 1990. Unpublished measure
- Feinberg ME, Hetherington EM. Differential parenting as a within-family variable. *Journal of Family Psychology*. 2001; 15:22–37. [PubMed: 11322082]
- Feinberg ME, Neiderhiser JM, Simmens S, Reiss D, Hetherington EM. Sibling comparison of differential parental treatment in adolescence: Gender, self-esteem, and emotionality as mediators of the parenting-adjustment association. *Child Development*. 2000; 71:1611–1628. [PubMed: 11194260]
- Feinberg ME, Solmeyer AR, McHale SM. The third rail of family systems: Sibling relationships, mental and behavioral health and preventive intervention in childhood and adolescence. *Clinical Child and Family Psychology Review*. 2012; 15:43–57. [PubMed: 22105663]
- Festinger L. A theory of social comparison processes. *Human Relations*. 1954; 7:117–140.
- Hernandez DJ. Demographic change and the life circumstances of immigrant families. *The Future of Children*. 2004; 14:17–47.
- Hughes D, Chen L. When and what parents tell children about race: An examination of race-related socialization among African American families. *Applied Developmental Science*. 1997; 1:200–214.
- Hughes DJ, Johnson D. Correlates in children's experiences of parents' socialization behaviors. *Journal of Marriage and Family*. 2001; 63:981–995.
- Jacobs JE, Lanza S, Osgood DW, Eccles JS, Wigfield A. Changes in children's self-competence and values: Gender and domain differences across grades one through twelve. *Child Development*. 2002; 73:509–527. [PubMed: 11949906]
- Johnson VK. Linking changes in whole family functioning and children's externalizing behavior across the elementary school years. *Journal of Family Psychology*. 2003; 17:499–509. [PubMed: 14640800]
- Kochar, R., Fry, R., Taylor, P. Wealth gaps rise to record highs between Whites, Blacks, and Hispanics. 2011. Retrieved from the Pew Research Center website: http://www.pewsocialtrends.org/files/2011/07/SDT-Wealth-Report_7-26-11_FINAL.pdf
- Kovacs, M. The Children's Depression Inventory: A self-rated depression scale for school aged youngsters. University of Pittsburgh; 1981. Unpublished manuscript
- Kowal A, Kramer L. Children's understanding of parental differential treatment. *Child Development*. 1997; 68:113–126.
- Kowal A, Kramer L, Krull JL, Crick NR. Children's perceptions of the fairness of parental preferential treatment and their socioemotional well-being. *Journal of Family Psychology*. 2002; 16:297–306. [PubMed: 12238412]
- Maccoby, EE. *The two sexes: Growing up apart, coming together*. Cambridge, MA: Harvard University Press; 1998.
- McHale, SM., Crouter, AC. How do children exert an impact on family life?. In: Crouter, AC., Booth, A., editors. *Children's influence on family dynamics: The neglected side of family relationships*. Mahwah, NJ: Lawrence Erlbaum; 2003. p. 207–220.
- McHale SM, Crouter AC, Kim JY, Burton LM, Davis KA, Dotterer A, Swanson DP. Mothers' and fathers' socialization of African American families: Implications for youth. *Child Development*. 2006; 77:1378–1402.
- McHale SM, Updegraff KA, Jackson-Newsom J, Tucker CJ, Crouter AC. When does parents' differential treatment have negative implications for siblings? *Social Development*. 2000; 9:149–172.

