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Adolescent Personality as a Prospective Predictor of Parenting: An Interactionist Perspective

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Abstract

This study examined personality during adolescence as a predictor of later parenting of toddler-aged offspring. Based on empirical research on the timing of parenthood and the interactionist model (Conger & Donnellan, 2007), age at parenthood and family socioeconomic status (SES) were examined as mediators of the relation between personality and parenting. Participants were 228 emerging adults from an ongoing longitudinal study of the transition to adulthood. Later entry into parenthood and higher SES accounted for the association between personality characteristics and lower levels of harsh parenting and higher levels of positive parenting. Consistent with the interactionist model, both personality characteristics and SES-linked variables were related to interpersonal processes in families. The findings suggest that promoting adaptive personality traits during childhood and adolescence may help delay early entry into parenthood, promote higher SES, and, indirectly, foster more positive parenting of young children.

Keywords

Personality; parenting; socioeconomic status; age at parenthood; longitudinal

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Adolescent Personality as a Prospective Predictor of Parenting: An Interactionist Perspective

There is considerable interest in the individual and ecological factors that shape parenting. In a now classic article, Belsky (1984) proposed three broad determinants of parenting: the parent's personal psychological resources, the child's characteristics, and contextual factors (e.g., social support). Of the three determinants of parenting, Belsky (1984) argued that personal psychological resources, including the parent's well-being and personality, are the most influential predictors of sensitive parenting. However, relatively little research has evaluated prospective connections between personality and parenting behaviors (Caspi, Roberts, & Shiner, 2005; Prinzie, Stams, Dekovic, Reijntjes, & Belsky, 2009). This gap in knowledge is surprising given that there is considerable evidence prospectively linking individuals' personality attributes with life outcomes such as occupational success and mortality (Caspi et al., 2005; Chapman, Fiscella, Kawachi, & Duberstein, 2009; Ozer & Benet-Martínez, 2006). In response to the need for more research in this area, the present study examined personality characteristics assessed during late adolescence and parenting behaviors toward toddler-aged offspring assessed three to eleven years later. Theory and empirical research indicate that positive characteristics and attributes should predict later initiation of parenthood and higher socioeconomic status (Conger & Donnellan, 2007; Woodward, Fergusson, & Horwood, 2006). Accordingly, we also examined whether age at entry into parenthood and socioeconomic status (SES) mediated the relation between the personality traits and parenting toward toddler-aged offspring.

Personality and Parenting

In his model of the determinants of parenting, Belsky (1984) proposed that personality characteristics associated with psychological maturity would predict sensitive and nurturant caregiving. Psychological maturity is characterized by empathetic perspective-taking and impulse control abilities that allow the parent to sensitively respond to a child (Belsky, 1984), and these attributes may be especially important when child behavior becomes challenging (Belsky & Barends, 2002). Of relevance to the present study, the developmental characteristics of toddlers pose numerous challenges for parents. In particular, parents are challenged to constructively respond to toddlers' noncompliance, energy, and curiosity while providing healthy levels of warmth, support, and structure (Shaw, Bell, & Gilliom, 2000). Thus, parenting toddlers may be especially taxing for parents with lower levels of psychological maturity or certain personality traits (e.g., high negative emotionality; Ellenbogen, Ostiguy, & Hodgins, 2010).

Much of the early empirical literature on personality and parenting supported Belsky's (1984) general perspective by demonstrating links between personality constructs such as ego development or ego resilience and sensitive parenting toward infants, toddlers, children, and adolescents (Belsky & Barends, 2002). Recently, empirical research has increasingly focused on how personality traits associated with the Big Five (Costa & McCrae, 1992) domains of neuroticism, extraversion, openness, agreeableness, and conscientiousness are related to the quality of parenting (Prinzie et al., 2009). For example, neuroticism predicted lower levels of shared positive relationships between mothers and their infants, and conscientiousness predicted higher levels of maternal tracking of infants (Kochanska, Friesenborg, Lange, & Martel, 2004). In the same study, agreeableness and openness predicted shared positive relationships between fathers and their infants, and agreeableness also predicted paternal responsiveness. These findings and a recent meta-analysis of the Big Five traits and parenting (Prinzie et al., 2009) suggest three important points. First, studies of the Big Five personality traits and parenting have provided further support for Belsky's (1984) original model. The second point, however, is that no single trait has emerged

consistently as the strongest predictor of parenting behavior. Different traits seem to be related to different aspects of parenting and thus it is important to consider multiple broad personality traits as predictors of parenting. Third, most generally, more research is needed given that only 30 total studies were included in their analysis. In particular, research using methods of assessing personality beyond self-reports is a pressing need.

