Psychology of Men & Masculinities

Testing the Father–Child Activation Relationship Theory: A Replication Study With Low-Income Unmarried Parents

Joyce Y. Lee, Brenda L. Volling, and Shawna J. Lee

Online First Publication, June 22, 2020. http://dx.doi.org/10.1037/men0000301

Psychology of Men & Masculinities

ISSN: 1524-9220 http://dx.doi.org/10.1037/men0000301

Testing the Father–Child Activation Relationship Theory: A Replication Study With Low-Income Unmarried Parents

Joyce Y. Lee, Brenda L. Volling, and Shawna J. Lee
University of Michigan, Ann Arbor

The current study aims to replicate and extend previous research on father–child activation relationship theory, which suggests that fathers engage in stimulating, challenging, and directive parenting behaviors that are likely to benefit children's development. A large and racially diverse sample of low-income, unmarried couples with young children (n = 672) was used to examine whether fathers and mothers exhibited an activation parenting profile (high sensitivity, positive regard, and stimulation of cognitive development, moderate levels of intrusive/directive behavior, and low detachment and negative regard). Observations of mother–child and father–child parenting behaviors during the two-bags task with preschool children were included in latent profile analysis to reveal 3 distinct parenting profiles for both fathers and mothers (i.e., supportive, activation, and intrusive), with the activation profile showing a pattern of moderate intrusiveness combined with sensitivity, positive regard, and cognitive stimulation. Four family configurations were created: (a) supportive mother/supportive father (23.74%), (b) supportive mother/activation father (9.24%), (c) activation mother/activation father (27.31%), and (d) activation mother/supportive father (39.71%). Children with supportive mothers and fathers had higher receptive language scores compared with those from other family groups, and had higher prosocial scores compared with children with activation mothers and activation fathers, but not other family groups (i.e., activation father/supportive mother or supportive father/activation mother). Results support activation relationship theory by noting a pattern of parenting behaviors used by fathers (and mothers) in which parents are moderately intrusive, challenging, or directive with their children, yet still sensitive and positive in their interactions.

Public Significance Statement
Sensitive and responsive parenting has been considered the ideal type of parenting for positive child outcomes. However, in this study, we showed that activation parenting—characterized by a moderate degree of intrusive/directive behaviors along with sensitivity, positive regard, and cognitive stimulation—was just as effective as supportive parenting in promoting children's socioemotional development in highly disadvantaged families with young children.

Keywords: father–child activation relationship theory, Building Strong Families, mothers' parenting behaviors, fathers' parenting behaviors, early childhood

Research on father involvement and its role in child development has dramatically increased in the past several decades (Jeynes, 2016; Lamb, 2010; Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008). Theoretical models highlight the father–child relationship and its role in facilitating child development (Cutler & Palkovitz, 2020; Grossmann et al., 2002; Paquette, Gagnon, & de Medeiros, 2020). Father–child activation relationship theory (Paquette, 2004) proposes that fathers play an important role in

Joyce Y. Lee, Department of Psychology and School of Social Work, University of Michigan, Ann Arbor; Brenda L. Volling, Department of Psychology, University of Michigan, Ann Arbor; Shawna J. Lee, School of Social Work, University of Michigan, Ann Arbor.

Joyce Y. Lee was supported by a dissertation fellowship from the Administration for Children and Families (Children's Bureau) under Grant 90PR0009-01-00 during the writing of this article. Brenda L. Volling and Shawna J. Lee were supported by a grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R15HD091763-01). Preliminary findings of this study were presented at the Family Strengthening Scholars' grantee meeting in May, 2019, at the Administration for Children and Families, Washington, DC. The Institutional Review Board at the University of Michigan, Ann Arbor, deemed this study under the project name Secondary Analysis of Building Strong Families Data (HUM00145063) as secondary analysis of existing data and thus exempt from institutional review board oversight. Brenda L. Volling, coguest editor of this fatherhood Special Issue, is a coauthor. Although she is a guest editor of this Special Issue on Fathering: New Perspectives, Paradigms, and Possibilities, she was recused from editorial considerations regarding this article to avoid potential conflicts of interest.

Correspondence concerning this article should be addressed to Joyce Y. Lee, Department of Psychology, University of Michigan, 530 Church Street, Ann Arbor, MI 48109; School of Social Work, University of Michigan, 1080 South University Avenue, Ann Arbor, MI 48109. E-mail: joyceyl@umich.edu

fostering children's exploration of the world because fathers tend to engage in behaviors that excite, surprise, and temporarily destabilize their children. Fathers also encourage children to take risks while simultaneously providing safety and security. In addition, Paquette (2004) argued that such fathering behaviors help children take more initiatives in unfamiliar contexts, engage in exploration, and overcome challenges. Paquette coined the term *father–child activation relationship* to represent a relationship that satisfies children's needs to be stimulated, take risks for exploration, and face obstacles, and find solutions to overcome them.

Paquette (2004) further posited that the father–child activation relationship is developed primarily through physical play (i.e., rough-and-tumble), which helps children develop self-regulation and social competence. During physical play, Paquette (2004) claimed that the fathers' modification of the intensity of play from highly arousing to less arousing based on children's cues of tolerance for emotional stimulation plays a critical role in children's development of self-regulation. Fathers tend to be more intrusive, which involves controlling, stimulating, directing, and sometimes interfering with children's autonomy during interactions compared with mothers (Craig, 2006; John, Halliburton, & Humphrey, 2013; Lindsey, Caldera, & Rivera, 2013; National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 1999; Volling, McElwain, Notaro, & Herrera, 2002).

Parental intrusiveness refers to the degree to which parents control and direct interactions interfere with their children's autonomy (Andreassen & Fletcher, 2007; Brady-Smith et al., 2013; Ispa et al., 2013). Intrusiveness in itself represents a single parenting dimension and needs to be carefully considered in the context of other parenting behaviors (e.g., sensitivity, cognitive stimulation). Many parents living in poverty use more intrusive or directive parenting with their young children than parents with more economic privilege (Bradley, Corwyn, McAdoo, & Coll, 2001; Tamis-LeMonda, Briggs, McClowry, & Snow, 2009). For instance, research with low-income, ethnic minority mothers has found that some mothers are more directive in their interactions with children than others, using more intrusive parenting behaviors in conjunction with sensitivity, positive regard, and cognitive stimulation (Brady-Smith et al., 2013; Ispa, Carlo, et al., 2015; Ispa, Claire Cook, Harmeyer, & Rudy, 2015; Ispa et al., 2013). This pattern represents a directive parenting style, in contrast to a more intrusive or harsh parenting style that combines intrusive parenting with negative parenting behaviors, such as negative regard and detachment (Brady-Smith et al., 2013; Hazen, Mc Farland, Jacobvitz, & Boyd-Soisson, 2010).

Parental intrusiveness occurring in the presence of a number of positive parenting behaviors is likely to have different outcomes for children than if occurring in the presence of negative parenting behaviors (Hazen et al., 2010). A similar situation may very well describe how some fathers interact with their children, which is why this profile involving moderate levels of intrusive/controlling behavior in combination with stimulating and sensitive behaviors has been referred to as activation fathering in previous research assessing Paquette's (2004) father–child activation relationship theory (Stevenson & Crnic, 2013; Volling, Stevenson, Safyer, Gonzalez, & Lee, 2019). In the current study, we continue with this tradition and refer to a pattern of parenting involving moderate levels of intrusiveness with high levels of sensitivity, positive regard, and stimulation of cognitive development as activation parenting, in contrast to intrusive or harsh parenting in which intrusiveness occurs in the absence of positive parenting behaviors.

Evidence for Activation Fathering Behavior

There is evidence to support the construct of activation fathering (Gaumon & Paquette, 2013; Paquette, Bolté, Turcotte, Dubeau, & Bouchard, 2000; Stevenson & Crnic, 2013; Volling et al., 2019). For instance, Paquette et al. (2000) used a sample of 468 socioeconomically disadvantaged French-Canadian families with children between the ages of 0 and 6 to examine different fathering profiles. Three were consistent with Baumrind's (1966) permissive, authoritarian, and authoritative parenting styles, with a fourth novel parenting profile they called "stimulating," which characterized 26% of the fathers. Fathers with a stimulating profile were similar to authoritative fathers with respect to basic caregiving, empathy, discipline, and physical play, but were also high on stimulating their children (e.g., introducing them to new games and activities), talking to others about positive aspects of their children, and providing emotional support to their children compared with the three other groups of fathers.