- McHale SM, Updegraff KA, Shanahan L, Crouter AC, Killoren SE. Siblings' differential treatment in Mexican American families. *Journal of Marriage and Family*. 2005; 67:1259–1274. [PubMed: 18414595]
- McHale SM, Whiteman SD, Kim JY, Crouter AC. Characteristics and correlates of sibling relationships in two-parent African American families. *Journal of Family Psychology*. 2007; 21:227–235. [PubMed: 17605545]
- McLoyd, VC. Changing demographics in the American population: Implications for research on minority children and adolescents. In: McLoyd, VC., Steinberg, L., editors. *Studying minority adolescents: Conceptual, methodological, and theoretical issues*. Mahwah, NJ: Erlbaum; 1998. p. 3–28.
- Mekos D, Hetherington EM, Reiss D. Sibling differences in problem behavior and parental treatment in nondivorced and remarried families. *Child Development*. 1996; 67:2148–2165. [PubMed: 9022235]
- Raudenbush, S., Bryk, A. *Hierarchical linear models*. Thousand Oaks, CA: Sage; 2002.
- Redmond C, Spoth RL, Shin C, Schainker LM, Greenberg MT, Feinberg M. Long-term protective factor outcomes of evidence-based interventions implemented by community teams through a community-university partnership. *The Journal of Primary Prevention*. 2009; 30:513–530. [PubMed: 19669885]
- Richmond MK, Stocker CM. Longitudinal associations between parents' hostility and siblings' externalizing behavior in the context of marital discord. *Journal of Family Psychology*. 2008; 22:231–240. [PubMed: 18410210]
- Richmond MK, Stocker CM, Rienks SL. Longitudinal associations between sibling relationship quality, parental differential treatment, and children's adjustment. *Journal of Family Psychology*. 2005; 19:550–559. [PubMed: 16402870]
- Rutter, M. Protective factors in children's responses to stress and disadvantage. In: Kent, MW., Rolf, JE., editors. *Primary prevention of psychopathology: Social competence in children*. Vol. 3. Hanover, NH: U of New England Press; 1979. p. 49–74.
- Saylor CF, Finch AJ, Spirito A, Bennett B. The Children's Depression Inventory: A systematic evaluation of psychometric properties. *Journal of Consulting and Clinical Psychology*. 1984; 52:955–967. [PubMed: 6520288]
- Schaefer ES. Children's report of parental behavior: An inventory. *Child Development*. 1965; 36:413–424. [PubMed: 14300862]
- Schwarz JC, Barton-Henry ML, Pruzinsky T. Assessing child-rearing behavior: A comparison of ratings made by mother, father, child, and sibling on the CRPBI. *Child Development*. 1985; 56:462–479. [PubMed: 3987419]
- Shanahan L, McHale SM, Crouter AC, Osgood DW. Linkages between parents' differential treatment, youth depressive symptoms, and sibling relationships. *Journal of Marriage and Family*. 2008; 70:480–494.
- Shanahan L, McHale SM, Osgood DW, Crouter AC. Conflict frequency with mothers and fathers from middle childhood to late adolescence: Within- and between-families comparisons. *Developmental Psychology*. 2007; 43:539–550. [PubMed: 17484569]
- Smetana, JG. Concepts of self and social convention: Adolescents' and parents reasoning about hypothetical and actual family conflicts. In: Gunnar, MR., Collins, WA., editors. *Minnesota Symposia on Child Psychology: Development during the transition to adolescence*. Vol. 21. Hillsdale, NJ: Erlbaum; 1988. p. 79–122.
- Suitor JJ, Pillemer K. Did mom really love you best? Exploring the role of within-family differences in developmental histories on parental favoritism in later life families. *Motivation and Emotion*. 2000; 24:105–120.
- Tamrouti-Makkink ID, Dubas JS, Gerris JRM, van Aken MAG. The relation between the absolute level of parenting and differential parental treatment with adolescent siblings' adjustment. *Journal of Child Psychology and Psychiatry*. 2004; 45:1397–1406. [PubMed: 15482500]
- Tucker CJ, McHale SM, Crouter AC. Dimensions of mothers' and fathers' differential treatment of siblings: Links with adolescents' sex-typed personal qualities. *Family Relations*. 2003; 52:82–89.

- Updegraff KA, McHale SM, Whiteman SD, Thayer SM, Delgado MY. Adolescent sibling relationships in Mexican American families: Exploring the role of familism. *Journal of Family Psychology*. 2005; 19:512–522. [PubMed: 16402866]
- Zimmerman FJ, Katon W. Socioeconomic status, depression disparities, and financial strain: What lies behind the income-depression relationship? *Health Economics*. 2005; 14:1197–1215. [PubMed: 15945040]

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Figure 1.

Interaction between mothers' differential conflict and financial stress predicting youths' risky behaviors.

Note. All significant PDT X financial stress and PDT X cultural socialization interactions showed the same pattern as pictured here. Asterisks indicate effects that were significantly different from zero, ** $p < .01$.

