Universidade do Minho
Escola de Psicologia

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Coparenting in fathers during the transition to parenthood

outubro de 2014

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Trabalho realizado sob a orientação da
Professora Bárbara Figueiredo
e do
Professor Diogo Lamela

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Mestrado Integrado em Psicologia da Universidade do Minho
Área de Especialização de Psicologia Clínica e da Saúde
Coparenting on fathers during the transition to parenthood
Tiago Miguel Pires Pinto
Professora Bárbara Figueiredo
Professor Diogo Lamela

Abstract

Coparenting establishment is a new developmental task during the transition to parenthood with importance to the success of this developmental transition that needs to be better explored. However, only few studies have investigated (a) coparenting development path during pregnancy and (b) individual and dyadic processes associated to the positive resolution of this developmental task in fathers. Addressing these gaps on coparenting investigation, the aims of the present study are: (1) to analyze coparenting development path in fathers from the first trimester of pregnancy until childbirth, (2) to explore the effects of individual (depression and anxiety) and dyadic (partner's relationship quality) dimensions on coparenting development path during this period in fathers, (3) to study differences in coparenting according to fathers' depression, anxiety and partner's relationship quality at the first trimester of pregnancy and (4) to study fathers' depression, anxiety and partner's relationship quality as predictors of coparenting at childbirth. The sample consists in 41 primiparous fathers. Three assessments were performed with the same measures: 1st and 3rd trimester of pregnancy and childbirth. A significant decrease in coparenting between the 1st trimester of pregnancy and childbirth was found. No effects for depression, anxiety and partner's relationship quality on fathers' coparenting developmental path were found. Significant lower levels of coparenting at childbirth were found in depressed fathers at the 1st trimester of pregnancy. Fathers' depression at the 1st trimester was identified as the best predictor of coparenting at childbirth. The present study represents an important advance in the developing literature on early coparenting relationships (1) by analyzing coparenting developmental path in fathers from the beginning of pregnancy and (2) by identifying depression as an important dimension associated to the positive resolution of coparenting developmental task in fathers.

Keywords: transition to parenthood; coparenting; fathers; depression; anxiety; partner's relationship quality

Mestrado Integrado em Psicologia da Universidade do Minho
Área de Especialização de Psicologia Clínica e da Saúde

Coparentalidade em pais-homens durante a transição para a parentalidade

Tiago Miguel Pires Pinto
Professora Bárbara Figueiredo
Professor Diogo Lamela

Resumo

O estabelecimento da coparentalidade consiste numa nova tarefa de desenvolvimento durante a transição para a parentalidade importante para o sucesso desta transição desenvolvimental. No entanto, particularmente em pais-homens, poucos estudos investigaram (a) a trajetória de desenvolvimento da coparentalidade durante a gravidez e (b) os processos individuais e diádicos associados à resolução positiva desta tarefa. Colmatando estas lacunas, os objetivos do presente estudo são analisar: (1) a trajetória de desenvolvimento coparentalidade em pais-homens desde o primeiro trimestre de gravidez até ao parto, (2) os efeitos de dimensões individuais (depressão e ansiedade) e diádicas (qualidade do relacionamento com a parceira) na trajetória de desenvolvimento da coparentalidade em pais-homens durante este período, (3) diferenças na coparentalidade de acordo com a depressão e ansiedade dos pais-homens e a qualidade do relacionamento com a parceira no primeiro trimestre de gravidez e (4) a depressão e ansiedade dos pais-homens e a qualidade do relacionamento com a parceira como preditores da coparentalidade no momento do parto. A amostra consiste em 41 pais-homens primíparos. Três avaliações foram realizadas com as mesmas medidas: primeiro e terceiro trimestre de gravidez e parto. Uma diminuição significativa na coparentalidade entre o primeiro trimestre de gravidez e o parto foi encontrada. Não foram encontrados efeitos da depressão e ansiedade e da qualidade do relacionamento com a parceira na trajetória de desenvolvimento da coparentalidade. Níveis mais baixos de coparentalidade no parto foram encontrados nos pais-homens deprimidos no primeiro trimestre de gravidez. A depressão no primeiro trimestre foi identificada como o preditor mais robusto da coparentalidade no momento do parto. O presente estudo representa um importante avanço na literatura sobre a coparentalidade pelo facto de (1) analisar a trajetória de desenvolvimento da coparentalidade em pais-homens desde o início da gravidez e (2) identificar a depressão como uma importante dimensão associada à resolução positiva desta tarefa de desenvolvimento em pais-homens.