The present study considers three broad personality traits (“super-factors”) derived from informant reports on the Multidimensional Personality Questionnaire (MPQ; Harkness, Tellegen, & Waller, 1995) - positive emotionality, constraint, and negative emotionality. The three MPQ super-factors have extensive empirical support as predictors of important life outcomes, and they have conceptual and empirical links with Big Five traits (e.g., Church, 1994). For example, negative emotionality is similar to the Big Five trait of neuroticism, and constraint is similar to the Big Five trait of conscientiousness. Furthermore, each MPQ super-factor taps aspects of personality that fit with Belsky’s (1984) conceptualization of psychological maturity. For example, elements of personality related to the domain of positive emotionality include social closeness and well-being, attributes that should promote positive parenting strategies and diminish the likelihood of harsh interactions with young children. Negative emotionality, in particular, taps aggression, hostility, and the susceptibility to distress that may interfere with forming a sensitive relationship with one’s offspring. Finally, constraint includes traits such as reflection and caution that should help individuals approach parenting in a planful and deliberate fashion.

Age at Parenthood, Socioeconomic Status, and Parenting

In addition to the role of personality characteristics as important psychological resources that may directly predict facets of parenting, personality may also *indirectly* influence parenting (Belsky & Barends, 2002; de Haan, Prinzie, & Dekovic, 2009). One such possibility is that personality traits might predict when individuals have children. As it stands, there is consistent evidence that relatively younger individuals tend to be harsher and less supportive in their parenting than comparatively older parents (e.g., Trentacosta & Shaw, 2008). A previous report based on data from the present sample also demonstrated a link between earlier age of parenthood and harsh parenting of toddlers (Scaramella, Neppl, Ontai, & Conger, 2008). Several studies have also found associations between younger maternal age and decreased supportiveness and sensitivity toward infants and young toddlers (e.g., Bornstein, Putnick, Suwalsky, & Gini, 2006). In short, converging lines of evidence indicate that age at parenthood is an important consideration in understanding the parenting of toddlers.

In the current study, we hypothesized that age at parenthood would partially explain the association between adolescent personality attributes and later parenting behaviors. Empirical evidence indicates that individual behavioral characteristics such as conduct disorder symptoms, substance use, and academic difficulties predict timing of entry into parenthood for both mothers and fathers (e.g., Jaffee, 2002; Jaffee, Caspi, Moffitt, Taylor, & Dickson, 2001). Personality traits have received less attention as predictors of the timing of parenthood, but the limited available research indicates that maladaptive personality characteristics (e.g., novelty seeking) also predict earlier entry into parenthood (Woodward et al., 2006). Given the evidence that numerous maladaptive behaviors and characteristics predict early parenthood, we expected that lower levels of constraint and positive emotionality and higher levels of negative emotionality would predict earlier entry into parenthood.

In addition to predicting a planful approach to childbearing, personality characteristics might also facilitate instrumental success in educational and occupational pursuits (e.g., Nofle & Robins, 2007; Roberts, Caspi, & Moffitt, 2003). Thus, personality characteristics during

adolescence should also predict greater socioeconomic success during emerging adulthood. Consistent with earlier research (see Conger & Donnellan, 2007; Hoff, Laursen, & Tardif, 2002), we expected that SES would mediate the association between age at parenthood and parenting behaviors. That is, we expected that in many instances younger parents would have less access to the educational and material resources that help facilitate positive parenting practices. Likewise, socioeconomic characteristics also are predictors of parenting behaviors (Hoff et al., 2002), and higher SES seems to be associated with more positive and less harsh parenting of young children.

The cross-generation processes hypothesized here are consistent with the interactionist model of socioeconomic status and human development proposed by Conger and Donnellan (2007). The interactionist perspective incorporates aspects of social causation and social selection into a transactional model of individuals and their socioeconomic context. Social causation, of which family stress models (e.g., Conger & Conger, 2002) are one example, posit that socioeconomic difficulties have negative consequences for psychological functioning and family adjustment. The current study therefore draws on this model to make specific predictions about the relations among personality attributes, family processes, and SES. A model of the hypothesized indirect relations between personality and parenting is presented in Figure 1. As this model shows, we hypothesized relations among socioeconomic status in the target youth's family of origin (generation one = G1), the target youth's (generation two = G2) personality during late adolescence, his/her age of entry into parenthood, the socioeconomic status within the target's family of procreation, and parenting toward toddler-aged offspring (generation three = G3).