Table 1

Means and (Standard Deviations) for Study Variables (N = 179 families)

Variables	Year 1		Year 2		Year 3	
	M	(SD)	M	(SD)	M	(SD)
Older siblings						
Age	13.81	(1.73)	14.86	(1.72)	16.02	(1.77)
Risky behavior	25.73	(7.02)	24.61	(6.17)	26.40	(7.33)
Depressive symptoms	1.99	(2.53)	1.92	(2.43)	1.68	(2.22)
Fairness of PDT	3.73	(0.78)	---	---	---	---
Mother cultural socialization	21.47	(5.32)	---	---	---	---
Father cultural socialization	17.32	(6.32)	---	---	---	---
Financial stress	0.00	(0.72)	---	---	---	---
Dyadic mother-youth acceptance ^a	4.21	(0.55)	4.09	(0.60)	4.05	(0.64)
Dyadic father-youth acceptance ^a	3.90	(0.68)	3.85	(0.64)	3.92	(0.66)
Dyadic mother-youth conflict ^a	2.66	(0.83)	2.52	(0.76)	2.48	(0.81)
Dyadic father-youth conflict ^a	2.69	(1.04)	2.39	(0.88)	2.40	(0.95)
Differential mother-youth acceptance ^b	-0.22	(0.71)	-0.23	(0.69)	-0.21	(0.77)
Differential father-youth acceptance ^b	-0.30	(0.84)	-0.24	(0.89)	-0.25	(0.91)
Differential mother-youth conflict ^b	0.13	(1.12)	0.06	(1.02)	-0.03	(1.10)
Differential father-youth conflict ^b	0.21	(1.10)	0.04	(0.92)	-0.14	(1.12)
Younger siblings						
Age	10.37	(1.08)	11.41	(1.08)	12.55	(1.12)
Risky behavior	---	---	22.05	(5.08)	23.07	(4.90)
Depressive symptoms	1.78	(2.27)	1.82	(2.73)	1.77	(2.26)
Fairness of PDT	3.88	(0.77)	---	---	---	---
Mother cultural socialization	20.82	(5.75)	---	---	---	---
Father cultural socialization	17.88	(6.17)	---	---	---	---
Dyadic mother-youth acceptance ^a	4.34	(0.51)	4.24	(0.54)	4.19	(0.57)
Dyadic father-youth acceptance ^a	4.12	(0.55)	4.02	(0.56)	3.92	(0.62)

Variables	Year 1		Year 2		Year 3	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Dyadic mother-youth conflict ^a	2.60	(0.83)	2.57	(0.86)	2.55	(0.85)
Dyadic father-youth conflict ^a	2.37	(0.88)	2.34	(0.90)	2.37	(0.86)

Note. PDT = Parents' differential treatment. Older siblings' differential treatment scores were created by subtracting younger siblings' reports from older siblings' reports. Younger siblings' differential treatment scores were created by subtracting older siblings' reports from younger siblings' reports (not shown). This resulted in the same values for older and younger siblings' differential treatment scores but with the opposite sign.

^aParent reports.
^bChild reports.

Table 2

Unstandardized Coefficients, (Standard Errors), and Random Effects for the Unconditional and Conditional Growth Curves of Risky Behavior and Depressive Symptoms (N = 179 families)

	Risky Behavior ^a		Depressive Symptoms ^b	
	Unconditional	Conditional	Unconditional	Conditional
	γ (SE)	γ (SE)	γ (SE)	γ (SE)
Fixed effects				
Intercept	3.14 (0.02) **	3.17 (0.02) **	0.35 (0.05) **	0.21 (0.11) †
Age	0.03 (0.01) **	0.02 (0.01) **	−0.01 (0.02)	−0.03 (0.03)
Birth order (1 = Older)		0.04 (0.02) †		0.18 (0.13)
Gender (1 = Girl)		−0.09 (0.02) **		0.16 (0.10)
Age X Gender		0.01 (0.01) †		
Gender constellation (1 = SG)		−0.01 (0.02)		−0.07 (0.11)
Random effects	Variance (SE)	Variance (SE)	Variance (SE)	Variance (SE)
Residual/Overdispersion ^c	0.02 (0.01) **	0.02 (0.01) **	0.37 (0.05)	0.37 (0.05)
L 2 intercept	0.02 (0.01) **	0.02 (0.01) **	0.48 (0.09) **	0.48 (0.09) **
L 3 intercept	0.01 (0.01) *	0.01 (0.01) *	0.09 (0.07) †	0.09 (0.07)

Note. SG = same-gender. L2 = Level 2; L3 = Level 3.

^aRisky behavior scores were log-transformed.

^bDepressive symptoms were modeled using a negative binomial regression.

^cFor the risky behavior model, this value was the residual. For the depressive symptoms model, this value was the overdispersion parameter.