Palavras-chave: transição para a parentalidade; coparentalidade; pais-homens; depressão; ansiedade; qualidade do relacionamento com a parceira

Background

According to Cowan (1991), developmental transitions can be conceptualized as long term processes that result in a qualitative reorganization of individuals, both internally and externally. For a life change to be designated a developmental transition, it should involve (a) an internal qualitative change, modifying the way that individuals understand and feel about themselves and the world, and (b) an external qualitative change, compelling individuals to reorganize their skills at individual and family level, adjusting to their new roles and their relationships with significant others. The transition to parenthood constitutes a complex developmental transition, compelling both women and men to solve several developmental tasks in order to adapt to a wide range of biological, psychological and socio-cultural changes, which occur at different levels - individual, marital and familiar (e.g., Cowan, 1991; Cowan & Cowan, 2000). The positive resolution of these developmental tasks allows an appropriate transition to parenthood, improving psychological adjustment and development, and preparing to an adequate parenting. On the reverse, the lack of or a negative developmental resolution may lead to (a) a non-existent or incomplete transition, (b) emergence of psychopathological symptoms and (c) inadequate parenting (e.g., Cowan & Cowan, 2000). Some studies have been recently reporting various positive changes associated with the transition to parenthood in terms of individual development at different levels – identity (e.g., Katz-Wise, Priess, & Hyde, 2010), partners' relationship quality (e.g., Mitnick, Heyman, & Smith Slep, 2009) and extended family relationships (e.g., Bost, Cox, Burchinal, & Payne, 2002). One the other hand, other studies have been reporting how an incomplete transition may negatively interfere in women and men psychological adjustment and parenting (e.g., Parfitt & Ayers, 2014).

Coparenting establishment is certainly a new developmental task during the transition to parenthood with importance to the success of this developmental transition that needs to be better explored (e.g., Figueiredo & Lamela, 2014). The determinants of coparenting needs to be better explore in order to promote this development and prevent unsuccessfully transition to parenthood (e.g., Feinberg & Kan, 2008; Solmeyer, Feinberg, Coffman, & Jones, 2013). However, only few studies have investigated coparenting development path during the transition to parenthood and the individual and dyadic processes associated to the positive resolution of this developmental task are largely unknown, namely in fathers (e.g., Favez, Frascarolo, Scaiola, & Corboz-Warnery, 2013; Van Egeren, 2004).

According to Feinberg (2003), coparenting is defined as the set and reciprocal involvement of both parents in education, responsibilities, and decisions about their children's lives, focusing on interparental interactions associated to adults' functions and expectations about the performance of their parents' role. This dyadic relationship refers to the quality and frequency of coordination and support that each parent provides to the other in childcare and does not include marital and parental dimensions (Feinberg, 2003). Coparenting is a (a) central aspect of family life (Cowan & McHale, 1996; Gable, Belsky, & Crnic, 1995; McHale & Rasmussen, 1998), (b) a universal systemic subsystem to all family structures with children (McHale et al., 2002), (c) being built co-progressively across the transition to parenthood and (d) already operative in this period (Van Egeren, 2004). Coparenting is not characterized by how each parent, individually, provides childcare (Groenendyk & Volling, 2007) neither constitutes a marital relationship substrate or offshoot, but an autonomous subsystem with idiosyncratic mechanisms and different characteristics from marital and parental subsystems (Feinberg, 2002; 2003).

