Published in final edited form as:

J Marriage Fam. 2019 June ; 81(3): 648–661. doi:10.1111/jomf.12562.

Intergenerational Risk of Parentification and Infantilization to Externalizing Moderated by Child Temperament

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Abstract

Objective: The present study examined the intergenerational risk of instrumental filial responsibility in the first generation on children's externalizing behaviors in the next generation and examined difficult child temperament as a potential moderator of this association.

Background: Filial responsibility refers to children's instrumental or emotional caregiving roles (Kuperminc, Jurkovic, & Casey, 2009). Moderate levels of instrumental responsibility, such as age-appropriate responsibilities, may be normative whereas too much (*parentification*) or too little (*infantilization*) responsibility are associated with risk to development (Jurkovic, 1997), parenting, and offspring development (Nuttall, Valentino & Borkowski, 2012). Prior work has not isolated the unique effects of instrumental caregiving or identified the children most susceptible to intergenerational risk.

Method: A multi-site, longitudinal design assessed a diverse sample of first-time mothers and their children. Data from the present study (N=374) were drawn from the third trimester of pregnancy, 12-month and 36-month assessments.

Results: Results support the curvilinear association between maternal history of instrumental caregiving and offspring externalizing symptoms controlling for emotional caregiving. Difficult child temperament moderated the association.

Conclusion: Maternal instrumental caregiving history increases risk to children's externalizing symptoms, particularly at high (parentification) and low (infantilization) levels of instrumental caregiving and when child temperament is easy rather than difficult.

Keywords

Family Processes; Family Relations; Parent-Child Relationships; Parenting; Intergenerational; Transitions

Introduction

Filial responsibility refers to children's instrumental and emotional caregiving behaviors within a family system and encompasses both typical and atypical child engagement in caregiving (Jurkovic et al., 2004; Kuperminc, Jurkovic, & Casey, 2009). Instrumental caregiving includes children's responsibilities for concrete functions that support the family whereas emotional caregiving includes children's responsibilities for caregiver's socioemotional needs (Jurkovic, Jessee, & Goglia, 1991). High levels of instrumental or emotional filial responsibility are considered to be developmentally inappropriate and a violation of the child's personal boundaries; the term parentification is used to describe these high levels of filial responsibility (Jurkovic, 1997). Parentification is well established in the literature as posing a risk to an individual's development in childhood and adulthood (Hooper, DeCoster, White, & Voltz, 2011; Macfie, Brumariu, & Lyons-Ruth, 2015; Nuttall & Valentino, 2017).

Parentification may initiate a negative cascade of intergenerational risk, with parentification in childhood adversely affecting early parenting practices and child behavior in the next generation. Importantly, childhood roles are internalized and may be recreated during parenthood (Boszormenyi-Nagy & Spark, 1973). Thus, the experience of parentification in childhood may lead to inappropriate expectations for offspring to fulfill parents' unmet needs (Barnett & Parker, 1998; Cotroneo, 1986). Maternal parentification history has been associated with risk to parenting cognitions and behavior. Prior studies have reported associations between maternal parentification history and poorer knowledge of infant development (Nuttall, Valentino, Wang, Lefever, & Borkowski, 2015), higher levels of emotional distress in response to infant distress (Jacobvitz, Morgan, Kretchmar, & Morgan, 1991), and less warmth and contingent responsiveness with infants (Nuttall, Valentino, & Borkowski, 2012; Nuttall et al., 2015). Maternal responsiveness to children's changing needs is important for children's cooperation and acceptance of parental commands (e.g., Schaffer & Crook, 1980); therefore, poor maternal responsiveness predicts the emergence of child externalizing behaviors, problem behaviors such as aggression and defiance (Wakschlag & Hans, 1999). Indeed, maternal history of parentification and poor responsiveness have been shown to contribute to the emergence of child externalizing behaviors in toddlerhood (Nuttall et al., 2012).

Moderation of Intergenerational Risk

Whereas previous studies have identified mediators of the association between maternal history of parentification and offspring externalizing (e.g., Nuttall et al., 2012), contexts that moderate this association have not yet been examined. The present study sought to identify which children in the second generation are most at risk to maladaptation in the context of risk posed by maternal history of filial responsibility. We fill this gap in the literature by focusing on the role of difficult child temperament as a potential moderator of the associations between maternal history of filial responsibility and child externalizing behaviors.

Temperament is an important predictor of individual differences in development throughout childhood (Rothbart, Ahadi, & Evans, 2000). Difficult child temperament is generally

defined as a tendency toward negative emotional expression, low emotion regulation, low adaptability, and withdrawal (Chess & Thomas, 1989). When children's temperament is not respected and accommodated by parenting, children are at risk for emotional adjustment difficulties (Chess & Thomas, 1991; Thomas & Chess, 1977). Given the increased needs of children with difficult temperament, and the rearing environment characterized by poor warmth and responsiveness provided by mothers with a history of parentification (Nuttall et al., 2012; 2015), there may be an elevated risk for poor parent-child goodness of fit. As such, children with difficult temperament may be especially susceptible to increased externalizing symptomatology in the context of the risk posed by maternal filial responsibility history. In contrast, the opposite of difficult temperament is referred to as easy temperament and children with this temperament may require less of parents and experience fewer negative outcomes (Thomas & Chess, 1977) in the context of the unresponsive parenting associated with maternal parentification history.

