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Father involvement during early childhood: A systematic review of the literature

[Father involvement: Systematic review]

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## **Abstract**

During recent years, fathers' involvement has been addressed as a key source of family well-being and positive child development. However, the pathways to father involvement and its consequences for child development are varied, influenced by social, cultural, and ecological variables, and lack a systematic integration. This paper aims to bridge this gap by offering a systematic review of studies examining the psychosocial processes of father involvement during early childhood over the last 10 years. A database search was performed using a combination of relevant keywords, leading to identification of 3,655 articles, with 179 manuscripts assessed for eligibility, and finally 86 included. Most of the studies examine determinants of father involvement, with an emerging number of studies relying on the father's assessment and longitudinal designs. Nevertheless, the focus on white middle-class families is dominant, leaving unexplored father involvement in other cultures and contexts. The findings are analyzed aiming to open new avenues for future research.

**Keywords:** Child care; father involvement; parents; psychosocial aspects; systematic review.

## Introduction

Father involvement has emerged during the last decades as a relevant social topic, with fathers being addressed as a key source of family well-being and positive child developmental outcomes (Cabrera, Fitzgerald, Bradley, & Roggman, 2014; Cabrera, Volling, & Barr, 2018; Lamb, 2000; WHO, 2007). The increased interest in the father's roles in the family is the result of socio-economic changes, such as the increased number of women in the labor force, as well as increased diversity in family structures and dynamics, prompting new beliefs about the parental roles, particularly for men (Cabrera et al., 2014; Wall, 2016).

However, the pathways to father involvement and its consequences for child development vary and are influenced by a complex interplay of individual, social, cultural and ecological variables, which have not yet been integrated in a systematic way (Cabrera et al., 2018). As such, it is critical to map the complexities involving father involvement to better understand “what it means to be a parent in the 21<sup>st</sup> century” (Cabrera et al., 2018, p.152). Because father involvement happens in diverse family ecosystems and is influenced by personal characteristics and beliefs, social relations, family configuration, and available resources (Cabrera et al., 2018; Lamb, 2004; Schoppe-Sullivan, Brown, Cannon, Mangelsdorf, & Sokolowski, 2008), it is not expected that all fathers will be involved in the same way.

### *Models of father involvement*

Father involvement is a broad concept involving multiple dimensions, such as direct interactions with the child, responsibility for managing child-related tasks, or the monitoring of child activities and social interactions. These dimensions, however, are not conceptually equivalent, translating into a wide range of fathering, corresponding to different forms of involvement (Parke, 2000). Important psychology frameworks have moved forward from the classical distinction between father presence and father absence by examining the different forms of involvement (Parke, 2000). These frameworks uncovered how the quality of father involvement is more

important to child development than its quantity, namely by examining the variety of forms and domains of involvement (Palkowitz & Hull, 2018; Parke, 2000).

One of the most influential models of father involvement was proposed by Lamb et al. (1985; Lamb, 1987), conceptualizing the variability of father involvement and distinguishing three components: (1) *engagement*, related to the father's direct interactions with the child, e.g. caregiving, play; (2) *accessibility*, referring to the father's availability to respond to child requests; and (3) *responsibility*, concerning involvement in activities without direct interactions, such as deciding the child's school, making appointments with doctors or teachers (Lamb, 2000; Parke, 2000). This model was later reviewed by Pleck (2010), who aimed to clarify the qualitative dimensions and the operationalization of father involvement. The new model proposes three primary components of father involvement with the child: (1) *positive engagement*, related to interactions to promote child development; (2) *warmth and responsiveness*, underlying the father's positive engagement; and (3) *control*, involving the monitoring of child activities and participation in decision-making. Two auxiliary components were added to clarify the distinct dimensions of the original *responsibility* component: (4) *indirect care*, related to involvement with child related tasks but without direct interaction, e.g. purchasing and arranging goods/services for the child, as well as the managerial role of the child's social connections; and (5) *process responsibility*, related to parental consciousness, involving initiative-taking and monitoring what is needed for child care and well-being (Pleck, 2010).

Although all these components are central to family well-being and child development, most of the literature has focused on direct interactions, neglecting how managerial aspects (e.g. by arranging the home environment, defining parental roles, setting rules, and providing opportunities for social contacts) influence the child's developmental outcomes and family well-being (Cabrera et al., 2000, 2018; Lamb, 2000; Parke, 2000; Pleck, 2010). Moreover, father involvement may develop and operate differently across diverse family developmental contexts (Lamb et al., 1987; Parke, 2000; Pleck, 2010). Attending to the variety of fathering components and social/family resources,

father involvement is influenced by psychosocial aspects, e.g. beliefs, socioeconomic/cultural backgrounds, interpersonal relations, child characteristics; but also has influence on a multiplicity of domains, such as child developmental outcomes, quality of marital relations, and family well-being. These are important considerations for a better understanding of how father involvement develops and operates, and should be integrated to guide research on the topic (Cabrera et al., 2000; Lamb, 2000; Palkovitz & Hull, 2018; Pleck 2010).

The dynamism and complexity of processes related to fathering is addressed by conceptual models, systematizing the complex and multi-level determinants to fathering, and the pathways by which fathers (in)directly influence the child (e.g. Cabrera et al., 2014; Parke, 2000). These models aim to guide research by conceptualizing how fathering is a dynamic and reciprocal process resulting from the interplay between an individual's characteristics, such as personality, attitudes, behaviors, and social and ecological background, as well as aspects external to the family, such as work, support systems, community, and societal expectations, impacting child development over time. These models are grounded on previous ecological theories, as the Bioecological Theory of Human Development (Bronfenbrenner, 2001), or the Model of Parenting (Belsky, 1984), aiming to conceptualize how father involvement may vary in relation to other aspects of the family system and detail how it may change over time (Cabrera et al., 2014).

#### *Psychosocial determinants and outcomes of father involvement*

Father involvement has been previously examined taking into account diverse psychosocial determinants, as well as the multiple ways in which it may influence child development, family dynamics and the relations in daily life, across distinct developmental contexts (Cabrera et al., 2018; Lamb, 2000; Palkovitz & Hull, 2018; Pleck 2010).

An increased number of studies have outlined the pathways to father involvement, such as the father's education, occupation, beliefs and motivations regarding their roles. For instance, more educated fathers are more involved with their children in direct interactions (Cabrera et al., 2011; Castillo, Welch, & Sarver, 2010; McBride et al., 2005). Father's beliefs and motivations regarding

fathering also play a key role in involvement: men with egalitarian gender attitudes are more prone to be involved in child rearing tasks, are more active, responsible and warm (Cabrera et al., 2014; Planalp & Braungart-Rieker, 2016). Relational, social and community contexts may also influence father involvement, with for example a positive parents' relationship eliciting father involvement, whereas marital conflict jeopardizes it (Fagan & Palkowitz, 2011; Jia & Schoppe-Sullivan, 2016; Schoppe-Sullivan et al., 2008). Long working schedules also have a negative impact on father involvement (Cabrera et al., 2018; WHO, 2007). Indeed, many of these findings have been presented in previous reviews (e.g. Cabrera et al., 2014, 2018; Lamb, 2000; Marsiglio, Amato, & Day, 2000; Palkovitz & Hull, 2018). However, these reviews do not rely on a systematic methodology and it is crucial to integrate and map the psychosocial determinants of father involvement (Cabrera et al., 2000, 2018).