Feinberg (2003) proposed an empirical-based coparenting ecological model, conceptualizing coparenting in four interrelated components: (1) childrearing agreement, (2) division of labor, (3) support versus undermining and (4) the joint family management. McHale and colleagues (2002) proposed three types of coparental relationships that seem to lead to different outcomes in all family members: (a) cooperative or a positive coparenting, which both parents engage in reciprocal interactions and decisions about childcare; (b) parallel coparenting, which each parent decide and provide childcare without communicating with the other parent; and (c) conflituous coparenting, which both parents conflict and criticize the decisions and care provided to the child by the other parent, in which the conflict may be overt or covert (see McHale et al., 2002).

The way that both fathers and mothers adjust to their new roles as coparents is determined and influenced by multiple factors. In terms of antecedents, Feinberg´s ecological model (2003) suggests that coparenting is shaped by four main factors: (a) individual parental characteristics, (b) child characteristics, (c) interparental relationship and (d) stress and support contextual sources. Literature suggests that gender may affect coparenting behavior as well as one's coparenting experience. One theory that is widespread, but still polarizing, is that women are the main organizing force of coparenting relationship and act as "gatekeepers" of their children, choosing to involve or exclude the father in parenting (Schoppe-Sullivan, Brown, Cannon, Mangelsdorf, & Sokolowski, 2008). In fact, mothers' beliefs about fathers' roles seems to play a larger role in how much supportive coparenting emerges between

coparents in the context of an average or low partner`s relationship quality. A study by Schoppe-Sullivan and Mangelsdorf (2013) reveals that mothers' beliefs about fathers' roles were only positively associated with supportive coparenting behavior when pre-birth marital behavior was low or average in terms of quality. This suggests that in the context of a high-quality couple relationship, whether or not the mother has more 'traditional' or 'non-traditional' beliefs about fathers' roles may not influence the development of supportive coparenting. However, some data suggests that fathers show more positive coparenting than mothers (Gordon & Feldman, 2008; Lindsey, Caldera, & Colwell 2005) and more satisfaction with coparenting (Van Egeren, 2004).

Empirical literature indicates a wide variety of variables as predictors of coparenting quality. First, individual parental characteristics, particularly higher depressive symptoms, has been identified as a risk factor for increased negative coparenting dynamics, including higher coparenting conflict (e.g., Bronte-Tinkew et al., 2009) and increased withdrawal during coparenting conversations (e.g., Elliston, McHale, Talbot, Parmley, & Kuersten-Hogan, 2008). A study by Bronte-Tinkew, Horowitz and Carrano (2010) revealed a negative association between fathers' depression and stress levels and supportive coparenting. Additionally, some evidence refers that other individual parental characteristics during pregnancy are predictive of later coparenting. For instance, negative expectations about coparenting during pregnancy are predictive of low cooperation and family warmth after childbirth, while larger reported discrepancies in parenting pre-birth beliefs are predictive of increased coparenting difficulties and decreased coparenting solidarity in the postpartum period (McHale et al., 2004; McHale & Rotman, 2007; Van Egeren, 2003). Furthermore, fathers who experience more frequent and intense negative emotions may be more likely to initiate or maintain hostile and competitive interactions during family play (Schoppe-Sullivan & Mangelsdorf, 2013). A recent study by Schoppe-Sullivan and Mangelsdorf (2013) refers fathers' negative emotionality as a predictor of greater postpartum undermining coparenting behavior. The association of fathers' negative emotionality and undermining coparenting behavior was present even when controlling for socioeconomic status, which was negatively associated with undermining coparenting behavior, consistent with the results of several other studies that have linked higher socioeconomic status with more adaptive coparenting behavior (e.g., Stright & Bales, 2003).

Since coparenting is a measure of dyadic functioning, it should be no surprise that partner's relationship quality has been linked to coparenting. Studies have found that lower relationship adjustment is associated with lower coparental support and higher coparental

conflict (e.g., Bronte-Tinkew, Scott, Horowitz & Lilja, 2009), and that relationship adjustment during pregnancy is predictive of coparenting behavior at 3-months postpartum (e.g., McHale, Kazali, Rotman, Talbot, Carleton & Lieberson, 2004).