It is important to note that Figure 1 offers an integrative perspective on life course dynamics following the interactionist model (Conger & Donnellan, 2007). As shown in Figure 1, the hypothesis that an adolescent's personality characteristics are predicted by the socioeconomic status of the adolescent's family of origin is consistent with a social causation perspective, as is the hypothesis that the socioeconomic status of the target's family of procreation predicts parenting practices. On the other hand, the social selection perspective suggests that individual attributes facilitate the accumulation of socioeconomic advantages. Thus, a social selection perspective is consistent with the hypothesis that adolescent personality traits predict SES during emerging adulthood and the timing of parenthood. The interactionist perspective on human development is especially relevant for cross-generational research, and recent empirical evidence supports the interplay of social causation and social selection when examining family functioning across generations (e.g., Schofield et al., in press).

The Present Study

Data for this report came from a prospective longitudinal study of rural families that was designed to examine economic, social, and behavioral outcomes across generations. First, we hypothesized that personality traits in adolescence would predict harsh parenting and positive parenting measured three to eleven years later after the transition to parenthood. We focused on harsh and positive parenting because they are two parenting constructs that are especially relevant to the challenges posed by toddlers. Specifically, when confronted with toddlers' noncompliance and curiosity, parents are frequently challenged to minimize harsh and hostile responses while providing healthy levels of warmth and support (Shaw et al., 2000). Second, we hypothesized that age at parenthood and G2 SES would be robust predictors of both dimensions of parenting, and they would at least partially account for relations between G2 personality traits and subsequent parenting. Because both mothers and fathers were included in the analysis and associations related to parent gender were not the focus of study, parent's gender was statistically controlled in all longitudinal analyses. In line with an interactionist perspective on human development, we also examined whether

family of origin (G1) socioeconomic status predicted the adolescent's personality traits and later SES.

Method

Participants

Participating families were part of the ongoing, longitudinal Family Transitions Project (FTP). The FTP originally recruited 559 youth and their families. The FTP is an extension of two earlier studies: The Iowa Youth and Families Project (IYFP) and the Iowa Single Parent Project (ISPP). For the IYFP, data were collected from 451 families during annual assessments from 1989 through 1992. Participants in the IYFP included the target adolescent (generation two = G2), their parents (generation one = G1), and a sibling within 4 years of age of the target adolescent (217 females, 234 males). The IYFP assessed two-parent families, and this study was originally designed to examine family economic stress. Target adolescents were recruited from public and private schools in eight rural Iowa counties, and they were in seventh grade at the initial interview in 1989. Seventy-eight percent of the eligible families agreed to participate. Due to the rural nature of the sample, there were few minorities (approximately 1% of the population); therefore, all of the participants in the IYFP were Caucasian. The families were primarily lower-middle or middle-class. Thirty-four percent of the families resided on farms, 12% lived in nonfarm rural areas, and 54% lived in towns with fewer than 6,500 residents.

For the ISPP, data were collected beginning in 1991 from 108 families with a target adolescent in 9th grade, the same year of school as target youth from the IYFP in 1991. Participants in the ISPP included target youth (G2), their single-parent mothers (G1), and a sibling within 4 years of the target youth. Telephone screeners identified families headed by a mother who had experienced divorce within two years prior to the start of the study, and all but three eligible families agreed to participate. Participating ISPP families were Caucasian, primarily lower middle or middle-class, one-parent families that lived in the same geographical areas as the IYFP families. Starting in 1991, measures and procedures were identical for the IYFP and ISPP families, with the exception that ISPP fathers did not participate in the in-home interviews. ISPP families participated in three waves of data collection: 1991, 1992, and 1993.

In 1994, the FTP was created by combining families from the IYFP and families from the ISPP. The focal adolescents from both the IYFP and the ISPP were in 12th grade when the FTP began in 1994. In 1994, target youth (G2) participated in the study with their parents (G1). Starting with the 1997 assessment, the oldest biological child (G3) of the target youth (G2) was recruited into the study. The G3 child had to be at least 18 months of age to be eligible to participate. By 2005, the final year for the present analyses, G3 children in the FTP ranged in age from 18 months to 13 years old. In 2005, 91% of the G2 target youth participated in the study.

The present prospective longitudinal analyses focused on a subsample (N = 228) of participating FTP families. The subsample represents target youth (G2), now emerging adults, who were followed into adulthood and had a child (G3) who completed the two-year-old assessment by 2005. If a G2 parent had no regular contact with their G3 child, then they were deemed ineligible for participation in this aspect of the project. At the time of the two-year-old assessment, G3 children averaged 23.92 months of age (range = 17.64 to 35.04 months), with 123 males and 105 females. The G2 parents averaged 25.79 (range = 20 to 30 years of age), with 92 males and 136 females. Of the 228 G2 parents, 87% were married (N=171) to or cohabiting (N=26) with a romantic partner at the time of the visit. All but one of these cohabitating partners were the other biological parent of the G3 child.