Further, Stevenson and Crnic (2013) conducted naturalistic home observations with 127 fathers and their 4-year-old children and found a single latent factor that they referred to as activated fathering, which included positive factor loadings for opportunity for interaction, cognitive stimulation, moderate levels of intrusiveness, and a negative factor loading for detachment. Activated fathering at 4 years predicted less child dysregulation during a problem-solving task and higher sociability in the home at 5 years. Similarly, using observation data of mother–child and father–child interactions from the Early Head Start Research and Evaluation Project, Ryan, Martin, and Brooks-Gunn (2006) conducted a person-centered cluster analysis and found four parenting groups for both fathers and mothers: (a) highly supportive parenting, which involved high levels of sensitivity, positive regard, and cognitive stimulation; (b) negative parenting, which involved high levels of intrusiveness; (c) detached parenting, which involved high levels of detachment; and (d) somewhat supportive parenting, which involved moderate levels of sensitivity, positive regard, and cognitive stimulation, as well as moderate levels of intrusiveness compared with parents in the highly supportive groups. Collectively, these findings suggest that fathers may indeed engage in challenging, directive, controlling, and simulating parenting interactions with their children in line with activation relationship theory.

Recently, Volling et al. (2019) conjectured that the somewhat supportive fathering group described by Ryan et al. (2006), with moderate levels of intrusiveness combined with sensitivity, was consistent with an activation parenting profile. Using observational data from a challenging teaching task to assess parental sensitivity, positive regard, cognitive stimulation, intrusiveness, and detachment from 195 two-parent families with 12-month-old infants, Volling et al. (2019) examined whether the activation profile emerged for both fathers, as well as mothers. A person-centered latent profile analysis (LPA) revealed three distinct parenting profiles for fathers and mothers that included (a) supportive parenting in which parents were high on sensitivity, positive regard, and cognitive stimulation; (b) disengaged parenting in which par-

ents were high on detachment; and (c) activation parenting which involved moderate levels of sensitivity, positive regard, and cognitive stimulation, as well as slightly higher levels of intrusiveness compared with those of parents with supportive parenting profiles. An additional intrusive parenting profile (i.e., high levels of intrusiveness, low levels of positive regard, and moderate levels of detachment) emerged for only a few fathers (4.81%). Although both fathers and mothers engaged in activation parenting, fathers (60%) were more likely than mothers (49%) to fall in the activation parenting profile.

Volling et al. (2019) further examined the association between parenting profiles for mothers and fathers in the same family and found that 30% of infants had both an activating mother and father, 26% a supportive mother and an activation father, and 11.4% both a supportive mother and father. Given the exploratory nature of these analyses, Volling et al. (2019) underscored the importance of replicating their findings, especially using samples of parents from different sociodemographic backgrounds, samples with children of different ages, and other interactive observational paradigms beyond the challenging teaching paradigm. The primary goal of the current study was to replicate Volling et al.'s (2019) findings using a racially diverse, large sample of low-income unmarried fathers and mothers with preschoolers in a 10-min semistructured, free-play observation from the Building Strong Families (BSF) study (Moore et al., 2013). Based on previous research and findings of a directive parenting profile for low-income, ethnic minority mothers (Brady-Smith et al., 2013), we hypothesized that a pattern of activation or directive parenting would emerge for both fathers and mothers but may describe more fathers than mothers.

Activation Parenting Behavior and Child Outcomes

Although Volling et al. (2019) did not find any relations between the activation parenting profiles and security of infant–mother and infant–father attachment, one other study found that activation fathering was linked with children's social and emotional outcomes in older children (Stevenson & Crnic, 2013). Consistent with Paquette's (2004) proposition that father–child activation fosters self-regulation and social competence, specifically, the researchers found that higher levels of activation fathering at 4 years was associated with lower levels of child behavior dysregulation during a problem-solving and higher sociability in the home at 5 years (Stevenson & Crnic, 2013). Studies have not examined activation fathering and other developmental outcomes (e.g., prosocial behaviors, language development, effortful control) even though research indicates that fathers' behaviors contribute uniquely to the prediction of children's prosocial behaviors (Carlo, Mestre, Samper, Tur, & Armenta, 2011; Lindsey et al., 2013), language development (Pancsofar & Vernon-Feagans, 2010; Schwab, Rowe, Cabrera, & Lew-Williams, 2018), and effortful control (Bridgett et al., 2018; Karreman, van Tuijl, van Aken, & Deković, 2008). Further, research on directive parenting among low-income mothers has found that although directive parenting by mothers in itself was linked with children's lower cognitive development and emotion regulation scores at age 3 compared with those of children with supportive mothers (Brady-Smith et al., 2013), directive mothering with children largely occurred in the context of positive maternal affect (Ispa, Claire Cook, et al., 2015). Importantly, mothers' positive regard lessened the negative relations between directive mothering behaviors and child outcomes, with this pattern holding across White, Black, and Mexican American families (Ispa et al., 2013).

The Current Study

The current study examined activation parenting among a sample of low-income fathers and mothers participating in the BSF study. For the first aim, we used a person-centered statistical approach to conduct LPA and explored whether there was an activation parenting profile that described both fathers' and mothers' interactions with their preschoolers during observations of a semistructured, free-play task. Based on Volling et al.'s (2019) research with fathers and mothers, we hypothesized that an activation parenting profile characterized by moderate levels of sensitivity, positive regard, and cognitive stimulation, as well as moderate levels of intrusiveness and low levels of detachment, would emerge for both fathers and mothers.

Consistent with previous research, we also hypothesized that additional parenting profiles would emerge describing supportive parenting (i.e., high sensitivity, positive regard, cognitive stimulation, and low intrusiveness and detachment); intrusive parenting (i.e., high intrusiveness and low sensitivity); and disengaged parenting (i.e., high detachment; Brady-Smith et al., 2013; Ryan et al., 2006; Volling et al., 2019). Although we expected that these different profiles would emerge for both fathers and mothers, we also hypothesized that the activation profile would describe more fathers than mothers. Further, because parents may use a more directive parenting style with older children (e.g., 36-month-olds) than with infants (e.g., 12-month-olds; Fagot & Kavanagh, 1993), we anticipated that even though similar profiles might be found (e.g., supportive, activation), the percentages of mothers and fathers in each might differ from earlier work.

The second aim was to determine if fathers and mothers in the same family interacted similarly or differently with their preschoolers. Thus, we examined associations across resulting profiles for mothers and fathers. The final aim was to create family groups based on mothers' and fathers' profiles and examine the links between these family groups and children's behavior problems, effortful control, receptive language, emotional security, and prosocial behaviors. Given the exploratory nature of the current study, we did not advance any directional hypotheses related to this aim. Overall, the current study makes an important contribution to the literature by (a) testing father–child activation relationship theory (Paquette, 2004); (b) replicating findings of Volling et al. (2019), using a large and diverse sample of socioeconomically disadvantaged families from the BSF data set; and (c) extending previous research to examine group differences in young children's developmental outcomes across family groups.

Method

The Building Strong Families Project

Data were from the BSF project, a large-scale demonstration and evaluation of a healthy marriage and relationship education program conducted between 2005 and 2011 across eight cities in the United States for low-income, romantically involved, and unmarried heterosexual couples who were expecting or recently

had a baby together (Wood, McConnell, Moore, & Clarkwest, 2010). The project was sponsored by the Office of Planning, Research and Evaluation in the Administration for Children and Families, U.S. Department of Health and Human Services, and developed, implemented, and evaluated by Mathematica Policy Research with the goal to strengthen unmarried, socioeconomically disadvantaged couples' relationships so that they could create stable and healthy home environments for their children (Office of Planning, Research, & Evaluation, 2008; Wood, Moore, Clarkwest, & Killewald, 2014).

Procedure

The BSF project recruited 5,102 couples from hospitals, maternity wards, prenatal clinics, health clinics, and special nutritional programs for women, infants, and children. Couples were eligible to enroll if (a) both the mother and father agreed to participate in the intervention, (b) the couple was romantically involved, (c) the couple was either expecting a baby together or had a baby younger than 3 months old, (d) the couple was unmarried at the time the baby was conceived, and (e) both parents were 18 years and older (Wood et al., 2010). After recruitment, Mathematica Policy Research obtained participants' written consents and randomly assigned couples into an intervention group ($n = 2{,}553$) or a control group ($n = 2{,}549$).

The BSF intervention focused primarily on providing 30 to 42 hr of relationship skills education in the form of group sessions, with each group session ranging from 2 to 5 hr depending on the day of the week, whereas control group couples could seek relationship skills education from other sources but were not provided with the BSF intervention services (see Wood et al., 2014, for full details of the BSF intervention and evaluation).

Data collection occurred at three time points in the BSF project: baseline (enrollment in the project), the 15-month follow-up, and the 36-month follow-up from enrollment in the BSF intervention. Observations of mother–child and father–child interactions were conducted as part of the 36-month follow-up. Because BSF was designed to evaluate an intervention, the data collection time points do not exactly correspond to the children's age. According to BSF documentation, the average of children was 42 months at the time the mother–child assessment was conducted and 44 months for the father–child assessment (Moore et al., 2013). Children's socioemotional developmental outcomes were available at the 36-month follow-up but not at the 15-month follow-up. The institutional review board—Health Sciences and Behavioral Sciences at the University of Michigan—determined that secondary analyses of BSF data were exempt from institutional review board oversight.