The role of father involvement on child developmental outcomes has been a key focus of research during the last decades, being identified as a predictor of children's better language and cognitive skills, higher self-regulation and fewer behavioral problems over time (Anderson et al., 2013; Cabrera et al., 2007; Cook et al., 2011). Although previous systematic reviews examined the effects of father involvement on child development (Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008), and child well-being of non-resident fathers (Adamsons & Johnson, 2013; Amato & Gilbreth, 1999), they do not fully cover the psychosocial aspects related to father involvement. First, by only examining longitudinally the consequences of father involvement to child development (Sarkadi et al., 2008), a diversity of studies, using different designs, were left out. Second, by only focusing on child development, other domains such as the quality of relationships, marital adjustment, or parents' well-being were disregarded. Third, by only examining the consequences of father involvement, its determinants were not considered. Finally, these reviews are now outdated and do not cover the diverse physical, social, and relational aspects related to father involvement during early childhood. So, it is of paramount importance to systematize its

determinants and consequences across the varied contexts of development (Cabrera et al., 2018; Palkovitz & Hull, 2018; Parke, 2000; Pleck, 2010), which is the goal of the current review.

The general aim of the current article is to offer an integrated view of the field by: (1) systematizing the psychosocial determinants of father involvement in worldwide research; (2) systematically examining father involvement consequences; and (3) identifying gaps in the literature and providing recommendations for future research, aiming to develop a more integrated agenda for studying the psychosocial aspects related to father involvement on early childhood.

## Method

This review follows the general guidelines presented in *Preferred Reporting for Systematic Reviews* (PRISMA; Moher et al., 2009) to examine the psychosocial processes related to father involvement (Figure 1). Each of these steps will be detailed next.

### Eligibility criteria and search strategy

A set of inclusion and exclusion criteria were established for article inclusion. For abstract screening, the following criteria were established *a priori*: (1) empirical articles with available abstract published in peer-review journals; (2) articles published in Portuguese, English, French, or Spanish (languages mastered by the authors); and (3) articles examining psychosocial processes of father involvement with children from birth to preschool (until 6 years old according to the World Health Organization); parents with at least 18 years-old, i.e. not adolescent parents. A hierarchical criterion of exclusion was created *a posteriori*: (1) infant or parents not living in natural contexts (e.g., institutionalized children, incarcerated fathers); (2) father involvement in the contexts of physical and/or mental illness, or addictive substance usage; (3) studies examining at least on dimension of father involvement, e.g. engagement, warmth, or responsibility, according to the psychosocial models of father involvement; (4) father involvement exclusively related to pregnancy, labor/birth or breastfeeding; (5) intervention programs; (6) articles aiming to develop, adapt, or validate measures of father involvement; and (7) studies with a qualitative design.



For the purpose of this review, we included studies in which men were presented as paternal figures involved in caregiving, despite marital status or biological relation (Sarkadi et al., 2008; Yogman et al., 2016). We also excluded studies that looked at father involvement only as providing financial support to the child. Although we are aware that financial support is an important dimension of the father responsibility component, it is not enough to capture the variability and multidimensionality of the role (Pleck, 2010; Sarkadi et al., 2008; Yogman et al., 2016).

A systematic data search was performed in PsycINFO and Web of Science using the following search terms (combined with Boolean terms): father\* OR paternal OR paternity AND involvement OR engagement AND infant OR child OR toddler OR baby. The combination of these terms was searched in the title, abstract and keywords. The search was applied to the last 10 years (until June 4<sup>th</sup> 2019), and resulted in 3,655 records (Figure 1).

### **Study selection**

The initial 3,655 articles were screened according to the established inclusion criteria by the first author and 3,282 articles were excluded at this stage. The remaining 273 articles were screened by the second author to assess eligibility for inclusion according to the criteria listed above and 179 full-texts were further assessed independently by the first two authors for inclusion. Disagreements were resolved by consensus. After full-text review by the first two authors, 86 articles met all the inclusion criteria (Figure 1).

### **Data extraction**

A categorization system was developed to collate and summarize the results. The categorization system was developed to identify: (1) general characteristics of the studies, e.g. country of origin, theoretical background (Table 1); (2) general characteristics of studies' participants, e.g. ethnicity, socioeconomic background, age range (Table 2); and domains and processes of father involvement (Table 3). The classification of the retrieved articles was performed by the first two authors. Disagreements were discussed until consensus was reached.

## Results

### *General description of the studies: Theoretical and empirical perspectives*

Generally, most of the articles drew upon psychosocial models of father involvement (e.g. Cabrera et al., 2014; Lamb et al., 1985, 1987; Pleck, 2010; 37.2%). Other theories, such as self-efficacy (Bandura, 1997), attachment (Bowlby, 1982), or gender role (Eagly et al., 2000) were also used. In some cases, authors addressed the use of more than one theoretical framework, for instance combining psychosocial models of father involvement with attachment theory, or family systems theory combined with gender roles theory; in those cases the articles were coded according to the frameworks presented by their authors. In other cases, the authors do not specify the theoretical framework on which their study was grounded (Table 1).

Most of the included studies used original samples (87.9%), whereas around 33% relied on secondary data. In what concerns studies' design, studies similarly relied on longitudinal (51.2%) and cross-sectional designs (47.7 %), but dyadic or mixed-methods approaches were much less frequent (Table 1). Although the self-reported assessment of father involvement was the most common (84.9%), an appreciable number of studies adopted other means of assessment, namely time-diary (8.1%) and observation (4.7%) approaches. Concerning the reporting of father involvement, most of the studies relied on father's reports (53.5%), whereas others assessed both mother and father (32.6%; Table 1).

Overall, studies were conducted in Anglo-Saxon countries, mainly in the United States of America (US; 57%). Father involvement in European (e.g. Finland, Portugal, Spain), Asian (mainly in China and Honk Kong), and Middle-Eastern (Israel, Turkey) and Brazil started to be uncovered but to a lower extent. It is important to note that studies with secondary data were mainly developed in US. Research involving more than one country was used in only two studies (Table 2).

Most of the studies assessed Caucasian (39.5%) and mixed ethnic background (20.9%) families. A small percentage of studies examined specific ethnic backgrounds, namely Asian (12.8%) and Middle-east (7%) families. Around 15% of the retrieved articles did not specify the

ethnic background of their participants. In what concerns participants' socioeconomic status (SES), middle-SES families were the most frequent (52.3%), with just a few clarifying that families belonged to higher or lower ranges. A small number of studies examined father involvement in low SES families (16.3%) and around 26% of the studies assessed families belonging to mixed SES (Table 2). Most of the studies assessed families in which fathers live together with mothers (70.9%), and almost all the studies included biological fathers (62.7%), with 31% disregarding this information. In what concerns the father's and child's age, a wide range of ages were covered by the included studies. Most of the children assessed were either infants (29.1%) or pre-school (27.9%), even in mixed-ages samples. Toddlers were the least explored age range corresponding to only 8.1% of the studies. Regarding father's age, mixed-age samples were the most frequent (65.1%), with around 18% of the articles leaving this information unspecified (Table 2).

