AMERICAN PSYCHOLOGICAL ASSOCIATION

Journal of Family Psychology

ISSN: 0893-3200

https://doi.org/10.1037/fam0000933

Parent–Child Play and Parent–Child Relationship: Are Fathers Special?

Lukas Teufl[1] and Lieselotte Ahnert[2]
[1] Faculty of Education and Psychology, University of Vienna
[2] Faculty of Education and Psychology, Free University Berlin

Given the substantial heterogeneity across studies on parent–child play, we comparatively explored father–child and mother–child play while controlling for effects of the play settings in two diverse situations. We pursued three open questions: (a) how play behaviors inherently differ between the parents, and (b) relate to play quality, and (c) what does this mean for the parent–child relationship? Father–child and mother–child play was separately instructed and videotaped in 80 two-parent families with children aged 18–58 months (44 boys). We offered a physical and a cognitive game, and analyzed each parent–child dyad after rating 10 characteristic parental play behaviors (*Encouraging*, *Surprising*, *Teasing*, *Explaining*, *Confirming*, *Instructing*, *Restricting*, *Lampooning*, *Sound-Imitating*, and *Caressing*) and three subscales of the Play Quality scale (Piskernik & Ruiz, 2018). External observers also assessed father– and mother–child relationships with the Attachment-Q Sort (Waters, 1995). Results suggest that types of game, rather than parent gender, predicted parental play behaviors. Parents differed in behaviors typical for involving children mentally (e.g., parents *explained*, *confirmed*, and *surprised*) or are popular for stimulating children physically (e.g., parents frequently *encouraged*, limited *restrictions*, and *imitated sounds*). High levels of *encouraging* and *confirming* behaviors were related to high quality across games with frequent bouts of *teasing*. During cognitive games, fathers obtained lower quality than mothers, yet both showed the same quality levels in physical games, where fathers, however, were less instructive and more restrictive while also caressing. High play quality in both games was not associated with mother–child but linked to father–child attachment.

Keywords: early childhood, fathering, parent–child interaction, parenting, play style

Supplemental materials: https://doi.org/10.1037/fam0000933.supp

Research on play has clearly shown that children's striking need to play—almost from birth—offers a window for parents to support children's cultural learning (Tomasello, 2008). Play, thus, fosters a variety of child competencies, ranging from cognitive and language competencies (e.g., Cabrera et al., 2017; Cook et al., 2011; Tamis-LeMonda et al., 2004) to social, behavioral, and emotional skills (e.g., Ahnert et al., 2017; Anderson et al., 2017; Lindsey et al., 1997; StGeorge & Freeman, 2017). Play is also perceived as an important context in which many aspects of parenting behaviors and the quality of parent–child relationships are revealed. The expectation that a parent participates in play, however, developed after the turn of the 20th century (Hulbert, 2004), and still varies across societies (e.g., Bornstein & Putnick, 2012; Roopnarine & Davidson, 2015). In some societies, parents consider play with children to be inappropriate, whereas mostly in Western societies, parents may cherish play as an opportunity to encourage child development and to model the relationship with the child. Socioeconomic class also plays a role for families of Western societies. While middle-class parents invest themselves heavily in children's leisure time and play, working-class and socio-economically disadvantaged (SED) families feel foremost responsible for custodial matters of their children's lives (Kim et al., 2018; Lareau, 2011).

Research Background

Research on parent–child play has a long tradition in the U.S. and Europe. It is dominated by studies of middle-class Caucasian families where both parents play and are both increasingly subjected to research on play. To identify differences in father–child and mother–child play, past research carefully examined effects of the parent–play interactions but neglected influences of the play

Lieselotte Ahnert https://orcid.org/0000-0003-2039-4695

This work was carried out as part of CENOF (the Central European Network on Fatherhood with headquarters at the University of Vienna) which was financially supported by the Jacobs Foundation (AZ: 2013-1049) and awarded to Lieselotte Ahnert. We are grateful to the participating parents and children and to the student teams of the faculty for collecting and coding the data at University of Vienna.

The authors declare no conflicts of interest with regard to the funding source for this study.

This research was conducted in accordance with the Helsinki Declaration as revised in 2013.

The data that support the findings of this study are available from the corresponding author upon reasonable request.

The present study was presented in a paper session at the conference of the International Society for the Study of Behavioural Development (ISSBD) in Goldcoast/Australia, 2018.

Correspondence concerning this article should be addressed to Lieselotte Ahnert, Faculty of Education and Psychology, Free University Berlin, Habelschwerdter Allee 45, 14195 Berlin, Germany. Email: lieselotte.ahnert@fu-berlin.de

settings. This resulted in a substantial heterogeneity across the studies. In a recent review, Vallotton et al. (2020) conclude that the effects of parent–child play are attributed to fathers' and mothers' abilities to adapt their play behaviors to a respective play setting offered by researchers. Unfortunately, only a few studies have systematically explored different play settings in the same playing parent–child dyad (Ahnert et al., 2017; Lindsey & Mize, 2000, 2001). To differentiate between fathers' and mothers' play behaviors, aside from the effects of the play setting, the present study thus explored the parents' behavior and play quality comparatively in two diverse settings.

Fluctuation in Parent Play Behaviors and Play Quality Within and Between Play Settings

When parents conveyed their play experiences in their own words through interviews, fathers portrayed themselves as more active playmates than mothers, contrasting their own more vigorous playful interactions with the mothers' more educative activities of high responsiveness. In line with this, mothers described themselves as tending to engage in teaching situations rather than play. Mothers—in turn—characterized the fathers foremost as engaging the child in physical play, sometimes with bouts of intrusive activities (see Bretherton et al., 2005; John et al., 2013). However, past research on play made it difficult to justify these parent qualitative descriptions of their lived experiences.

We initially scanned 34 quantitative studies published from 2000 onwards, which included both fathers and mothers playing with their children aged between 12 and 60 months of normal development (marked with an asterisk in the reference list). Twelve studies explored the parental repertoire of play behaviors as described by *Encouraging*, *Surprising*, *Teasing*, *Explaining*, *Confirming*, *Instructing*, *Restricting*, *Lampooning*, *Sound-Imitating*, and *Caressing*. The studies showed (Supplemental Material, Table S1) that this behavioral repertoire could be observed almost equally frequently across play settings and parent gender. In the context of this article, we will use the term *parent gender* to refer to a differentiation between mothers and fathers, but not only on the basis of gender. Many additional factors, such as own socialization experiences, behavioral stereotypes, attitudes, and roles in the family (e.g., as primary or secondary caregiver) as well as challenges in the work force (e.g., position and working hours) and so forth, play a key role.