Participants

Participants in the current study were 672 mothers and fathers who took part in the 36-month follow-up observational assessments of parent–child interactions of a semistructured, free-play task across five BSF programs (i.e., Atlanta, Baton Rouge, Houston, Indiana counties, Oklahoma City; Moore et al., 2013). To create the analytic sample from the initial 5,102 families, 602 mothers from the Baltimore site were excluded because none of the fathers participated in the observational task. The parent–child observational component of BSF primarily involved parents who were residential with each other and the child *all* of the time at the 36-month follow-up. As such an additional 1,364 mothers and 1,614 fathers not residing with the child at the 36-month follow-up and 308 mothers and fathers not residing with each other at the 36-month follow-up were excluded. Finally, 542 mothers and fathers without observational data were excluded. The final analytic sample for the current study was $n = 672$ families. Among these families, there were 622 families with complete data from both parents, 38 families missing father data, and 12 families missing mother data. Table 1 shows sociodemographic information of the analytic sample.

Measures

Parenting behaviors. Mothers and fathers were observed in independent parent–child interaction sessions during home visits. Mother–child interactions were conducted first and then father–child interactions. Fathers' and mothers' parenting behaviors were observed and videotaped separately during the two-bags task (Administration for Children & Families, 2002), a 10-min semistructured, free-play interaction task between the parent and child that was modified from the three-bags task of the NICHD Study of

Table 1
Sample Characteristics

Variable	*M* (*SD*) or %
Mother's age (range: 18–41 years)	23.60 (4.86)
Father's age (range: 18–52 years)	25.96 (5.92)
Couple's ethnicity and race	
Black	41.92%
White	24.85%
Hispanic	22.56%
Other	10.67%
Couple's education	
Neither parent has high school diploma	15.09%
One parent has high school diploma	33.54%
Both parents have high school diploma	51.37%
Mother's employment status (yes)	28.22%
Father's employment status (yes)	81.36%
Mother's income in the past year	22.96 (4.58)
0 = None	22.59%
1 = $1–$4,999	31.73%
2 = $5,000–$9,999	20.60%
3 = $10,000–$14,999	9.14%
4 = $15,000–$19,999	7.14%
5 = $20,000–$24,999	4.49%
6 = $25,000–$34,999	3.16%
7 = $35,000 or above	1.16%
Father's income in the past year	
0 = None	3.27%
1 = $1–$4,999	13.75%
2 = $5,000–$9,999	14.57%
3 = $10,000–$14,999	21.28%
4 = $15,000–$19,999	17.51%
5 = $20,000–$24,999	14.08%
6 = $25,000–$34,999	10.15%
7 = $35,000 or above	5.40%
Couple's relationship length in years	3.37 (3.25)
Child's gender (boy)	44.85%
Assignment in the BSF program (intervention)	52.88%

Note. $N = 672$. Variables are from baseline when couples enrolled in the BSF program. BSF = Building Strong Families.

Early Child Care (NICHD Early Child Care Research Network, 1999). Two-bags were placed on a mat on the floor and parents were asked to spend time playing with the children using objects in the two bags. The parent was instructed first to open Bag 1, which included a book before moving on to Bag 2, which included pretend play toys. The parent was told that they could divide the 10 min between the two bags however they chose. Eighteen trained coders rated a total of six parenting behaviors and four child behaviors from the parent–child interaction videos in a centralized location, using the same rating system as the NICHD Study of Early Child Care Research Network (Moore et al., 2013; NICHD Early Child Care Research Network, 1999). Only the parent behaviors were used in the current study's LPA analyses to create parenting profiles.

The rating system used a 7-point rating scale ranging from 1 (*not at all characteristic*) to 7 (*very characteristic*) to code: (a) *sensitivity*—the ability to perceive and accurately interpret the child's behavior and respond appropriately; (b) *intrusiveness*—interventions or overstimulation that impinge on the child's independence and are more parent-centered than child-centered; (c) *detachment*—lack of involvement and disengagement with the child; (d) *positive regard*—demonstrating positive feelings toward the child; (e) *negative regard*—demonstrating negative feelings (e.g., criticism, harsh tone) toward the child; and (f) *stimulation of cognitive development*—scaffolding the child's cognitive development during the task.

Child behavior problems. Child behavior problems were assessed with 21 items from the Behavior Problem Index (Peterson & Zill, 1986; Zill, 1985). The items included child internalizing (e.g., "Child is too fearful or anxious") and externalizing (e.g., "Child is disobedient") behavior problems. These items are similar to those from the Child Behavior Checklist (Achenbach, 1991), which has been used in previous research examining father–child relationship and preschool-aged children's behavior problems (Gaumon & Paquette, 2013). Mothers rated the 21 items on a 3-point scale ranging from 1 (*often true*) to 3 (*never true*). The scale was reverse coded and recoded from 0 (*never true*) to 2 (*often true*) so that higher points represent higher levels of child behavior problems. A composite child behavior problems variable was created by averaging the items ($\alpha = 0.84$).

Child prosocial behaviors. Child prosocial behaviors were assessed with nine items from the Social Interaction Scale of the Preschool and Kindergarten Behavior Scales–Second Edition (Merrell, 2002). The items represent young children's positive behaviors (e.g., "Comforted other children who were upset") in the past 3 months. Items from the Social Interaction Scale have been adapted for use in large surveys, such as the Early Childhood Longitudinal Survey–Birth Cohort and University Preschool Child Outcome Study (Moore et al., 2013). Mothers rated the nine items on a 4-point scale ranging from 1 (*often*) to 4 (*never*). The scale was reverse coded so that higher scores represented higher levels of child prosocial behaviors. A composite child prosocial behaviors variable was created by averaging the nine items ($\alpha = 0.77$).

Child emotional insecurity. Child emotional insecurity was assessed with 10 items from the Security in the Marital Subsystem-Parent Report Inventory (Davies, Forman, Rasi, & Stevens, 2002). These items included the child's reactions to seeing arguments and disagreements between parents in the past month (e.g., "[CHILD] couldn't seem to calm down after you argued"). Mothers rated these items on a 4-point scale from 1 (*often*) to 4 (*never*). Items were reverse coded so that higher scores represented higher levels of child emotional insecurity amid interpersonal conflict. A composite child emotional insecurity variable was created by averaging the items ($\alpha = 0.84$).

Child receptive language. Child receptive language was assessed using the Peabody Picture Vocabulary Test 4 (PPVT-IV; Dunn & Dunn, 2007). PPVT-IV is a norm-referenced standardized test designed to directly measure children's knowledge of word meanings. The researcher presents a series of words that range from easy to difficult and are accompanied by a plate consisting of multiple pictures. The child is instructed to indicate which picture best matches the word presented by the researcher. A series of child errors suggest that the level of difficulty is becoming too great for the child at which point the researcher stops the task. The PPVT has been used in similar large surveys, such as the Fragile Families and Child Wellbeing Study (Bendheim-Thoman Center for Research on Child Wellbeing, 2019).

Child effortful control. Child effortful control was assessed using the Walk-a-Line-Slowly task (Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996), which involved asking the child to walk down a straight line made with a 6-foot-long blue ribbon placed on the floor (Moore et al., 2013). The task had a baseline trial and two slow trials and was coded using the duration in minutes and seconds it took for the child to complete each trial. To be consistent with Kochanska et al. (1996), all minutes were converted to seconds, and the mean of the two slow trials were used as the final score for child effortful control.

Analysis Plan

To identify parenting profiles, a person-centered LPA analysis (Bergman & Magnusson, 1997) was conducted using Mplus 8.3 (Muthén & Muthén, 2017) for fathers and mothers separately because each parent was observed in independent parent–child dyadic interaction sessions at the 36-month follow-up. To determine model fit and the appropriate number of profiles, the Bayesian information criteria (BIC), entropy, and Lo-Mendell-Rubin adjusted likelihood ratio test (LMR-A) were used. Smaller BIC values represent better fit. Entropy is used to determine profile distinctiveness, and values closer to 1 indicate better profile distinction. LMR-A is used to assess for significant improvement in fit of a *k* model, where *k* indicates the number of groups, compared with a *k*-1 model. A significant LMR-A result suggests a preference for the *k* model over the *k*-1 model.

LPA results from Mplus were subsequently imported to Stata 15.1 (StataCorp, 2017), where χ^2 analyses were conducted to determine associations across fathers' and mothers' profiles in the same family. This specifically allowed for investigating whether mothers and fathers had similar or different parenting profiles within the same family and to further create family groups (e.g., supportive mother/supportive father, supportive mother/activation father). One-way analyses of variance were then used to examine mean differences in children's developmental outcomes across the different family groups.

Results

Preliminary Results

Descriptive statistics of the analytic sample can be found in Table 1. All sociodemographic information was obtained from baseline. Mean comparisons using paired samples *t* tests showed no significant differences between mothers and fathers across all six parenting behavior variables (i.e., sensitivity, detachment, positive regard, negative regard, intrusiveness, and cognitive stimulation).

