

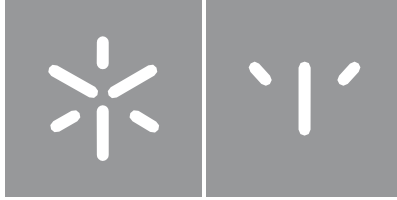


Couple relationship during the transition to parenthood: gender and parity effects over time

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parenthood: gender and parity effects over time**

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Relação conjugal durante a transição para a parentalidade: efeitos do género e paridade ao longo do tempo

Resumo

Embora a literatura assinala a deterioração da qualidade da relação conjugal durante a transição para a parentalidade, dados sobre os efeitos do género e da paridade são limitados. Este estudo teve como objetivo analisar (1) as alterações nas interações positivas e negativas da relação conjugal, do primeiro trimestre da gravidez até aos três meses pós-parto; e (2) as diferenças e efeitos do género e da paridade nas interações positivas e negativas da relação conjugal desde o primeiro trimestre da gravidez até aos três meses pós-parto. A amostra é constituída por 206 mães e 189 pais ($N = 395$, primíparos ou múltiparos) que, em cada trimestre da gravidez, no parto e nos três meses pós-parto, preencheram um instrumento que avalia as interações positivas e negativas na relação conjugal. Os resultados sugerem uma diminuição das interações negativas na relação conjugal entre o primeiro trimestre de gravidez e os três meses pós-parto. Esta diminuição das interações negativas na relação conjugal foi principalmente reportada pelos pais primíparos entre o primeiro trimestre de gravidez e o parto. As interações positivas na relação conjugal mantiveram-se constantes entre o primeiro trimestre de gravidez e os três meses pós-parto. Contudo, as mães reportaram uma diminuição das interações positivas do terceiro trimestre de gravidez até aos três meses pós-parto e as mães múltiparas também reportaram uma diminuição do primeiro trimestre até aos três meses pós-parto. Embora no geral não tenha sido observada deterioração na qualidade da relação conjugal, uma diminuição das interações positivas foi reportada pelas mães após o parto e desde o primeiro trimestre de gravidez até aos três meses pós-parto pelas mães múltiparas.

Palavras-chave: relação conjugal; positiva e negativa; género; paridade; transição para a parentalidade.

Couple relationship during the transition to parenthood: gender and parity effects over time

Abstract

Although a deterioration has been found on couple's relationship quality during the transition to parenthood, data regarding gender and parity effects are limited in the literature. This study aimed to analyze (1) changes in couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum; and (2) gender and parity differences and effects on couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum. A sample of 206 mothers and 189 fathers ($N = 395$, primiparous or multiparous) completed a measure of couple's positive and negative interactions at each pregnancy trimester, childbirth, and at three months postpartum. Results suggested a decrease on couple's negative interactions from the first trimester of pregnancy to three months postpartum. This decrease on couple's negative interactions was mainly reported by primiparous fathers from the first trimester of pregnancy to childbirth. Couple's positive interactions remain stable from the first trimester to three months postpartum. However, mothers reported a decrease on couple's positive interactions from the third trimester of pregnancy to three months postpartum, and multiparous mothers also reported a decrease from the first trimester of pregnancy to three months postpartum. Although no overall deterioration was found on couple's relationship quality, a decrease on couple's positive interactions was reported by mothers during the postpartum period and from the first trimester of pregnancy to three months postpartum reported by multiparous mothers.

Keywords: couple's relationship; positive and negative; gender; parity; transition to parenthood.

