Published in final edited form as:

Subst Use Misuse. 2016 August 23; 51(10): 1264–1273. doi:10.3109/10826084.2016.1168440.

Child Problems as a Moderator of Relations Between Maternal Impulsivity and Family Environment in a High-Risk Sample

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Abstract

Objective—Previous studies have suggested that maternal characteristics are related to family environment; however, the relation between maternal impulsivity, in particular, and family environment is not well understood. As such, we examined direct relations between maternal impulsivity and family environment, as well as whether the relation between maternal impulsivity and family environment was moderated by child problems for sons and daughters. We hypothesized that child problems would moderate the association between maternal impulsivity and family environment. We also explored whether these associations differ for boys and girls.

Method—Data from the initial visit of a longitudinal study was used for the current study. Participants included 297 youth (137 boys; 160 girls) of 10 to 12 years of age ($M = 10.99$, $SD = .84$) and their mothers. The majority of the sample had a family history of substance use disorder ($n = 236$).

Results—Hierarchical linear regressions showed that for sons there was a significant interaction between maternal impulsivity and child problems on family environment. Maternal impulsivity was positively related to family environment problems among sons with few emotional and behavioral problems, but there was no significant correlation among sons with high problem levels. Among daughters, there was no significant interaction between maternal impulsivity and child emotional and behavioral problems on family environment.

Conclusions—The results suggest that the association between maternal impulsivity and family environment may depend on problem level and child gender. Thus, addressing maternal impulsivity in therapy may benefit some families.

Introduction

Family environment is a multidimensional concept that includes communication, conflict resolution, familial roles, and affective expression between members of a household

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(Skinner, Steinhauer, & Santa-Barbara, 1983). Research has suggested that family environment is related to several important developmental outcomes in late childhood and early adolescence (Jewell & Beyers, 2008; Olszewski, Kulieke, & Buescher, 1987; Palmer, 2000). Therefore, examining factors that may impact family environment is of particular interest. Recent research shows that maternal levels of impulsivity are related to more conflict in the mother-child relationship (Gau & Chang, 2013), higher negative parenting (Chronis-Tuscano, Raggi, Clarke, Rooney, Diaz, & Pian, 2008), lower maternal involvement, lower positive parenting, and less use of positive reinforcement (Chen & Johnston, 2007). In much of this research, however, maternal impulsivity is conceptualized within the context of an Attention-Deficient Hyperactivity Disorder (ADHD) diagnosis. While one of the key symptoms of ADHD is impulsivity, this diagnosis encompasses other processes (i.e., inattention and hyperactivity) and does not broadly account for the impulsivity construct. Using a more specific measure of impulsive behavior would provide a clearer picture of how maternal impulsivity is related to family environment.

Delay discounting is one aspect of impulsivity that may be related to family environment. Delay discounting is a measure of impulsive decision making and represents an individual's preference for smaller, immediate rewards relative to larger, later rewards (Stahl et al., 2014). Maternal delay discounting may be related to family environment because parenting behaviors resulting from impulsive decision making may lead to family stress. In other words, ineffective parenting techniques, such as spanking, yelling, or shaming that attempt to command immediate compliance, may be less effective and cause more family stress (Patterson, 1982) than more effective parenting techniques that use behavior modification principles to command long-term compliance. To our knowledge, no research has examined possible associations between mothers' delay discounting and family environment.

The person-environment fit perspective (Eccles et al., 1993) suggests that it is important to consider complex relations between maternal delay discounting and family environment as opposed to simple linear associations. More specifically, this perspective purports that conflict occurs when there is mismatch between an individual's characteristics (e.g., psychological needs and personality) and their environment (e.g., characteristics of other individuals). Indeed, recent research suggests that maternal impulsivity may be less related to parenting practices when children demonstrate high levels of problems, such as internalizing, externalizing, and other behavioral, or social difficulties, than when they demonstrate low levels of problems (Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007; Slesnick, Reed, Letcher, Katafiasz, Jones, & Buettner, 2012). In other words, high maternal impulsivity may not be related to family environment in families with a child with significant difficulties because mothers and offspring have similar activity levels and engage in similar decision making, behavioral, and communication patterns. Little research, however, has examined relations among child problems, maternal impulsivity, and family environment in the same study and no research has examined the associations separately for sons and daughters.