Distinguishing Instrumental and Emotional Filial Responsibility

At high levels of filial responsibility, both instrumental and emotional dimensions of filial responsibility confer risk as parentification. Emotional parentification is conceptualized as more destructive than instrumental parentification (Boszormenyi-Nagy & Spark, 1973; Jurkovic et al., 1991; McMahon & Luthar, 2007). As such, research often focuses solely on emotional parentification or the combined effects of instrumental parentification and emotional parentification. For example, in the literature on the intergenerational risk posed by parentification, Nuttall and colleagues (2012) examined parentification operationalized as both emotional and instrumental responsibilities as posing risk to offspring externalizing. Therefore, there remains a need to examine the specific consequences of instrumental parentification while controlling for emotional parentification in order to isolate the intergenerational risk posed by instrumental parentification.

The constructs of instrumental and emotional caregiving further diverge at lower levels of responsibility. Moderate levels of emotional caregiving are detrimental or, at best, neutral; whereas, moderate levels of instrumental caregiving may be appropriate or even beneficial to child adjustment (see Boszormenyi-Nagy & Krasner, 1986; Boszormenyi-Nagy & Spark 1973). For example, moderate levels of instrumental caregiving may allow the child to feel a sense of contribution and responsibility that facilitates healthy identity formation and the development of self-esteem and self-efficacy (Boszormenyi-Nagy & Krasner, 1986; Boszormenyi-Nagy & Spark 1973). Finally, at the low end of the spectrum of responsibility, the absence of emotional filial responsibility is considered normative whereas the absence of instrumental filial responsibility, known as infantilization, may confer risk. Infantilization occurs when expectations for child engagement in instrumental responsibilities are absent. This lack of challenge and parental expectation is also developmentally inappropriate and may put children at risk for under functioning in later life (Jurkovic, 1997).

In summary, instrumental filial responsibility is theorized to occur on a spectrum with extremely low scores indicative of infantilization, moderate scores indicative of normative or beneficial caregiving roles, and high scores indicative of parentification (Jurkovic, 1997). Restated in statistical terms, instrumental filial responsibility is theorized to have a

curvilinear relationship with risk whereas emotional filial responsibility is theorized to have a linear relationship with risk, e.g., emotional parentification. Emotional parentification is frequently studied as a linear construct without considering instrumental caregiving responsibilities (e.g., Peris, Goeke-Morey, Cummings, & Emery, 2008) and few studies have focused on the spectrum of instrumental caregiving. As such, much less is known about the effects of instrumental caregiving on development in comparison to the established negative associations between emotional parentification and development. Furthermore, the middle range of the instrumental caregiving construct is the least-studied portion of the instrumental caregiving spectrum. For example, Ketisch, Jones, Mirsalimi, Casey, and Milton (2014) examined infantilization and parentification using separate scales and found psychopathology associated with both of these extremes in instrumental filial responsibility; however, this methodology precluded analysis of the moderate levels of instrumental filial responsibility. Because theory argues that within the moderate range instrumental caregiving is normative or beneficial, testing the curvilinear relationship nature of this association should also consider whether the moderate range is particularly beneficial to child adjustment. Therefore, in order to extend literature operationalizing filial responsibility as a linear construct including both emotional and instrumental caregiving (e.g., Nuttall et al., 2012), we specifically sought to isolate the impact of the entire instrumental filial responsibility spectrum on offspring externalizing.

Conceptualizations of Risk and Benefit

A goal of the present study is to identify which children are most likely to be impacted by maternal history of filial responsibility given that it is unlikely that all children are impacted equally. The diathesis-stress or dual-risk conceptualization of risk (Monroe & Simmons, 1991; Sameroff, 1983) posits that some individuals are particularly vulnerable to the negative consequences associated with adverse environments or stressors due to individual risk characteristics. Alternatively, the differential susceptibility hypothesis (Belsky, 1997a, 1997b, 2005) argues that children vary, for better and for worse, in their susceptibility to rearing influence. In this framework, the same ontogenic traits that make an individual vulnerable to an adverse environment may also allow an individual to be more responsive to supportive contextual conditions (Belsky & Pluess, 2009). For example, children high in negative emotionality have been found to experience the most *risk* from low quality childcare or parenting and to experience the most *benefit* from high quality childcare or parenting (Pluess & Belsky, 2010). The hypothesized curvilinear nature of the instrumental filial responsibility construct in which instrumental caregiving poses risks at both high levels (parentification) and low levels (infantilization) but is beneficial at moderate levels, is particularly well suited to the differential susceptibility framework. Both parentification theory and differential susceptibility hypothesize that a variable poses both risks and benefits depending on the level in which it occurs. As such, the present study utilized the differential susceptibility framework to test the risk posed by maternal instrumental filial responsibility to avoid potentially mischaracterizing maternal instrumental filial responsibility exclusively as a risk factor (such as emotional parentification).