Procedure

In 1994 when the G2 targets were in 12th grade, all of the families of origin were visited in their homes by a trained interviewer for approximately two hours. During the visit, family members completed questionnaires that focused on topics such as parenting, family interactions, and individual characteristics. The present report focuses on informant report (i.e., G1 mother and G1 father, where applicable) on a questionnaire of G2's personality from the 1994 assessment, as described in more detail below. In *T*-test comparisons, the G2 subsample included in the present report did not differ from other FTP targets on informant reports of personality super-factors or family per capita income at the 1994, or twelfth grade, assessment.

After 1994, the focus of the study shifted from the G2's family of origin to the G2's family of procreation. Relevant to the present study, from 1997 through 2005 the G2 target youth, now emerging adults, and their first-born G3 children completed an in-home visit. During the visit, G2 emerging adults completed a series of questionnaires about their child, and also participated in two videotaped interaction tasks. These tasks included a clean-up and a parent-child puzzle completion task. Only observational codes derived from the videotaped clean-up task were used in the present report because this task was designed to measure harsh discipline and positive parenting whereas the puzzle task was designed to tap parental scaffolding and child language development.

The clean-up task was completed at the end of the in-home visit. The task began after the G3 child played with a variety of toys, first alone (6 minutes) and then with the experimenter present (5 minutes). The G2 parent was asked to return to the room and instructed that it was time for their child to clean up the toys. The parent was informed that s/he could offer help to their child as necessary, but the G3 child was expected to clean up the toys alone. Trained observers coded aspects of positive and harsh parenting from video recordings of the clean up task using the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998). For 25% of the observational tasks, 2 independent observers were randomly assigned to score the same interactions to assess inter-observer reliability. Additional coding details are provided below.

Measures

Socioeconomic status—Years of education and the family's per capita income were used to create latent socioeconomic status (SES) constructs. For years of education, participants were asked to indicate the highest grade of schooling completed. Possible answers ranged from kindergarten (0) to education beyond a master's degree (20). The mean years of education for the G1 mother and father and the mean per capita income (divided by 1,000 for ease of analysis and interpretation) at the 1991, 1992, and 1994 assessments were used as indicators for the G1 (G2's family of origin) SES construct. G2 education level reflected the number of years of education of the G2 target obtained at the date of the visit with their G3 child (in 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, or 2005). G2 family per capita income level represented G2's family per capita income at the data collection nearest to the assessment with their G3 child. G2 education and per capita income were used as indicators for the G2 SES latent construct.

G2 personality characteristics—In 1994, participating G1 parents completed a 33-item informant report version of the Multidimensional Personality Questionnaire (MPQ; Harkness, et al., 1995) to assess their adolescent's (G2) personality characteristics. The MPQ includes a number of lower-order subscales that measure three super-factors of positive emotionality, negative emotionality, and constraint. Each super-factor is the aggregate of three or four subscales, each measured with three items. Within each super-

factor, G1 mother and father reports were relatively highly correlated ($r = .61, p < .001$ for positive emotionality; $r = .53, p < .001$ for negative emotionality; $r = .68, p < .001$ for constraint). Furthermore, the aggregated super-factors also were correlated, with Pearson r s ranging from .45 ($p < .001$; positive emotionality and constraint) to $-.60$ ($p < .001$; negative emotionality and constraint).

G2 age at first parenthood—G2's age upon first becoming a parent was calculated by subtracting G3's date of birth as provided on a demographic questionnaire from G2's date of birth as provided on a similar questionnaire. Age at first parenthood was recorded in months.

G2 positive and harsh parenting—Using the IFIRS, observers rated the G2 parent's interactions with their young child during the clean-up task from videotaped recordings. Interactions were observed at the child's age at first entry into the study in 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, or 2005. The clean-up task was designed to evaluate the interaction between parents and children during an activity that could be stressful and provoke harsh parenting behaviors. However, this task also provided ample opportunity to observe positive parental support and guidance. A number of parental behaviors were rated on a 9-point scale ranging from low (no evidence of the behavior) to high (the behavior is highly characteristic of the parent). Each scale was used as a separate indicator for the latent construct. Positive parenting was measured using three codes: listener responsiveness, communication, and assertiveness. Listener responsiveness captures verbal and nonverbal responsiveness that suggests validation and attentiveness. Communication includes behaviors that promote rather than inhibit the exchange of information between parent and child. Assertiveness captures clear, appropriate, neutral and/or positive expressions that are open, straightforward, self-confident, non-threatening, and non-defensive in style. The codes that comprised the G2 positive parenting construct were internally consistent ($\alpha = .83$), and inter-rater reliability was adequate (.92).