Child sex is another variable that may impact the association between maternal impulsivity, as sons and daughters demonstrate different levels of closeness and conflict with mothers (Domene, Socholotiuk, & Young, 2011; Jagers et al., 2014). Males also demonstrate

greater impulsivity (Hasson & Fine, 2012), greater risk-taking (Byrnes, Miller, & Schafer, 1999), and lower inhibitory control (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Furthermore, research has found that many maternal characteristics are related to problems for sons but not daughters (Guo & Slesnick, 2011; Patock-Peckham, King, Morgan-Lopez, Ulloa, & Moses, 2011). To test the idea that relations between maternal impulsivity and family environment depend on child problems, this study tested the moderation between maternal delay discounting and child problems on family environment for sons and daughters.

In summary, the current study investigated the interaction between maternal delay discounting (a specific measure of impulsivity) and child problems on family environment in an at-risk sample (which was operationalized as an oversampling of families with a history of substance use disorder) because we were interested in sampling families that were more likely to be experiencing family difficulties. Our specific hypothesis was that we would find a significant positive association between maternal delay discounting and family environment when child problems were low, but that maternal delay discounting would not be associated with family difficulties when child problems were high. Additionally, we explored associations among these variables separately for boys and girls.

Methods

Participants and Sample Selection

The protocol was approved by the Institutional Review Board at our institution. Although data were collected as part of a larger longitudinal study ($N = 386$) examining individual, familial, and environmental predictors of substance use initiation during adolescence (Ryan, Acheson, Charles, Lake, Hernandez, Mathias, & Dougherty, in press), only data from the initial visit were used in the current study. Participants were included in the current subsample if their mother was the participating parent and all data were available. This reduced the current sample to 297 boys and girls ranging in age from 10 to 12 years ($M = 10.99$, $SD = .84$). Mothers' mean age was 36.71 years ($SD = 6.64$). The current sample included youth with a family history of substance use disorder (FH^+ $n = 236$) in addition to children without a family history of substance use disorder (FH^- $n = 61$).

Children and their mothers were recruited from the community through radio, newspaper, and television advertisements. Inclusion criteria included children ages 10 to 12, good physical health, and for the FH^+ group, at least a biological father with a history of a substance use disorder. Boys and girls were excluded if they had disabilities that would prohibit them from completing the study, reported regular substance use, or had an $IQ < 70$ (Wechsler Abbreviated Scale of Intelligence; Psychological Corporation, 1999). Youth were also excluded if they met DSM-IV-TR diagnostic criteria for any psychiatric disorder, except FH^+ youth could meet criteria for Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Attention-Deficit Hyperactivity Disorder (ADHD), Dysthymia, or Anxiety Disorders because these disorders are commonly co-morbid with initiation of substance use during adolescence. FH^+ youth are particularly vulnerable for developing substance use problems in adolescence (Iacono, Malone, & McGue, 2008) and therefore excluding youth with these disorders would result in an unrepresentative sample of FH^+ youth.

Procedures

After study eligibility was determined, mothers and their children were escorted to separate rooms to complete study measures privately. Mothers completed demographic measures including their child's birth date, sex, race, and ethnicity. Maternal marital status, education, and employment were self-reported on the *Four Factor Index of Social Status* (FFIS; Hollingshead, 1975), which was used to calculate family socioeconomic status (SES). The mother and child completed assessments of their family environment and child's problems, and the mother completed interviews of maternal mental health and delay discounting (described below). Interviews of maternal mental health were completed by trained research staff; and all diagnoses were made by consensus review with the study's board certified child and adolescent psychiatrist.