Finally, Table 3 displays the domains of father involvement and the empirical processes related to it. Most of the studies focused on aspects related to father engagement, e.g. direct care activities, such as changing diapers, affection, and play (67.4%). However, an appreciable number of studies (15.1%) examined the three dimensions of involvement (i.e. engagement, responsibility and accessibility). Regarding empirical processes, although most of the studies examined father involvement as an outcome (60.5%), a relevant number of studies also focused on the consequences of father involvement in multiple domains of child and family well-being (24.4%), and some examined both (9.3%). A few studies also examined father involvement as having mediator or moderating effect on multiple aspects. The psychosocial processes related to father involvement will be detailed next, starting with the: (1) determinants of father involvement (i.e. father involvement as outcome); (2) consequences of father involvement (i.e. as predictor) to family relationships and child development.

### *1. Determinants of father involvement*

The studies examining psychosocial determinants of father involvement were the most frequent (60.5%) and were organized along four main dimensions: (1) *Individual influences*,

examining paternal-related variables, such as social background, personality characteristics, fathers' behaviors and attitudes; (2) *Familial*, including other family members' characteristics, behaviors and family relationships; (3) *Extra-familial and support systems*, containing aspects related social network, community and work; and (4) *Cultural*, including macro social, cultural, political, economic conditions, which will be detailed next. These levels of analysis were organized based on the Biological Model of Human Development (Bronfenbrenner, 2005), adapted by Cabrera et al. (2014) and Parke (2000), who offered heuristic models of father involvement to describe the reciprocal processes between characteristics of the person and the ecological environment where fathering happens.

### *1.1. Individual determinants*

The individual determinants were frequently examined ( $n=35$ ), mainly concerning aspects related to the person ( $n=15$ ), or individual attitudes and beliefs concerning fathering ( $n=20$ ).

Aspects related to father's socioeconomic background were often examined, but with some inconsistent findings. On the one hand, parents' higher income/education was related to greater father involvement (ID#14, 47, 52, 61, 86), namely in the specific domains of direct (ID#24, 34, 41) and indirect care (ID#62, 79), but to lower involvement in play (ID#61, 63). On the other hand, lower father's income/education was related to higher father involvement (#30) in caregiving and play (ID#34). However, parenting styles seem to play a role in these associations. Among fathers with lower education, those with an authoritative style were more involved in direct care (ID#61). A study with Chinese families uncovered how a greater difference on mothers' and fathers' occupational status exerted a negative influence on father involvement through co-parenting (ID#51); i.e. when both parents' occupational status was high or low, fathers were more likely to become involved in childrearing, compared to fathers whose occupational status was higher than that of their spouses. . The effect of father's age on his involvement was neglected by most of the included studies. Among those which examined it, higher father's age seemed to reveal a beneficial influence on his involvement (ID#29, 43), namely in caring for infant's distress (ID#41). However,

other studies reported that younger fathers were more involved (ID#14, 66), whereas older fathers were less involved in play (ID#61, 62), indirect care (ID#62), and teaching/discipline (ID#61).

Aspects related to paternal history tended to focus on father's childhood experiences, and, to a lesser extent, examined the timing of entry into fatherhood. Findings depicted that, in general, fathers' positive childhood experiences (ID#41) and greater involvement of their own fathers were related to more involvement (#29), whereas fathers who received less physical affection from their own mothers revealed lower involvement with their children (#7). Moreover, father's own parents' higher education was related to higher father involvement in caregiving and play (ID#34). One study also depicted how marital status (i.e. cohabiting vs. married fathers) moderated the relation between receiving maternal affection during infancy and father involvement (ID#7): cohabiting fathers, compared to married ones, were less involved with their newborns when they had received less physical affection from their mothers during infancy.

Studies examining individual attitudes about father involvement tended to rely on longitudinal designs, often starting with pregnancy. Fathers with pre-natal involvement, e.g. by attending pregnancy check-ups or pre-natal classes, predicted higher involvement after birth, namely across the first two years (ID#7, 52, 74, 76), particularly in caregiving and play (ID#34), with the quality of the mother–father relationship mediating the association between pre-natal and later father involvement (i.e., 14 months postpartum; ID#77). In addition, fathers with more positive attitudes toward the baby during pregnancy revealed higher involvement 3 months after birth (#73). Moreover, greater father involvement in the days following the birth was related to higher involvement after 6 months (#74). Some studies uncovered how small gestures such as the cut of the umbilical cord at birth (ID#8) or being involved on the day of the mother's hospital discharge (ID#74) were related to higher father involvement in the first months after birth.

Although father involvement as having a mediating effect was minimally examined, some studies uncovered how the father's perceptions of his skills to care for the infant before and after birth were mediated by early father involvement (ID#5). In addition, one study explained that

interactive effects of maternal physical affection and marital status on engagement with newborns was mediated by paternal involvement during pregnancy (ID#7).

The role of the father's cognitive attitudes, e.g. self-efficacy, on his involvement was also examined. Greater father's self-efficacy and positive beliefs regarding the paternal role were related to greater father involvement (ID#43, 44, 66), namely over time (ID#59, 73, 74, 80). Self-efficacy and positive beliefs regarding parenting also played a role by mediating the relation between the father-mother relationship (e.g. parenting alliance, marital satisfaction) and father involvement (ID#44). Also, among immigrant fathers who tended to engage less in caretaking activities, when compared to non-immigrant, fathers' traditional beliefs about parenting partially accounted for this association (ID#15). Marital satisfaction also moderated the effect of fathering efficacy on father's involvement: fathers with high marital satisfaction reported higher levels of involvement than fathers who had low marital satisfaction for the same level of fathering efficacy (ID#43). Father's mental health also played a role in his involvement: worse father's psychological adjustment led to a decrease in his involvement over time (ID#31), whereas lower levels of parenting stress were related to higher father involvement (ID#79).

Some studies examined the account of father's identification with his role as a father, revealing that greater identity as a father was related to increased involvement (ID#1, 21, 23, 36, 69), which tended to remain stable over time (ID#23, 36). However, the way mothers valued father's engagement moderated his involvement: when mothers assigned high importance to fathering roles, fathers who value being a parent tended to be more involved with their children (ID#1). Moreover, fathers engaged in more caregiving activities when mothers reported higher depressive symptoms when marital conflict was low and increased in play when marital conflict was higher (ID#69).

### *1.2. Family determinants*

These studies mainly focused on interpersonal aspects of the family (e.g. marital satisfaction, gatekeeping;  $n=21$ ). Ecological (e.g. family size, family well-being;  $n=6$ ) and individual aspects of the child (e.g. sex, temperament) were examined on a lesser extent ( $n=7$ ).