Harsh parenting was defined as hostile and excessively angry responses to the child. Three codes were used: hostility, angry coercion, and antisocial. Hostility captures the parent's angry, critical, disapproving, contemptuous, or rejecting behavior directed toward the G3 child. Angry coercion indicates that the parent was engaging in attempts to control the child's behavior that included hostile, contemptuous, blaming, or threatening behavior. The antisocial code captures the parent's use of self-centered, egocentric, acting out, or out-of-control behavior in response to a child action. Internal consistency for the codes comprising the G2 harsh parenting construct was excellent ($\alpha = .96$), and inter-rater reliability was substantial (.95). These codes have been used to create separate harsh and positive parenting factors in previous reports (e.g., Neppl, Conger, Scaramella, & Ontai, 2009).

Analysis Plan

Analyses proceeded in several steps. First, descriptive statistics were explored. Next, a structural equation modeling (SEM) approach was utilized to examine relations among personality, age at parenthood, socioeconomic status, and parenting. Models were examined with Mplus version 6.0 (Muthen & Muthen, 2010). Age at parenthood and G2 gender were examined in the SEMs as individual manifest variables, and multiple indicators were used to create latent constructs for the personality traits, G1 SES, G2 SES, harsh parenting, and positive parenting.

All SEM models were run separately for positive emotionality, negative emotionality, and constraint because these personality traits were highly correlated. For each personality trait, we began by examining a measurement model that included all latent constructs (G1 SES, G2 personality construct, G2 SES, G2 harsh parenting, and G2 positive parenting) to

establish factor loadings and intercorrelations among constructs. Next, an SEM was conducted to evaluate predictions from the model presented in Figure 1. We controlled for G2 gender in this model by including G2 gender as a predictor of each endogenous latent construct and the age at parenthood manifest variable. With two exceptions (female gender was associated with lower age at parenthood in all three models and with higher G2 SES in the negative emotionality and constraint models), direct paths involving gender were not significant¹.

All SEMs were investigated in a similar manner. Given the small amount of missing data, we used full information maximum likelihood procedures to adjust for missing data. Overall model fit was examined with multiple fit indices based on the potential limitations of the χ^2 test of exact fit. Model fit was considered adequate if the Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI) values met established guidelines for good to fair fit (see Hu & Bentler, 1999). All direct paths were also examined for statistical significance and are presented in Table 2. Lastly, the hypothesized indirect paths were tested for statistical significance using the Delta method (see Sobel, 1982) as implemented in Mplus (see Table 3).

Results

Table 1 presents the number of participants with complete data for each manifest variable as well as descriptive means, standard deviations, and ranges for the variables. The range of scores for the G1 mean per capita income variable included two negative values because this variable tapped net farm income, which could be negative. The mean age of entry into parenthood was between 24 and 25 years (range = 18 to 29 years). Next, we present the results from SEMs that were conducted separately for each personality super-factor.

Positive Emotionality

The initial measurement model demonstrated good fit ($\chi^2(44) = 57.02, p > .05$, RMSEA = .04 and CFI = .99). All factor loadings were statistically significant ($p < .001$). Standardized loadings were .85 for G1 maternal reports of G2's positive emotionality and .73 for G1 paternal reports of G2's positive emotionality. For the G1 SES construct, loadings were .68 for education and .34 for per capita income. For the G2 SES construct, loadings were .76 for education and .55 for per capita income. For harsh parenting, loadings ranged from .89 (antisocial) to .98 (hostility). For positive parenting, loadings ranged from .79 (communication) to .81 (listener responsiveness). All correlations between latent constructs were statistically significant and in the expected direction. Importantly, the positive emotionality construct was negatively correlated with the harsh parenting construct ($r = -.23, p < .01$). Positive emotionality was also correlated with the positive parenting construct ($r = .26, p < .01$).

The full model shown in Figure 1 examined the hypothesis that positive emotionality would indirectly predict both harsh parenting and positive parenting through G2 age of parenthood and G2 family SES. The chi-square for this model was statistically significant, $\chi^2(63) = 102.01, p < .01$. The RMSEA and CFI indicated adequate model fit, RMSEA = .052 and CFI = .975. All loadings and paths shown in this model were statistically significant except for the non-significant path from G2 age at parenthood to harsh parenting (see Table 2). When a separate model was run that included all constructs from Figure 1 but with direct paths

¹G2 gender was also examined as a moderator for the model presented in Figure 1 by comparing an unconstrained multigroup model with a constrained multigroup model for each personality super-factor. In the constrained model, the focal paths shown in Figure 1 were set to be equal across gender. When comparing the unconstrained model to the constrained model for each personality super-factor, Chi-square difference tests were non-significant ($ps > .05$). Thus, G2 gender was not supported as a moderator.

added from positive emotionality to harsh parenting and from positive emotionality to positive parenting, these direct paths were non-significant ($ps > .05$).