The remaining 24 studies focused on the quality of parental play and composed complex scales, such as *Play Quality* (Ahnert et al., 2017), *Playfulness* (Cabrera et al., 2017; Menashe-Grinberg & Atzaba-Poria, 2017), *Scaffolding/Structuring* (e.g., Cook et al., 2011; de Mendonca et al., 2011; John et al., 2013; Kwon et al., 2013; Lovas, 2005; Menashe-Grinberg & Atzaba-Poria, 2017; Tamis-LeMonda et al., 2004), *Play Sensitivity* (e.g., Endendijk et al., 2016; Frosch & Mangelsdorf, 2001; Fuertes et al., 2016; Grossmann et al., 2002; Hall et al., 2015; Hallers-Haalboom et al., 2014, 2017; John et al., 2013; Kwon et al., 2012, 2013; Lovas, 2005; Lucassen et al., 2015; Menashe & Atzaba-Poria, 2016; Menashe-Grinberg & Atzaba-Poria, 2017; National Institute of Child Health & Human Development Early Child Care Research Network, 2008; Pancsofar et al., 2008; Tamis-LeMonda et al., 2004; Tissot et al., 2015; van Berkel et al., 2014), and *Intrusiveness* (e.g., Cabrera et al., 2007; Frosch & Mangelsdorf, 2001; Kwon et al., 2012; Lucassen et al., 2015). In overall summary of the findings of these 24 studies (Supplemental Material, Table S2), parents appeared relatively equal in the overall *Play quality*. Fathers did not appear more playful than mothers. Of the seven studies that measured *Scaffolding/Structuring,* only four studies (Cook et al., 2011; John et al., 2013; Lovas, 2005; Menashe-Grinberg & Atzaba-Poria, 2017) found evidence that mothers' structuring of their children's play was higher than fathers' structuring. Similarly, of the 19 studies that rated *Play sensitivity/responsiveness,* eight studies found fathers to be as sensitive as mothers (e.g., Endendijk et al., 2016; Frosch & Mangelsdorf, 2001; Fuertes et al., 2016; Hall et al., 2015; Hallers-Haalboom et al., 2014, 2017; Kwon et al., 2012; Lovas, 2005; Menashe-Grinberg & Atzaba-Poria, 2017; Pancsofar et al., 2008; van Berkel et al., 2014). Of the four studies that observed *Intrusiveness* in parent–child play, two of them (Frosch & Mangelsdorf, 2001; Kwon et al., 2012) found fathers to be more intrusive than mothers, the other two studies reported no difference.

Taken together, recent quantitative empirical research studies blur the differences described by fathers' and mothers' qualitative reports of playing with their children. Even studies that are expected to unveil influences of parent gender because of their nonstructured nature of the settings (e.g., free-play scenarios) barely found differences in father–child versus mother–child play. Thus, the question of whether and how mothers and fathers inherently differ in their play remained unanswered, as this includes the question of which behaviors are associated with high play quality, that is, none of the 34 studies aimed to link concrete behaviors to a measure of play quality.

Play Quality as Related to Play Behaviors

To assure high-quality levels in parent–child play, parents must be sensitive playmates. According to early work by MacDonald (1993), sensitive playmates need to *first* adjust their behaviors to the emerging playscripts that the child develops and monitors. Parents might encourage and confirm what children want to play, but they should limit instructions, explanations, and restrictions, as this may jeopardize the child's participation in the play situation. *Second*, the sensitive parent playmate must join the pleasure and flow of joy during play, for example by sound-imitations or by surprising and teasing the child, contributing to the momentum of play. *Third*, experiences in sharing emotions are further important features of play quality. Parents might thus contribute to the child's play activities by caressing or even lampooning, which would trigger expressions of emotions in the child. However, parental behaviors contributing to play quality are exchangeable but only if they serve the functions of maintaining child playscripts, the mutual flow of joy, and the share of emotions. This implies that achievements of play quality must mainly focus on the function of behaviors in play contexts and not on the nature of behaviors per se.

Furthermore, high quality of parent–child play might nurture the parent–child relationship. Researchers theorized (Paquette, 2004) and empirically demonstrated (Kerns & Barth, 1995; Newland et al., 2008) that frequent activation during rough-and-tumble play situations might foster children's relationship, specifically with fathers. Grossmann et al. (2002) showed that fathers who encourage their playing children ensure father–child attachment, at least in later periods of adolescence. Research findings are less straightforward regarding immediate associations between father–child play and father–child attachment, and were also mixed in linking types of mother–child play to mother–child attachment (see Grossmann et al., 2002; Kerns & Barth, 1995).

Research Questions and Hypotheses

The present study focused on father–child and mother–child dyads of the same child and utilized two types of play settings. Based on parents' self-reports, we provided play settings that may be preferred by fathers, for example, a physical game, or by mothers, for example, a cognitive game. We pursued three open questions: (a) how play behaviors inherently differ between the parents, and (b) relate to play quality?, and (c) what does this mean for the parent–child relationship? Given the idea that parent play behaviors are inherently diverse, we expected differences with regard to the particular play setting they preferred. That is, more play behaviors from mothers' than fathers' repertoire should be observed during cognitive games, while the opposite should be the case during physical games. We likewise presumed similar differences in the quality of play with the child, with mothers playing better in cognitively challenging and fathers playing better in physically challenging games. The quality of play should finally be associated with the parent–child attachment, in a way that the quality of the cognitive mother–child play would be foremost related to mother–child attachment and the quality of the physical father–child play to father–child attachment.

Method

Participants

After the Ethics Committee of the Medical University of Vienna/Austria approved the research study (ECS 1710/2013), we recruited 80 two-parent families through kindergartens, childcare centers, playgrounds, and playgroups as part of a large-scale study on fatherhood. The majority of the families ($n = 50$) lived in Austria's capital *Vienna*, 21 families lived in surrounding villages, and nine in medium-sized cities of the neighboring state *Lower Austria*. The families comprised the biological parents of the children and represented Austrian middle-class of Caucasian ethnicity. The fathers were 21–67 years ($M = 37$; 7, $SD = 6$; 5) and the mothers 21–47 years ($M = 34$; 7, $SD = 5$; 3) old. All fathers worked for 40.34 hr per week on average, whereas only 49 mothers were on the labor market for an average of 22.68 hr per week. Forty-nine fathers and 51 mothers finished college or university; education was later dichotomized in 0 (=no bachelor's degree) and 1 (=at least a bachelor's degree). The monthly family income was less than 2,000€ for only 9%. For 25% of the families, it was 2,000–3,000€, for 33% 3,000–4,000€, and more than 4,000€ for 33% of the families. All children (44 boys) were healthy and born at term, with ages ranging from 18 to 58 months ($M = 31$; 10, $SD = 16$; 3). Of the sample, 26% were an only child, more than half (55%) had one, and 19% two siblings. Only one child per family took part in the study, and those were foremost the second born (83.1%).

Procedure

After the parents provided written informed consent, two research assistants visited the families twice at home. The families reported on sociodemographic characteristics via short interviews. During each visit, the two assistants observed one parent and the target child for at least 2 hr to describe the quality of the parent–child attachment. Afterwards, the parent played both a physical and a cognitive game. For this, we designed four games with instructions in standardized manuals to enhance comparability. A counterbalanced design controlled the order effects in the measures by selecting parent and game for the first visit. We videotaped the play settings and later analyzed them in the lab. Two games were physically and the other two were cognitively challenging. The games were similar in length, with physical games taking 4 min 52 s ($SD = 2$; 1) and cognitive games 5 min 26 s ($SD = 1$; 2).

Physical Games

During the *Candy Bomber*, parents helped the children bring small balls from one side of the room to bowls at the other side of the room by holding and transporting the child ("letting him fly") between those places. As this game was designed for children under three, children of 36 months and older played *Horse Polo*, where they sat on the parents' back and hit small balls into a goal with a long-handled mallet (more details in Ahnert et al., 2017).

Cognitive Games

The cognitive games included *Wild Berry* for children under three and *Build-Up* for children from three onwards. During *Wild Berry*, parents hid a small ball under one of three cones, shuffled them around and then the child guessed under which cone the ball was. During the *Build-Up* game, the child and the parent cooperated to construct something together using materials such as building blocks, small wheels, screws, and so forth (see Ahnert et al., 2017).