Measures

Independent variables

Maternal impulsivity: Mothers' impulsivity was assessed with a delay-discounting questionnaire (Kirby, Petry, & Bickel, 1999) that has established reliability and validity (Kirby, 2009; Kirby et al., 1999; Kirby & Petry, 2004). This questionnaire consists of 27 fixed-choice questions that require participants to indicate whether they would prefer an immediate reward that was smaller or a delayed reward that was larger. These questions (e.g., "Would you prefer (a) \$54 today or (b) \$80 in 30 days?") used small (\$25-\$35), medium (\$50-\$60), or large (\$75-\$85) amounts of money. Rates of delay discounting were characterized by calculating k values based on Mazur's (1987) hyperbolic discounting function. For the analyses in the present study, k values were averaged across the three monetary amounts (small, medium, large) and log transformed due to non-normality. Higher average k values indicated increased delay discounting (and greater impulsivity).

Child problems: Mothers completed the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) and youth completed the Youth Self-Report (YSR), which provide a measure of child's Externalizing Problems (attention problems and aggressive behavior), Internalizing Problems (anxiety and depression), and Total Problems (internalizing, externalizing, attention, social, and thought problems) in the past 6 months. The current analyses averaged parent and child responses to the Total Problems scale to provide one continuous measure of child emotional and behavioral problems. Higher scores indicate higher levels of problems. The CBCL and YSR have excellent validity and reliability (Achenbach & Rescorla, 2001).

Dependent variable

Family environment: The General Scale of the Family Assessment Measure (FAM-III; Skinner et al., 1983) was given to mothers and children to obtain a quantitative index of the family environment in the prior 6 months. The FAM-III General Scale is a 50-item self-report measure that yields scores on seven subscales (task accomplishment, role performance, communication, affective expression, involvement, control, and values and norms), which are averaged together to provide an overall rating. Parent and child overall rating scores were converted to T -scores and then averaged to provide one continuous

measure of mothers' ($M = 50.09$, $SD = 8.83$) and child's ($M = 51.36$, $SD = 7.93$) report of family difficulties. T -scores ranging from 20- 40 indicates a very good family environment, 40-60 indicate moderate difficulties in the family environment, and scores above 60 indicate a poor family environment. The FAM-III General Scale shows adequate validity in a wide range of samples (for review, see Skinner, Steinhauer, & Sitarenios, 2000) and produced satisfactory reliability for the current sample (Adolescents Cronbach's $\alpha = .71$, Mothers $\alpha = .80$).

Potential confounds

Maternal mental health and family history of substance use disorder: Mothers were interviewed using the *Family History Assessment Module* (FHAM; Janca, Bucholz, & Janca, 1992) to assess for current and lifetime histories of substance use disorders in the biological father, mother, and second-degree relatives. Children who did not have a father or other first or second degree relatives (i.e., mother or grandparents) with a history of substance use disorder were placed in the FH- group. FH was coded FH- = 0 and FH+ = 1 and used as a control variable in all analyses.

The FHAM was also used to assess for the presence of other past or current mental health diagnoses, including Depression, Antisocial Personality Disorder, Conduct Disorder, and Bipolar Disorder in mothers. Each diagnosis was entered into the statistical models as binary variables to examine whether relations between delay discounting and family environment is better explained by these diagnoses.

Data Analyses

Hierarchical linear regressions were used to examine relations among maternal delay discounting, child problems, and family environment. For each analysis, the linear terms (maternal delay discounting and child problems) and the necessary control variable was entered in Step 1. Interactions between maternal delay discounting and child problems were explored by centering both variables and then multiplying them to create the interaction term. This interaction term was entered in Step 2. This step allowed us to examine whether child problems moderated the relation between maternal delay discounting and family environment. Regressions were conducted separately for male and female children in order to test whether the interaction between maternal delay discounting and child problems was related to family environment differently for sons and for daughters.