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Couple relationship during the transition to parenthood: gender and parity effects over time

The transition to parenthood is a major developmental transition that involves several psychological, biological and social adjustments, occurring at individual, dyadic and family levels (e.g., Cowan & Cowan, 2000; Figueiredo, 2014). This transition begins during pregnancy, or even earlier with planning, and lasts until several months postpartum (e.g., Adamsons, 2013; Figueiredo et al., 2018; Moreno-Rosset, Arnal-Rémon, Antequera-Jurado, & Ramírez-Uclés, 2016). Becoming a parent can be a stressful task for both members of the couple (e.g., Figueiredo & Conde, 2015; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008; Molgora, Acquati, Fenaroli, & Saita, 2018), as the transition to parenthood requires changes in their lifestyle as well as the renegotiation and reorganization of their roles, as couple and as new parents (e.g., Alves, Milek, Fonseca, Canavarro, & Pereira, 2019; Ferriby, Kotila, Dush, & Schoppe-Sullivan, 2015; Moreno-Rosset et al., 2016).

In order to adjust to the transition to parenthood, both members of the couple must achieve several developmental tasks (Cowan & Cowan, 2000). Achieving the necessary developmental tasks is related to positive changes on couple and family relationship quality (e.g., Bost, Cox, Burchinal, & Payne, 2002; Lorensen, Wilson, & White, 2004; Mitnick, Heyman, Smith, & Slep, 2009), while the negative achievement of these developmental tasks may lead to an incomplete transition (Cowan & Cowan, 2000).

Couple's relationship satisfaction and quality has influence on mother's and father's adjustment to the transition to parenthood (Figueiredo et al., 2018). Couple's relationship quality and satisfaction are multidimensional constructs of the individual perceptions of both members of the couple about their relationship (Kluwer, 2010). Couple's relationship quality refers to what is established between the members of the couple and includes positive and negative interactions (Canário & Figueiredo, 2016). Positive interactions refer to shared activities, support and partnership, while negative interactions include irritability, lack of support from partner and criticism (e.g., Figueiredo et al., 2008).

Couple's relationship quality can be a protective or a risk factor for mother's and father's adjustment to the transition to parenthood (e.g., Figueiredo et al., 2018; Kluwer, 2010). Positive couple's relationship maintenance during the transition is a protective factor (e.g., Welch, Rouleau-Mitchell, Farero, Lachmar, & Wittenborn, 2019), while a deterioration of couple's relationship quality is a risk factor for the adjustment to the transition to

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parenthood (Figueiredo et al., 2018; Osofsky et al., 1985). Crucial aspects of couple's relationship quality are communication, emotional closeness (e.g., Suto, Takehara, Yamane, & Ota, 2017), partner support, sexuality, intimacy (e.g., Cowan & Cowan, 2003; Parfitt & Ayers, 2014), and the duration and status of couple's relationship before pregnancy (Howard & Brooks-Gunn, 2009; Trillingsgaard, Baucon, & Heyman, 2014). These may suffer some changes during the transition to parenthood that may contribute to the deterioration of couple's relationship quality (e.g., Lawrence et al., 2008; Theisen, Osofsky, Simpson, & Rhodes, 2019).

The literature has been consistently reporting a decline on couple's relationship quality during the transition to parenthood (e.g., Belsky, Spanier, & Rovine, 1983; Don & Mickelson, 2012; Molgora et al., 2018; Moreno-Rosset et al., 2016; Osofsky et al., 1985; Trillingsgaard, Sommer, Lasgaard, & Elklit, 2014). Longitudinal studies showed that couple's relationship quality tends to decline from pregnancy to the postpartum period (e.g., Cowan & Cowan, 1992; Doss, Rhoades, Stanley, & Markman, 2009), and this decline persists across the transition to parenthood (e.g., Doss et al., 2009; Lawrence et al., 2008). The decline observed during pregnancy was associated with pregnancy acceptance (e.g., Slade et al., 2009). The decline observed during the postpartum period was associated with infant care (e.g., Halford & Petch, 2010; Kluwer, 2010), new responsibilities, and lack of parenting experience (e.g., Belsky, Lang, & Huston, 1986). Moreover, workplace demands, and household labor can also increase stress in both members of the couple (e.g., Moller, Hwang, & Wickberg, 2006, 2007).