Feinberg's ecological model (2003) suggests that coparenting quality influence directly (a) parenting, as well as (b) parents' and (c) children adjustment (Feinberg, 2003). The literature has pointing that a supportive coparenting contributes to parents' adjustment through the way that each supports the other in his/her parenting (Solmeyer & Feinberg, 2011) and enhance father's involvement in the responsibilities and decisions about the child (e.g., Buckley & Schoppe-Sullivan, 2010; Jia, Kotila, & Schoppe-Sullivan, 2012). On the other hand, a coparental relationship manifest by parents' intrusiveness, undermining or active competition for the attention and childcare may have a negative impact on parents' adjustment (e.g., Majdandžić, de Vente, Feinberg, Aktar, & Bögels, 2012; Solmeyer & Feinberg, 2011; Waller, 2012). A significant association between coparenting quality and children's psychological adjustment has also been reported (e.g., McHale, 2007). Conflituous and noncooperational coparentaring were identified as significant predictors of children's internalizing and externalizing problems, independently of their developmental stage and family structure (e.g., Feinberg, Kan & Hetherington, 2007; Lamela, Figueiredo, Bastos, & Feinberg, 2013; LeRoy, Mahoney, Pargament, & DeMaris, 2013; Teubert & Pinquart, 2010; Scrimgeour, Blandon, & Buss, 2013).

Coparenting demonstrates relative consistency over time, particularly in terms of rank-order stability. McHale and Rotman (2007) used correlational analyses to demonstrate rank-order stability from 3-12 and 12-30 months postpartum in scores of a coparenting solidarity measure that included observational and self-report indicators of cohesion and conflict. Additionally, Schoppe-Sullivan, Mangelsdorf, Frosch and McHale (2004) found moderate rank-order stability in observed supportive and undermining coparenting behavior at 6 months to 3 years postpartum. These studies shown that couples high (or low) in coparenting at a certain time point are likely to remain high (or low) at subsequent time points.

Some studies have investigated coparental quality at the first months postpartum, both in fathers and mothers (e.g., Laxman et al, 2013; Schoppe-Sullivan, Mangelsdorf, Brown, & Szewczyk Sokolowski, 2007; Solmeyer & Feinberg, 2011), but no study (a) assessed coparenting since the beginning of pregnancy and (b) these studies tended to have widely-spaced time points, which may conceal more subtle fluctuations in coparenting experiences. Despite the fact that individual (e.g., depression and anxiety) and dyadic (e.g., partner's relationship quality) predictors of coparenting quality have been explored in some detail, no

study has looked at how these dimensions influence the trajectory of coparenting during the transition to parenthood.

Demonstrated the impact that coparenting seems to have in parents' adjustment, in children's and family cycle development (e.g., Feinberg et al., 2007) and addressing the gaps about coparenting investigation, the aims of the present study are: (1) to analyze coparenting development path in fathers from the first trimester of pregnancy until childbirth, (2) to explore the effects of individual (depression and anxiety) and dyadic (partner's relationship quality) dimensions on coparenting development path during this period in fathers, (3) to study differences in coparenting according to fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy and (4) to study fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy as predictors of coparenting at childbirth. Four hypotheses are proposed: (1) there are changes in fathers' coparenting developmental path from the first trimester of pregnancy until childbirth, (2) there are effects of depression, anxiety and partner's relationship quality in fathers' coparenting from the first trimester of pregnancy until childbirth, (3) there are significant differences in coparenting according to fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy and (4) fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy are significant predictors of coparenting at childbirth.

Method

Participants

The sample consists in eighty primiparous fathers recruited at the first trimester of pregnancy in two Health Services (one public and one private) in Portugal. From the eighty participants, 51.25% (N= 41) completed all three assessments and was considered in study analysis. Exclusion criteria were: (a) not reading or writing Portuguese, (b) resident in Portugal less than 10 years, (c) multiparous fathers, (d) multiple gestations and (e) pregnancies with gestational problems.

The great majority of the participants were Portuguese (97.5%), Caucasian (88.8%) and Catholic (88.8%). More than half of the participants were aged between 30 and 39 years old (M = 31.26; SD = 4.14), were employed in manual (qualified or not qualified) jobs, for

more than 6 years (50.8%), were married or cohabiting (91.2 %), and living with the partner without any other family members in the household (76.2 %) (see Table 1).

Table 1

Sociodemographic characteristics of the sample.