Supplemental analyses—Because research suggests that maternal age, child age, mental health disorders marked by impulsivity symptoms (Antisocial Personality, Conduct, and Bipolar Disorders) and maternal substance use disorder are related to family environment and/or impulsivity (Barkley, Anastopoulos, Guevremont, & Fletcher, 1992; Jaffee, Harrington, Belsky, Caspi, & Moffitt, 2006), all regressions were conducted with and without controlling for these variables. None of the variables were significant in the models and results did not differ between the models that included these variables and those that did not. Thus, these variables were dropped from the final model. Family history of substance use disorders was retained in the models.

Results

Demographic Characteristics and Study Variables

Sons and daughters did not differ significantly on any of the demographic or study specific variables (see Table 1). There were no significant sex differences in age, race, ethnicity, IQ, socioeconomic status, maternal mental health diagnoses, child problems, family history status, or maternal delay discounting. Although there was a trend for families of boys to demonstrate greater family difficulties, scores for both males and females were within the range for moderate family difficulties. Consistent with the pattern of findings in the larger cohort, there were significant differences between FH+ and FH- in IQ ($F(1, 295) = 14.00, p < .001$; FH- $M = 101.33, SD = 11.62$; FH+ $M = 95.29, SD = 11.14$) and family environment ($F(1, 295) = 33.77, p < .001$; FH- $M = 46.44, SD = 5.68$; FH+ $M = 51.80, SD = 6.59$); and built into the design of the larger longitudinal study, there are differences between FH+ and FH- in maternal diagnosis and child problems (Ryan et al., in press). These differences in the current subsample support our decision to include family history of substance use disorders as a control variable.

Correlations among Study Variables of Interest—Correlations among variables of interest for sons and daughters are shown in Table 2. While family history status was significantly correlated with both family environment and maternal delay discounting for sons and daughters, there were some differences. Maternal delay discounting was significantly positively correlated with family environment and child problems and significantly negatively correlated with maternal age for boys, but not for girls. Family environment was positively correlated with child problems for both boys and girls.

Regression Analyses

Daughter's family environment—As shown in Table 3, both family history of substance use disorder and child problems were related to daughter's family environment in the first step, $R^2 = .14$. Girls with a positive family history of substance use disorder and high problems had more family difficulties. Adding the interaction between maternal delay discounting and child problems in the second step did not explain a significant amount of additional variance in family environment, $R^2 = .01, F(1, 146) = 2.28, p = .13$.

Son's family environment—In Step 1 of the model (Table 4), family history of substance use disorder and child problems were both significantly related to son's family environment, $R^2 = .29$. Sons with a family history of substance use disorder and high levels of problems reported more family difficulties. In Step 2, the interaction between maternal delay discounting and child problems was entered and accounted for a significant amount of additional variance in family environment, $R^2 = .02, F(1, 128) = 4.19, p = .04$. The overall model predicting family environment for boys was significant, $R^2 = .31, F(4, 128) = 15.34, p < .001$.

The interaction between maternal delay discounting and child problems was explored using the procedures suggested by Aiken and West (1991). Figure 1 demonstrates the regression slopes for the association between maternal delay discounting and family environment for

sons with high (75% quartile) and low (25% quartile) problems. Among sons in the lower quartile of problem scores, there was a significant positive correlation between maternal delay discounting and family environment difficulties, $r = .40$, $p = .02$. Therefore, our first hypothesis was supported for sons: when children have few problems, increases in maternal delay discounting are related to increases in family difficulties. Among the sons in the upper quartile of problems, the correlation between maternal delay discounting and family environment was not significant, $r = -.15$, $p = .39$. Therefore, maternal delay discounting was not significantly related to family environment among families with sons with high problems, supporting our second hypothesis for boys.