Although the literature is consensual about the deterioration of couple's relationship quality during the transition to parenthood, data regarding gender and parity effects are limited. The transition to parenthood affects both members of the couple (e.g., Theisen et al., 2019), however, it can be experienced differently by mothers and fathers (e.g., Adamsons, 2013) and in different stages of the transition (e.g., Moreno-Rosset et al., 2016; Rodriguez & Adamsons, 2012). The few available studies suggested gender effects on couple's relationship quality during the transition to parenthood (e.g., Doss et al., 2009; Lawrence et al., 2008). Both mothers and fathers revealed a decrease on couple's relationship quality during the transition to parenthood (e.g., Mitnick, Heyman, & Smith-Slep, 2009). However, a steeper decline in couple's relationship quality was found in mothers than in fathers (e.g., Doss et al., 2009; Katz-Wise, Priess, & Hyde, 2010; Kluwer, 2010; Lawrence, Nylen, & Cobb, 2007; Tweng, Campbell, & Foster, 2003). Moreover, mothers reported less couple's relationship quality during pregnancy and at the childbirth. On the other hand, couple's

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relationship quality remained stable in fathers during pregnancy and the postpartum period (Lawrence et al., 2008).

The available literature also suggested parity effects on couple's relationship quality during the transition to parenthood. Primiparous couples showed better couple's relationship quality during the transition to parenthood than multiparous couples (e.g., Belsky et al., 1983; Mortensen, Torsheim, Melkevik, & Thuen, 2012). Studies found a steeper decline on couple's relationship satisfaction and quality in multiparous than in primiparous, particularly during the postpartum period (e.g., DiFlorio et al., 2014), and this decline persists across the transition to parenthood (Kluwer, 2010; Tweng et al., 2003).

The adjustment to the transition to parenthood occur not only with the first child but also with the addition of another child to the family (Volling, 2012). For both primiparous mothers and fathers, adding an infant to the dyad and wide family can bring different challenges and stressors to the couple's relationship (e.g., Schwerdtfeger, Todd, Oliver, & Hubler, 2013; Trillingsgaard et al., 2014). Multiparous couples face new challenges during the transition to parenthood, that may consist of adapting their family structure to the arrival of the new child and creating new routines to take care of two or more children, simultaneously (e.g., Twenge et al, 2003). Moreover, evidence showed that the birth of a second child is associated with more responsibilities, which can be a risk factor for the deterioration of couple's relationship quality during the postpartum period (e.g., Moller et al., 2007). However, to our knowledge, few studies assessed couple's relationship quality during the transition to parenthood in multiparous mothers and fathers.

The literature highlights the key role of couple's relationship quality during the transition to parenthood (e.g., Parfitt & Ayers, 2014; Redshaw & Martin, 2014). Although a deterioration has been found on couple's relationship quality during the transition to parenthood, gender and parity effects and differences in couple's positive and negative interactions are mostly limited. Fathers and multiparous couples, as well as couple's relationship dimensions – positive and negative interactions -, are not often considered in the literature. Therefore, the present study aimed to analyze (1) changes in couple's positive and negative interactions from first trimester of pregnancy to three months postpartum; (2) gender differences and effects on couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum; (3) parity differences and effects on couple's positive and negative interactions from the first pregnancy trimester to three months

postpartum; and (4) interaction differences and effects between gender and parity on couple's positive and negative interactions from the first pregnancy trimester to three months postpartum.

Method

Participants

The sample is representative of Portuguese parents (NIS, 2018). The sample of this study comprised 206 mothers and 189 fathers ($N = 395$, primiparous and multiparous). Nearly all the participants were Portuguese (91.4%), aged between 20 and 39 years old (85.9%), married or cohabiting (88.4%), and were employed (80.4%). More than half of the couples were primiparous (56.0%), were from medium socioeconomic level (58.2%), and had nine or more years of education (67.2%; see Table 1). Half of the infants were male (54.8%), while the remaining were female (45.2%). Most of the infants were born after the 37th week of gestation (97.0%), with birthweight higher than 2500g (91.7%), and initiated breastfeeding (95.7%).