Characteristic		*N*= 80 %
Age (years)	20-29	31.3
	30-39	66.2
	≥ 40	2.5
Socio-economic level	High	27.5
	Medium high	11.3
	Medium	23.8
	Medium low	16.3
	Low	5
Professional status	Employed	87.5
	Unemployed	10
	Household or student	2.5
Education (in years)	< 9	8.8
	[9-12]	55
	> 12	36.2
Matrimonial status	Married	67.5
	Cohabitation	23.7
	Single	8.8
Household	Partner	76.2
	Partner and partner's children	2.5
	Partner and family	12.5
	Family (only)	8.8

Procedure

The present research was conducted in accordance with the Helsinki Declaration and received previous approval from the University of Minho Ethical Commission. Participants were randomly recruited, between October 2013 and April 2014, after the first ultrasound (between 8 and 14 weeks). This recruitment occurred in two distinct ways: (a) presently, recruited by researchers in the obstetrics outpatient service waiting room and; (b) indirectly, recruited through the partner's phone contact, also collected by researchers in the same outpatient service waiting room. The aims and the procedures of the study were explained, 90% of 100 primiparous fathers contacted agreed to participate and 80% signed an online informed consent form. The present study has a prospective design with three online assessments: (1) 1st trimester of pregnancy (8-14 weeks of gestation), (2) 3rd trimester of

pregnancy (28-32 weeks of gestation), and (3) childbirth (2-30 days postpartum). In all assessments the same measures were used.

Measures

Sociodemographic Questionnaire. This questionnaire (SDQ) is an adaptation for fathers of the questionnaire proposed by Figueiredo, Teixeira, Conde, Pinto and Sarmento (2009), comprising 72-open questions concerning fathers' (a) social and demographic situation and (b) medical and psychological conditions. The questions refers to (a) fathers' social and demographic conditions (e.g., age, birth, ethnicity, employment, education) as well as (b) marital relationship and household (e.g., marital status, household composition), (c) social support (e.g., confidants), (d) partner's pregnancy (e.g., conception type, pregnancy planning), (e) partner's gynecologic and obstetric history (e.g., number of pregnancies, abortions, fertility treatment) and (f) father's medical and psychological history (e.g., psychiatric hospitalizations, treatments and appointments and physical problems).

State Anxiety Inventory. The State Anxiety Inventory (STAI-S) is a 20-item self-report scale that measures the temporary condition of "state anxiety" (anxiety in a specific situation) (STAI-T/S; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Several studies have been used this measure during pregnancy with men (e.g., Figueiredo & Conde, 2011; Figueiredo et al., 2008). STAI-S Portuguese version has shown good internal consistence - Cronbach's α = .88 (Biaggio, Natalicio, & Spielberger, 1976). Recently, Tendais, Costa, Conde and Figueiredo (2014) found excellent internal consistency for STAI-S in pregnancy (Cronbach's α = .92, respectively) and advised an optimal cutoff of 40 for this period.

Edinburgh Postnatal Depression Scale. The Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) is a 10-item self-report scale scored on a 4-point Likert scale, designed to assess postpartum depression. This measure assesses the intensity of depressive symptoms within the previous seven days and has been used in several studies with men during pregnancy (e.g., Figueiredo & Conde, 2011; Parfitt & Ayers, 2014; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). EPDS Portuguese version showed good internal consistency for pregnancy (Cronbach's α = .88) and the optimal cutoff score was 9 (Tendais et al., 2014).

Relationship Questionnaire. The Relationship Questionnaire (RQ; Figueiredo et al., 2008) is a 12-item self-report scale scored on a 4-point Likert scale. This measure was designed to assess both positive and negative aspects of partner relationship: (1) positive dimensions, assessed by the positive relationship subscale, include a sense of support and care, as well as affection, closeness and joint interests and activities; and (2) negative dimensions, assessed by the negative relationship subscale, include anxiety, irritability and criticisms that have been associated with undesirable outcomes. A higher score on the positive relationship subscale means that these positive relationship aspects are more present, as well as having a higher score in the negative relationship subscale means that these negative relationship aspects are more present in the partner relationship. Also, higher the RQ total score better the partner relationship, assessed by the participant. The questionnaire showed a good internal consistency (Cronbach`s α= 0.79 for the total scale; 0.90 for the positive subscale; and 0.72 for the negative subscale) and test–retest reliability (r =50.74 for the total scale).