Measures

Parent Play Quality

We used a 5-point Likert scale to describe *Play Quality* ranging from 1 (*distant and chaotic play interaction with parent and child following different aims*) to 5 (*togetherness and joy between parent and the child, displaying mutual behavioral adjustment and dialog-like play structures with concurring goals*). This scale is a result of a test construction (Piskernik & Ruiz, 2018) that generalized the scores of three 5-point Likert scales: (a) *Familiarity* assesses how well a parent provides play activity according to expectations of how the child will react and feel. The subscale also reflects parent and child feelings of togetherness and joy, and therefore focusses on how the child integrates the parent's actions during play, (b) *Calibration* considers the coordination of the play situation and describes how well the parent's and child's activities are related to each other; how well the parent participates in the play script. The subscale therefore evaluates how dialogue structures emerge to meet mutual goals of play. Finally, (c) *Adjustment* captures cognitive–structural features of play, focusing on how a parent makes effective efforts to advise the child on a better structure of the play situation; child is compliant or raises new ideas and mutual adjustments emerge.

A group of 21 research assistants completed a training on the three subscales for the later Play Quality scale. They needed to reach an interrater reliability of Intra-Class-Coefficient (ICC) >.70 with the master rater (the first author) before they rated the 320 play records of the present study. After the first 10 records had been rated, the master rater invited the assistants to discuss problematic ratings until they reached agreement. Forty-seven records (14.69%) were double-rated by two assistants, who were randomly chosen and paired, revealing

good ICCs of .66 for *Familiarity*, .80 for *Calibration*, and .70 for *Adjustment* (for more details see Ahnert et al., 2017).

The scores of these scales were later transformed into scores of the *Play Quality scale*, which not only economically condensed the three subscales and thus avoided inflations of the results, but also demonstrated structural and functional measurement invariance for both the physical as well as the cognitive games across parent gender (see Piskernik & Ruiz, 2018).

Parent Play Behavior

A group of five experts (including the first and second author) determined 10 types of parental play behaviors, building on previous research: (a) *Encouraging* when the parent praised and motivated the child to continue and supported the playscript, (b) *Surprising* when the parent contributed to the play flow with an extra idea or stressed a detail during the ongoing play procedure, (c) *Teasing* when the parent tickled or scared the child in a playful way, (d) *Explaining* when the parent informed the child about characteristics and functions of the objects that were played with or demonstrated a procedure, (e) *Confirming* when the parent acknowledged the child's play activities, paraphrased, or imitated them, (f) *Instructing* when the parent gave orders or directed the child to do something, or shared with the child what to do next, (g) *Restricting* when the parent stopped or interrupted child's behaviors during play or took toys away, (h) *Lampooning* when the parent made ironic or even sarcastic comments, (i) *Sound-Imitating* when the parent used specific sounds to accentuate certain play activities, and (j) *Caressing* when the parent cuddled the child, kissed the neck, and so forth, during play.

Parallel to the group of research assistants who rated the subscales for Play Quality, another group of 20 research assistants completed a training on the 10 parental play behaviors. Using the software INTERACT (Mangold, 2015), the assistants carried out event-coding procedures and thereby delivered rates per minute for each play behavior. To meet sufficient reliability, we follow the same procedure as mentioned above: The assistants had to reach an interrater reliability of ICC > .70 with the master rater (the first author) before they rated the play behaviors from the 320 original records. After rating the first 10 records, the master rater discussed rating problems with the group. Fifty-one records (15.93%) were double-rated by research assistants, who were randomly chosen and paired, and revealed good ICCs between .68 (for Instructing) and .95 (for Caressing). The two groups of research assistants who rated the records were unfamiliar to the families, the research aims of the study, and each other's ratings. Each assistant rated almost 18 records (including the double-coded records for testing reliability) either on the subscales of Play Quality or the parent behavioral repertoire. The records were randomly allocated in terms of parent and child gender, type of play, and whether the record was used as retest for reliability or not.

Attachment

The Attachment Q-Sort (AQS; Waters, 1995) assessed mother–child and father–child attachment. Two research assistants (who did not belong to the group of assistants that coded the play situations) simultaneously observed the parent–child dyad at home for at least 2 hr and rated the items of the AQS independently of each other, with AQS scores ranging from −1 to 1. We then subjected the AQS scores to Fisher's *r*-to-*z* transformation to ensure normal distribution. As the AQS scores reached high interrater reliability between the two observers ($r = .87$), they were averaged before later statistics. In this sample, attachment security did not differ for fathers, $M = 0.48$, $SD = 0.26$, and mothers, $M = 0.51$, $SD = 0.28$, with $t = .07$, $p = .942$.

Data Analysis

As each child was observed in two play settings with both the father and mother, meaning there were two data sets for each child comprising the 10 different play behaviors and the play quality, the data analysis needed to be suitable for hierarchical data. In addition, some play behaviors were rare, resulting in zero-inflation of those data. Up to 86% of the parents had zero values in some behaviors (see Table 1). As these rare behaviors are considered distinctive with regard to the quality of play, they were not combined with other behaviors. The remaining data were highly skewed and of non-normal distribution (Poisson distribution). Due to the zero-inflation, Poisson distribution of the data and the hierarchical nature, we used Generalized Linear Mixed Models (GLMMs) in R (R Core Team, 2017) applying glmmTMB package (Brooks et al., 2017) to calculate model estimates.

In order to test (a) whether parents' play behaviors and the quality of play differed with regard to parent gender and type of game, behaviors, and quality were predicted through parent gender, type of game as well as Parent gender × Type of game interaction as Level 1 variables in this GLMMs model. Two further GLMMs (one for each game type) tested (b) how the parental play behaviors related to play quality in physical as well as cognitive games. Child gender and age (as Level 2 variables), as well as parent age, gender, education, and the 10 parental play behaviors (as Level 1 variables) were included to predict play quality. A subsequent step of the GLMMs model included Parent gender × Parent play behavior (as Level 1 variables) to assess whether links between parental play behaviors and quality were distinct for fathers and mothers (all tests displayed by *marginal* R^2, see Nakagawa & Schielzeth, 2013). Analysis of variances (ANOVAs) between the first and second step within the models assessed improvements in the explained variance through the additional steps (displayed by ΔR^2).

Eventually, we tested (c) whether play quality in physical and cognitive games could predict parent–child attachment, when child gender and age, parent age and education served as controls. Here, we used two multiple regressions in order to test for father–child and mother–child attachment separately. One common model would require comparable measures of paternal and maternal AQS scores as the model would take all AQS scores together and test them against parent gender. This, however, could lead to an incorrect estimate of the model parameters, as evidence of measurement invariance of the AQS in fathers and mothers is still missing.

Results

Parent Play Behavior and Play Quality

Parent play behaviors that were indicated by average rates per minute (as displayed in Table 1) ranged from 0.04 for the lowest levels (e.g., *Caressing* and *Teasing*) up to 2.39 for the highest levels

Table 1
Play Behaviors (Rates/Minute) and Play Quality (Scores) of Fathers and Mothers During Physical and Cognitive Games

	Physical game						Cognitive game					
	Father			Mother			Father			Mother		
Play behaviors and play quality	*M*	*SD*	None	*M*	*SD*	None	*M*	*SD*	None	*M*	*SD*	None
Encouraging	1.25	1.04	8	1.09	1.13	17	0.51	0.60	19	0.48	0.59	30
Surprising	0.20	0.31	44	0.14	0.31	54	0.35	0.56	38	0.40	0.90	42
Teasing	0.05	0.15	65	0.04	0.13	69	0.08	0.29	64	0.06	0.22	69
Explaining	0.09	0.14	46	0.09	0.24	53	0.14	0.18	39	0.18	0.51	43
Confirming	0.43	0.60	35	0.52	0.70	30	0.64	0.67	21	0.90	1.15	18
Instructing	1.20	1.41	12	1.07	1.19	14	0.85	0.81	12	1.01	1.81	22
Restricting	0.24	0.37	38	0.23	0.30	43	0.74	0.70	10	0.66	0.75	21
Lampooning	0.16	0.33	59	0.10	0.29	65	0.18	0.32	43	0.22	0.43	50
Sound-imitating	2.39	2.00	2	1.98	1.76	6	1.31	1.26	10	1.33	1.98	19
Caressing	0.10	0.27	66	0.10	0.33	60	0.07	0.22	68	0.04	0.11	69
Play quality	3.04	0.52	—	3.13	0.73	—	2.96	0.61	—	3.84	0.75	—

Note. None = nonoccurrence; number of parents who never showed the respective play behavior.