As shown in Table 3, G1 SES had a significant indirect relation with G2 SES including indirect paths through positive emotionality and a joint indirect path through positive emotionality and age at parenthood. Furthermore, positive emotionality had a significant indirect relation with harsh parenting. Two of the three indirect paths from positive emotionality to harsh parenting were statistically significant: the indirect path through G2 SES and the indirect path through G2 age at parenthood and G2 SES. A statistically significant indirect effect was also found from positive emotionality to positive parenting, although in this case the indirect path from positive emotionality to positive parenting through G2 age at parenthood was also statistically significant.

Negative Emotionality

The initial measurement model for negative emotionality demonstrated adequate fit, $\chi^2 (44) = 66.68, p < .05$, RMSEA = .05 and CFI = .98. All factor loadings were statistically significant ($p < .001$). Standardized loadings were .78 for G1 maternal reports of G2's negative emotionality and .68 for G1 paternal reports of G2's negative emotionality. Not surprisingly, all other factor loadings were nearly identical to the loadings for the positive emotionality measurement model. All correlations between latent constructs were statistically significant and in the expected direction, except for a marginally significant negative correlation between G1 SES and negative emotionality ($p < .10$). Importantly, the negative emotionality construct was correlated with the harsh parenting construct ($r = .32, p < .001$), and it was negatively correlated with the positive parenting construct ($r = -.24, p < .01$).

The chi-square for the full negative emotionality model (see Figure 1) was statistically significant, with $\chi^2 (63) = 109.06, p < .01$. The RMSEA and CFI indicated adequate model fit, RMSEA = .057 and CFI = .970. All loadings and paths shown in this model were statistically significant except for the non-significant paths from negative emotionality to G2 SES and from G2 age at parenthood to harsh parenting. Furthermore, the path from G2 age at parenthood to positive parenting was marginally significant ($p < .10$; see Table 2). When a separate model was run with direct paths added from negative emotionality to harsh parenting and positive parenting, these direct paths were non-significant ($ps > .05$).

As shown in Table 3, indirect effects involving negative emotionality were similar to the model for positive emotionality. However, the indirect paths from G1 SES to G2 SES were marginally significant ($p < .10$) due to the non-significant direct path from negative emotionality to G2 SES. Negative emotionality had a significant indirect relation with harsh parenting, which was accounted for by the joint path involving both G2 age at parenthood and G2 SES. An indirect effect was also found from negative emotionality to positive parenting, and again in this case the joint path involving both G2 age at parenthood and G2 SES was the statistically significant indirect path.

Constraint

The initial measurement model for constraint demonstrated adequate fit, $\chi^2 (44) = 62.43, p < .05$, RMSEA = .04 and CFI = .99. All factor loadings were statistically significant ($p < .001$). Standardized loadings were .86 for G1 maternal reports of G2's constraint and .78 for G1 paternal reports of G2's constraint. All other factor loadings were nearly identical to the loadings found in the positive emotionality and negative emotionality measurement models. All correlations between latent constructs were statistically significant and in the expected direction. The constraint construct was negatively correlated with the harsh parenting

construct ($r = -.35, p < .001$), and it was positively correlated with the positive parenting construct ($r = .28, p < .001$).

The chi-square for the full model (see Figure 1) for constraint was statistically significant, $\chi^2(63) = 114.28, p < .01$. The RMSEA and CFI indicated adequate model fit, RMSEA = .060 and CFI = .968. All but three direct paths shown in this model were statistically significant (see Table 2). The non-significant paths were the path from constraint to G2 SES, the path from G2 age at parenthood to harsh parenting, and the path from G2 age at parenthood to positive parenting. When a separate model was run with direct paths added from constraint to harsh parenting and from constraint to positive parenting, the direct path from constraint to positive parenting was non-significant ($p > .05$). However, the path from constraint to harsh parenting was statistically significant ($\beta = -.19; p < .01$).

As shown in Table 3, indirect effects involving constraint were similar to the models for positive emotionality and negative emotionality. The indirect effect from G1 SES to G2 SES was explained by the joint path through constraint and G2 age at parenthood. Constraint had a significant indirect relation with harsh parenting, which was accounted for by the joint path involving both G2 age at parenthood and G2 SES. A statistically significant indirect effect was also supported from constraint to positive parenting, and again in this case the joint path involving both G2 age at parenthood and G2 SES was the statistically significant indirect path.