Difficult child temperament, the moderator of interest in the present study, is a well-established differential susceptibility factor. A large body of literature suggests that infants

high in negative emotionality or difficult temperament are disproportionately susceptible, for better or for worse, to rearing experience (for a review, see Belsky, 2005). Although children with difficult temperament may more easily become overwhelmed in even modestly adverse rearing environments, they may also benefit disproportionately in sensitive, high quality environments which help them regulate distress and other negative affect (Belsky, 2005; Pluess & Belsky, 2010). Establishing disproportionate benefits for children with difficult temperament whose mothers were engaged in moderate levels of instrumental filial responsibility in their family of origin would be useful for differentiating between normative and pathological levels of instrumental filial responsibility and for advancing instrumental filial responsibility theory.

The Present Study

Goals of the present study include: 1) investigating the intergenerational risk of instrumental filial responsibility on children's externalizing behaviors; and 2) examining a potential moderator (difficult child temperament) of the association between maternal history of instrumental filial responsibility in the first generation (G1) and externalizing in the next generation (G2). Consistent with theory (Jurkovic, 1997), a curvilinear association between G1 instrumental filial responsibility and G2 externalizing was hypothesized. In contrast to G2 infants with easy temperament, G2 infants with difficult temperament were expected to be more susceptible to the risk posed by maternal history of inappropriate instrumental filial responsibility (e.g., parentification and infantilization) as indicated by externalizing symptoms. It was further hypothesized that G2 infants high in difficult temperament would *benefit* from G1 history of moderate levels of instrumental filial responsibility, such that they would demonstrate the lowest levels of externalizing symptoms.

To isolate instrumental filial responsibility, we included emotional parentification and the interaction between emotional parentification and difficult child temperament in our analyses to control for the potential effects associated with emotional parentification. We further controlled for maternal history of childhood abuse because parentification is considered a form of emotional maltreatment co-occurring with childhood abuse (Macfie et al., 1999); therefore, it is important to isolate the association of parentification on child adjustment above and beyond the effects of abuse. We also controlled for maternal age because prior work has found negative associations between maternal age and both childhood parentification and externalizing behaviors (Nuttall et al., 2012). Finally, because we relied solely on maternal reports and it is possible affective state may influence retrospective reports of attachment experiences in childhood (e.g. Roisman, Fortuna, & Holland, 2006), we additionally explored maternal depressive symptoms as a potential confound of our results.

Method

Data for the present study were drawn from a multi-site, longitudinal study designed to understand parenting behaviors among a diverse sample of first time mothers. As such, the present sample included adolescent mothers and adult mothers with low educational achievement (comparable levels to that of adolescent mothers) as well as adult mothers with

higher levels of education. Parturient women were recruited through primary care facilities in South Bend, Indiana; Kansas City, Kansas; Kansas City, Missouri; Washington, D.C.; and Birmingham, Alabama under institutional review board approvals from 2001 to 2007. Data were first collected during the prenatal period with follow-up assessments through the first 36 months of the baby's life. The present study included data collected when the infant was 12 and 36 months old.

The present study included a subsample of 374 mother-child dyads who participated in the 36-month assessment. Forty-nine percent ($n = 184$) of the sample consisted of mother-daughter dyads and 51% ($n = 190$) of the sample consisted of mother-son dyads. At the prenatal assessment, parturient women ranged in age from 14.72 to 36.02 years ($M = 21.47$, $SD = 5.32$), and 56% of the women had completed high school. At the prenatal assessment, 58.8% of women were single, 21.1% were living with a partner, and 18.4% were married. Ethnicity was as follows: 62.3% African American, 19.8% Caucasian, and 16.1% Hispanic. Annual incomes were estimated from mother's endorsements of a range of possible monthly income when their children were 12 months old; the mean annual income was \$18,970.00. In G1 we assessed retrospective reports of maternal history of filial responsibility of both instrumental and emotional caregiving as well as of childhood abuse and depressive symptoms. In G2, we assessed difficult temperament at child age 12 months and externalizing symptoms at child age 36 months.

Measures

Filial Responsibility Scale, Adult Version (FRS; Jurkovic, Thirkield, & Morrell, 2001).—Filial responsibility data were collected with the FRS during the 36-month data collection. The FRS is a retrospective report measure of filial responsibility during the individual's childhood. Scales include Instrumental Caregiving, Expressive/Emotional Caregiving, and Perception of Unfairness. Instrumental Caregiving (10 items) is conceptualized as concrete caregiving behavior, e.g., "I often did the family's laundry," whereas Emotional Caregiving (10 items) is conceptualized as the child taking responsibility for a caregiver's emotional needs, e.g., "At times I felt I was the only one my mother or father could turn to." Alpha coefficients were .78 for both the instrumental and emotional caregiving scales. Emotional parentification was included as a covariate in our analysis of instrumental caregiving.