(e.g., *Sound-Imitating*). These play behaviors were highly independent. Of the 45 possible intercorrelations per game and parent, only six bivariate correlations during physical and 12 during cognitive games with fathers, as well as 15 during physical and 10 during cognitive games with mothers were significant. The significant correlations displayed small effect sizes, justified by Kendall $\tau <$ .30 (see Table 2). As an interesting side effect, however, a contrasting pattern emerged between the parents during physical games. For fathers, both *Surprising* and *Confirming* were correlated with *Encouraging*, $r = -.18$ versus $r = -.25$, but not with *Explaining*, $r =$ .16 versus $r = .12$, whereas the opposite was the case for mothers: *Surprising* and *Confirming* were correlated with *Explaining,* $r = .23$ versus $r = .23$, but not *Encouraging* $r = -.04$ versus $r = .07$.

GLMMs revealed similar levels of each play behavior in fathers and mothers, resulting in nonsignificant effects of parent gender and Parent gender × Play behavior interactions. This suggested that parent gender hardly influenced the play behaviors (see Table 3). However, there were significant effects of types of game on play

Table 2
Intercorrelations of Parent Play Behaviors With Play Quality and Parent–Child Attachment During Physical and Cognitive Games

Physical games	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	AQS
Encouraging (1)		−.04	.04	.07	.05	−.05	−.08	.07	**.29**	.02	**.23**	.09
Suprising (2)	**−.18**		**.29**	**.23**	**.26**	.10	.08	.13	**.24**	**.23**	.08	−.09
Teasing (3)	−.04	**.26**		**.27**	**.25**	.09	.12	**.21**	.16	**.25**	.16	−.14
Explaining (4)	−.08	.16	**.24**		**.23**	−.01	.00	.16	.14	.16	.06	.04
Confirming (5)	**−.25**	**.22**	**.20**	.12		.10	.03	.13	**.18**	.13	**.22**	.02
Instructing (6)	.00	.07	.14	.09	.07		**.23**	−.04	−.11	.07	.09	−.07
Restricting (7)	−.05	.04	.14	.03	−.04	.16		.10	.08	.12	−.12	−.02
Lampooning (8)	.15	.04	.15	−.05	.00	.00	.05		.13	**.26**	−.03	−.17
Sound-imitating (9)	.12	.16	.08	.01	.09	−.01	−.02	−.08		**.20**	.09	.16
Caressing (10)	.01	.12	.20	.08	−.05	.08	.12	−.06	.06		−.02	−.05
Play quality (11)	.09	−.08	.08	−.08	.13	−.01	−.03	−.05	**.23**	−.01		.12
AQS	−.06	.06	.09	−.05	.11	−.08	−.03	−.05	**.23**	−.01	.17	

Cognitive games	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	AQS
Encouraging (1)		.09	−.07	.04	−.11	.15	.09	.00	.16	.17	**.20**	.06
Suprising (2)	.09		.13	**−.23**	.09	.03	.17	.02	**.27**	.21	.14	.12
Teasing (3)	−.05	.09		−.11	**.22**	.09	.04	**.27**	.11	.14	**.21**	−.08
Explaining (4)	.12	.05	.07		**.20**	**.25**	−.02	−.15	**−.23**	−.17	.08	−.09
Confirming (5)	−.07	.10	.07	**.19**		.17	.05	.09	.09	−.06	.15	−.15
Instructing (6)	.12	.05	.07	**.23**	.14		**.23**	−.08	.12	.14	.00	−.01
Restricting (7)	**.28**	**.18**	.02	.01	.03	**.24**		**.19**	**.24**	.08	.02	.00
Lampooning (8)	−.01	−.03	.06	−.14	.07	−.07	.04		.01	.06	.15	−.12
Sound-imitating (9)	**.26**	**.28**	.11	−.01	.11	**.23**	**.30**	.00		.03	**.21**	.03
Caressing (10)	**.22**	.15	.21	.17	−.05	.13	**.22**	.09	**.24**		−.08	−.04
Play quality (11)	.12	.14	.17	.13	.17	−.02	.00	.12	.14	.15		.03
AQS	.03	.09	**−.20**	−.03	−.13	−.01	−.01	−.13	.01	**−.18**	.16	

Note. Father's coefficients are presented under the diagonal; mother's coefficients are above the diagonal. Bold numbers indicate significant coefficients ($p <$ .05) with values <.30 yielding small effect sizes. AQS = attachment Q-sort.

Table 3
Predicting Parent Play Behaviors and Play Quality by Parent Gender and Type of Game

Parent gender and type of game	Encouraging $R^2 = .17$				Surprising $R^2 = .09$				Teasing $R^2 = .02$			
	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*
Intercept	−0.78	0.18	−4.44	<.001	−1.00	0.21	−4.81	<.001	−2.79	0.48	−5.87	<.001
Parent (father)	0.05	0.23	0.21	.832	−0.13	0.27	−0.50	.615	0.29	0.62	0.47	.635
Game (physical)	0.81	0.20	4.01	<.001	−1.02	0.35	−2.95	.003	−0.34	0.72	−0.48	.633
Parent × Game	0.09	0.28	0.34	.736	0.34	0.47	0.84	.401	−0.09	0.95	−0.09	.928

	Explaining $R^2 = .04$				Confirming $R^2 = .05$				Instructing $R^2 = .02$			
	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*
Intercept	−1.14	0.22	−5.26	<.001	−0.26	0.15	−1.73	.084	−0.11	0.13	−0.84	.400
Parent (father)	−0.28	0.29	−0.95	.343	−0.34	0.19	−1.82	.069	−0.18	0.17	−1.04	.298
Game (physical)	−0.64	0.32	−1.99	.047	−0.53	0.20	−2.68	.007	0.03	0.16	0.19	.853
Parent × Game	0.17	0.48	0.35	.726	0.12	0.30	0.40	.690	0.32	0.23	1.42	.157

	Restricting $R^2 = .21$				Lampooning $R^2 = .04$				Sound-imitating $R^2 = .06$			
	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*
Intercept	−0.42	0.16	−2.70	.007	−1.49	0.25	−6.01	< .001	1.38	0.21	6.65	< .001
Parent (father)	0.11	0.20	0.58	.563	−0.23	0.37	−0.62	.537	−0.08	0.26	−0.31	.758
Game (physical)	−1.09	2.77	−3.93	< .001	−0.82	0.44	−1.87	.061	0.59	0.26	2.32	.020
Parent × Game	−0.02	0.38	−0.05	.960	0.67	0.59	1.14	.253	0.49	0.36	1.38	.167

	Caressing $R^2 = .05$				Play quality $R^2 = .23$			
	β	*SE* β	*z*	*p*	β	*SE* β	*z*	*p*
Intercept	−3.18	0.58	−5.50	<.001	3.88	0.07	54.15	<.001
Parent (father)	0.49	0.73	0.68	.499	−0.89	0.08	−10.68	<.001
Game (physical)	0.90	0.68	1.33	.185	−0.73	0.08	−8.72	<.001
Parent × Game	−0.54	0.89	−0.62	.539	−0.76	0.19	6.75	<.001

Note. R^2 = marginal R^2.

behaviors. Parents more commonly *encouraged*, β = 0.81, $p < .001$, and *sound-imitated*, β = 0.59, $p = .020$, but seldom *restricted actions* (β = −1.09, $p < .001$) in physical than in cognitive games, whereas parents e*xplained*, β = −0.64, $p = .047$, *confirmed*, β = −0.53, $p = .007$, and *surprised*, β = −1.02, $p = .003$, more frequently in cognitive than in physical games.