The influence of both the father-mother relationship and communication on father involvement was frequently examined. Greater marital satisfaction (ID#43, 55, 57, 70) and positive co-parenting were positively related to father involvement (ID#27, 47, 54, 86), namely over time (ID#55, 72, 86). Father's report of greater relationship quality moderated father's engagement with the child in literacy activities (ID#13). Other study uncovered that father residency status moderated the associations between the mother–father relationship and fathers' time spent with the child (ID#76): a better parental relationship led to greater time alone with a 14-month-old child among non-resident fathers. The association between supportive co-parenting and father involvement in caregiving, however, was moderated by the child's sex, being significant when the focal child was a girl (ID#32). Lower maternal gatekeeping was also related to higher levels of father involvement (ID#41, 59), whereas mothers' higher support for fathering increased his involvement (ID#63, 65). Importantly, father involvement mediated the relation between maternal support and marital satisfaction (ID#65). Some studies examined father involvement among non-cohabiting parents, uncovering how positive co-parenting is related to a greater father involvement (ID#54, 82), namely over time (ID#19). Also, father's greater share of childcare when living as a couple increases father's involvement after separation (ID#47).

Only two studies focused on the effects of the quality of interpersonal father-child relations, specifically attachment quality, on father involvement. Findings suggest that higher father-child attachment was associated with higher involvement in direct care, play, education and affection (ID#11, 71) with this association remaining stable across early childhood (ID#11). Ecological aspects of the family, such as family size, also play an important role in father involvement, which was higher in small families, particularly for the caring and nurturing dimensions (ID#26, 30, 86).

Indeed, a greater number of children in the household was related to lower father involvement in play (ID#41). Additionally, in families with lower family stress fathers were more involved in direct care, play, education and affection (ID#71). Another study uncovered a lower paternal overall and nighttime involvement in infant caregiving when the child shared the room with parents (vs. child sleeping in a different room; ID#81). Divorced fathers and fathers in non-traditional families exhibited greater interaction with children, in comparison to fathers in traditional families (ID#26).

In the literature, child's characteristics, such as age, sex, or temperament are described as having a role in father involvement, but results are inconsistent, with many studies reporting the absence of significant effects. Nonetheless, others suggest the influence of these variables, e.g., the child's age was related to contradictory patterns of father involvement. In one study fathers were more involved with older preschool children in discipline/teaching (#26), whereas others revealed that as the preschoolers grows older, fathers were less involved in teaching/discipline activities (ID#61). A longitudinal study also depicted the effect of birth order, with fathers being more involved with their firstborns (ID#42), in indirect care and play domains (ID#62). Regarding child's sex, one study showed fathers more involved with play and direct care with boys than with girls (ID#62), whereas another described a faster and increased involvement in caregiving tasks with girls over boys (ID#69).

Concerning the child's temperament, some studies suggested that difficult child temperament was related to lower father involvement in play and affection (ID#41), whereas others revealed that father involvement was higher when the child was perceived as having a more challenging temperament (ID#10). However, the number of father's working hours moderated the relation between challenging temperament and workday play, indicating that temperament and workday play were only related among fathers who worked longer hours (ID#10). Marital satisfaction also emerged as important in accounting for the association between infant temperament and father involvement (ID#55).



Aspects of the mother were rarely examined, but one study depicted that the mother's desire for higher participation of the father was strongly related to his involvement (ID#62). Longitudinal studies also depicted that mothers' higher positive perceptions about fathers (ID#20) and maternal encouragement (ID#18) was associated with greater involvement, namely fathers' higher warmth toward their child (ID#20). In opposition, mothers' distress during pregnancy was related to a decline in father involvement after birth (ID#31).

Finally, a set of studies described how mothers and fathers engage with their child. Overall, mothers engage more frequently and in a more diverse way in daily activities (ID#39, 50, 52, 59, 62, 70). Still, some differences emerged in the way each parent is involved with the child. Although both parents rated themselves as more involved in play and affection, rather than in discipline (ID#22), mothers desired a greater participation of the fathers in caregiving activities, and a lesser participation in play (ID#62). Others described how fathers engaged more in physical play and object exploration with sons, while mothers engaged more in social games and routines with daughters (ID#50). One study also displayed a parental agreement on reports about fathers' financial provisioning and time spent with the infant. Inconsistencies were found related to fathers' engagement in direct caregiving, decision-making responsibility, and assistance with household chores, with fathers reporting higher levels of involvement than the ones reported by mothers (#58).

### *1.3. Extra-family determinants*

The work-family relationship was one of the most frequent topics examined among extra-family determinants related to father involvement ( $n= 18$ ). Only one study explored informal support systems, revealing that receiving help from people outside of the family was associated with higher father involvement in play (ID#34).

Paternal leave was an extra-family determinant often examined, uncovering how it positively impacts father's involvement (ID#28, 38, 56, 67, 68). However, how the duration of the paternal leave impacts it is less clear, with some claiming that duration does not impact involvement (ID# 28, 56), whereas others argue that longer leaves are related to a greater involvement not only

in caretaking tasks (ID#39, 70), but also in responsibility domains (ID#38), namely over infancy (ID#39, 70). Paternity leave-taking and its greater length are especially likely to boost fathers' engagement and responsibility among nonresident fathers (ID#38). In addition, father's attitudes partially explain the relationships between length of paternity leave and father engagement (ID#68).

Current research also uncovered how employment of both parents, and particularly mother's increased number of working hours, was positively related to higher father involvement (ID#46, 52, 59, 79), with longitudinal studies revealing the stability of these association over time (ID#42, 59, 74). Although fathers in comparison with mothers were still less involved with their children, parents who work on opposite shifts had a more equitable division of childcare than parents who work on the same shift (ID#42, 59). Studies also highlighted how the number of hours at work and the quality of the work environment influenced father involvement. Lower father working hours (#30, 46), lower work distress (ID#29, 34), and greater work stability and flexibility (ID#14) were related to higher levels of father involvement, namely in the domains of direct care and play (ID#34). Otherwise, the number of hours at work was negatively associated with father involvement (ID#56), namely in play and decreases accessibility to the child (ID#10).

#### *1.4. Cultural determinants*

Despite overall cultural influences on father involvement having been only minimally examined, aspects of gender-role beliefs ( $n=5$ ) or religiousness ( $n=3$ ) began to be uncovered. In general, more egalitarian gender-role beliefs predicted greater father involvement (ID#29, 34, 44, 65), also over time (ID#37, 59), particularly for dual-earner families (ID#42) in direct-care activities and play (ID#29, 34). Importantly, fathers with more egalitarian gender role beliefs engaged more with "responsibility" activities (ID#36). Father involvement mediated gender role beliefs and marital satisfaction (ID#65).

The role of religiosity on father's involvement is still ambiguous. Overall, higher religiousness was related to higher involvement (ID#66, 67), with religious participation moderating the associations between paternity leave and father involvement (ID#67). However,

religiousness had a negative effect on some activities of the father's direct care, where more religious couples displayed a greater gender gap in "the messy" involvement (i.e. changing diapers, putting the child to sleep), with mothers doing substantially more of this work (ID#16).