Person-Centered Analyses for Mothers' and Fathers' Parenting

Latent profiles of fathering. The three-profile model, BIC = 10,395.70, entropy = 0.84, LMR-A = 270.37, $p = .04$, was considered the best fitting model for fathers because there was a decrease in BIC and an increase in entropy relative to the two-profile model, BIC = 10,626.89 and entropy = 0.82. The four-profile had a lower BIC (BIC = 10,277.66) than that of the three-profile model, but its entropy was smaller (entropy = 0.83), and the LMR-A suggested no improvement for a four-profile model over a three-profile model, LMR-A = 159.67, $p = .11$.

The means for the three-profile model are provided in Table 2. The first and largest profile was labeled the *supportive* profile (n = 350, 55.21%) because fathers in this group had the highest levels of sensitivity, positive regard, and cognitive stimulation with the lowest levels of intrusiveness, detachment, and negative regard. We labeled the next profile the *activation/directive* profile (n = 221, 34.86%) because it closely matched the activation profile found by Volling et al. (2019), with fathers using moderate levels of intrusiveness in combination with relatively high levels of sensitivity, positive regard, and cognitive stimulation, and low levels of detachment. The final and smallest profile was labeled the *intrusive* profile (n = 63, 9.94%) because fathers demonstrated the highest levels of intrusiveness, detachment, and negative regard with the lowest levels of sensitivity, positive regard, and cognitive stimulation.

Latent profiles of mothering. The three-profile model, BIC = 10,663.94, entropy = 0.79, LMR-A = 254.96, $p = .17$, was also considered the best fitting model for mothers. In the three-profile model, there was a decrease in BIC relative to that of the two-profile model (BIC = 10,879.07) although an increase in BIC relative to the four-profile model (BIC = 10,242.37). The three-profile model had a high entropy (entropy = 0.79), but the two-profile and four-profile models had slightly higher values for entropy, 0.83 and 1.00, respectively. Moreover, neither the LMR-A comparing the two-profile and three-profile models, LMR-A = 254.96, $p = .17$, nor the LMR-A comparing the three-profile and four-profile models, LMR-A = 456.97, $p = .16$, was significant, making it somewhat unclear which model to select.

Given the exploratory nature of this work, we decided to choose the three-profile model because Volling et al. (2019) found three distinct parenting profiles for mothers, which matched the three profiles found here. The means for the three-profile model are provided in Table 2 and reveal three similar profiles for mothers as found for fathers. The first profile was labeled the *supportive* profile (n = 171, 25.91%) with the highest levels of sensitivity, positive regard, and cognitive stimulation and the lowest levels of intrusiveness, detachment, and negative regard. The largest profile for mothers, however, was the *activation/directive* profile (n = 381, 57.73%), with mothers showing moderate levels of intrusiveness combined with moderately high levels of sensitivity, positive regard, and cognitive stimulation. The last profile was labeled *intrusive* (n = 108, 16.36%) because it revealed a pattern with the highest levels of intrusiveness, detachment, and

Table 2
Means in Parenting Behaviors for Mothers' and Fathers' Three-Profile Solutions

Parenting behaviors	Supportive profile		Activation profile		Intrusive profile				Total sample	
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	η_p^2	*M*	*SD*
Mothers' parenting behaviors										
Sensitivity	5.83_a	0.47	4.57_b	0.56	2.88_c	0.64	956.04^{***}	0.74	4.62	1.09
Intrusiveness	2.17_a	0.75	3.11_b	0.89	4.30_c	1.19	181.27^{***}	0.36	3.06	1.13
Detachment	1.73_a	0.57	2.48_b	0.83	3.67_c	1.18	173.80^{***}	0.35	2.48	1.04
Positive regard	5.30_a	0.64	4.29_b	0.70	3.27_c	0.87	273.87^{***}	0.45	4.38	0.97
Negative regard	1.58_a	0.56	2.11_b	0.74	3.31_c	1.18	159.39^{***}	0.33	2.17	0.96
Cognitive stimulation	4.92_a	1.14	3.97_b	0.95	3.56_c	0.98	75.80^{***}	0.19	4.15	1.11
Fathers' parenting behaviors										
Sensitivity	5.33_a	0.53	3.86_b	0.48	2.51_c	0.59	1065.27^{***}	0.77	4.54	1.09
Intrusiveness	2.49_a	0.79	3.56_b	0.97	4.38_c	1.30	166.87^{***}	0.35	3.05	1.13
Detachment	1.92_a	0.67	2.85_b	0.97	4.10_c	1.23	209.43^{***}	0.40	2.46	1.10
Positive regard	4.73_a	0.75	4.06_b	0.67	2.75_c	0.93	205.73^{***}	0.40	4.30	0.96
Negative regard	1.68_a	0.68	2.34_b	0.93	3.65_c	1.32	155.35^{***}	0.33	2.11	1.04
Cognitive stimulation	4.36_a	1.06	3.79_b	1.03	3.27_c	1.12	39.35^{***}	0.11	4.05	1.12

Note. Fathers' profiles (total n = 634): supportive profile (n = 350); activation profile (n = 221); intrusive profile (n = 63). Mothers' profiles (total n = 660): activation profile (n = 381); intrusive profile (n = 108); supportive profile (n = 171). Scores with different subscripts are statistically different across groups based on post hoc tests using Bonferonni corrections. F values relate to tests of significance of group difference among four groups; F values for mothers were $F(2, 657)$, and F values for fathers were $F(2, 631)$. η_p^2 = partial eta squared.
*** $p < .001$.

negative regard and the lowest levels of sensitivity, positive regard, and cognitive stimulation.

In sum, separate parenting profiles for mothers and fathers were created based on the person-centered LPA. Results showed three parenting profiles for both mothers and fathers: (a) supportive (i.e., high levels of sensitivity, positive regard, cognitive stimulation, and low levels of intrusiveness, negative regard, and detachment); (b) activation/directive (i.e., moderate levels of intrusiveness but also moderately high levels of sensitivity, positive regard, and cognitive stimulation); and (c) intrusive (i.e., high levels of intrusiveness and low levels of sensitivity, positive regard, and cognitive stimulation). There were no significant relations between the main family groups and sociodemographic variables, including mothers' and fathers' age, education, ethnicity/race, work status, income, couples' relationship length, and BSF project random assignment status. Next, cross tabulations and χ^2 tests were used to created family profiles using both mother and father data.

Family-Level Relationships Across Mothers' and Fathers' Profiles

The χ^2 tests demonstrated a significant association between mothers' and fathers' parenting profiles, $\chi^2(4) = 28.49$, $p < .001$, which can be seen in Table 3. The largest group of families comprised a supportive father and an activation mother ($n = 189$, 30%), followed by families with both an activation father and activation mother ($n = 130$, 21%), and families with both a supportive father and supportive mother ($n = 113$, 18%). The remaining family groups were families with an activation father and a supportive mother ($n = 44$, 7%), an activation father and intrusive mother ($n = 44$, 7%), a supportive father and an intrusive mother ($n = 41$, 6.6%), an intrusive father and activation mother ($n = 39$, 6%), an intrusive father and intrusive mother ($n = 17$, 2.7%), and an intrusive father and a supportive mother ($n = 5$, 0.8%). Cell sizes were small for some of these family groups. As such, we focused on four main family groups, which are described more specifically in the next section, for our follow-up analyses.

Benefits of Activation Fathering to Children's Developmental Outcomes

To examine the links between family profiles and child outcomes, four family groups of interest were created for comparisons: (a) supportive mother and supportive father families ($n = 113$, 23.74%); (b) supportive mother and activation father families ($n = 44$, 9.24%); (c) activation mother and activation father families ($n = 130$, 27.31%); and (d) activation mother and supportive father families ($n = 189$, 39.71%). These four groups were selected because they allowed us to determine if children's outcomes differed depending on whether children had a supportive or activation parent; whether there was none, one, or two activation parents in the home; and whether having an activation father predicted better child outcomes. In other words, we were interested in whether children needed to have a supportive parent to exhibit positive outcomes and, relatedly, whether activation/directive parenting served as a risk factor that undermined children's developmental outcomes.

To determine associations between activation fathering and children's development, one-way analyses of variance with family group as the between-subjects factor and each of the child outcomes as the dependent variables were conducted. Findings demonstrated significant main effects of family group for children's prosocial behaviors, $F(3, 472) = 5.20$, $\eta_p^2 = 0.03$, and receptive language, $F(3, 305) = 11.21$, $\eta_p^2 = 0.10$. Means can be found in Table 4. Children in families with a supportive mother/supportive father had significantly higher prosocial scores compared with children in families with an activation mother/activation father, but did not differ significantly from children in families with an activation father/supportive mother or supportive father/activation mother. For children's receptive language, children from supportive mother/supportive father families had significantly higher language scores compared with children from all three family groups. There were no significant main effects of family group for children's behavior problems, effortful control, and emotional insecurity. The family groups did not differ on child sex for mothers' and fathers' parenting behaviors.