Parenting Stress Index, Short Form (PSI-SF; Abidin, 1995).—The PSI-SF is a widely used parent-report measure of parenting stress that assesses stress related to maternal domains and child domains (Haskett, Ahern, Ward, & Allaire, 2006). We used the Difficult Child Temperament subscale of the PSI-SF, which consists of 12 items assessing the temperament or behavioral characteristics of the child that influence the parent-child relationship. Example items include, "I feel that my child is very moody and easily upset," and, "My child gets upset easily over the smallest thing." The psychometric properties of the PSI-SF, including the convergent and discriminant validity of the difficult child temperament scale, have been validated in samples demographically similar to the present sample (e.g., Reitman, Currier, & Stickle, 2002). Moreover, the difficult child temperament sub-scale has demonstrated good convergent validity with observer ratings of the child (Haskett et al.,

2006). Difficult Child Temperament was measured at 12 months, consistent with the extant differential susceptibility literature (e.g. Blair, 2002), in which difficult temperament is usually measured in infancy between 6 and 18 months (e.g., van den Boom, 1994; Blair, 2002; Belsky, Hsieh, & Crnic, 1998; Kochanska, Aksan, & Joy, 2007). The alpha coefficient for the difficult child temperament scale was .83.

Infant-Toddler Social and Emotional Assessment (ITSEA; Carter & Briggs-Gowan, 1993).—The ITSEA is a parent-report measure of child socio-emotional problem behaviors and competencies. We used the Externalizing Behavior scale, representing aggression, defiance, negative emotional reactivity, and high activity, (Briggs-Gowan & Carter, 1998). The ITSEA has demonstrated good validity and test-retest reliability and confirmatory factor models support the internal consistency of the ITSEA (Briggs-Gowan & Carter, 1998; Carter, Briggs-Gowan, Jones, & Little, 2003). Furthermore, maternal reports of child social-emotional problem behaviors and competencies on the ITSEA have demonstrated good convergent validity when compared with laboratory observational ratings, thus demonstrating that scores on the ITSEA do not simply represent maternal biases associated with maternal perceptions (Carter, Little, Briggs-Gowan, & Kogan, 1999). Externalizing data were collected at child age 36 months, consistent with other work on differential susceptibility (e.g. Belsky et al., 1998). The alpha coefficient for the externalizing scale was .87.

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998).—The CTQ is a 28-item retrospective self-report questionnaire that assesses childhood maltreatment (sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect) using a 5-point scale ranging from 1 (*never true*) to 5 (*very often true*). The subscales computed from the 28-item CTQ are appropriate for both nonclinical and clinical populations, and have been shown to have good reliability and strong construct and external validity (Bernstein & Fink, 1998). For example, scores on the CTQ have been found to be significantly correlated with trauma ratings from child welfare records, reports of family members, and clinician ratings (Bernstein, Ahluvalia, Pogge, & Handelsman, 1997). Mothers completed the CTQ about their own child abuse history at the 6-month assessment. The sexual abuse and physical abuse subscales (each composed of 5-items) were utilized to determine G1 maternal abuse history in childhood. The internal consistency for maternal abuse history was $\alpha = .82$. Because parentification is a form of emotional maltreatment (Kerig, 2005) that often co-occurs with childhood abuse (Macfie et al., 1999), maternal abuse history was covaried in all analyses.

Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996).—Maternal depressive symptoms were assessed with the 21-item BDI-II at 36 months (concurrent with the administration of the FRS). Symptoms were rated on 4-point Likert scale reflecting severity experienced during the past two weeks. Internal consistency was $\alpha = .92$.

Analytic Strategy

We used path analysis to test saturated models. Before conducting any analysis, all of the predictors (including the polynomial and interaction terms) were centered as suggested by

Enders (2010) and Enders, Baraldi, and Cham (2014). All variables were standardized based on estimates of variable means and variances prior to conducting substantive analyses. Therefore, all reported path coefficients are standardized.

The present study utilized robust missing data procedures to address potential bias associated with missing data and outliers and/or skew (see Figure 1). The three-year attrition rate for the study was 44.87%, which is comparable to attrition rates in other samples of high-risk community families (e.g. Cicchetti, Rogosch, & Toth, 2006). The present investigation hypothesized curvilinear relationships and moderation effects, both of which are analytically tested with product terms; estimation bias associated with missing data and non-normality are compounded when product terms are included in the model (Yuan, 2009; Yuan & Savalei, 2014). Therefore, we utilized the two-stage robust method (TS-R) for handling missing data as this method is well suited to data with outliers and non-normal data (Yuan & Zhang, 2012). Two-stage methods can outperform the full information likelihood method commonly employed to account for missing data (Savalei & Bentler, 2009; Savalei & Falk, 2014).