Coparenting Relationship Scale - Prenatal Version. Coparenting Relationship Scale-Prenatal Version (CRS-PV; Pinto & Figueiredo, 2014) is a 26-item self-report scale scored on a 7 point Likert scale. This measure was designed to assess coparenting, distributed over 4 subscales: (1) coparenting support and agreement assesses one's perception of coparental support from partner and the degree that each parent agrees with matters relating to infant education; (2) division of labor assesses how coparents share and coordinate the responsibilities of infant care; (3) exposure to conflict assesses parents perception about expose the infant to conflicts related to their education; and (4) coparenting undermining assesses the perception that coparental relationship is regulated by critics, guilty and competition between the parents. This measure showed good internal consistency (Cronbach`s α= 0.75).

Data Analytic Strategy

In order (1) to analyze coparenting development path in fathers from the first trimester of pregnancy until childbirth and (2) to explore the effects of individual (depression and anxiety) and dyadic (partner's relationship quality) dimensions on coparenting development path during this period in fathers an ANOVA general linear model repeated measures were performed. For this purpose, the model included (a) coparenting (CRS-PV values) as measure and (b) two pregnancy assessments and childbirth were used as the within-subject effects

factor. Depression (EPDS values), anxiety (STAI-S values) and partner's relationship quality (RQ values) at the 1st trimester of pregnancy were considered as between-subjects factors. Main effects and interaction terms were tested. Post hoc contrasts were used to determine the nature of effects over time. Pair-wise comparisons were performed with Bonferroni correction. In order (3) to study differences in coparenting according to fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the 1st trimester of pregnancy independent sample T tests were performed. In order (4) to study fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy as predictors of coparenting at childbirth a multiple linear regression (stepwise method) was performed. The model included fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy as independent variables and coparenting at childbirth as dependent variable.

Results

(1) Coparenting developmental path in fathers from the 1st trimester of pregnancy to childbirth

Repeated measures ANOVA revealed significant changes in father's coparenting since the 1st trimester of pregnancy to childbirth [$F(2, 80) = 3.28$, $p < .05$] (see Table 2). Post hoc contrasts showed a significant decrease in coparenting between the 1st trimester of pregnancy and childbirth. Pair-wise comparisons revealed significant mean differences between (a) the 1st trimester of pregnancy and childbirth ($p < .05$) but not (b) between the 1st trimester of pregnancy and the 3rd trimester of pregnancy ($p = 1.00$) and (c) between the 3rd trimester of pregnancy and childbirth ($p = 1.00$).

Table 2.

Coparenting developmental path in fathers at the 1st, 3rd trimester of pregnancy and childbirth.

	1st trimester		3rd trimester		Childbirth			
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*Df*
Coparenting	108.34	1.41	108.27	1.42	104.27	2.01	3.28*	2, 80

Notes. *M* = Mean; *SD* = State Deviation.
* $p < .05$.

(2) Individual (depression and anxiety) and dyadic (partner's relationship quality) effects on fathers' coparenting developmental path

Repeated measures ANOVA revealed no significant effects for depression [$F(1.71, 66.78) = 1.84$, $p = 1.71$], anxiety [$F(1.70, 66.46) = .54$, $p = .54$] and both positive and negative dimensions of partner's relationship quality [$F(1.70, 66.29) = .26$, $p = .73$; $F(1.66, 64.85) = 1.60$, $p = .21$] at the 1st trimester of pregnancy on fathers' coparenting developmental path (see Table 3).

Table 3.

Individual (depression and anxiety) and dyadic (partner's relationship quality) effects on fathers' coparenting developmental path.