Discussion

The current study aimed to replicate and extend previous research on activation fathering, using a large and diverse sample of low-income families with young children. The main findings provide further evidence for an activation parenting profile, described by moderate levels of intrusiveness *and* moderate levels of positive behaviors including sensitivity, positive regard, and cognitive stimulation (Paquette, 2004; Paquette et al., 2020; Ryan et al., 2006; Stevenson & Crnic, 2013; Volling et al., 2019), which is also similar to the directive parenting profile found in several studies of low-income mothers from racially and ethnically diverse backgrounds (Brady-Smith et al., 2013; Ispa, Carlo, et al., 2015; Ispa, Claire Cook, et al., 2015; Ispa et al., 2013). Large numbers of both mothers and fathers fit the activation/directive parenting profile in this sample of low-income couples with preschoolers. The current study replicated a number of previous studies, including Ryan et al. (2006) who used a diverse sample of low-income couples with a 24-month-old child and the three-bags task, Brady-Smith et al.

Table 3
Relations Between Latent Profiles of Fathering and Mothering

Parenting latent profiles	Mother, activation profile, *n* (%)	Mother, intrusive profile, *n* (%)	Mother, supportive profile, *n* (%)	Total
Father, supportive profile	189 (30)	41 (6.6)	113 (18)	343
Father, activation profile	130 (21)	44 (7)	44 (7)	218
Father, intrusive profile	39 (6)	17 (2.7)	5 (0.8)	61
Total	358	102	162	$N = 622$

Note. $\chi^2(4) = 28.49$, $p < .001$.

Table 4
Mean Differences in Child Outcomes for Different Parenting Profiles

	Supportive mother/supportive father (n = 113)		Supportive mother/activation father (n = 44)		Activation mother/activation father (n = 130)		Activation mother/supportive father (n = 189)				Total sample (N = 672)	
Child outcomes	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	η_p^2	*M*	*SD*
Prosocial behaviors	2.54_a	0.37	2.44_{ab}	0.48	2.31_b	0.53	2.41_{ab}	0.46	(3, 472) 5.20**	0.03	2.38	0.50
Behavioral problems	0.42	0.23	0.39	0.25	0.45	0.27	0.43	0.26	(3, 472) 0.87	0.01	0.44	0.26
Emotional insecurity	1.37	0.40	1.36	0.34	1.40	0.47	1.41	0.50	(3, 458) 0.26	0.00	1.40	0.49
Effortful control	4.67	2.87	4.82	2.56	4.00	2.94	4.01	2.10	(3, 434) 2.43	0.02	4.07	2.45
Receptive language	101.64_a	15.30	92.11_b	13.96	94.37_b	14.74	88.83_b	16.38	(3, 305) 11.21***	0.10	91.29	16.78

Note. Scores with different subscripts are statistically different across groups based on post hoc tests using Bonferonni corrections. *F* values relate to tests of significance of group difference among four groups. η_p^2 = partial eta squared.
** $p < .01$. *** $p < .001$.

(2013) who used a sample of low-income mothers with a 12-month-old infant and the three-bags task, and Volling et al. (2019) who used a sample of predominantly middle-class couples with a 12-month-old infant and a challenging teaching task.

In particular, our findings map on to what Ryan et al. (2006) found—a parenting profile for both mothers and fathers they labeled as "somewhat supportive," which was characterized by moderately intrusive parenting behaviors but also relatively high sensitivity, positive regard, and cognitive stimulation parenting behaviors. Although the researchers did not call this parenting profile the activation or directive profile, the patterns among the parenting behaviors are similar to those found by others for fathers (Stevenson & Crnic, 2013; Volling et al., 2019), low-income mothers (Brady-Smith et al., 2013), and in the current study. By using data from the BSF project, we have shown that the activation profile indeed describes some low-income fathers' and mothers' interactions with their young children.

Emergence of Distinct Parenting Profiles: Supportive, Intrusive, and Activation

In the current study, the activation mother/supportive father group was the largest (30%), followed by the activation mother/activation father family group (21%), and then the supportive mother/supportive father family group (18%). At first glance, our results seem to differ from those of Volling et al. (2019), who found that the activation mother and activation father family group was the largest family group (29.89%) followed by the supportive mother and supportive father family group (11.41%), as well as Ryan et al. (2006), who found that the supportive mother and supportive father family group was the largest family group (62%) followed by the supportive mother and unsupportive father family group (15%) and the unsupportive mother and supportive father family group (15%). These differences may be due, in part, to differences in sample characteristics, age of the children, and/or observational methodology across studies. However, a more careful look suggests that our results may align with previous research.

In particular, Ryan et al. (2006) merged the "highly supportive" and "somewhat supportive" clusters into a single "supportive" cluster for both mothers and fathers in creating family groups. This resulted in the supportive mother and supportive father group being the largest family group (62%), which approximates what we find if we too merge the activation group (akin to the "somewhat supportive" group in Ryan et al., 2006) with the supportive group (69%). Similarly, the researchers created a single "unsupportive" cluster from the "detached" or "negative" cluster, yielding 15% of families falling into the unsupportive mother and supportive father family group. A similar recoding convention, where the intrusive group is recoded as the unsupportive group and the activation group is recoded as part of the supportive group, resulted in a similar percentage of unsupportive mothers and supportive fathers in our study (13.6%). Altogether, the above evidence underscores the emergence of distinct parenting profiles (i.e., supportive, intrusive, and activation) across studies, with the percentages of family groups resembling each other among studies that focus on socioeconomically disadvantaged samples.

Interestingly, we found that the proportion of fathers with a supportive parenting profile (55.21%) was greater than that of mothers with a supportive parenting profile (25.91%). This seems inconsistent with previous research, which found that middle-class (Volling et al., 2019) and low-income (Ryan et al., 2006) mothers were more likely than their counterpart fathers to be characterized by supportive parenting. Volling et al. (2019) found that 41.1% of the mothers and 24.1% of the fathers had a supportive parenting profile, and Ryan et al. (2006) showed that 46.62% of the mothers and 33.76% of the fathers had a supportive parenting profile. Relatedly, we found that more than half of the mothers (57.73%) in our sample displayed an activation parenting profile compared with about a third of the fathers (34.86%) with the same profile. Although we cannot know for certain why this might be the case without additional research in this area, one possible explanation may be due to the nature of the two-bags task which involves object-directed toy play, a style of play often seen in mother–child interactions, and not physical play, which may be preferred and more accurately capture fathers' activation behaviors (Lamb, 2010; Paquette et al., 2020). Consequently, mothers may demonstrate activation or directive parenting by using more control and instruction (that might be coded as intrusive) during the semistructured, free-play task while also maintaining positive mother–child interactions, a finding in line with arguments put forth by Ispa and colleagues (2013). Fathers may spend most of their time in the same free-play session playing with their children, being sensitive

to and praising their children and not be as concerned about teaching or instruction requiring more control.

It is worth noting that the BSF sample experienced high levels of socioeconomic disadvantage, and the fact that a large proportion of mothers in our sample exhibited an activation profile is consistent with previous research showing that mothers living in poverty endorse or engage in directive parenting behaviors, which is characterized by moderate levels of sensitivity and low levels of negative regard coupled with directive/intrusive behaviors (Bradley et al., 2001; Brady-Smith et al., 2013; McFadden & Tamis-LeMonda, 2013). Using data from the Early Head Start Research and Evaluation Project, Brady-Smith et al. (2013) found that almost a third of all mothers in their sample displayed the directive parenting profile. Ispa et al. (2015) demonstrated in a sample of low-income black mothers with their toddlers that directive parenting behavior involving mothers' physical intervention during semistructured, free-play with their children usually occurred in the context of positive maternal affect, with the goal to show or instruct children how to play with toys. This description of directive parenting fits well with the activation profile found here for both fathers and mothers.

That said, it is important to underscore that the exclusively intrusive parenting profile (i.e., high on intrusiveness but low on sensitivity, positive regard, and stimulation of cognitive development) described few parents in our study and was the smallest group of mothers (16.36%) and fathers (9.94%). Thus, far more parents used "intrusive" behaviors while also responding sensitively, attempting to stimulate their children's cognitive development and doing so while holding their children in high regard, than engaging in predominantly intrusive and controlling behaviors with negative regard for the child. Relatedly, the intrusive mother/intrusive father family group was less than 3% of the sample, suggesting that researchers may be advised to consider a more person-focused approach when investigating parenting, in general, and certainly in highly socioeconomically disadvantaged families, where the activation/directive profile describes significant numbers of fathers and mothers.