Supplementary Analyses—To further examine similarities and differences between boys with high and low levels of problems, we examined whether either group of boys reported different proportions of internalizing to externalizing problems. We examined internalizing and externalizing problems because while internalizing problems are related to family environment (Chan, Doan, & Tompson, 2014; Queen, Stewart, Ehrenehirch-May, & Pincus, 2012), externalizing problems has an even stronger association with family environment (Barkley, Anastopoulos, Guevremont, & Fletcher, 1992; Gau & Chang, 2013). The relative balance of internalizing versus externalizing problems was similar within the sons with low levels of problems (internalizing $M = 5.94$, $SD = 3.49$; externalizing $M = 5.51$, $SD = 3.31$) and for sons with high levels of problems (internalizing $M = 28.91$, $SD = 11.44$; externalizing $M = 30.85$, $SD = 9.07$). Therefore, externalizing problems alone did not account for the associations among problems, maternal delay discounting, and family environment. We also compared the family environment scores between sons in the upper and lower problem quartiles to test whether average family difficulties was higher in the families with higher child problems. This analysis suggested that sons with high problems ($M = 54.37$, $SD = 5.59$) had significantly more family difficulties on average than did boys with low problems ($M = 47.57$, $SD = 5.98$), $F(1, 84) = 29.00$, $p < .001$.

Discussion

To our knowledge, this is the first study to use maternal delay discounting to examine associations among maternal impulsivity, child problems, and family environment. Based on previous research suggesting that maternal impulsivity may be less related to family environment among families with high levels of child problems (Slesnick et al., 2012), we hypothesized that maternal delay discounting would be positively associated with family environment when children had few problems but not when children had high levels of problems. We tested this hypothesis separately for sons and daughters to examine possible sex differences in the correlates of family environments. Our results found that there was a significant interaction between maternal delay discounting and child problems for sons but not for daughters. The interaction showed that when mothers and sons report low levels of problems, maternal delay discounting is associated with family environment. For sons with high levels of problems and for daughters, however, there was no association between maternal delay discounting and family environment.

The fact that an association between maternal delay discounting and family environment was only found among sons suggests that there may be a sex difference in relations among

maternal impulsivity, child problems, and family environment. This sex difference may be partially due to differences between mother-son and mother-daughter relationships. Research suggests that mothers report higher warmth (Jagers et al., 2014), but more conflict (Domene et al., 2011), with sons than with daughters. Impulsive behavior may have an especially strong effect on relationships that are close but high on conflict. Another possible explanation for the sex difference is that factors other than maternal impulsivity are more related to family environment among girls. Future research should examine whether maternal anxiety or depression, two internalizing problems girls are more likely to report (Hyde, 2014), interact with child characteristics to predict family environment.

Furthermore, the interaction in the model examining sons' family environment showed that when mothers and sons report high levels of problems, maternal delay discounting is not associated with family environment. This finding can be understood within the context of the person-environment fit perspective. Parental impulsivity is related to a number of problematic behaviors (e.g., Jones, Kemp, & Chan, 2013). It is possible that when there is a similarity fit between mother and son in impulsive and problematic conduct, maternal delay discounting is not related to family environment. In other words, mother and son may be engaging in similar decision-making and behaviors, resulting in maternal impulsivity being less related to family conflict or closeness. There are at least two other possible explanations for this finding as well. First, given that children with high problems reported significantly more family difficulties than did children with fewer problems, it is possible that families in which children have high problems experience difficulties due to the child's behavior. Therefore, maternal impulsivity may account for little variability in family environment. Second, factors not examined in this study may be associated with family environment in families in which children have high problems. Social support, availability and use of mental health treatment, and/or paternal characteristics other than maternal impulsivity may relate to family environment in these cases (Misri, Reebye, Milis, & Shah, 2006; Theule, Wiener, Rogers, & Marton, 2011).