## 2. *Outcomes of father involvement*

The outcomes of father involvement were examined at the individual ( $n=17$ ) and interpersonal levels ( $n=7$ ). At the individual level, studies mainly focused on aspects related to child development, whereas at the interpersonal level they focused on marital relations or co-parenting.

### 2.1. *Child development outcomes*

Most of the studies examined the consequences of father involvement on the child's socio-emotional and behavioral outcomes. Father involvement in play and direct care was related to lower preschoolers' externalizing behaviors (ID#25, 33, 40, 48, 79), particularly for boys (ID#25, 35, 79). Fathers' positive involvement was also related to greater cognitive ability in children (ID#64), namely over time (ID#84). In opposition, lower father involvement was related to greater child-peer aggression, regardless of the quality of the mother-child relationship (ID#37).

Father involvement also played a role in child emotion regulation, being related to higher levels of socio-emotional competence (ID#2, 4, 45, 79). Indeed, higher paternal involvement with discipline was associated with fewer problem behaviors and more advanced math skills (ID#3), namely among boys who were African American (ID#4). Importantly, co-parenting seemed to moderate the association between father involvement (in play) and the child's social competence: lower levels of supportive co-parenting were associated with a decrease in child social competence (ID#33). Also, the influence of maternal gatekeeping on preschoolers' socio-emotional development was mediated by father involvement (ID#83). Moreover, the effect of maternal co-parenting attitudes on child externalizing behaviors was mediated by father involvement, particularly among fathers who displayed prenatal involvement, and after accounting for child temperament (ID#85).

A longitudinal time-diary study depicted that greater father involvement at 13 months of the infant predicted attachment security at 3 years (ID#11), but revealing different influences of father involvement on the attachment, depending on work/non-work-days. On work-days, father involvement in caregiving was related to more attachment security, whereas father involvement in play was related to lower attachment security. In opposition, on non-workdays, father involvement in play was associated with higher attachment security (ID#9). Less explored was the role of father involvement on child mental health, with only one study uncovering the relation between higher father involvement and lower levels of anxiety, depression, and withdrawal of the child (ID#48).

Some studies have also assessed the role of father involvement on the infant's sleep. Overall, studies depicted the positive influence of father involvement in caregiving on the quantity and quality of infant sleep (ID#77, 78), even after controlling for breastfeeding (ID#77), one year later (ID#6). Moreover, father involvement moderated child sleep disturbances and maternal stress, with both parents displaying high levels of stress when father involvement was low (ID#60).

## *2.2. Interpersonal relations outcomes*

This set of studies examined how father involvement has implications for co-parenting, marital and familial relationships. Regarding co-parenting, the results seem to be inconsistent. Some studies reported that greater father involvement in caregiving and play was related to more supportive co-parenting (ID#20, 63), better family and marital interactions (ID#48), including over time (ID#32). Others found that greater father involvement in caregiving and play was associated with decreased undermining co-parenting behavior in dual-earner families, whereas in single-earner families greater father involvement in caregiving was associated with less perceived supportive co-parenting (ID#12). One study examining direct and indirect effects of father involvement uncovered its different longitudinal paths to co-parenting depending on the type of activity in which fathers were engaged (ID#17): father's physical involvement was associated with increased levels of later co-parenting conflict, whereas father's involvement with cognitive stimulation was related to lower levels of later co-parenting conflict.

A few studies also examined the influence of father involvement on the mother's well-being. One depicted that an increased involvement in child caregiving was associated with decreases in mothers' dysphoria and anxiety (ID#31). Another study revealed that lower father involvement in direct care was an independent risk factor for maternal depression six months after birth (ID#49). Among unemployed mothers, those with higher levels of anxiety tended to have partners who spent less time with the child and had lower childcare and nursing frequency (#49).

### **Discussion**

The main goal of this review has been to provide a systematized overview of the current research on psychosocial processes of father involvement. Relying on heuristic models of fathering (Cabrera et al., 2014; Parke, 2000), we systematize the (1) fathers' individual characteristics, his relationships and background accounting for his involvement; and (2) the implications of this involvement to child development and well-being. We moved forward from previous reviews by also systematizing the consequences of father involvement to other domains beyond child development, e.g. marital relationship, co-parenting. The main contributions and gaps of the included articles are here discussed aiming to provide directions for future studies.

#### *General characteristics of the studies: Emerging approaches on father involvement research*

Diverse theoretical frameworks – with psychosocial models of father involvement (e.g. Cabrera et al., 2014; Lamb et al., 2004; Pleck, 2010) being the most frequent – have been used to analyze the reciprocal influences between family members, their behaviors and ecological characteristics (Cabrera et al., 2014). Sometimes, the same study combined different theoretical frameworks, depicting the multiple lenses by which father involvement has been examined. The use of heuristic models of fathering was reflected in most of the studies' designs, which specifically examined father involvement relying on fathers' or both parents' reports/observations, aiming to uncover (inter)personal aspects accounting for father involvement. Importantly, transactional research also started to be explored by analyzing how children's characteristics impact fathering (Cabrera et al., 2014). However, some articles did not make explicit which theoretical framework

was used, inhibiting a full understanding about the meaning and nature of these psychosocial processes (Abend, 2008). The lack of theoretical background to guide the research on father involvement has been addressed as one of the main challenges of researching the topic, which may lead to a narrow understanding about the “what” and “whys” of fatherhood, its determinants and consequences (Lamb, 2000; Palkovitz & Hull, 2018; Pleck, 2010; Volling & Cabrera, 2019).

In what concerns study design, a growing body of research relies on longitudinal and dyadic approaches. Moreover, interviews, time-diary studies and observational ones have become more prevalent (around 15%), providing new understandings about fathering, with most of them assessing fathers’ (54%) or both parents’ (33%) reports. These emerging trends are crucial to understand how contextual and interpersonal aspects may influence father involvement, capturing the dynamism and transformations inherent to it and the evolution of reciprocal processes over time (Cabrera et al., 2014). However, these trends are distinct from findings of other reviews (e.g. Cabrera et al., 2018; Palkowitz et al., 2018), which reported a dominance of cross-sectional studies, typically relying on mothers’ reports of father involvement. These divergent trends maybe due to the fact that studies included in the current review were performed during the last 10 years, revealing more specific methodological approaches to examining father involvement, revealing a considerable progress of current research on father involvement (Parke & Cookston, 2019). Importantly, this research, by being theoretically grounded, allows for the identification of psychosocial determinants of father involvement and the role of the father in the child’s development and in family relations.