Discussion

The findings confirm and extend the interactionist model of human development (Conger & Donnellan, 2007) and Belsky's (1984; Belsky & Barends, 2002) theoretical perspective on the relation between personality and parenting. Consistent with study hypotheses, each personality characteristic was correlated with harsh parenting and positive parenting. Further analyses demonstrated that age at parenthood and G2 family SES accounted for the prospective relations between each personality characteristic and later parenting.

The findings suggest that personality may indirectly influence parenting through personality's role in adjustment during emerging adulthood. That is, positive emotionality, lower levels of negative emotionality, and constraint measured during adolescence predicted later entry into parenthood, and later age at parenthood predicted higher SES. Furthermore, these mediators jointly accounted for much of the association between each personality characteristic and the parenting constructs. These findings are in line with Belsky's (1984; Belsky & Barends, 2002) assertion and recent empirical evidence (de Haan et al., 2009) that, in addition to personality's important role as a direct predictor of parenting, personality characteristics may indirectly influence parenting. These findings may be of interest to prevention researchers and policymakers who design, implement, and oversee programs to delay entry into parenthood and prevent negative outcomes among young children. Because personality characteristics seem to be more malleable earlier in development rather than later (e.g., Caspi et al., 2005), prevention efforts should focus on programs that might foster the kinds of traits examined in this study.

Also important, the personality characteristics directly predicted age at parenthood even after accounting for the parent's gender. Past research has identified numerous individual and contextual factors that predict an earlier age at parenthood, but most previous research on this topic has focused heavily on individual characteristics associated with psychopathology. The normative assessment of personality used in the current study may help to expand our understanding of the range of characteristics that predict timing of entry into parenthood. In addition, the robust relations that were demonstrated between age of

entry into parenthood and family SES add to evidence regarding the potentially negative outcomes associated with early parenthood. Another important finding was that this process likely demonstrates continuity across generations, inasmuch as SES in the family of origin was positively related to adaptive personality traits and was strongly related with G2 SES. Overall, these findings support both social causation and social selection perspectives and the interactionist model that incorporates these two life-course dynamics (Conger & Donnellan, 2007).

Given that age at parenthood was a key mediator in the models of personality and parenting, it is important to consider the cultural trends suggesting that the range of “early parenthood” has extended upward into the mid-twenties (Jaffee, 2002). The present study reflected this trend, as there were few adolescent parents but a relatively normal distribution of entry into parenthood across the twenties. In contemporary times, the late teens and early twenties are typically a time of identity development and personal exploration rather than a time when individuals directly assume the traditional roles of adulthood such as parent and caregiver (Arnett, 2000). These results suggest that entry into parenthood during the early portion of emerging adulthood is associated with less positive and harsher parenting of toddlers, and this association is largely accounted for by younger parents’ reduced SES. In short, it appears that an earlier age at parenthood has consequences for two generations—the parents and their offspring.

Results were remarkably consistent across separate models for positive emotionality, negative emotionality, and constraint, but it is interesting to note that positive emotionality was the only personality construct that directly predicted G2 family SES. This finding may suggest that positive emotionality plays an especially important role in young adults’ educational attainment and financial stability, beyond its role in delaying early childbearing. However, comparisons across personality traits must be interpreted with caution, as separate models were run for positive emotionality, negative emotionality, and constraint due to the relatively high magnitude of the correlations between the personality super-factors.

Limitations and Future Directions

The present report is based on data from a prospective longitudinal study that is currently following the original adolescents (G2) in the study into their early thirties. The fact that the prospective study is ongoing meant that our analyses were limited to parents with an age at parenthood that ranged from the late adolescent years through the twenties. Diminished effects of parent age on SES and parenting may have been found had parent ages ranged into the thirties and forties. The ethnic and geographic composition may also limit the degree to which the findings generalize to diverse populations. In urban communities with high concentrations of poverty and associated co-factors, personality characteristics may be less robust predictors of age at parenthood and SES. Future replications of the model of personality and parenting with diverse populations are needed to increase confidence in the interactionist perspective on human development across generations. Although the study was strengthened by a multi-method approach, the present report utilized a short form informant report version of the MPQ and a single observation of parenting. Attempts to replicate the present findings should also address these methodological limitations.

Future research should expand investigations of personality, timing of parenthood, and family SES to consider how personality characteristics influence entry into parenthood and socioeconomic standing. Furthermore, future research could examine whether age at parenthood impacts change in personality during adulthood that in turn impacts parenting. Likewise, more basic research is needed to understand factors that promote positive personality development. Such research could inform prevention programs designed to promote the kinds of attributes that facilitate success and help delay parenthood.