From the 260 mothers and fathers ($N = 520$) who completed the first assessment wave (first trimester of pregnancy), 206 mothers (79.2%) and 189 fathers (72.6%) completed measures during the second and the third trimester of pregnancy, childbirth, and at three months postpartum ($n = 395$; 74.0%). Significant associations were found between the participants that completed all assessment waves and the participants who did not, regarding age, marital status, and socioeconomic level. Participants who completed all assessment waves were more likely to be older, $\chi^2 = 16.75$, $p < 0.001$, married, $\chi^2 = 24.96$, $p < 0.01$, and belong to higher socioeconomic level, $\chi^2 = 7.93$, $p = 0.019$. No associations were found between the participants who completed all assessment waves and those who did not complete, in any other remaining sociodemographic characteristics (e.g., occupational status and schooling), as well as in the studied variables.

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Table 1

Participants' sociodemographic characteristics.

	Mothers <i>n</i> = 206 %	Fathers <i>n</i> = 189 %	Total <i>N</i> = 395 %
<i>Age (years)</i>			
≤19	11.5	4.2	7.9
20-29	47.0	38.9	42.9
30-39	39.2	46.9	43.1
≥40	2.3	10.0	6.1
<i>Marital status</i>			
Cohabiting	32.6	32.5	32.5
Married	55.8	55.7	55.8
Single	11.2	10.2	10.7
Divorced	0.4	1.6	1.0
<i>Socioeconomic level</i>			
High	9.3	16.4	12.5
Medium	62.9	53.4	58.2
Low	27.8	30.2	28.8
<i>Occupational status</i>			
Employed	71.8	89.0	80.4
Unemployed	21.6	9.0	15.4
Other	2.0	6.6	4.2
<i>Schooling</i>			
<9	26.9	38.6	32.8
9-12	54.3	47.9	51.0
>12	18.8	13.5	16.2

Procedure

The present study takes part of a larger longitudinal study, conducted according with the guidelines provided by the Declaration of Helsinki and received previous approval of the Ethical Committees of all institutions involved. Mothers and fathers ($N = 520$) were recruited in an Obstetrics outpatient Unit of a public health service at the first pregnancy appointment. After being informed about the aims and procedures of the study, the mothers and the fathers who were willing to participate signed an informed consent. The exclusion criteria were not reading or writing Portuguese and multiple gestations. The study had a longitudinal design with five assessment waves: first (8 – 14 weeks of gestation, $M = 13.90$, $SD = 1.38$) second (20 – 24 weeks of gestation, $M = 21.21$, $SD = 1.14$) and third trimester of pregnancy (30 – 34 weeks of gestation, $M = 31.14$, $SD = 1.65$), childbirth (1 – 3 postpartum days, $M = 2.30$, $SD = 0.51$), and at three months postpartum (10 – 14 postpartum weeks, $M = 13.60$, $SD = 0.80$). Participants repeatedly completed measures to assess their sociodemographic characteristics and couple's positive and negative interactions.

Measures

Sociodemographic characteristics. The Sociodemographic Questionnaire (Figueiredo, Teixeira, Conde, Pinto & Sarmento, 2009) was used to collect sociodemographic information of the participants - such as gender and parity, as well as age, nationality, socioeconomic level, marital status, and schooling.

Couple's positive and negative interactions. The Relationship – Questionnaire (RQ) was used to assess couple's positive and negative interactions. The RQ comprises 12 items scored on a four-point Likert-type scale, ranging from one (never) to four (always), divided into two subscales that assesses couple positive and negative interactions. The positive subscale (eight items) assesses the feeling of support and concern, as well as satisfaction, closeness and common interests (e.g., Do you and your partner show affection to each other?). The negative dimension (four items), assesses anxiety, irritability and criticism, associated with undesirable outcomes (e.g., Do you and your partner get irritable with each other?). Higher total scores on the RQ indicate better couple relationship. The RQ was developed with the aim of being completed in a short period of time, focusing on behaviors and suitable for both mothers and fathers. It is a questionnaire used to assess the couple relationship during the transition to parenthood (Figueiredo et al., 2008). The RQ showed a good internal consistency and test-retest reliability ($r = .74$; Figueiredo et al., 2018; Figueiredo et al., 2008). In the present study,

the RQ showed a good internal consistency in mothers and fathers, both in the positive and negative subscales (range of $\alpha = .70 - .92$).