Our results did show that maternal impulsivity was positively related to family environment in families with sons with low levels of problems. This finding is consistent with previous research on the association between maternal impulsivity (usually measured as ADHD symptomology) and such factors related to family environment as lower maternal warmth and involvement (Chronis et al., 2008) and higher levels of conflict (Gau & Chang, 2013). This study suggests that it is important to consider child characteristics such as gender and behavioral problems when examining the relation between maternal impulsivity and family problems. Future research may explore the impact of additional child characteristics, such as age, temperament, or psychological disorders.

In addition, our study extends this past research by examining a specific component of impulsivity (delay discounting). Unlike most previous research that utilized broad measures of maternal impulsivity, this study examined one specific aspect, called delay discounting. Delay discounting as a measure of impulsivity has been related to several adult behaviors (Chivers & Higgins, 2012; Jones, Kemp, & Chan, 2013; Melanko & Larkin, 2013; Petry, 2001), but has not been previously related to family environment. The current results suggest that, similar to other aspects of impulsivity, maternal delay discounting may have important

associations with family functioning among families with sons with few problems. Consistent with the person-environment fit hypothesis for how conflict and family difficulties emerge (Eccles et al., 1993), one interpretation for this association is that mothers who are high on delay discounting may engage in behavior that creates conflict with other family members, such as impulsive money or time management (Chivers & Higgins, 2012), strong negative reactions to stress (Diller, Patros, & Prentice, 2011), criminal behavior (Nagin & Pogarsky, 2004), or substance use (Jones, Kemp, & Chan, 2013). These behaviors may create conflict in families in which there are few previous difficulties due to low levels of child problems.

A few limitations of the current study should be noted. First, only one measure of maternal impulsivity was examined. Research suggests that different aspects of impulsivity are related to different forms of behavior (Dougherty et al. 2009; Stahl et al., 2014), and therefore future studies should include multiple measures of impulsivity. Second, the mechanism through which delay discounting is related to family environment remains unclear. It was beyond the scope of the current study to examine what maternal behaviors impacted by delay discounting were related to family environment. The design of the current study also did not allow us to test whether greater family difficulties possibly lead to an increase in maternal impulsivity and child problems. Third, the current analysis only examined families at one point in time. Future longitudinal research should examine whether maternal delay discounting and other forms of impulsivity are related to changes in family environment.

This study has also several notable strengths. Unlike some previous research on maternal impulsivity (e.g., Chen & Johnston, 2007; Gau & Chang, 2013), our measure did not rely on symptoms of ADHD. The current measure of maternal impulsivity focused on delay discounting, which is related to several dimensions of adult behavior. Second, our measures of child problems and family environment included assessments from both mothers and children, thereby reducing single-rater bias. This also accounts for bias in reporting from either the mother or the child.

In summary, this study suggested complex relations among maternal delay discounting, child problems, and family environment. Maternal delay discounting may be related to family environment only for sons with few behavioral and/or emotional problems. In these families, high maternal delay discounting is related to increases in family difficulties. However, maternal delay discounting was not related to family environment in families in which sons had high levels of problems or among daughters. This pattern of results has significant implications for family therapy. Addressing maternal impulsivity and attempting to change delay discounting (Koffarnus, Jarmolowicz, Mueller, & Bickel, 2013) may be beneficial in families with sons with few behavioral problems. In families in which sons have high levels of problems, effective therapy might address factors contributing to child problems, structural issues, and other difficulties in addition to maternal impulsivity. Future research should continue to explore the relation between maternal characteristics and family environment while considering the possible roles of child sex and adjustment problems.

Acknowledgments

Research supported in this manuscript was supported by NIDA of the National Institutes of Health under award numbers R01DA026868, R01DA033997-02S2, T32DA031115.

Glossary

Impulsivity	a predisposition toward rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individual or to others
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Figure 1.
The relation between maternal delay discounting and family environment among child with low and high levels of problems.