#### *General characteristics of the sample: A biased view of father involvement*

Studies included in the current review were conducted in diverse countries, but mainly focused on Western societies. There was a dominant focus on white (40%) and middle-class families (52%), leaving unexplored among the included studies father involvement in different socioeconomic and cultural backgrounds. Hence, most of the studies ignored the variability of the families in which father involvement happens worldwide and their influence on family dynamics

and child development (Cabrera et al., 2018; Palkovitz & Hull, 2018; Pleck, 2010). Although a significant number of studies included mixed ethnic (21%) and mixed socioeconomic samples (26%), they tended to ignore how father involvement happens among these different social groups. In addition, most of the studies that examined specific ethnic groups (e.g. African, Latinos) relied on lower SES samples. Hence, the results do not allow disentanglement of SES and ethnic characteristics for father involvement. This narrow approach limits the understanding of the wide range of families' behaviors, expectations, and social norms related to parenting in general, and fatherhood in particular. This is a significant gap, taking into account that father involvement is a reciprocal process between characteristics of father's background, namely family characteristics, interpersonal relations, culture, and social politics (Cabrera et al., 2014). As such, fathers from different social backgrounds express distinct concerns and expectations about the child's needs and education (Caldwell et al., 2010; Smith et al., 2015). This information is also crucial to facilitate communication with other child professional providers, such as pediatricians, teachers, or community based organizations, who deal with children and families from diverse social backgrounds (Yogman, Craig, & Garfield, 2016).

Although the focus on black and non-residential fathers has increased, particularly in American studies, these often rely on secondary data (e.g. *The Fragile Families and Child Wellbeing Study*) and are still scarce, limiting the understanding of how cultural influences and ethnicity-related family values and beliefs account for father involvement, as addressed by the psychosocial models of fathering (e.g. Cabrera et al., 2014; Parke, 2000). The lack of variability in social, economic and family diversity reflected in these studies may also be due to limitations of data collection – e.g. limited research resources may hamper the variability of sample recruitment methods. Nevertheless, by ignoring how fatherhood occurs across diverse ethnic, social, and cultural backgrounds, scholars are not examining “real fatherhood” happening within diverse family contexts (Cabrera et al., 2018). This oversight is critical, considering that the way a father engages

with his child(ren) is tied to the family's social background, namely paternal history, cultural values, social networks and community (Cabrera et al., 2014; Parke & Cookston, 2019).

Regarding child and father age-ranges, studies revealed distinct trends in their specificities. About child age-range, most of the research tended to focus on infants and preschool children, with a considerable number of studies including mixed-age groups, mainly in longitudinal research. Still, studies are leaving unexplored how fathers engage with toddlers and how this evolves over time. This points to an empirical gap about how father involvement may vary depending on the child's age and how (in)direct forms of care may occur across early childhood. In what concerns father age-range, most of the studies relied on mixed age samples, or did not mention the father's age. By ignoring the timing of fatherhood, studies also do not capture how aspects related to the father's age, such as energy, health, or personal availability may account for his involvement (Parke, 2000). This is critical taking into account that younger and older fathers differ in interaction with their child, namely in domains of involvement (Kulik & Sadeh, 2015; Kwok et al., 2013; Monteiro et al., 2009). These findings call for a greater inclusion of personal aspects of the fathers, as stated by the heuristic models of fathering, to better understand how father involvement may vary across the life course and contexts of development (Cabrera et al., 2014; Parke, 2000).

*Psychosocial processes related to father involvement: A dominant focus on father engagement and its determinants*

The focus on the father's direct engagement with the child was a dominant trend, with most of the studies assessing direct interactions, particularly on play/leisure activities and affection. Father involvement in "hands-on" activities, such as changing diapers or feeding were also often examined. Thus, despite the call to scholars move beyond father engagement, exploring other key dimensions of fatherhood, such as indirect care or accessibility (Cabrera et al., 2018; Parke, 2000; Pleck, 2010), these remained less examined. This gap limits the understanding not only about how fathers are available to be "on duty" with the child (i.e. accessibility), but also how fathers are assuming managerial roles related to child health and well-being (i.e. responsibility; Parke, 2000). It



is thus more difficult to determine whether fathers perform an autonomous role in parenting, rather than being peripheral and “helpers” of the mothers (Lamb, 2000; Pleck, 2012). This bias is still present in much of the research, which frequently examined father involvement through unidimensional evaluations of involvement in play, affection, or leisure activities, leaving unexplored the interplay between specific components of microsystems, mesosystems interactions, as well as exo and macrosystems influences. This is crucial to fully address the heuristic models of fathering, to better exploring attitudes, motivations and beliefs, allowing for an understanding of how “maternal and paternal parenting operates in additive, complementary, and synergistic ways” (Cabrera et al., 2014, p.349; Parke, 2000).

Overall, there is a trend of studies analyzing the psychosocial determinants of father involvement, rather than its outcomes. Mechanisms and conditions accounting for these processes were rarely examined. In what concerns psychosocial determinants, aspects related to the father and his relationship with the child’s mother were the most frequent. Findings highlighted how the father’s education, positive attitudes and behaviors on parenting enhance his involvement. Yet, aspects beyond direct observation, such as emotions and cognitions related to fathering and child development, e.g. worries, desires, joy, rumination or pride, tend to be neglected. Hence it remains a call to integrate these components of fatherhood with the conceptualization of its involvement (Palkowitz et al., 2018; Parke, 2000; Parke & Cookstone, 2019; Pleck, 2010), allowing to capture the dynamism and bidirectionality of father involvement (Cabrera et al., 2014). Based on that, new measures of fathering may be developed, namely to cover aspects, such as how individual expectations and performances of fatherhood correspond to individual societal aspirations, decreasing the effects of social desirability involved not only on self-report measures, but also on observational designs.

Family and contextual determinants of father involvement start to be examined, addressing the interplay between the person, the family and their ecological characteristics as addressed by psychosocial models of fatherhood (Cabrera et al., 2018; Lamb, 2000; Palkowitz et al., 2018; Pleck,

2010; Volling & Cabrera, 2019). These studies revealed how the quality of interpersonal relationships in the family (i.e. between mother, father, and the child) influences father involvement in different domains, reinforcing the ecological perspective of father involvement (Palkowitz et al., 2018; Pleck, 2010; Volling & Cabrera, 2019). Less explored are the personal aspects of the mother and the child and their influence on father involvement, failing to capture how they may differently account for paternal roles and involvement (Lamb, 2000; Parke, 2000; Volling & Cabrera, 2019), as addressed by the heuristic model (Cabrera et al., 2014). Although characteristics of the child (e.g. temperament) were examined in some studies, contradictory findings suggest the need to include other variables and mechanisms to understand its influence on father involvement, to consider the pathways from father involvement to child development and vice-versa (Cabrera et al., 2014).

Importantly, extra-family characteristics such as work arrangements and cultural beliefs have emerged as an important trend, although to a lesser extent. Other ecological aspects of the family, such as religiousness or informal support systems were mainly overlooked. Moreover, just a few studies explored the influence of these determinants across families with different configurations and socio-cultural backgrounds, leaving unexplored how personal and ecological aspects unfold father involvement (Cabrera et al., 2018; Lamb, 2000; Palkowitz et al., 2018; Pleck, 2010; Volling & Cabrera, 2019). These gaps limit the understanding about how societal norms and community ideals influence father involvement, not only concerning father's and others' perceptions about it, but also how his involvement corresponds to his expectations, to his engagement with his own paternal aspirations.