Statistical analysis

In order to (1) analyze the changes on couple's positive and negative interactions from the first trimester to three months postpartum, a Multivariate Analysis of Variance (MANOVA) for repeated measures was performed. The MANOVA for repeated measures model included couple's positive and negative interactions (positive and negative subscales scores) as factors between subjects (dependent variables) with five levels (first, second and third trimester of pregnancy, childbirth and three months postpartum).

To analyze differences and effects of (2) gender, (3) parity and (4) the interaction between gender and parity on couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum, gender (coded as 0 = mother; 1 = father), parity (coded as 0 = primiparous; 1 = multiparous) and the interaction between gender and parity (coded as 1 = primiparous mothers; 2 = multiparous mothers; 3 = primiparous fathers; 4 = multiparous fathers) were included in the MANOVA for repeated measures model as independent variables. Pairwise comparisons were applied to analyze intraindividual and interindividual differences between groups at all assessment waves, performing a MANOVA. The significance of the results was considered at the level of $p < .05$. Data were analyzed using SPSS version 26.

Results

Couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum

Results revealed no significant effects of time on couple's positive interactions from the first trimester of pregnancy to three months postpartum, $F(4,1576) = 1.46, p = .213$. Pairwise comparisons revealed a decrease on couple's negative interactions from the first trimester of pregnancy to three months postpartum, $F(4,1576) = 4.48, p = .001$. Significant differences on couple's negative interactions were observed between the first trimester of pregnancy, and (1) the second ($p = .033$) and (2) the third trimester of pregnancy ($p = .037$), (3) childbirth ($p = .006$) and (4) three months postpartum ($p = .026$; see Table 2).

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Table 2

Couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum

Variables	Trimesters of pregnancy						Postpartum				<i>F</i>	<i>Pairwise comparisons</i>
	(1) First		(2) Second		(3) Third		(4) Childbirth		(5) 3 months			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Positive Interactions	3.65	0.36	3.63	0.41	3.64	0.38	3.63	0.40	3.61	0.42	1.47	1 = 2 = 3 = 4 = 5
Negative Interactions	2.15	0.55	2.07	0.50	2.07	0.53	2.05	0.51	2.06	0.49	4.28**	1 > 2, 3, 4, 5

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

***p* < .01

Gender differences and effects on couple's positive and negative interaction from the first trimester of pregnancy to three months postpartum

Results revealed a significant effect of the interaction between time and gender on couple's positive interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 5.28, p < .001$ (see table 3). Intraindividual pairwise comparisons revealed that couple's positive interaction decreases in mothers (1) from the first trimester of pregnancy to childbirth ($p = .029$) and (2) from the third trimester of pregnancy to three months postpartum ($p = .045$). While in fathers, no changes were observed on couple's positive interaction from the first trimester of pregnancy to three months postpartum ($p = 1.00$; see Figure 1A). Furthermore, interindividual pairwise comparisons revealed significant differences between mothers and fathers on couple's positive interaction at three months postpartum, $F(1,392) = 4.46, p = .035$. Mothers reported fewer positive interactions at three months postpartum, than fathers. No significant differences were found between mothers and fathers in the remaining assessment waves of the couple's positive interactions, range of $F = 0.15 - 2.51$, range of $p = .114 - .696$.

No significant effects of the interaction between time and gender were found on couple's negative interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 0.02, p = .956$ (see Table 3; see Figure 1B). Likewise, no significant interindividual differences were found between mothers and fathers in all the assessment waves of the couple's negative interactions, range of $F = 0.03 - 0.98$, range of $p = .324 - .855$.