Use of a Person-Centered Approach and Children's Developmental Outcomes

A key advantage of the current study was its use of a person-centered approach, which allowed for an examination of parenting behaviors in context, with a specific focus on parental intrusiveness. Parental intrusiveness happening in conjunction with positive parenting behaviors likely produces different outcomes for children than when used in conjunction with negative parenting behaviors (Hazen et al., 2010). A person-centered approach allowed us to test this assumption directly. Recall that Paquette (2004) argued that mothers provide comfort and support in the context of a secure mother–infant attachment relationship (i.e., supportive parenting), whereas fathers encourage exploration and social competence in the context of the father–infant activation relationship. In this view, the supportive mother/activation father family group is also likely to yield positive outcomes for children, and our results indicate this was the case. Children in the supportive mother/activation father families did not differ on prosocial behaviors, behavior problems, effortful control, and emotional insecurity from children in families with both a supportive mother and supportive father. Without taking a person-centered approach, we would not have uncovered these family-level patterns that considered intrusive behavior in context with other parenting behaviors. A variable-centered approach, in contrast, primarily focuses on intrusiveness alone isolated from other parenting variables and may provide a very different picture of intrusive and controlling behavior that has negative consequences for children. Indeed, a follow-up analysis of the BSF data in which we correlated parents' intrusiveness with the five child outcomes in this study showed that mothers' intrusiveness was significantly associated with lower levels of children's effortful control, $r = -0.12$, $p < .01$, and receptive language, $r = -0.25$, $p < .001$, and fathers' intrusiveness was significantly associated with higher levels of children's behavior problems, $r = .09$, $p = .02$, and lower levels of children's prosocial behaviors, $r = -0.12$, $p < .01$, effortful control, $r = -0.10$, $p = .02$, and receptive language, $r = -0.12$, $p = .02$.

The only instance where there appeared to be an advantage for children when having a supportive mother and supportive father was children's receptive language scores, in which these children scored significantly higher compared with children in the other three family groups. Thus, having a supportive mother and a supportive father may be beneficial for young children's language acquisition. This is consistent with Ryan et al.'s (2006) finding in which children with both a supportive mother and father scored higher on the Bayley Mental Development Index than all other children, as well as meta-analyses that have found a link between sensitive and responsive parenting and children's language development (Madigan et al., 2019). Children exposed to sensitive and responsive parenting behaviors were 2.8 time more likely to develop strong language skills compared with children who were not surrounded by such parenting behaviors. In fact, families' socioeconomic status moderated this relationship, with stronger effect sizes for low and diverse socioeconomic status groups compared with middle and upper socioeconomic status groups. There was a stronger positive association between parental sensitive responsiveness and children's language for low socioeconomic status families than for middle to upper socioeconomic status families, suggesting that parental sensitive responsiveness is especially beneficial for children's language development when children are raised in socioeconomically disadvantaged families (Madigan et al., 2019). Overall, sensitive and responsive parenting is believed to help create a secure attachment that aids in children's exploration and, in turn, builds their neural architecture for joint attention and language (Ainsworth, Bell, & Stayton, 1974; Wade, Browne, Madigan, Plamondon, & Jenkins, 2014).

With respect to children's prosocial behaviors, families with a supportive mother/supportive father exhibited significantly higher child prosocial behaviors compared with families with an activation mother/activation father, but not other family groups (including families with supportive mother/activation father). In other words, having an activation father in the family was just as beneficial for children's prosocial development as having a supportive father, especially when the mother was supportive. Previous research suggests that father–child relationship quality (along with mother–child relationship quality) may be linked with children's prosocial development (McHarg, Fink, & Hughes, 2019; Richaud de Minzi, 2013). Using a sample of 387 middle-class families with children aged 8–12, Richaud de Minzi showed that fathers' (as well as mothers') perspective taking—the ability to

place oneself in another person's place and understand their feelings—was positively linked with children's perspective taking, suggesting that fathers (and mothers) are likely to help promote their children's cognitive empathy.

Regarding the remaining child outcomes, including behavioral problems, emotional insecurity, and effortful control, there were no differences across family groups. According to the current findings, children's socioemotional and behavioral development was similar when there was an activation father (or mother) in the family as having a supportive father. In general, our findings seem to lend support for Paquette's (2004) father–child activation relationship theory and the argument that fathers' engagement in arousing, stimulating, and challenging behaviors, which may appear intrusive at first, can contribute to children's socioemotional competence when also accompanied by a number of positive parenting behaviors. Importantly, child sex differences did not bear out in the parenting practices across family groups, suggesting that these parenting profiles did not differ in families with boys or girls.

Limitations and Future Directions

The current study has a number of limitations to consider. The models in the current study were cross-sectional, given that observational parenting and child outcome data were only available at a single point in the BSF study, which limits our ability to draw conclusions about potential causality between the parenting profiles and various child outcomes. As such, findings should be interpreted with this limitation in mind, and future studies should aim to use longitudinal data.

The study was exploratory in nature, as the literature on the father-activation relationship is nascent and empirical research supporting the father–child activation relationship theory is currently limited in number. This study's results along with those of Volling et al. (2019) and Ryan et al. (2006) are beginning to provide some evidence of an activation fathering profile that future research can now use to formulate more specific hypotheses.

Results from this study cannot be generalized to a larger group of low-income, unmarried couples with young children because families in this study volunteered to participate in the BSF project to receive relationship skills education, had to stay together for ~3 years, and completed all of the research protocols. Use of population-level, representative samples is needed to advance research on activation relationship theory further.

There are limitations to the observational measure and coding system used to test activation relationship theory, as neither the two-bags task nor the available observational codes were initially designed to assess and test fathering in the manner described here and instead, were paradigms and coding systems designed with mothers in mind. As such, the two-bags task likely creates a context that favors mothers' style of object-mediated and pretend play over fathers' preference for physical play (John et al., 2013; Paquette et al., 2020). Given that fathers tend to engage in more arousing and stimulating physical play than mothers, a play task free of toys to promote such behaviors would have been preferable. Further, the two-bags task may not lend itself to providing opportunities for fathers to engage with their children in play behaviors that involve risk-taking and rough-and-tumble play. This limitation may explain why we found more fathers with the supportive profile than those with the activation profile. Future research should employ observational paradigms that involve physical play tasks (Paquette et al., 2020), such as "Get Up" (Fletcher, StGeorge, & Freeman, 2013) or "Sock Wrestle" (Fletcher et al., 2013), that may result in risk-taking and rough-and-tumble play behaviors and thus more accurately capture the activation parenting behaviors as theorized by Paquette (2004). Observational coding systems designed specifically to measure the risk-taking, challenging, and destabilizing behaviors of father–infant activation relationship theory are sorely needed to advance research in this area so that researchers no longer have to rely on secondary analysis of data based on methods and procedures designed to assess mother–child interactions.

In addition to physical play tasks, more *challenging* tasks than the two-bags free-play used in the current study might better capture activation behaviors. For example, a cleanup task (Kochanska et al., 1996) where a parent is instructed to direct and put pressure on their child to help clean up toys may better capture activation parenting behaviors. Mothers' gentle guidance during the cleanup task describes a style of parenting in which parents exert control but in a warm and supportive manner that encourages children's compliance in contrast to the use of power assertion (Blandon & Volling, 2008; Kochanska, Aksan, & Koenig, 1995; Kochanska, Brock, & Boldt, 2017; Kochanska et al., 1996). Indeed, this controlling yet gentle guidance that benefits children's self-regulation could potentially represent activation parenting. The term *intrusiveness* has a negative connotation and meaning for many researchers, and it is often used to refer to suboptimal parenting behaviors. Future research on fathering and parenting, in general, may benefit by using alternative terms with less negative connotation, such as *directiveness* (Ispa et al., 2013), gentle guidance or control (Kochanska et al., 2017), or challenging parenting behavior (Majdandžić, de Vente, & Bögels, 2016) that align with the core dimensions of activation relationship theory.

Our secondary analyses took advantage of the available child outcomes in the BSF data set, but father–child activation relationship theory has specific hypotheses about which aspects of children's development would benefit. For example, the theory does not articulate that activation parenting predicts children's prosocial behaviors or receptive language, but rather children's exploration, openness to the world, risk-taking, and competition. Such variables were not available in the BSF data set, preventing direct theory-testing as it relates to predicted child outcomes. Future research would benefit by considering the behavioral outcomes of children that would be predicted to be fostered by activation parenting.

Finally, we used a subsample of BSF families in which all fathers were residential with the mother and the child all of the time because the majority of observational data were collected from residential father families and not available for families in which fathers had varying residential statuses. Our analytic sample is likely to have some unique characteristics. Because family processes including parenting are likely to be different for families with a nonresidential and residential father (Lee, Volling, Lee, & Altschul, 2020), future research should consider examining nonresidential fathers' parenting profiles or use fathers' residential status as a moderator. We would not necessarily expect the results to be the same for nonresidential fathers as those found here for residential fathers.

Notwithstanding these limitations, the study has a number of strengths, such as employing a large and racially diverse sample of low-income families with young children, and using a person-centered approach to test the father–child activation relationship theory, with the aim of replicating and extending previous research on this topic. Currently, Paquette's (2004) theory and its conceptualization of the activation parenting profile is being tested in a number of ways (for details, see Bocknek et al., 2017; Lazarus et al., 2016; Majdandžić et al., 2016; Stevenson & Crnic, 2013; Volling et al., 2019), with these researchers referring to this emerging parenting pattern by various terms, including *stimulating*, *directive*, or *challenging*. We preferred to use the term *activation parenting*, as this term could be linked directly to Paquette's (2004) theory and the earliest study by Stevenson and Crnic (2013), who created an activative parenting composite describing fathers using moderate levels of intrusiveness while also maintaining a high degree of sensitivity and positive regard for children. The critical point to communicate here is that despite such differences in naming conventions, researchers are starting to break from the maternal template of the sensitive and responsive mother as the ideal parent and explore alternative parenting profiles based on a theory of father–child relationships. This new parenting profile that includes stimulating, controlling, and challenging behavior while being sensitive and responsive to the needs of children, is displayed by both fathers and mothers, and in the end, opens up new avenues for research on parenting and children's development.