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Figure 1.
Model of Personality, Age at Parenthood, and Socioeconomic Status as Predictors of Parenting.

Table 1

Means, Standard Deviations, and Range of Scores for Study Variables

Variable	N	Range	<i>M</i>	<i>SD</i>
G1 Mean Years of Education	205	9.00 to 19.00	13.40	1.63
G1 Mean Per Capita Income in thousands	222	−8.52 to 74.36	9.88	7.11
G2 Positive Emotionality (Mother Report)	211	19.00 to 58.00	42.66	7.13
G2 Positive Emotionality (Father Report)	178	25.00 to 58.00	42.83	6.24
G2 Negative Emotionality (Mother Report)	211	9.00 to 38.00	21.82	6.13
G2 Negative Emotionality (Father Report)	178	10.00 to 36.00	22.24	5.26
G2 Constraint (Mother Report)	211	16.00 to 44.00	30.47	5.50
G2 Constraint (Father Report)	178	17.00 to 41.00	30.15	4.85
G2 Age at Parenthood in months	228	218.00 to 348.00	294.42	33.18
G2 Years of Education	210	8.00 to 18.00	14.39	1.85
G2 Per Capita Income in thousands	216	.00 to 59.67	18.16	10.02
G2 Hostility to G3 Child	225	1.00 to 9.00	2.77	1.99
G2 Angry Coercion to G3 Child	225	1.00 to 9.00	2.59	2.12
G2 Antisocial to G3 Child	225	1.00 to 9.00	3.34	1.89
G2 Assertiveness to G3 Child	225	1.00 to 8.00	5.33	1.55
G2 Listener Responsiveness to G3 Child	225	1.00 to 9.00	4.68	1.82
G2 Communication to G3 Child	225	1.00 to 9.00	4.94	1.35

Table 2

Standardized Coefficients for Direct Paths in the Models of Personality, Age at Parenthood, and SES as Predictors of Parenting (Standard Errors in Parentheses)

Direct Paths from Figure 1	Positive Emotionality (PEM)	Negative Emotionality (NEM)	Constraint (CON)
G1 SES to G2 Personality (PEM, NEM, or CON)	.29(.12) *	-.27(.13) *	.26(.11) *
G1 SES to G2 SES	.54(.13) **	.57(.14) **	.58(.14) **
G2 Personality to G2 Age at Parenthood	.36(.07) **	-.39(.07) **	.37(.07) **
G2 Personality to G2 SES	.29(.11) *	-.17(.12)	.05(.11)
G2 Age at Parenthood to G2 SES	.58(.08) **	.64(.08) **	.70(.07) **
G2 Age at Parenthood to G2 Harsh Parenting	-.16(.11)	-.08(.12)	-.07(.13)
G2 Age at Parenthood to G2 Positive Parenting	.27(.11) *	.23(.12) ^a	.20(.13)
G2 SES to G2 Harsh Parenting	-.35(.11) **	-.44(.12) **	-.45(.13) **
G2 SES to G2 Positive Parenting	.35(.11) **	.40(.13) **	.44(.13) **

^a
 $p < .10$.

*
 $p < .05$.

**
 $p < .01$.

Table 3

Standardized Coefficients for Focal Indirect Paths in the Models of Personality (PEM, NEM, or CON), Age at Parenthood (AP), and SES as Predictors of Harsh Parenting (HAR PAR) and Positive Parenting (POS PAR)

Indirect Paths from Figure 1	Positive Emotionality (PEM)	Negative Emotionality (NEM)	Constraint (CON)
G1 SES → G2 Personality → G2 SES	.086(.034)*	.046(.027) ^a	.012(.025)
G1 SES → G2 Personality → G2 AP → G2 SES	.061(.027)*	.067(.035) ^a	.067(.031)*
G2 Personality → G2 AP → G2 SES	.207(.043)**	-.249(.051)**	.259(.052)**
G2 Personality → G2 AP → HAR PAR	-.056(.040)	.031(.048)	-.024(.049)
G2 Personality → G2 SES → HAR PAR	-.102(.046)*	.074(.058)	-.021(.049)
G2 Personality → G2 AP → G2 SES → HAR PAR	-.072(.029)*	.109(.041)**	-.116(.044)**
G2 Personality → G2 AP → POS PAR	.098(.044)*	-.089(.051) ^a	.072(.051)
G2 Personality → G2 SES → POS PAR	.104(.047)*	-.069(.051)	.020(.047)
G2 Personality → G2 AP → G2 SES → POS PAR	.073(.031)*	-.100(.040)*	.114(.044)*

^a
 $p < .10$.

*
 $p < .05$.

**
 $p < .01$.