In TS-R each case is weighted according to its distance from the center of the majority of the data, with cases farther away from the center receiving smaller weights. The tuning parameter (denoted ϕ) is also explicitly related to the percentage of outliers that one would like to control. Following suggestions by Yuan and Zhang (2012), we set $\phi = 0.05$ (meaning 5% of cases are down-weighted) given that the proportion of outliers did not exceed 5% of the observations in any variable. TS-R easily allows for the inclusion of auxiliary variables to further combat the estimation bias that occurs when data are missing and non-normal. Age and educational background of mothers (1 = adolescent, 2 = adult low-education, 3 = adult high-education) was included as an auxiliary variable in the models because this variable was believed to explain at least some missingness due to differential retention challenges across these groups of mothers.

Results

Means, standard deviations, and correlations for all relevant variables are presented in Table 1. G1 mothers reported a wide range of instrumental caregiving and emotional parentification given that the possible score range for these scales is 10 to 50. The only significant difference in substantive variables across data collection sites was lower instrumental filial responsibility at the Indiana site than Alabama or Kansas ($F(3, 320) = 3.340, p < .05$); however, this effect was small (0.03).

Impact of G1 Instrumental Filial Responsibility on G2 Externalizing Behaviors

First, we tested the curvilinear association between G1 history of instrumental filial responsibility and G2 child externalizing behaviors. There was a significant curvilinear association between instrumental filial responsibility in G1 and externalizing in G2 ($b = 0.16, s.e. = 0.05, p < .01$), such that high levels (parentification) and low levels (infantilization) of instrumental filial responsibility were associated with higher levels of child externalizing behaviors than moderate levels of instrumental filial responsibility. Emotional parentification was not significantly associated with externalizing ($b = -0.08, s.e.$

= 0.05, $p = .11$). Maternal abuse history was positively associated with child externalizing ($b = 0.17$, $s.e. = 0.05$, $p < .001$) and maternal age was negatively associated with child externalizing ($b = -0.13$, $s.e. = 0.05$, $p < .01$).

Moderation Analyses

Next, we tested whether G2 difficult child temperament interacted with G1 instrumental filial responsibility history to moderate the association with G2 externalizing behaviors. This path analysis model is presented in Figure 2. The polynomial interaction term for G1 instrumental filial responsibility was significantly associated with externalizing ($b = -0.24$, $s.e. = 0.05$, $p < .001$), indicating moderation and a curvilinear relationship between G1 instrumental caregiving and G2 child externalizing in the context of difficult child temperament. There was a significant main effect for the polynomial instrumental caregiving term on child externalizing ($b = 0.35$, $s.e. = 0.05$, $p < .001$) and also a significant main effect for difficult child temperament on externalizing ($b = 0.46$, $s.e. = 0.05$, $p < .001$). There was not a significant interaction between G1 emotional parentification and G2 difficult child temperament ($b = -0.08$, $s.e. = 0.05$, $p = .09$), nor was there a significant main effect for emotional parentification on G2 externalizing ($b = -0.08$, $s.e. = 0.05$, $p = .09$). Maternal abuse history was significantly associated with G2 externalizing ($b = 0.16$, $s.e. = 0.05$, $p < .01$) and maternal age was significantly associated with G2 externalizing ($b = -0.10$, $s.e. = 0.05$, $p < .05$). The R^2 for this model was 0.35, indicating that this model accounted for 35% of the variance in G1 externalizing.

Moderation results are illustrated in Figure 3; as is standard practice for plotting of an interaction (e.g., Cohen, Cohen, West, & Aiken, 2003; Hayes, 2017), we chose three levels of temperament (one standard deviation above the mean, the mean, and one standard deviation below the mean) to plot the curvilinear association between G1 instrumental filial responsibility and G2 externalizing. As such, Figure 3 indicates that the association between instrumental caregiving and externalizing tends to be stronger at high and low levels of instrumental caregiving and when child temperament is easy rather than difficult.

Exploratory Examination of Depressive Symptoms as a Potential Confound

Low rates of depressive symptoms were observed in the present sample. As indicated by the established clinical cut-offs for the BDI (Beck et al., 1996), 86% of the sample fell in the minimal category, 9% in the mild category, 4% in the moderate category, and only 1% in the severe category. Partial correlations between substantive variables controlling for depressive symptoms reflect the overall pattern observed in the bivariate correlations not accounting for depressive symptoms (see Table 1). Next, we re-ran our path models in the subsample experiencing the lowest threshold of depressive symptoms (i.e., minimal = total score of 0 to 13 out of 63). Results of the first model indicate a significant curvilinear association between instrumental filial responsibility in G1 and externalizing in G2 ($b = 0.18$, $s.e. = 0.05$, $p < .01$). Results of the second model indicate the polynomial interaction term for G1 instrumental filial responsibility was significantly associated with externalizing ($b = -0.12$, $s.e. = 0.05$, $p < .05$) and significant main effects for the polynomial instrumental caregiving term ($b = 0.30$, $s.e. = 0.05$, $p < .001$) and for difficult child temperament on externalizing ($b = 0.18$, $s.e. = 0.05$, $p < .001$). As such, supplemental exploratory examinations of depressive

symptoms suggest that depressive symptoms do not account for the observed associations between variables in our models.