Most interestingly, however, the last GLMM on play quality showed significant main effects of parent gender, β = −10.68, $p = <.001$, and type of game, β = −8.72, $p = <.001$, where the interaction effect (Parent gender × Type of game) indicated that mothers' play quality was higher than fathers' in cognitive games, whereas no difference was found in physical games.

Play Quality as Related to Parent Play Behavior

Two further GLMMs (separately for play quality in physical and cognitive games) investigated whether the play qualities were achieved through different play behaviors (taking parent gender and the type of game into account). For physical versus cognitive games, the model explained $R^2 = .29$ versus $R^2 = .47$ of the variance of play quality in the first step (see Table 4). Child age but not gender appeared significant for physical games, β = 0.01, $p < .001$, and for cognitive games, β = 0.01, $p < .011$, with parents of older children showing higher levels of play quality.

Furthermore, *Encouraging* (for physical games, β = 0.17, $p < .001$, and for cognitive games, β = 0.34, $p < .001$), *Confirming* (for physical games, β = 0.32, $p < .001$, and for cognitive games, β = 0.18, $p < .003$), and *Teasing* (for physical games, β = 0.68, $p = .024$, and for cognitive games, β = 0.40, $p < .044$), were positively related to play quality. There were some peculiarities where *Lampooning* observed in physical games was negatively (β = −0.33, $p = .024$), and in cognitive games positively (β = 0.52, $p = .001$) associated with play quality. This demonstrated the power of play settings, which can change the function of a play behavior. One might speculate that lampooning could disrupt the feeling of togetherness needed for close bodily contact and therefore negatively affect basic understanding in physical games. In contrast, lampooning might stimulate processes of cognitive games and could therefore positively regulate parent–child interactions. Finally, *Instructing* showed negative effects (β = −0.18, $p = .001$), whereas *Sound-*

Table 4
Play Quality in Physical and Cognitive Games as Predicted by Child and Parent Characteristics, and Parent Play Behaviors

Child and parent characteristics and parent play behaviors	Physical game				Cognitive game			
	Step 1: $R^2 = .29$				Step 1: $R^2 = .47$			
	β	*SE* β	*t*	*p*	β	*SE* β	*t*	*p*
Intercept	2.50	0.32	7.92	<.001	3.18	0.37	8.65	<.001
Child (female)	−0.03	0.18	−0.27	.393	0.06	0.10	0.54	.294
Child age	0.01	0.01	3.82	<.001	0.01	0.01	2.31	.011
Parent age	−0.01	0.01	−0.15	.439	−0.00	0.01	−0.48	.317
Education	−0.07	0.09	−0.77	.218	0.07	0.11	0.66	.255
Parent (father)	−0.09	0.08	−1.19	.117	−0.86	0.10	−8.28	<.001
Encouraging	0.17	0.05	3.68	<.001	0.34	0.09	3.76	<.001
Surprising	0.03	0.18	0.16	.436	0.14	0.10	1.37	.085
Teasing	0.68	0.34	1.98	.024	0.40	0.23	1.71	.044
Explaining	−0.16	0.13	−1.27	.101	−0.10	0.12	−0.81	.240
Confirming	0.32	0.07	4.37	<.001	0.18	0.07	2.73	.003
Instructing	−0.01	0.04	−0.37	.357	−0.18	0.06	−3.07	.001
Restricting	−0.17	0.14	−1.21	.113	0.03	0.09	0.31	.380
Lampooning	−0.33	0.17	−1.98	.024	0.52	0.15	3.49	<.001
Sound-imitating	0.03	0.03	1.17	.122	0.10	0.05	1.95	.026
Caressing	−0.08	0.19	−0.41	.341	−0.24	0.29	−0.80	.211
	Step 2: $R^2 = .37$				Step 2: $R^2 = .51$			
	β	*SE* β	*t*	*p*	β	*SE* β	*t*	*p*
Parent (father) × Encouraging	−0.06	0.09	−0.74	.231	−0.16	0.19	−0.84	.201
Parent (father) × Surprising	−0.04	0.38	−0.12	.454	−0.11	0.20	−0.52	.301
Parent (father) × Teasing	−0.46	0.66	−0.70	.242	0.51	0.61	0.83	.202
Parent (father) × Explaining	−0.02	0.27	−0.06	.476	0.11	0.26	0.41	.342
Parent (father) × Confirming	−0.13	0.12	−1.09	.139	−0.19	0.14	−1.41	.078
Parent (father) × Instructing	−0.23	0.07	−3.37	< .001	0.16	0.12	1.31	.084
Parent (father) × Restricting	0.57	0.23	2.49	.006	0.13	0.17	0.76	.223
Parent (father) × Lampooning	−0.38	0.35	−1.09	.137	−0.14	0.29	−0.50	.309
Parent (father) × Sound-imitating	−0.02	0.05	−0.36	.360	0.11	0.10	1.13	.129
Parent (father) × Caressing	1.01	0.45	2.25	.012	−1.31	0.77	−1.70	.045

Note. Physical game: ICC = .45. Step 2 was significant ($\Delta R^2 = .08$; $p = .013$); Cognitive game: ICC = .01. Step 2 was not significant ($\Delta R^2 = .04$; $p = .310$); R^2 = marginal R^2.

imitating showed positive effects on the quality of cognitive play, although effect sizes were small.

As the model generally confirmed that fathers obtained lower play quality than mothers, $\beta = -0.86$, $p < .001$, although in cognitive games only, we entered the Parent gender × Parent play behavior interactions as a second step in the model. As a result, we improved the explained variance, however, only for the physical game, $\Delta R^2 = .08$; $p = .013$, and revealed three effects that focused on fathers. That is, *Instructing*, $\beta = -0.23$, $p < .001$, *Restricting*, $\beta = 0.57$, $p = .006$, and *Caressing*, $\beta = 1.01$, $p < .012$, suggested that fathers instructed less and restricted more than mothers for higher play quality during the physical game, which they consummated by caressing the child (see Table 4).

Play Quality and Parent–Child Attachment

Two multiple regressions (one for each parent) analyzed the association of play qualities in physical and cognitive games with parent–child attachment. Whereas the model for mother–child attachment did not reach significance, $R^2_{adj} = .03$, $p = .162$, the model for fathers explained $R^2 = .12$ of variance (see Table 5). Even more surprisingly, not only the play quality in physical, $\beta = 0.12$, $p = .026$, but also in cognitive games, $\beta = 0.09$, $p = .040$, was positively associated with the father–child attachment, independently of each other.

Discussion

The present study explored mother–child and father–child play in an Austrian middle-class sample and observed how much and how well these parents allowed themselves to be engaged in the play with their children. We provided two special types of play settings which were opposite in two ways: The games (a) were constructed to challenge the parent–child play cognitively versus physically and (b) favored known preferences for fathers' arousing and bodily oriented play versus mothers' contemplative symbolic-oriented play (see Bretherton et al., 2005; John et al., 2013). We first analyzed the parents' play repertoire as well as the play quality. Results indicated that fathers and mothers utilized almost the same repertoire of play behavior, depending, however, on which type of game they played. This finding confirms the rare studies by Lindsey and Mize (2000, 2001) that also compared maternal and parental play behaviors across two different games with similar adaptations of the parents' play behaviors to the respective settings.