Table 1

Demographic Characteristics

Characteristics	Sons (<i>n</i> = 137)	Daughters (<i>n</i> = 160)	F(df), χ^2 (df), or Fisher Exact	<i>p</i>
	<i>M</i> (SD) or %	<i>M</i> (SD) or %		
Age	11.03 (0.84)	10.93 (0.84)	.99 (1, 295)	.32
Child's Race				.61
White	84.7%	86.9%		
African-American	12.4%	11.9%		
Other ^a	2.9%	1.3%		
Child's Ethnicity			.05	.83
Hispanic	75.2%	76.3%		
Non-Hispanic	24.8%	23.8%		
Full Scale IQ	96.68 (12.36)	96.40 (10.71)	.04 (1, 295)	.84
Socioeconomic Status ^b	35.36 (12.14)	35.06 (11.84)	.05 (1, 295)	.83
Maternal Diagnosis				
Substance Use Disorder	21.2%	20%	.06 (1)	.88
Disorders High in Impulsivity ^c	3.6%	5.6%	.64 (1)	.59
Depression	21.9%	23.1%	.06 (1)	.89
Child Problems	59.86 (36.90)	53.97 (22.06)	2.76 (1, 295)	.10
FH ⁺ ^d	82.5%	76.9%	1.42 (1)	.25
Maternal Delay Discounting	−1.8 (.56)	−1.8 (.53)	.22 (1, 295)	.64
Family Environment ^d	51.45 (6.16)	49.95 (7.21)	3.64 (1, 295)	.06

Note:

^eReported scores are log values of raw scores.

^aRepresents American Indian or Alaska native (*n* = 2), Native Hawaiian or Pacific Islander (*n* = 1), and Unknown (*n* = 1).

^bScores for this scale range from 8 (unskilled laborer) to 66 (major business professional).

^cMaternal disorders include Antisocial Personality, Conduct, and Bipolar Disorders.

^dFH⁺ = Families with a history of a substance use disorder.

Table 2

Correlations among Variables for Sons and Daughters

	1	2	3	4	5	6
1. Maternal Delay Discounting	--	.13	.12	.01	-.12	.16 [*]
2. Family Environment	.26 ^{**}	--	.30 ^{**}	.32 ^{**}	.06	.14
3. Family History	.12	.32 ^{**}	--	.28 ^{**}	-.27 ^{**}	-.09
4. Child Problems	.30 ^{**}	.50 ^{**}	.29 ^{**}	--	-.04	.11
5. Maternal Age	-.19 [*]	-.20 [*]	-.20 [*]	-.21 [*]	--	.09
6. Child Age	.01	-.03	-.01	.02	.18 [*]	--

Note. Correlations above the diagonal are for daughters; correlations below are for sons.

^aMaternal mental health diagnosis includes antisocial personality disorder, conduct disorder, and bipolar disorder.

^{**}
 $p < .01$

^{*}
 $p < .05$.

Table 3

Multiple Linear Regression Analyses Predicting Daughters' General Family Environment from Maternal Delay Discounting

Predictor	<i>B</i>	<i>p</i> value	<i>R</i> ²
Step 1			.14**
Family History	3.64	.007	
Child Problems	.06	.001	
Maternal Delay Discounting	1.18	.25	
Step 2			.01
Family History	3.83	.005	
Child Problems	.05	.003	
Maternal Delay Discounting	1.79	.101	
Maternal Delay Discounting × Child Problems	.053	.133	

Table 4

Multiple Linear Regression Analyses Predicting Sons' General Family Environment from Maternal Delay Discounting

Predictor	<i>B</i>	<i>p</i> value	<i>R</i> ²
Step 1			.30**
Family History	3.39	.007	
Child Problems	.07	.001	
Maternal Delay Discounting	1.05	.215	
Step 2			.02*
Family History	2.94	.020	
Child Problems	.08	.001	
Maternal Delay Discounting	.60	.483	
Maternal Delay Discounting × Child Problems	−.04	.043	