Discussion

The present study examined the curvilinear association between maternal history of instrumental filial responsibility in the first generation (G1) and child externalizing behaviors in the second generation (G2). In addition, we examined difficult child temperament as a moderator of this association while controlling for the direct and interactive effects of maternal history of emotional parentification in the first generation (G1) as well as maternal abuse history and maternal age. Results support the expected curvilinear relationship between G1 instrumental filial responsibility and G2 child externalizing behaviors. Moreover, results indicate that G2 difficult child temperament interacted with G1 maternal history of instrumental caregiving in the association with G2 externalizing behaviors. Given that prior research has typically focused on the combined effects of instrumental and emotional parentification or emotional parentification alone, examining the unique effects of instrumental filial responsibility makes multiple important contributions to the literature on filial responsibility and intergenerational risk.

First, these results extend prior findings associating maternal history of filial responsibility with externalizing symptoms in offspring (Nuttall et al., 2012) by identifying maternal history of instrumental parentification (G1) as posing risk to children's externalizing behaviors (G2) while controlling for emotional parentification. This is particularly important given that emotional parentification has frequently been found to be more destructive to G1 adjustment than instrumental parentification (e.g., Jurkovic et al., 1991; McMahon & Luthar, 2007). Identifying that instrumental caregiving has its own exacerbating effect on externalizing behaviors in the next generation is an important contribution. Clearly, researchers should assess and consider instrumental parentification in examinations of parentification and filial responsibility rather than focusing solely on emotional parentification.

Second, both high and low levels of instrumental filial responsibility increased risk to externalizing symptoms in G2. Examination of the low end of the instrumental filial responsibility spectrum demonstrated that G1 infantilization was also associated with increased externalizing behaviors in G2. This finding is consistent with theoretical work arguing that too little expectation for child engagement in instrumental responsibilities constitutes a lack of challenge that is also developmentally inappropriate and leads to intergenerational risk (Boszormenyi-Nagy & Spark, 1973; Jurkovic, 1997). As such, results of the present study further support distinguishing instrumental caregiving and emotional caregiving rather than combining these two dimensions of filial responsibility given that too little instrumental caregiving in childhood (i.e., infantilization) confers risk to the next generation in addition to the risk conferred by excessive instrumental (or emotional) parentification. Stated in statistical terms, results suggest that instrumental caregiving is a curvilinear construct whereas emotional caregiving is a linear construct; as such, these constructs should not be summed. In addition, the detection of risk associated with infantilization and parentification builds upon work in G1 linking infantilization with risk

(e.g., Ketisch et al., 2014) to also demonstrate that infantilization in G1 is also associated with intergenerational risk as denoted by increased externalizing behaviors in G2. As such, the present study makes an important contribution to our understanding of infantilization by demonstrating that maternal history of infantilization increases the risk of externalizing symptoms in the next generation similar to maternal history of instrumental parentification.

Third, although child externalizing scores were lower when maternal instrumental filial responsibility was in moderate range compared to low and high levels, moderation analyses do not suggest that maternal experiences within the moderate range of the instrumental filial responsibility spectrum serve as an enriched environment sufficient to foster beneficial adjustment, at least in terms of decreasing externalizing behaviors. Based on theoretical work suggesting that moderate levels of instrumental caregiving might be beneficial to G2 child development (Jurkovic, 1997), we utilized one of the most well-established differential susceptibility factors, difficult child temperament, to test whether G2 children high in difficult temperament were differentially more susceptible to the risks of maternal history of instrumental parentification and infantilization and to the potential benefits of the moderate range of maternal history of instrumental caregiving. Children in G2 with difficult child temperament displayed increased levels of externalizing behaviors at all levels of G1 history of instrumental caregiving in comparison to G2 children lower in difficult child temperament; however, G2 children higher in difficult temperament displayed less marked differences in externalizing based on level of G1 instrumental caregiving history than children with easy temperament.