Table 5
Father–Child and Mother–Child Attachment as Predicted by Child and Parent Characteristics, and Play Quality

Child and parent characteristics, and play quality	Father–child dyad				Mother–child dyad			
	$R^2 = .12$ ($p = .020$)				$R^2 = .03$ ($p = .162$)			
	β	*SE* β	*t*	*p*	β	*SE* β	*t*	*p*
Intercept	−0.18	0.24	−0.76	.451	−0.04	0.29	−0.12	.904
Child (female)	0.10	0.06	1.80	.076	0.02	0.07	0.34	.734
Child age	−0.00	0.00	−1.11	.271	−0.01	0.01	−0.44	.664
Parent age	0.01	0.00	0.62	.535	0.01	0.06	1.16	.251
Education	−0.08	0.06	−1.37	.176	0.01	0.07	0.09	.927
Play quality/physical game	0.12	0.06	1.98	.026	0.07	0.05	1.28	.206
Play quality/cognitive game	0.09	0.05	1.78	.040	0.01	0.05	0.20	.840

Note. R^2 = adjusted R^2.

In the present study, both parents explained, confirmed, and surprised more frequently in cognitive than physical games, while they encouraged, restricted, and imitated sounds more often in physical games. For example, parents motivated the children to allow them to become part of a "flight" or a "horse-back ride" during the physical games. The parents played these themes according to the child's expectations and needs. That is, they regulated the intensity of the play by pretending to steer a slow or fast plane or to behave like a wild or tame horse, being sensitive to the current process and momentum of play. Parents eventually joined the child's joy through considerable sound imitation and onomatopoeia. Fathers slightly differed from mothers in these games. The way fathers interacted was less instructive and more restrictive, yet finished off by caressing, so that they ultimately achieved the same play quality as mothers.

In contrast, mothers and fathers did not show differences in behavior during cognitive games. They explained, confirmed, surprised, and made the agenda of these games most attractive. For example, parents talked about the "hidden berries" as sweet and tasty, and about the "planned construction" as a great surprise at grandparents' next visit, and so forth. Moreover, parents supported the child's ideas at any costs. These overwhelming similarities in parents' play repertoire might be explained by family dynamics, which show how parenting practices of both parents tend to resemble each other (e.g., Barnett et al., 2008).

Unfortunately, we did not explore the frequency of these games in the everyday lives of the families. From this perspective, it could be true that mothers and fathers differ substantially. That is, fathers might mainly select the more vigorous games to engage with their children in day-to-day life. Physical games would probably be observed more often in father–child play than cognitive games. Fathers' absence due to work responsibilities might even enforce this preference, as more vigorous play might compensate for fathers' shortage of time, as it is highly attractive for the child. In contrast, symbolic, cognitive-oriented games would be observed in mother–child play more often than physical games as mothers steadily explain and confirm child's knowledge during the day anyway. Although analyses on fathers' time spent with their children in middle-class samples (Piskernik & Ahnert, 2019) provided no evidence that fathers favor arousing games over symbolic ones, much more research on this issue is warranted.

The present study also measured how well parents played based on the three dimensions *familiarity*, *calibration*, and *adjustment*, which were merged to scores for play quality. Findings revealed that parents were almost equivalent in play quality. In cognitive games, however, fathers obtained lower quality than mothers, yet they obtained same quality levels in physical games, whereas the fathers, however, were less instructing and more restrictive, while still caressing. That mothers achieved higher quality in cognitive games suggests that symbolic play scenarios might be naturally integrated into the day-to-day life, aiming to share interest in the world of a child and to improve cognitive competencies. This also means that cognitive games require deep insights into the child's world, as well as more time to elaborate on them. One might speculate that working compared to stay-at-home mothers might therefore show a greater preference for physical games as a more immediate, positive emotional response from the child can be elicited in such games. However, we found no indication that the 61% of mothers who worked (on average for 20 hr) were less skilled in the cognitive play setting than the stay-at-home mothers. In addition, this finding might be not transferable to fathers, in particular as it is questionable whether fathers' absence from home is the key factor that limits the quality of cognitive father–child games. The present study asked instead whether there is a specific behavioral play repertoire related to quality of parent–child play. We identified a general basic set of parental play behaviors (*Encouraging*, *Confirming*, and *Teasing*), which were associated with the quality across games and parent gender. Nevertheless, being a sensitive playmate also means adjusting behavior to the particular nature of the game. Thus, some play behaviors contributed to play quality in one play setting better than in another. For example, *Lampooning* was more frequent the better the quality of cognitive games, but less frequent in better quality physical games, suggesting that lampooning is inefficient in maintaining feelings of togetherness in physical games, while being good for stimulating mental processes in cognitive games.

Most strikingly, however, play quality was not linked to mother–child attachment but to father–child attachment. This study is the first to show that fathers' play behaviors are directly associated with the father–child attachment, and was associated with both contexts, namely physical *and* cognitive games, in this regard. This was a very unexpected finding. Contrary to research in the framework of the activation theory (Paquette, 2004), which solely stresses the importance of arousing play for the father–child relationship, not only physical activation but also engaging in educative play activities appeared similarly important in the present study. The fact that mothers' play quality was not associated with the mother–child

attachment security is in line with previous findings, which described other contexts of caregiving, such as critical situations of temper tantrums and other distress regulation (Deichmann & Ahnert, 2021) or expressed in teaching situations like shared book reading (Teufl et al., 2020) as being of greater importance. These events in children's lives might be more crucial than play to form and maintain the mother–child attachment.

The findings are useful for family education and intervention settings, where it is clear that fathers should be involved. Unfortunately, counseling at such places is heavily mother-orientated and focuses on cognitive approaches to improve child development. It is time to discuss how different facets of child development could be consolidated by improving father–child interaction and father–child relationship through play. As playing serves as an important context for father–child attachment among Western middle class families, fostering the quality of father–child play could help family interventions to support relationship harmony in the family as well as child development. The middle-class sample that was involved in this research is the same clientele who may actively seek intervention if there are issues during development. The majority of psychological intervention services are based on play for children of these ages. The focus on middle-class clients is thus reasonable but not exclusive. Families with less socioeconomic resources (e.g., so-called SED families; see Kim et al., 2018) could have children at greater risk for less optimal child development as these families encounter everyday challenges quite differently to families with greater socioeconomic resources. SED families are mainly faced with poverty, detrimental living environments, family chaos, poor neighborhoods, and community violence, which surely affects parenting behavior and can hinder parents in paying attention to a healthy family climate, including parent–child play. It would be worthwhile to focus on interventions for these families and their children based on parent–child play; in particular, appealing to fathers.

Besides the significant findings of the present study on parent–child play, it is similarly important to point out some restrictions. *First*, the present results cannot simply be applied to nontraditional families of homosexual parents, even though parent gender played only a minor role. *Second*, we do not know how child characteristics (e.g., temperament, prematurity, etc.) influence the parent–child play. *Third*, as the research design was cross-sectional, causal interpretation must be avoided. *Fourth*, the study investigated parent–child play interactions in two specific play settings. To assure ecological validity of the results, it is important to compare them with play observations obtained in other contexts and throughout the everyday life of the families.

Nevertheless, this study demonstrated that both fathers and mothers in traditional families are equally able to play and adapt their play behaviors to their children's play intentions in order to achieve high play quality. Most notably, playing appeared to be an important context in particular for the father–child attachment, with play interactions of high qualities in both physical as well as cognitive games.