Conclusion

Consistent with the father–child activation relationship theory, the current study found an activation profile for fathers, as well as mothers. In this regard, key findings from previous studies, including Ryan et al. (2006) and Volling et al. (2019), were replicated using a large and diverse sample of low-income unmarried couples with young children. The current study also extended previous work by examining the associations between family profiles and children's behavioral, language, and socioemotional development. Sensitive and responsive mothering has been held as the optimal style of parenting for positive child outcomes in developmental and parenting research. When comparing different families in the current study, children in families with a supportive and activation parent did not differ in socioemotional outcomes compared with children with two supportive parents. Specifically, moderately intrusive parenting behaviors, as long as they are accompanied with a number of positive parenting behaviors, should not be automatically viewed as negative parenting by fathers or mothers. Notably, groups of intrusive mothers and intrusive fathers, who were indeed high on intrusiveness, negative regard and detachment, and low on positive parenting behaviors, characterized few parents in this highly socioeconomically disadvantaged sample. Researchers may need to consider alternate models of parenting that do not rely on and equate sensitive and responsive mother–child interactions based on traditional theories of mother–child attachment as the ideal parenting construct. Such an approach may limit our understanding of father–child relationships and the manner in which fathers' (and mothers') activation parenting contributes to children's development.

References

Achenbach, T. M. (1991). *Manual for Child Behavior Checklist/4–18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.

Administration for Children and Families. (2002). *Making a difference in the lives of infants and toddlers and their families: The impacts of early head start, Volume I: Final technical report*. Retrieved from https://www.acf.hhs.gov/opre/resource/making-a-difference-in-the-lives-of-infants-and-toddlers-and-their-families-0

Ainsworth, M. D. S., Bell, S. M., & Stayton, D. F. (1974). Infant-mother attachment and social development: Socialization as a product of reciprocal responsiveness to signals. In M. P. M. Richards (Ed.), *The integration of a child into a social world* (pp. 99–135). New York, NY: Cambridge University Press.

Andreassen, C., & Fletcher, P. (2007). *Early Childhood Longitudinal Study, Birth Cohort (ECLS–B) Psychometric Report for the 2-Year Data Collection* (NCES 2007–084). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development, 37,* 887–907. http://dx.doi.org/10.2307/1126611

Bendheim-Thoman Center for Research on Child Wellbeing. (2019). *User's guide for the Fragile Families and Child Wellbeing Study public data, year 5*. Princeton, NJ: Princeton University. Retrieved from https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/year_5_guide.pdf

Bergman, L. R., & Magnusson, D. (1997). A person-oriented approach in research on developmental psychopathology. *Development and Psychopathology, 9,* 291–319. http://dx.doi.org/10.1017/S095457949700206X

Blandon, A. Y., & Volling, B. L. (2008). Parental gentle guidance and children's compliance within the family: A replication study. *Journal of Family Psychology, 22,* 355–366. http://dx.doi.org/10.1037/0893-3200.22.3.355

Bocknek, E. L., Dayton, C., Raveau, H. A., Richardson, R., Brophy-Herb, H. E., & Fitzgerald, H. E. (2017). Routine active playtime with fathers is associated with self-regulation in early childhood. *Merrill-Palmer Quarterly, 63,* 105–134. http://dx.doi.org/10.13110/merrpalmquar1982.63.1.0105

Bradley, R. H., Corwyn, R. F., McAdoo, H. P., & Coll, C. G. (2001). The home environments of children in the United States part I: Variations by age, ethnicity, and poverty status. *Child Development, 72,* 1844–1867. http://dx.doi.org/10.1111/1467-8624.t01-1-00382

Brady-Smith, C., Brooks-Gunn, J., Tamis-LeMonda, C. S., Ispa, J. M., Fuligni, A. S., Chazan-Cohen, R., & Fine, M. A. (2013). Mother–infant interactions in Early Head Start: A person-oriented within-ethnic group approach. *Parenting, 13,* 27–43. http://dx.doi.org/10.1080/15295192.2013.732430

Bridgett, D. J., Ganiban, J. M., Neiderhiser, J. M., Natsuaki, M. N., Shaw, D. S., Reiss, D., & Leve, L. D. (2018). Contributions of mothers' and fathers' parenting to children's self-regulation: Evidence from an adoption study. *Developmental Science, 21,* e12692. http://dx.doi.org/10.1111/desc.12692

Carlo, G., Mestre, M. V., Samper, P., Tur, A., & Armenta, B. E. (2011). The longitudinal relations among dimensions of parenting styles, sympathy, prosocial moral reasoning, and prosocial behaviors. *International Journal of Behavioral Development, 35,* 116–124. http://dx.doi.org/10.1177/0165025410375921

Craig, L. (2006). Does father care mean fathers share? A comparison of how mothers and fathers in intact families spend time with children. *Gender and Society, 20,* 259–281. http://dx.doi.org/10.1177/0891243205285212

Cutler, L., & Palkovitz, R. (2020). Fathers' shared book reading experiences: Common behaviors, frequency, predictive factors, and develop-

mental outcomes. *Marriage and Family Review, 56,* 144–173. http://dx.doi.org/10.1080/01494929.2019.1683119

Davies, P. T., Forman, E. M., Rasi, J. A., & Stevens, K. I. (2002). Assessing children's emotional security in the interparental relationship: The Security in the Interparental Subsystem Scales. *Child Development, 73,* 544–562. http://dx.doi.org/10.1111/1467-8624.00423

Dunn, L. M., & Dunn, D. M. (2007). *PPVT-4: Peabody Picture Vocabulary Test*. Bloomington, MN: Pearson Assessment.

Fagot, B. I., & Kavanagh, K. (1993). Parenting during the second year: Effects of children's age, sex, and attachment classification. *Child Development, 64,* 258–271. http://dx.doi.org/10.2307/1131450

Fletcher, R., StGeorge, J., & Freeman, E. (2013). Rough and tumble play quality: Theoretical foundations for a new measure of father–child interaction. *Early Child Development and Care, 183,* 746–759. http://dx.doi.org/10.1080/03004430.2012.723439

Gaumon, S., & Paquette, D. (2013). The father–child activation relationship and internalising disorders at preschool age. *Early Child Development and Care, 183,* 447–463. http://dx.doi.org/10.1080/03004430.2012.711593

Grossmann, K., Grossmann, K. E., Fremmer-Bombik, E., Kindler, H., Scheuerer-Englisch, H., & Zimmermann, P. (2002). The uniqueness of the child-father attachment relationship: Fathers' sensitive and challenging play as a pivotal variable in a 16-year longitudinal study. *Social Development, 11,* 301–337. http://dx.doi.org/10.1111/1467-9507.00202

Hazen, N. L., McFarland, L., Jacobvitz, D., & Boyd-Soisson, E. (2010). Fathers' frightening behaviours and sensitivity with infants: Relations with fathers' attachment representations, father–infant attachment, and children's later outcomes. *Early Child Development and Care, 180,* 51–69. http://dx.doi.org/10.1080/03004430903414703

Ispa, J. M., Carlo, G., Palermo, F., Su-Russell, C., Harmeyer, E., & Streit, C. (2015). Middle childhood feelings toward mothers: Predictions from maternal directiveness at the age of two and respect for autonomy currently. *Social Development, 24,* 541–560. http://dx.doi.org/10.1111/sode.12108

Ispa, J. M., Claire Cook, J., Harmeyer, E., & Rudy, D. (2015). Mothers' physical interventions in toddler play in a low-income, African American sample. *Infant Behavior and Development, 41,* 88–101. http://dx.doi.org/10.1016/j.infbeh.2015.08.006

Ispa, J. M., Csizmadia, A., Rudy, D., Fine, M. A., Krull, J. L., Bradley, R. H., & Cabrera, N. (2013). Patterns of maternal directiveness by ethnicity among Early Head Start Research participants. *Parenting, 13,* 58–75. http://dx.doi.org/10.1080/15295192.2013.732439

Jeynes, W. H. (2016). Meta-analysis on the roles of fathers in parenting: Are they unique? *Marriage and Family Review, 52,* 665–688. http://dx.doi.org/10.1080/01494929.2016.1157121

John, A., Halliburton, A., & Humphrey, J. (2013). Child–mother and child–father play interaction patterns with preschoolers. *Early Child Development and Care, 183,* 483–497. http://dx.doi.org/10.1080/03004430.2012.711595

Karreman, A., van Tuijl, C., van Aken, M. A. G., & Deković, M. (2008). Parenting, coparenting, and effortful control in preschoolers. *Journal of Family Psychology, 22,* 30–40. http://dx.doi.org/10.1037/0893-3200.22.1.30

Kochanska, G., Aksan, N., & Koenig, A. L. (1995). A longitudinal study of the roots of preschoolers' conscience: Committed compliance and emerging internalization. *Child Development, 66,* 1752–1769. http://dx.doi.org/10.2307/1131908

Kochanska, G., Brock, R. L., & Boldt, L. J. (2017). A cascade from disregard for rules of conduct at preschool age to parental power assertion at early school age to antisocial behavior in early preadolescence: Interplay with the child's skin conductance level. *Development and Psychopathology, 29,* 875–885. http://dx.doi.org/10.1017/S0954579416000547

Kochanska, G., Murray, K., Jacques, T. Y., Koenig, A. L., & Vandegeest, K. A. (1996). Inhibitory control in young children and its role in emerging internalization. *Child Development, 67,* 490–507. http://dx.doi.org/10.2307/1131828

Lamb, M. E. (2010). *The role of the father in child development* (5th ed.). Hoboken, NJ: Wiley.