† $p < .10$.

* $p < .05$.

** $p < .01$.

Table 3

Unstandardized Coefficients for Between-Person (B-P) and Within-Person (W-P) Parents' Differential Treatment (PDT) Predicting Youths' Risky Behavior (N = 179 families)

	Mother Acceptance as Predictor	Father Acceptance as Predictor	Mother Conflict as Predictor	Father Conflict as Predictor
Fixed effects	γ (SE)	γ (SE)	γ (SE)	γ (SE)
Sib. bio. relatedness (1 = Biological)	−0.056 (0.030) [†]	−0.074 (0.031) [*]	−0.068 (0.030) [*]	−0.076 (0.030) [*]
Parental separation (1 = Separated)	0.072 (0.035) [*]	0.091 (0.045) [*]	0.070 (0.036) [*]	0.096 (0.044) [*]
Income	−0.005 (0.003) [†]	−0.002 (0.003)	−0.004 (0.003) [†]	−0.002 (0.003)
Financial stress	−0.001 (0.018)	−0.003 (0.019)	−0.009 (0.018)	−0.006 (0.019)
Cultural socialization	0.004 (0.002) [*]	0.001 (0.002)	0.003 (0.002)	−0.001 (0.002)
Fairness	−0.023 (0.014) [†]	−0.028 (0.014) [*]	−0.027 (0.013) [*]	−0.025 (0.013) [†]
Dyadic P-Y relationship	−0.047 (0.015) ^{**}	−0.049 (0.014) ^{**}	0.033 (0.011) ^{**}	0.041 (0.010) ^{**}
B-P PDT	−0.043 (0.017) [*]	−0.018 (0.015)	0.047 (0.012) ^{**}	0.035 (0.012) ^{**}
W-P PDT	0.019 (0.031)	−0.032 (0.011) ^{**}	0.014 (0.008) [†]	0.016 (0.009) [†]
W-P X Birth order (1 = Older)	−0.085 (0.031) ^{**}			
W-P PDT X Gender constellation (1 = SG)	0.054 (0.027) [*]			
W-P PDT X Financial stress			−0.023 (0.012) [*]	
W-P PDT X Cultural socialization			−0.003 (0.002) [*]	

Note. P-Y = parent-youth. SG = same-gender.

[†]
 $p < .10$.

^{*}
 $p < .05$.

^{**}
 $p < .01$.

Table 4

Unstandardized Coefficients for Between-Person (B-P) and Within-Person (W-P) Parents' Differential Treatment (PDT) Predicting Youths' Depressive Symptoms (N = 179 families)

	Mother Acceptance as Predictor	Father Acceptance as Predictor	Mother Conflict as Predictor	Father Conflict as Predictor
Fixed effects	γ (SE)	γ (SE)	γ (SE)	γ (SE)
Sib. bio. relatedness (1 = Biological)	−0.050 (0.140)	−0.083 (0.146)	−0.079 (0.142)	−0.044 (0.145)
Parental separation (1 = Separated)	−0.039 (0.172)	−0.006 (0.217)	−0.060 (0.176)	0.017 (0.219)
Income	−0.007 (0.013)	0.001 (0.014)	−0.006 (0.013)	0.003 (0.014)
Financial stress	−0.007 (0.086)	0.007 (0.092)	−0.030 (0.088)	−0.012 (0.094)
Cultural socialization	0.011 (0.010)	−0.012 (0.010)	0.006 (0.010)	−0.017 (0.010) [†]
Fairness	−0.280 (0.065) ^{**}	−0.276 (0.068) ^{**}	−0.306 (0.065) ^{**}	−0.276 (0.067) ^{**}
Dyadic P-Y relationship	−0.192 (0.080) [*]	−0.221 (0.076) ^{**}	0.105 (0.055) [*]	0.123 (0.051) [*]
B-P PDT	−0.275 (0.084) ^{**}	−0.199 (0.073) ^{**}	0.213 (0.059) ^{**}	0.224 (0.062) ^{**}
W-P PDT	−0.222 (0.070) ^{**}	−0.158 (0.059) ^{**}	0.121 (0.044) ^{**}	0.076 (0.046) [†]
W-P PDT X Financial stress		0.221 (0.093) [*]		−0.166 (0.066) [*]

Note. P-Y = parent-youth.

[†]
 $p < .10$.

^{*}
 $p < .05$.

^{**}
 $p < .01$.