		Coparenting							
		1st trimester		3rd trimester		Childbirth			
Variables	Groups	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*Df*
Depression	Depressed	104.40	13.45	105.60	10.71	93.00	21.00	1.84	1.71, 66.78
	Non depressed	108.88	8.34	108.64	8.94	105.83	10.91		
Anxiety	Anxious	108.00	8.98	108.34	8.74	103.84	13.30	.54	1.70, 66.46
	Non anxious	112.66	10.07	107.33	15.31	109.67	2.89		
Positive partner's relationship	High	107.66	8.60	108.06	8.19	103.57	13.67	.26	1.70, 66.29
	Low	112.33	11.13	109.50	14.18	108.33	6.022		
Negative partner's relationship	High	109.44	8.84	106.80	9.11	104.36	13.03	1.60	1.66, 64.85
	Low	106.63	9.29	110.56	8.83	104.13	13.12		

Notes. *M* = Mean; *SD* = State Deviation.

(3) Differences in coparenting according to fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the 1st trimester of pregnancy

Independent sample T tests revealed significant differences in coparenting at childbirth between depressed and non-depressed fathers at the 1st trimester of pregnancy [$t(39) = 2.18$, $p < .05$]. Lower levels of coparenting at childbirth were found in depressed fathers at the 1st trimester of pregnancy. No significant differences were found in coparenting at the 1st trimester of pregnancy [$t(39) = 1.05$, $p = .30$] and the 3rd trimester of pregnancy [$t(39) = .69$, $p = .49$] between depressed and non-depressed fathers. Independent sample T tests also revealed no significant differences in coparenting according to fathers' (a) anxiety [$t(39) = .29$, $p = .77$; $t(39) = 1.29$, $p = .21$; $t(39) = .72$, $p = .47$] and (b) partner's relationship quality, both positive [$t(39) = 1.18$, $p = .25$; $t(39) = .36$, $p = .72$; $t(39) = .83$, $p = .41$] and negative [$t(39) = -.98$, $p = .34$; $t(39) = 1.31$, $p = .20$; $t(39) = -.06$, $p = .96$], at the 1st trimester of pregnancy (see Table 4).

Table 4.

Coparenting according fathers' depression, anxiety and partner's relationship quality at the 1st trimester of pregnancy.

		Coparenting					
		1st trimester		3rd trimester		Childbirth	
Variables	Groups	*t*	*df*	*T*	*df*	*t*	*Df*
Depression	Depressed *vs* Non-depressed	1.05	39	.69	39	2.18*	39
Anxiety	Anxious *vs* Non-anxious	.29	39	1.29	39	.72	39
Positive partner's relationship	High *vs* Low	1.18	39	.36	39	.83	39
Negative partner's relationship	High *vs* Low	-.98	39	1.31	39	-.06	39

*$p < .05$

(4) Fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the 1st trimester of pregnancy as predictors of coparenting at childbirth

Fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the 1st trimester of pregnancy were studied as predictors of coparenting at childbirth (see Table 5). The regression model explained 45.7% of the variance (adjusted R^2 = .19, $F(1,39) = 10.30$, $p < .01$). Fathers' depression at the 1st trimester was the best predictor of coparenting at childbirth (β = -2.17, t = -3.21, $p < .01$). This results indicate that depressed fathers at the 1st trimester of pregnancy show lower levels of coparenting at childbirth.

Table 5.
Fathers' depression, anxiety and partner's relationship quality at the first trimester of pregnancy as predictors of coparenting at childbirth.

	R^2 (adj R^2)	F	df	β	t
Model					
Depression	.21 (.19)	10.30	1,39	-2.17	-3.21**
Anxiety	.21 (.19)	10.30	1,39	.06	.38
Positive partner's relationship	.21 (.19)	10.30	1,39	-.12	-.81
Negative partner's relationship	.21 (.19)	10.30	1,39	.09	.59

Notes. *adj* R^2 = adjusted R^2.
**$p < .05$

Discussion

The present study is the first to analyze coparenting developmental path since early pregnancy in fathers. Supporting the first hypothesis of this study, a significant decrease was found on coparenting between the first trimester of pregnancy and childbirth in fathers. This result provides new evidence about coparenting establishment developmental task in fathers (e.g., Figueiredo & Lamela, 2014) and suggest that despite the fact that coparenting seems to be relatively consistent over time (e.g., McHale & Rotman, 2007) fluctuations in coparenting developmental path may be expected during pregnancy. During pregnancy coparenting developmental path decreases over time, highlighting that fathers tended to be less satisfied with coparenting interactions. In this period fathers start to experience coparental interactions

and adjustment to their new roles as coparents (e.g., Feinberg, 2003) and that may justified slight changes.