Research on the consequences of father involvement mainly focused on child emotional and behavioral outcomes. Although most of the studies examined direct associations, some of the mechanisms and conditions accounting for them have begun to be considered. The importance of external aspects, e.g. mother's attitudes and behaviors, addressed by psychosocial models (Cabrera et al., 2014; Parke, 2000) were highlighted, but other aspects such as how mother/father emotional and cognitive processes account for child development were overlooked (Parke, 2000; Palkowitz et

al., 2018), as were accounts of father involvement on child mental health. By ignoring the role of father involvement on the psychological adjustment of diverse family members, studies limit the understanding of this role as an important resource for promoting positive developmental cascades in families (Masten, 2014; Palkowitz et al., 2018).

### **Final remarks**

The current review uncovers how research in father involvement is progressing, with a considerable number of studies relying on fathers' reports and longitudinal assessments. Nevertheless, this review has some limitations that need to be addressed. First, by only including empirical scientific articles published during the last 10 years, potentially relevant sources, such as book chapters or "grey literature", were left out because they were not located in the searched databases. Second, aiming to capture overall psychosocial determinants and outcomes related to father involvement, we decided to use broader keywords, such as "father involvement" or "child"; therefore, articles related to the research topic indexed with other terms may not have been identified. Third, due to our goal of understanding psychological processes of everyday father involvement in the family context, studies examining pathological processes, or father involvement in non-familial contexts (e.g. incarcerated fathers, criminal history) were not included. Fourth, by focusing on psychosocial processes, qualitative studies were not included, despite their important contributions to meaning-making on the topic, particularly to better understanding incongruent findings or less explored aspects of fathering. Fifth, it is important to highlight that the trends and gaps addressed derived from the parameters developed for the inclusion/exclusion of the articles. Finally, according to systematic reviews' goals and methods, the quality of included studies and their size effects were not evaluated, limiting extrapolation to clinical designs. Despite these limitations, this review, by relying on a systematized approach, allows for the identification of current research on psychosocial processes of father involvement, identifying important directions for future research.

At a first glance, there is an evident need to go beyond the study of father involvement in Western middle-class families. Researchers need to design quantitative studies to examine fathering on other contexts, such as families with non-resident fathers, reconfigured families in which there may exist more than one parental figure, e.g. the biological father and a stepfather, or families with parents of the same sex. In addition, as characteristics of father involvement tend to be tied to family socioeconomic background (Parke & Cookston, 2019), future studies need to focus on economically and ethnically diverse families, namely with cross-cultural research. Research needs to move forward in relation to theory to better understand the reciprocal influence of family's elements and social resources on father involvement, namely the involvement on specific dimensions of care. Moreover, future studies may be informative to understand what fathers do and how it matters for children (Cabrera et al., 2014, 2018). This is particularly important due to the increase of economic inequality, which may contribute to greater variability in paternal engagement across social classes and groups (Parke & Cookston, 2019). Funding agencies may play an important role to stimulate diverse research, namely through special calls to deepen the knowledge about fathering in vulnerable backgrounds, as well as on same-sex relationships, or non-residential fathers. The increase of incentives to stimulate participation on data collection may be a helpful approach to decrease these gaps on research.

Second, there is a need to better understand how the socio-cultural characteristics in which the family is embedded, such as religiousness, social norms or beliefs about parenting influence fatherhood processes (Cabrera et al., 2018; Parke & Cookston, 2019). Despite some studies have started to uncover how parental and gender beliefs influence fathering, it is still scarce the understanding of the influence community and societal expectations about fathering affect father's individual behavior and development. This is central, taking into account the role of social norms and cultural beliefs to modulate and explain how fathers involve with different aspects of childcare (Cabrera et al., 2018; Parke, 2000). Hence, future studies should provide a closer look to family dynamics and its interconnection with cultural/societal backgrounds, exploring how it influences

individual aspirations and behaviors of fathering, enacting or inhibiting it, possibly through feedback mechanisms (Palkowitz et al., 2018; Parke, 2000; Volling & Cabrera, 2019).

Third, father involvement research needs to move beyond fathers', mothers', and children's behavioral scripts and start to include their emotions, cognitions and affects (Parke, 2000; Pleck, 2010). Aspects related to expectations and plans related to child development, or parents' decision-making, or thoughts about parenting play a key-role on the way fathers involve (Pleck, 2010) but remain forgotten in most of the research. Hence, the investigation of intra-individual aspects (e.g. cognitions, beliefs, emotions) are important developments for future research by providing important clues about manifestations of father involvement and interpersonal relations.

Finally, there is a call to better understand personal, relational, and ecological mechanisms and conditions accounting for father involvement in diverse family contexts. It is crucial to better understand the indirect effects of father involvement processes, as well as (inter)personal/ contextual aspects modulating it. This corpus of knowledge is particularly relevant to better respond to the social claim of promoting father involvement. Taking into account the increased number of interventions to enhance father involvement, particularly in the context of disadvantaged backgrounds, and some of the identified gaps (e.g. Henry et al., 2019; McBride et al., 2017), it is critical to explore these mechanisms and conditions to better design evidence-based prevention and intervention programs. Moreover, this approach would decrease biases that tend to be perpetuated on fathering research, such as the focus on behavioral aspects of direct care and play, often relying on self-report. This is crucial to understand how each parent individually and together influence father's involvement and contribute to child's development (Cabrera et al., 2018; Pleck, 2010).

Overall, this review uncovers the need to better understand how social and ecological aspects of the family influence father involvement, moving beyond the analyzes of direct effects on Western traditional middle-class families. Taking into account the multicultural diversity of today's families, it is critical to integrate their contextual variability, in order to be able to offer tailored intervention programs and promote evidence-based social policies to enhance father involvement in

diverse family contexts. Hence, there is a call for a broader and more contextualized understanding of aspects related to father involvement to overcome inequalities in family dynamics.

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*General Characteristics of the Studies*

	<i>n</i>	%	Article ID# <sup>1</sup>
<i>Theoretical background<sup>2</sup></i>			
Psychosocial models of father involvement	32	37.2	6, 10, 12, 14-15, 23-24, 30-31, 36-39, 42-46, 48, 51, 55, 58, 61-62, 66, 68-70, 74-75, 85-86
Family systems theory	12	14	17-18, 25, 32-33, 35, 42, 59, 65, 73, 76, 83
Ecological models of development	6	7	3-4, 41, 58, 71, 84
Other theories	22	25.6	1, 9, 11, 13, 19, 20-22, 25, 34, 37, 39, 47, 50, 54, 56, 60, 63, 64-65, 72, 78
Not mentioned	20	23.3	2, 5, 7, 8, 16, 26, 27-29, 40, 49, 52-53, 67, 70, 77, 79-82
<i>Type of data</i>			
Original sample	58	87.9	2, 5-12, 16, 20-22, 24-26, 29-34, 37, 39, 41-46, 48-52, 55, 57-63, 65, 70-71, 73-81, 83, 85-86
Secondary data	28	32.6	1, 3-4, 13-15, 17-19, 23, 27-28, 35-36, 38, 40, 47, 53, 54, 56, 64, 66-69, 72, 82, 84
<i>Study design<sup>2</sup></i>			
Cross-sectional	41	47.7	2, 3, 6, 9-10, 12-14, 21-22, 24-30, 34-37, 41, 43-44, 48-52, 56, 58, 60-63, 65-66, 71, 79, 83, 86
Longitudinal	44	51.2	1, 4-5, 7-8, 11, 15-20, 23, 31, 32-33, 38-40, 42, 45, 47, 53-55, 57, 59, 64, 67-70, 72-78, 80-82, 84-85
Mixed-methods <sup>3</sup>	1	1.2	46
Dyadic	5	5.8	16, 22, 59, 63, 75
<i>Assessment of Father Involvement</i>			
Self-reported	73	84.9	1-8, 12-19, 21-27, 29-30, 31-38, 40-44, 46-54, 56-58, 60-62, 64-69, 71-75, 78-86
Time-diary	7	8.1	10-11, 28, 39, 45, 55, 73
Observation	4	4.7	20, 63, 70, 76