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Table 3
Gender differences and effects on couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum

	Positive Interactions					Negative Interactions							
	(1)		(2)		F	(1)		(2)		F			
	Mothers (n = 206)	Fathers (n = 189)	Mothers (n = 206)	Fathers (n = 189)		Mothers (n = 206)	Fathers (n = 189)						
M	SD	M	SD		M	SD	M	SD					
1 st trimester (a)	3.68	0.32	3.62	0.39	1 = 2	1 st trimester (a)	2.12	0.52	2.18	0.59	1 = 2		
2 nd trimester (b)	3.61	0.42	3.64	0.41	1 = 2	2 nd trimester (b)	2.06	0.48	2.09	0.52	1 = 2		
3 rd trimester (c)	3.63	0.39	3.65	0.39	5.28***	1 = 2	3 rd trimester (c)	2.06	0.55	2.08	0.52	0.27	1 = 2
Childbirth (d)	3.61	0.42	3.66	0.38	1 = 2	Childbirth (d)	2.06	0.53	2.05	0.47	1 = 2		
3 months (e)	3.57	0.46	3.66	0.37	1 < 2	3 months (e)	2.04	0.49	2.09	0.50	1 = 2		
	a = b, c		a = b = c = d = e			a = b = c = d = e		a = b = c = d = e					
	a > d, e												
	b = c, d, e												
	c = d; c > e												

Notes. M = Mean; SD = Standard Deviation.

***p < .001

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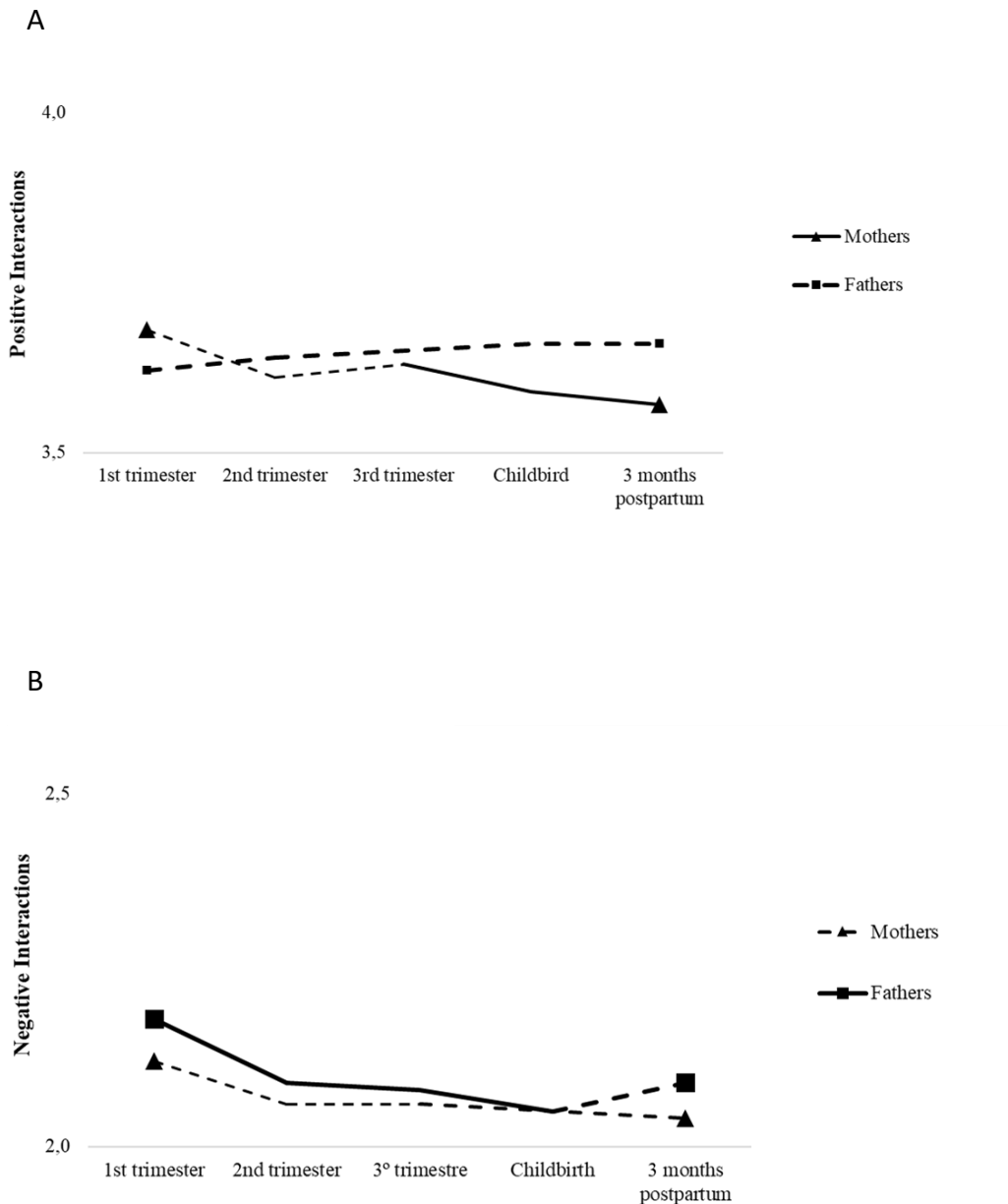