In short, a G1 history of moderate instrumental caregiving history did not confer benefits on G2 in terms of reducing child externalizing behaviors in the context of difficult child temperament. Therefore, moderate levels of instrumental filial responsibilities may facilitate normative adjustment without having an additional, beneficial element for children with difficult temperament in terms of externalizing. Consistent with the idea of dual-risk rather than differential susceptibility, the results of the present study indicate that maternal history of instrumental parentification or infantilization (e.g., too many or too few instrumental responsibilities) and difficult temperament in G2 function as vulnerability factors for the development of externalizing behaviors in the second generation. These results across generations are similar to the findings of McMahon and Luthar (2007) suggesting that the high and low ends of the instrumental filial responsibility spectrum were associated with G1 child maladjustment and moderate amounts of instrumental filial responsibility were associated with normative, but not beneficial, development. Although moderate instrumental filial responsibility is theoretically considered to be normative and beneficial (Boszormenyi-Nagy & Spark 1973), the moderate range of instrumental filial responsibility may still be far from the type of enriched environment differential susceptibility theory describes as necessary for disproportionate benefit to occur. Moderate levels of instrumental caretaking behaviors may only be positive when they are also developmentally appropriate, supervised, and acknowledged in the family (Jurkovic, 1997).

Limitations and Future Directions

Although the present study makes several important contributions to the extant literature, it is not without limitations. First, the present study was limited in that all data were collected from the same report source (i.e., maternal reports). This limitation was somewhat mitigated through the inclusion of a prospective design to combat bias due to state-specific reporting. Prior research examining the validity of the parent-report measures of children used in the present study have demonstrated acceptable agreement between these parent report measures and observational measures of children. For example, the PSI-SF (our measure of difficult child temperament) has demonstrated good convergent validity with observational ratings of children (Haskett et al., 2006). Similarly, maternal reports of children's social-emotional problem behaviors on the ITSEA have demonstrated good convergent validity when compared with laboratory observational ratings (Carter et al., 1999). As such, the PSI-SF and ITSEA do not appear to simply represent maternal biases associated with maternal perceptions and likely are acceptable measures of children's traits and behaviors. Nevertheless, future studies would benefit from multiple reporting sources, including observational methods. In addition, we further attempted to evaluate the potential confound of maternal affective state by re-analyzing our data in the sub-sample of the data experiencing the lowest levels of depressive symptoms reported on the BDI-II; our results held in these supplemental analyses.

Second, our assessment and conceptualization of difficult child temperament may have additional limitations. We assessed difficult child temperament with a scale that is used less frequently in the temperament literature than measures such as the Infant Behavior Questionnaire Revised (Gartstein & Rothbart, 2003). Moreover, maternal reports of child temperament have been critiqued as blurring objective characteristics of the child with subjective characteristics of the mother (e.g., Seifer, Sameroff, Barrett, & Krafchuk, 1994). Examinations of the convergent and discriminant validity of the PSI-SF found that the difficult child temperament scale was a better predictor of child behavior rather than parental functioning in contrast to the parental distress sub-scale, which demonstrated the reverse pattern (Haskett et al., 2006; Reitman et al., 2002). However, future research may seek to replicate our findings using a measure used more frequently to assess infant temperament and an observational measure, in particular. Furthermore, although we have conceptualized child temperament as a risk factor for children's behavioral outcomes consistent with some theoretical conceptualizations of temperament (e.g., Rothbart et al., 2000), we acknowledge that other theorists conceptualize difficult child temperament as overlapping with externalizing behavior (e.g., Chess & Thomas, 1989; see Goldsmith et al., 1987 for a review of differing conceptualizations of temperament).

Third, the conclusions drawn in the present study are somewhat limited in their generalizability given the very high-risk nature of this sample. The present study controlled for maternal age and maternal abuse history in G1 in an attempt to rectify this potential problem; however, it is still possible that other risk factors influencing child adjustment could have obscured findings. For example, socioeconomic status was only roughly estimated in the present sample and thus we did not consider socioeconomic status in our modeling; future studies should obtain more precise estimates of income and other variables

related to socioeconomic status in order to consider the influence of socioeconomic status. Moreover, now that these associations have been found in a high-risk sample, future research should also consider a broader, lower risk sample. Lastly, we were unable to account for the nesting of data in our multi-site study design. Although the fixed-effects modeling approach has been shown to be effective to handle the issue of small number of clusters under the regression framework when there are no missing data (McNeish & Stapleton, 2016), approaches to regression and path models with missing data have yet to be developed and remain an active area of methodological research.

An interesting direction for future research may be to extend the findings of the present study to the intergenerational *transmission* of filial responsibility. To the best of the authors' knowledge, the intergenerational transmission of infantilization has not yet been examined. However, multiple studies have noted an intergenerational transmission of parentification (for a review, see Nuttall & Valentino, 2017). An important future extension of the present work will be to examine how G2 child characteristics, such as difficult temperament, and behaviors, such as externalizing, are associated with subsequent engagement in child filial responsibility. In a study of parentification in childhood, Fish, Belsky, and Youngblade (1991) found that child temperament and externalizing behaviors at age three predicted parentification at age four. Another important direction is longitudinal work examining externalizing behaviors further into development in order to better understand the risk posed to the child. In addition, future researchers may wish to examine positive elements of child development (e.g., prosocial behavior) in order to further elucidate the adjustment impact of moderate levels of instrumental caregiving as positive child behaviors may better capture benefits to offspring adjustment.