Fathers' coparenting developmental path was not significantly affected by the studied individual (depression and anxiety) and dyadic (partner's relationship quality) dimensions, on contrary to the second hypothesis of the present study. These results revealed that these dimensions might not affected fathers' coparenting developmental path from the first trimester of pregnancy to childbirth. We can also suppose that effects would be only present in the postpartum period. Some studies have found negative associations between father's depression and anxiety and coparenting (e.g., Bronte-Tinkew, Moore, Matthews, & Carrano, 2007), suggesting that depression and anxiety may (a) reduce father's ability to coparent and (b) be a risk factor for increased negative coparenting dynamics (e.g., Elliston et al., 2008) during postpartum period.

Family systems framework, suggests that family subsystems (e.g., marital and coparenting subsystem) are interdependent, highlighting that the reorganization of marital subsystem, particularly after childbirth, has important consequences for overall family system (Cowan & McHale, 1996). However, because coparenting subsystem start to develop during pregnancy, prenatal period represents a family system transition and the interdependence between both these subsystems may be present only in postpartum period.

In this study, differences in coparenting according to fathers' (a) depression, (b) anxiety and (c) partner's relationship quality at the first trimester of pregnancy were studied. Supporting the third hypothesis, significant differences in coparenting at childbirth between depressed and non-depressed fathers at the first trimester of pregnancy were found with lower levels of coparenting found in depressed fathers at the first trimester of pregnancy. These results might reveal that depression play an important role in fathers' ability to coordinate and involve in positive coparental interactions with the other coparent, particularly in the postpartum period, after the birth of the child.

In the present study, fathers' depression at the first trimester of pregnancy was also identified as the best predictor of coparenting at childbirth. Similar to previous studies (e.g., Bronte-Tinkew, Moore, Matthews, & Carrano, 2007), this result suggest that depression may reduce father's ability to coparent and may increase negative coparenting dynamics, including higher coparenting conflict (e.g., Bronte-Tinkew et al., 2009) and increased withdrawal during coparenting conversations (e.g., Elliston et al., 2008). In a context of depression, fathers may (a) experience more frequent and intense negative emotions and may have more negative expectations about coparenting during pregnancy. Previous studies have reported

fathers' negative emotionality as a predictor of greater postpartum undermining coparenting behavior, pointing that fathers who experience more frequent and intense negative emotions may be more likely to initiate or maintain hostile and competitive interactions during family play (e.g., Schoppe-Sullivan & Mangelsdorf, 2013). Negative expectations about coparenting during pregnancy have also been identified as predictors of low cooperation and family warmth after childbirth (e.g., McHale et al., 2004; McHale & Rotman, 2007; Van Egeren, 2003).

Limitations

Constructs were assessed by a self-report questionnaire. Although all measures have exhibited a very good reliability and construct validity, additional observational methods of the dyadic and triadic interactions could have contributed to a higher accuracy of the coparenting profiles and reduced possible shared method variance.

Implications for practice and research

A wide range of studies, first in women and recently in man, has been shown that depression is the better determinant of parenting (e.g., Parfitt & Ayers, 2014). This study provides new evidence that depression also may be an important determinant of coparenting quality since the beginning of the transition to parenthood. Early detection of depressed fathers can be an important measure to detect fathers in risk of coparenting maladjustment. Finally, the measure used to assess coparenting, by showing satisfactory psychometric properties in the current study, can be used in clinical settings in order to identify fathers in risk of negative coparenting interaction.

Conclusions

The present study represents an important advance in the developing literature on early coparenting relationships, and the broader literature on family interaction and processes (1) by analyzing coparenting developmental path in fathers from the beginning of pregnancy and (2) by identifying depression as an important dimension associated to the positive resolution of coparenting developmental task in fathers.

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