Lazarus, R. S., Dodd, H. F., Majdandžić, M., de Vente, W., Morris, T., Byrow, Y., . . . Hudson, J. L. (2016). The relationship between challenging parenting behaviour and childhood anxiety disorders. *Journal of Affective Disorders, 190,* 784–791. http://dx.doi.org/10.1016/j.jad.2015.11.032

Lee, J. Y., Volling, B. L., Lee, S. J., & Altschul, I. (2020). Longitudinal relations between coparenting and father engagement in low-income residential and nonresidential father families. *Journal of Family Psychology, 34,* 226–236. http://dx.doi.org/10.1037/fam0000612

Lindsey, E. W., Caldera, Y. M., & Rivera, M. (2013). Mother–child and father–child emotional expressiveness in Mexican-American families and toddlers' peer interactions. *Early Child Development and Care, 183,* 378–393. http://dx.doi.org/10.1080/03004430.2012.711589

Madigan, S., Prime, H., Graham, S. A., Rodrigues, M., Anderson, N., Khoury, J., & Jenkins, J. M. (2019). Parenting behavior and child language: A meta-analysis. *Pediatrics, 144,* e20183556. http://dx.doi.org/10.1542/peds.2018-3556

Majdandžić, M., de Vente, W., & Bögels, S. M. (2016). Challenging parenting behavior from infancy to toddlerhood: Etiology, measurement, and differences between fathers and mothers. *Infancy, 21,* 423–452. http://dx.doi.org/10.1111/infa.12125

McFadden, K. E., & Tamis-LeMonda, C. S. (2013). Maternal responsiveness, intrusiveness, and negativity during play with infants: Contextual associations and infant cognitive status in a low-income sample. *Infant Mental Health Journal, 34,* 80–92. http://dx.doi.org/10.1002/imhj.21376

McHarg, G., Fink, E., & Hughes, C. (2019). Crying babies, empathic toddlers, responsive mothers and fathers: Exploring parent-toddler interactions in an empathy paradigm. *Journal of Experimental Child Psychology, 179,* 23–37. http://dx.doi.org/10.1016/j.jecp.2018.11.002

Merrell, K. W. (2002). *Preschool and Kindergarten Behavior Scales* (2nd ed.). Austin, TX: PRO-ED.

Moore, Q., Sun, X., Wood, R. G., Clarkwest, A., Killewald, A., & Monahan, S. (2013). *The Building Strong Families project: Restricted use data files documentation report*. Princeton, NJ: Mathematic Policy Research.

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide*. Los Angeles, CA: Authors.

National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network. (1999). Child care and mother-child interaction in the first 3 years of life. *Developmental Psychology, 35,* 1399–1413. http://dx.doi.org/10.1037/0012-1649.35.6.1399

Office of Planning, Research, & Evaluation. (2008). *Implementation of Building Strong Families Program*. Retrieved from https://www.acf.hhs.gov/opre/resource/implementation-of-building-strong-families-program

Pancsofar, N., & Vernon-Feagans, L. (2010). Fathers' early contributions to children's language development in families from low-income rural communities. *Early Childhood Research Quarterly, 25,* 450–463. http://dx.doi.org/10.1016/j.ecresq.2010.02.001

Paquette, D. (2004). Theorizing the father-child relationship: Mechanisms and developmental outcomes. *Human Development, 47,* 193–219. http://dx.doi.org/10.1159/000078723

Paquette, D., Bolté, C., Turcotte, G., Dubeau, D., & Bouchard, C. (2000). A new typology of fathering: Defining and associated variables. *Infant and Child Development, 9,* 213–230. http://dx.doi.org/10.1002/1522-7219(200012)9:4<213::AID-ICD233>3.0.CO;2-0

Paquette, D., Gagnon, C., & de Medeiros, J. M. (2020). Fathers and the

activation relationship. In H. E. Fitzgerald, K. von Klitzing, N. Cabrera, J. Scarano do Mendonca, & T. Skjothaug (Eds.), *Handbook of fathers and child development: Prenatal to preschool*. Cham, Switzerland: Springer Nature.

Peterson, J. L., & Zill, N. (1986). Marital disruption, parent-child relationships, and behavior problems in children. *Journal of Marriage and the Family, 48,* 295–307. http://dx.doi.org/10.2307/352397

Richaud de Minzi, M. C. (2013). Children's perception of parental empathy as a precursor of children's empathy in middle and late childhood. *The Journal of Psychology, 147,* 563–576. http://dx.doi.org/10.1080/00223980.2012.721811

Ryan, R. M., Martin, A., & Brooks-Gunn, J. (2006). Is one good parent good enough? Patterns of mother and father parenting and child cognitive outcomes at 24 and 36 months. *Parenting, 6,* 211–228. http://dx.doi.org/10.1080/15295192.2006.9681306

Sarkadi, A., Kristiansson, R., Oberklaid, F., & Bremberg, S. (2008). Fathers' involvement and children's developmental outcomes: A systematic review of longitudinal studies. *Acta Paediatrica, 97,* 153–158. http://dx.doi.org/10.1111/j.1651-2227.2007.00572.x

Schwab, J. F., Rowe, M. L., Cabrera, N., & Lew-Williams, C. (2018). Fathers' repetition of words is coupled with children's vocabularies. *Journal of Experimental Child Psychology, 166,* 437–450. http://dx.doi.org/10.1016/j.jecp.2017.09.012

StataCorp. (2017). *Stata statistical software: Release 15*. College Station, TX: Author.

Stevenson, M., & Crnic, K. (2013). Intrusive fathering, children's self-regulation and social skills: A mediation analysis. *Journal of Intellectual Disability Research, 57,* 500–512. http://dx.doi.org/10.1111/j.1365-2788.2012.01549.x

Tamis-LeMonda, C. S., Briggs, R. D., McClowry, S. G., & Snow, D. L. (2009). Maternal control and sensitivity, child gender, and maternal education in relation to children's behavioral outcomes in African American families. *Journal of Applied Developmental Psychology, 30,* 321–331. http://dx.doi.org/10.1016/j.appdev.2008.12.018

Volling, B. L., McElwain, N. L., Notaro, P. C., & Herrera, C. (2002). Parents' emotional availability and infant emotional competence: Predictors of parent-infant attachment and emerging self-regulation. *Journal of Family Psychology, 16,* 447–465. http://dx.doi.org/10.1037/0893-3200.16.4.447

Volling, B. L., Stevenson, M. M., Safyer, P., Gonzalez, R., & Lee, J. Y. (2019). In search of the father-infant activation relationship: A person-centered approach. *Advancing Research and Measurement on Fathering and Child Development, 84,* 50–63. http://dx.doi.org/10.1111/mono.12404

Wade, M., Browne, D. T., Madigan, S., Plamondon, A., & Jenkins, J. M. (2014). Normal birth weight variation and children's neuropsychological functioning: Links between language, executive functioning, and theory of mind. *Journal of the International Neuropsychological Society, 20,* 909–919. http://dx.doi.org/10.1017/S1355617714000745

Wood, R. G., McConnell, S., Moore, Q., & Clarkwest, A. (2010). *Strengthening unmarried parents' relationships: The early impacts of Building Strong Families*. Princeton, NJ: Mathematic Policy Research.

Wood, R. G., Moore, Q., Clarkwest, A., & Killewald, A. (2014). The long-term effects of Building Strong Families: A program for unmarried parents. *Journal of Marriage and the Family, 76,* 446–463. http://dx.doi.org/10.1111/jomf.12094

Zill, N. (1985). *Behavior Problem Scales developed from the 1981 Child Health Supplement to the National Health Interview Survey*. Child Trends. Retrieved from https://www.childtrends.org/wp-content/uploads/01/Behavior-Problems-Index.pdf

Received December 3, 2019
Revision received May 12, 2020
Accepted May 20, 2020 ■