References

References marked with an asterisk indicate studies included in the meta-analysis

*Ahnert, L., Teufl, L., Ruiz, N., Piskernik, B., Supper, B., Remiorz, S., Gesing, A., & Nowacki, K. (2017). Father-child play during the preschool years and child internalizing behaviors: Between robustness and vulnerability. *Infant Mental Health Journal*, *38*(6), 743–756. https://doi.org/10.1002/imhj.21679

Anderson, S., Qiu, W., & Wheeler, S. J. (2017). The quality of father-child rough-and-tumble play and toddlers' aggressive behavior in China. *Infant Mental Health Journal*, *38*(6), 726–742. https://doi.org/10.1002/imhj.21675

Barnett, M. A., Deng, M., Mills-Koonce, W. R., Willoughby, M., & Cox, M. (2008). Interdependence of parenting of mothers and fathers of infants. *Journal of Family Psychology*, *22*(4), 561–573. https://doi.org/10.1037/0893-3200.22.3.561

Bornstein, M. H., & Putnick, D. L. (2012). Cognitive and socioemotional caregiving in developing countries. *Child Development*, *83*(1), 46–61. https://doi.org/10.1111/j.1467-8624.2011.01673.x

Bretherton, I., Lambert, J. D., & Golby, B. (2005). Involved fathers of preschool children as seen by themselves and their wives: Accounts of attachment, socialization, and companionship. *Attachment & Human Development*, *7*(3), 229–251. https://doi.org/10.1080/14616730500138341

Brooks, M. E., Kristensen, K., van Benthem, K. J., Magnusson, A., Berg, C. W., Nielsen, A., Skaug, H. J., Mächler, M., & Bolker, B. M. (2017). Modeling zero-inflated count data with glmmTMB. *bioRxiv*. https://doi.org/10.1101/132753

*Cabrera, N. J., Karberg, E., Malin, J. L., & Aldoney, D. (2017). The magic of play: Low-income mothers' and fathers' playfulness and children's emotion regulation and vocabulary skills. *Infant Mental Health Journal*, *38*(6), 757–771. https://doi.org/10.1002/imhj.21682

*Cabrera, N. J., Shannon, J. D., & Tamis-LeMonda, C. (2007). Fathers' influence on their children's cognitive and emotional development: From toddlers to pre-K. *Applied Developmental Science*, *11*(4), 208–213. https://doi.org/10.1080/10888690701762100

*Cook, G. A., Roggman, L. A., & Boyce, L. K. (2011). Fathers' and mothers' cognitive stimulation in early play with toddlers: Predictors of 5th grade reading and math. *Family Science*, *2*(2), 131–145. https://doi.org/10.1080/19424620.2011.640559

*de Mendonca, J. S., Cossette, L., Strayer, F. F., & Gravel, F. (2011). Mother-child and father-child interactional synchrony in dyadic and triadic interactions. *Sex Roles*, *64*(1), 132–142. https://doi.org/10.1007/s11199-010-9875-2

Deichmann, F., & Ahnert, L. (2021). The terrible twos: How children cope with frustration and tantrums and the effect of maternal and paternal behaviors. *Infancy*, *26*(3), 469–493. https://doi.org/10.1111/infa.12389

*Endendijk, J. J., Hallers-Haalboom, E. T., Groeneveld, M. G., van Berkel, S. R., van der Pol, L. D., Bakermans-Kranenburg, M. J., & Mesman, J. (2016). Diurnal testosterone variability is differentially associated with parenting quality in mothers and fathers. *Hormones and Behavior*, *80*, 68–75. https://doi.org/10.1016/j.yhbeh.2016.01.016

*Frosch, C. A., & Mangelsdorf, S. C. (2001). Marital behavior, parenting behavior, and multiple reports of preschoolers' behavior problems: Mediation or moderation? *Developmental Psychology*, *37*(4), 502–519. https://doi.org/10.1037/0012-1649.37.4.502

*Fuertes, M., Faria, A., Beeghly, M., & Lopes-dos-Santos, P. (2016). The effects of parental sensitivity and involvement in caregiving on mother-infant and father-infant attachment in a Portuguese sample. *Journal of Family Psychology*, *30*(1), 147–156. https://doi.org/10.1037/fam0000139

*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*(3), 307–331. https://doi.org/10.1111/1467-9507.00202

*Hall, R. A. S., Hoffenkamp, H. N., Tooten, A., Braeken, J., Vingerhoets, A., & van Bakel, H. J. A. (2015). The quality of parent-infant interaction in the first 2 years after full-term and preterm birth. *Parenting: Science and Practice*, *15*(4), 247–268. https://doi.org/10.1080/15295192.2015.1053333

*Hallers-Haalboom, E. T., Groeneveld, M. G., van Berkel, S. R., Endendijk, J. J., van der Pol, L. D., Bakermans-Kranenburg, M. J., & Mesman, J.

(2016). Wait until your mother gets home! Mothers' and fathers' discipline strategies. *Social Development*, *25*(1), 82–98. https://doi.org/10.1111/sode.12130

*Hallers-Haalboom, E. T., Groeneveld, M. G., van Berkel, S. R., Endendijk, J. J., van der Pol, L. D., Linting, M., Bakermans-Kranenburg, M. J., & Mesman, J. (2017). Mothers' and fathers' sensitivity with their two children: A longitudinal study from infancy to early childhood. *Developmental Psychology*, *53*(5), 860–872. https://doi.org/10.1037/dev0000293

*Hallers-Haalboom, E. T., Mesman, J., Groeneveld, M. G., Endendijk, J. J., van Berkel, S. R., van der Pol, L. D., & Bakermans-Kranenburg, M. J. (2014). Mothers, fathers, sons and daughters: Parental sensitivity in families with two children. *Journal of Family Psychology*, *28*(2), 138–147. https://doi.org/10.1037/a0036004

Hulbert, A. (2004). *Raising America: Experts, parents, and a century of advice about children*. Random House.

*John, A., Halliburton, A., & Humphrey, J. (2013). Child-mother and child-father play interaction patterns with preschoolers. *Early Child Development and Care*, *183*(3–4), 483–497. https://doi.org/10.1080/03004430.2012.711595

Kerns, K. A., & Barth, J. M. (1995). Attachment and play: Convergence across components of parent-child relationships and their relations to peer competence. *Journal of Social and Personal Relationships*, *12*(2), 243–260. https://doi.org/10.1177/0265407595122006

Kim, P., Evans, G. W., Chen, E., Miller, G., & Seeman, T. (2018). How socioeconomic disadvantages get under the skin and into the brain to influence health development across the lifespan. In N. Halfon, C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of life course health development* (pp. 463–498). Springer. https://doi.org/10.1007/978-3-319-47143-3_19

*Kwon, K. A., Bingham, G., Lewsader, J., Jeon, H. J., & Elicker, J. (2013). Structured task versus free play: The influence of social context on parenting quality, toddlers' engagement with parents and play behaviors, and parent-toddler language use. *Child and Youth Care Forum*, *42*(3), 207–224. https://doi.org/10.1007/s10566-013-9198-x

*Kwon, K. A., Jeon, H. J., Lewsader, J. T., & Elicker, J. (2012). Mothers' and fathers' parenting quality and toddlers' interactive behaviours in dyadic and triadic family contexts. *Infant and Child Development*, *21*(4), 356–373. https://doi.org/10.1002/icd.1746

*Laflamme, D., Pomerleau, A., & Malcuit, G. (2002). A comparison of fathers' and mothers' involvement in childcare and stimulation behaviors during free-play with their infants at 9 and 15 months. *Sex Roles*, *47*(11–12), 507–518. https://doi.org/10.1023/A:1022069720776

Lareau, A. (2011). *Unequal childhoods: Class, race, and family life*. University of California Press. https://doi.org/10.1525/9780520949904

*Lindsey, E. W., Cremeens, P. R., & Caldera, Y. M. (2010a). Mother-child and father-child mutuality in two contexts: Consequences for young children's peer relationships. *Infant and Child Development*, *19*(2), 142–160. https://doi.org/10.1002/icd.645