Conclusions

Despite its limitations, the present study makes important contributions to the literature on filial responsibility by contributing new information regarding the risk maternal history of instrumental filial responsibility poses to the next generation. Findings support theoretical work suggesting that instrumental filial responsibility occurs on a spectrum in which high levels of instrumental caregiving (parentification) and low levels of instrumental caregiving (infantilization) confer risk to children's externalizing behaviors whereas moderate levels are considered normative (Jurkovic, 1997). Moreover, the present study provides the first empirical evidence that both maternal history of instrumental parentification and infantilization in childhood pose risk to children in the next generation. The association between instrumental caregiving and externalizing tends to be stronger at high (parentification) and low (infantilization) levels of instrumental caregiving. Children highest in difficult temperament displayed the highest levels of externalizing symptoms across levels of maternal instrumental caregiving history, however, children with less difficult temperament were more affected by high and low levels of maternal history of instrumental caregiving in comparison to moderate levels of maternal history of instrumental caregiving.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments:

This research was supported by NICHD grant HD-39456; cosponsor groups include the CDC, NIDA, and the Department of Education, as well as the Robert Wood Johnson Foundation (037224). This work was also made possible by the Centers for the Prevention of Child Neglect; senior members of the Centers for the Prevention of Child Neglect include John Borkowski, Judy Carta, Bette Keltner, Lorraine Klerman, Craig Ramey, Sharon Ramey, and Steve Warren. The authors also wish to acknowledge Jennifer Burke Lefever for her assistance with the dataset.

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FIGURE 1. BOXPLOTS OF STANDARDIZED PREDICTORS, COVARIATES, AUXILIARY VARIABLE, AND OUTCOME VARIABLE

NOTE: CIRCLES REPRESENT POTENTIAL OUTLIERS THAT ARE MORE THAN 1.5 TIMES INTERQUANTILE RANGE AWAY FROM THE FIRST AND THIRD QUANTILES. M: DIFFICULT CHILD TEMPERAMENT (12 MOS); X2: SQUARED INSTRUMENTAL FILIAL RESPONSIBILITY; X2M: THE INTERACTION TERM FORMED BY MULTIPLYING X2 WITH M; X1: EMOTIONAL PARENTIFICATION; X1M: THE INTERACTION TERM FORMED BY MULTIPLYING X1 WITH M; C1: MATERNAL CHILDHOOD ABUSE HISTORY; C2: MATERNAL AGE; A1: MOM TYPE (1=ADOLESCENT, 2=ADULT LOW-EDUCATION, 3=ADULT HIGH-EDUCATION); Y: EXTERNALIZING T-SCORE (CORRESPONDING RANGE FOR Y IN A T-SCORE SCALE IS 28–96).

FIGURE 2. PATH ANALYSIS MODEL FOR TESTING MODERATION
NOTE: DASHED LINES INDICATE COVARIATE EFFECTS.

FIGURE 3. INTERACTION OF INSTRUMENTAL CAREGIVING AND DIFFICULT CHILD TEMPERAMENT

NOTE: THE ASSOCIATION OF MATERNAL INSTRUMENTAL FILIAL RESPONSIBILITY HISTORY AND CHILDREN'S EXTERNALIZING T-SCORES WHEN OFFSPRING'S DIFFICULT CHILD TEMPERAMENT SCORES ARE AT A STANDARD DEVIATION ABOVE THE MEAN (DIFFICULT; DASHED LINE), THE MEAN (DOTTED LINE), AND A STANDARD DEVIATION BELOW THE MEAN (EASY; DASHED-DOTTED LINE).

Table 1.

Descriptive Statistics and Correlations Among Study Variables

	1	2	3	4	5	6	7
1. Instrumental Caregiving (Linear)	—	.98**	.70**	.19*	.23**	-.46**	.25**
2. Instrumental Caregiving ² (Curvilinear)	.98**	—	.68**	.17	.21*	-.45**	.25**
3. Emotional Caregiving	.64**	.63**	—	.13	.10	-.24**	.36**
4. Difficult Child Temperament (12 months)	.17**	.15*	.18**	—	.36**	-.24**	.06
5. Child Externalizing (36 months)	.19**	.17*	.10	.34**	—	-.22*	.12
6. Maternal Age	-.34**	-.31**	-.16**	-.12	-.17*	—	.01
7. Maternal Abuse History	.15**	.16**	.24**	.07	.19**	.002	—
Mean	26.87	—	26.48	23.99	54.61	21.47	0.88
SD	7.70	—	7.19	7.10	12.49	5.32	1.41
Minimum	10	—	11	12	28	14.72	0
Maximum	47	—	46	54	96	36.02	6
Percent Complete	87	—	89	73	60	100	91

Note:

Bivariate correlations are displayed below the diagonal and partial correlations controlling for depressive symptoms are displayed above the diagonal

*
p<.05**
p<.01