Interview	2	2.3	9, 59
<i>Who reported Father Involvement</i>			
Father	46	53.5	3-4, 6-9, 11-13, 17, 23-27, 29-34, 38, 40-41, 43-44, 46, 49-52, 56-58, 64-67, 71, 73-74, 76-77, 84-86
Mother	11	12.8	28, 35-37, 47-48, 62, 72, 80, 83, 82
Both	28	32.6	1, 2, 5, 10, 15-16, 18-22, 39, 42, 45, 53-55, 59-61, 63, 68-70, 75, 78-79, 81
Not mentioned	1	1.2	14

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*General Characteristics of the Sample*

	<i>n</i>	<i>%</i>	Article ID# <sup>1</sup>
<i>Country of origin</i>			
Anglo-Saxon countries	49	57	1, 3-7, 9-23, 27-28, 31-33, 37-39, 42, 45, 48, 53-55, 59, 63, 66-70, 72-73, 76, 80, 82, 84-85
European countries	16	18.6	2, 8, 26, 35-36, 40, 47, 52, 56-57, 61-62, 64, 71, 75, 79
Asian countries	9	10.5	29, 43-44, 46, 49-51, 74, 83
Middle-east countries	7	8.1	30, 41, 60, 65, 77, 78, 81
Other countries (Brazil, South Africa)	3	3.5	24, 25, 58
Samples involving different countries	2	2.3	34, 86
<i>Ethnical background</i>			
Race/ethnic background			
Caucasian	33	38.4	2, 5-6, 8-12, 16-17, 20, 22, 26-28, 31-33, 37, 39, 42, 45, 48, 52, 55, 59, 63, 71, 73, 79-80, 84-85
Black	3	3.5	3, 57, 66
Asian	11	12.8	29, 30, 43, 44, 46, 49-51, 74, 83, 86
Latinos	2	2.3	13, 15
Middle-East	6	7	41, 60, 65, 77, 78, 81
Mixed	18	20.9	1, 4, 14, 18-19, 23, 34, 38, 47, 53-54, 67-70, 72, 76, 82
Not mentioned	13	15.1	7, 21, 24-25, 35, 36, 40, 56, 57, 61-62, 64, 75
<i>Socioeconomic Status</i>			
Low	14	16.3	5, 8, 13-15, 18, 20, 25, 34, 38, 46, 54, 67, 72
Middle	45	52.3	2, 6-7, 9-11, 16-17, 22, 26, 28, 31-33, 37, 39, 41-43, 45, 48-49, 52, 55, 58-62, 65-66, 70-71, 73, 75-83, 85-86
High	1	1.2	74

Mixed SES	22	25.6	1, 3, 4, 12, 19, 21, 23, 24, 27, 29, 30, 44, 47, 50-53, 57, 63-64, 68-69, 84
Not mentioned	4	4.7	35, 36, 40, 56
<i>Mother-father living together</i>			
Yes	61	70.9	1, 2-3, 5-10, 12-13, 16-18, 21-22, 24-29, 32-33, 36-37, 39-43, 45-46, 48, 51-52, 55-56, 58-66, 68, 69-71, 73-75, 77-81, 84-85
Both	16	18.6	4, 14, 15, 19, 23, 35, 38, 44, 47, 53, 54, 67, 72, 76, 82, 86
Not mentioned	9	10.5	11, 20, 30, 31, 34, 49, 50, 57, 83
<i>Children's age range <sup>2</sup></i>			
Infant (0-12 months)	25	29.1	5, 7-8, 13-16, 20, 28, 31, 35, 39, 42, 45, 49, 53, 57-59, 64, 67, 73-75, 77-78
Toddler (13-35 months)	7	8.1	6, 11, 21, 27, 50, 63, 86
Preschool age (3-6 years)	24	27.9	2, 9-10, 12, 19, 22-26, 29-30, 32-33, 40, 43-44, 46, 48, 51, 61, 66, 79, 83
Mixed ages	30	34.9	1, 3-4, 17-18, 34, 36-38, 41, 47, 52, 54-55, 56, 60, 62, 65, 68-69, 70-72, 76, 80-82, 84, 85
<i>Father's age range <sup>2</sup></i>			
Young adults (18-35 years)	8	9.3	5, 16, 31, 38, 57, 73, 80, 83
Middle-age adults (36-55 years)	6	7.9	22, 24-26, 46, 81
Mixed ages	56	65.1	1-4, 6, 8, 10, 12-15, 17, 20, 21, 23, 28-30, 32-34, 37, 39, 41, 43-45, 49, 51-56, 58-69, 71, 74-79, 82, 84, 85, 86
Not mentioned	16	18.6	7, 9, 11, 18, 19, 27, 35, 36, 39, 40, 42, 47, 48, 50, 70, 72



*Assessment of Father Involvement Domains*

	<i>n</i>	%	Article ID# <sup>1</sup>
<i>Domains of Father Involvement</i>			
Engagement	58	67.4	1, 3-14, 16-19, 24-25, 29-34, 42, 44-50, 53-57, 59-60, 65-67, 69, 70, 72-78, 81-86
Availability	1	1.2	68
Responsibility	1	1.2	52
Mixed	13	15.1	15, 20-23, 35-36, 38, 40-41, 58, 63, 71
All	13	15.1	2, 26-28, 37, 39, 43, 51, 61, 62, 64, 79, 80
<i>Processes of Father Involvement<sup>2</sup></i>			
Determinants of father involvement	52	60.5	1, 7, 8, 10, 13-16, 18-19, 21, 23-24, 26-30, 34, 36, 38, 41-44, 47, 51-52, 54-57, 59-60, 62, 64-74, 76, 80-83, 85-86
Outcomes of father involvement	21	24.4	2, 3, 4, 6, 9, 12, 17, 25, 32, 35, 37, 40, 45, 48-50, 53, 75, 77, 78, 84
Both predictor & outcome	8	9.3	5, 11, 20, 31, 33, 46, 63, 79
Moderator	1	1.2	60
Mediator	5	5.8	5, 7, 65, 83, 85