*Lindsey, E. W., Cremeens, P. R., & Caldera, Y. M. (2010b). Gender differences in mother-toddler and father-toddler verbal initiations and responses during a caregiving and play context. *Sex Roles*, *63*(5–6), 399–411. https://doi.org/10.1007/s11199-010-9803-5

*Lindsey, E. W., & Mize, J. (2000). Parent-child physical and pretense play: Links to children's social competence. *Merrill-Palmer Quarterly*, *46*(4), 565–591. https://doi.org/10.1037/t58344-000

*Lindsey, E. W., & Mize, J. (2001). Contextual differences in parent-child play: Implications for children's gender role development. *Sex Roles*, *44*(3–4), 155–176. https://doi.org/10.1023/A:1010950919451

Lindsey, E. W., Mize, J., & Pettit, G. S. (1997). Mutuality in parent-child play: Consequences for children's peer competence. *Journal of Social and Personal Relationships*, *14*(4), 523–538. https://doi.org/10.1177/0265407597144007

*Lovas, G. S. (2005). Gender and patterns of emotional availability in mother-toddler and father-toddler dyads. *Infant Mental Health Journal*, *26*(4), 327–353. https://doi.org/10.1002/imhj.20056

*Lucassen, N., Tiemeier, H., Luijk, M., Linting, M., Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., Jaddoe, V. W. V., Hofman, A., Verhulst, F. C., & Lambregtse-Van den Berg, M. P. (2015). Expressed emotion during pregnancy predicts observed sensitivity of mothers and fathers in early childhood. *Parenting: Science and Practice*, *15*(3), 158–165. https://doi.org/10.1080/15295192.2015.1053316

*Lundy, B. L., & Fyfe, G. (2016). Preschoolers' mind-related comments during collaborative problem-solving: Parental contributions and developmental outcomes. *Social Development*, *25*(4), 722–741. https://doi.org/10.1111/sode.12176

MacDonald, K. (Ed.). (1993). *Parent-child play: Descriptions and implications*. State University of New York Press.

Mangold. (2015). *INTERACT 14 User Guide*. Mangold International GmbH (Ed.). www.mangold-international.com

*Menashe, A., & Atzaba-Poria, N. (2016). Parent-child interaction: Does parental language matter? *British Journal of Developmental Psychology*, *34*(4), 518–537. https://doi.org/10.1111/bjdp.12147

*Menashe-Grinberg, A., & Atzaba-Poria, N. (2017). Mother-child and father-child play interaction: The importance of parental playfulness as a moderator of the links between parental behavior and child negativity. *Infant Mental Health Journal*, *38*(6), 772–784. https://doi.org/10.1002/imhj.21678

Nakagawa, S., & Schielzeth, H. (2013). A general and simple method for obtaining R^2 from generalized liner mixed-effects models. *Methods in Ecology and Evolution*, *4*(2), 133–142. https://doi.org/10.1111/j.2041-210x.2012.00261.x

*National Institute of Child Health and Human Development Early Child Care Research Network. (2008). Mothers' and fathers' support for child autonomy and early school achievement. *Developmental Psychology*, *44*(4), 895–907. https://doi.org/10.1037/0012-1649.44.4.895

Newland, L. A., Coyl, D. D., & Freeman, H. (2008). Predicting preschoolers attachment security from fathers' involvement, internal working models, and use of social support. *Early Child Development and Care*, *178*(7–8), 785–801. https://doi.org/10.1080/03004430802352186

*Nordahl, K. B., Janson, H., Manger, T., & Zachrisson, H. D. (2014). Family concordance and gender differences in parent-child structured interaction at 12 months. *Journal of Family Psychology*, *28*(2), 253–259. https://doi.org/10.1037/a0035977

*Pancsofar, N., Vernon-Feagans, L., Odom, E., & Roe, J. R. (2008). Family relationships during infancy and later mother and father vocabulary use with young children. *Early Childhood Research Quarterly*, *23*(4), 493–503. https://doi.org/10.1016/j.ecresq.2008.07.001

Paquette, D. (2004). Theorizing the father-child relationship: Mechanisms and developmental outcomes. *Human Development*, *47*(4), 193–219. https://doi.org/10.1159/000078723

Piskernik, B., & Ahnert, L. (2019). What does it mean when fathers are involved in parenting? *Monographs of the Society for Research in Child Development*, *84*(1), 64–78. https://doi.org/10.1002/mono.12404

Piskernik, B., & Ruiz, N. (2018). Measurement, structural, and functional invariance of parent-child play quality coding across multiple games and parent gender. *European Journal of Developmental Psychology*, *17*(1), 156–164. https://doi.org/10.1080/17405629.2018.1480935

R Core Team. (2017). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. www.R-project.org

Roopnarine, J. L., & Davidson, K. L. (2015). Parent-child play across cultures advancing play research. *American Journal of Play*, *7*, 228–252.

*Rowe, M. L., Coker, D., & Pan, B. A. (2004). A comparison of fathers' and mothers' talk to toddlers in low-income families. *Social Development*, *13*(2), 278–291. https://doi.org/10.1111/j.1467-9507.2004.000267.x

StGeorge, J., & Freeman, E. (2017). Measurement of father-child rough-and-tumble play and its relations to child behavior. *Infant Mental Health Journal*, *38*(6), 709–725. https://doi.org/10.1002/imhj.21676

*Tamis-LeMonda, C. S., Baumwell, L., & Cristofaro, T. (2012). Parent-child conversations during play. *First Language*, *32*(4), 413–438. https://doi.org/10.1177/0142723711419321

*Tamis-LeMonda, C. S., Shannon, J. D., Cabrera, N. J., & Lamb, M. E. (2004). Fathers and mothers at play with their 2- and 3-year-olds: Contributions to language and cognitive development. *Child Development*, *75*(6), 1806–1820. https://doi.org/10.1111/j.1467-8624.2004.00818.x

Teufl, L., Deichmann, F., Supper, B., & Ahnert, L. (2020). How fathers' attachment security and education contribute to early child language skills above and beyond mothers: Parent-child conversation under scrutiny. *Attachment & Human Development*, *22*(1), 71–84. https://doi.org/10.1080/14616734.2019.1589063

*Tissot, H., Favez, N., Udry-Jorgensen, L., Frascarolo, F., & Despland, J. N. (2015). Mothers' and fathers' sensitive parenting and mother-father-child family alliance during triadic interactions. *The Family Journal*, *23*(4), 374–380. https://doi.org/10.1177/1066480715601110

Tomasello, M. (2008). *Origins of human communication*. MIT Press. https://doi.org/10.7551/mitpress/7551.001.0001

Vallotton, C. D., Foster, T., Harewood, T., Cook, J., & Adekoya, A. R. (2020). Fathers and young children at play: A scoping review of studies of fathers' play with sons and daughters from birth to preschool. In H. E. Fitzgerald, K. von Klitzing, N. J. Cabrera, J. Scarano de Mendonça, & T. Skjøthaug (Eds.), *Handbook of fathers and child development*. Springer.

*van Berkel, S. R., Groeneveld, M. G., Mesman, J., Endendijk, J. J., Hallers-Haalboom, E. T., van der Pol, L. D., & Bakermans-Kranenburg, M. J. (2014). Parental sensitivity towards toddlers and infant siblings predicting toddler sharing and compliance. *Journal of Child and Family Studies*, *24*(8), 2270–2279. https://doi.org/10.1007/s10826-014-0029-y

Waters, E. (1995). Appendix A: The attachment Q-set (Version 3.0). *Monographs of the Society for Research in Child Development*, *60*(2–3), 234–246. https://doi.org/10.1111/j.1540-5834.1995.tb00214.x

Received July 13, 2020
Revision received September 23, 2021
Accepted September 27, 2021 ■