Figure 1. Couple's positive (A) and negative (B) interactions from the first trimester of pregnancy to three months postpartum in mothers and fathers.

Parity differences and effects on couple's positive and negative interaction from first trimester of pregnancy to three months postpartum

Results revealed no significant effects of the interaction between time and parity on couple's positive interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 1.99, p = .094$ (see Table 4, see Figure 2A). However, interindividual pairwise comparisons revealed significant differences between primiparous and multiparous on couple's positive interaction at the second trimester of pregnancy, $F(1,392) = 9.33, p = .002$, third trimester of pregnancy, $F(1,392) = 3.28, p = .051$, at childbirth, $F(1,392) = 8.02, p = .005$, and at three months postpartum, $F(1,392) = 8.88, p = .003$. Multiparous mothers and fathers reported fewer positive interaction at the second and the third trimester of pregnancy, childbirth, and at three months postpartum, compared to primiparous mothers and fathers. No significant differences were found between primiparous and multiparous at the first trimester of pregnancy, $F(1,392) = 1.74, p = .188$.

Likewise, no significant effects of the interaction between time and parity were found on couple's negative interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 1.20, p = .309$ (see Table 4). However, intraindividual pairwise comparisons revealed a decrease in couple's negative interactions of primiparous mothers and fathers from the first trimester (1) to the third trimester, $p = .023$, (2) to childbirth, $p = .006$, and (3) to the three months postpartum, $p = .013$ (see Figure 2B). Interindividual pairwise comparisons revealed significant differences between primiparous and multiparous in couple's negative interaction at childbirth, $F(1,392) = 2.99, p = .045$, and at three months postpartum, $F(1,392) = 3.70, p = .045$. Multiparous mothers and fathers reported more negative interaction at childbirth and at the three months postpartum, compared to primiparous mothers and fathers. No significant differences were found between primiparous and multiparous at the first, second, and at the third trimester of pregnancy, $F(1,392) = 0.01 - 2.55, p = .111 - .944$.

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Table 4

Parity differences and effects on couple's positive and negative interactions from first trimester of pregnancy to three months postpartum

	Positive Interactions					Negative Interactions					
	(1)		(2)		F	(1)		(2)		F	
	Primiparous (n = 220)		Multiparous (n = 175)			Primiparous (n = 220)		Multiparous (n = 175)			
	M	SD	M	SD		M	SD	M	SD		
1 st trimester (a)	3.67	0.34	3.63	0.38	1 = 2	1 st trimester (a)	2.15	0.56	2.15	0.55	1 = 2
2 nd trimester (b)	3.68	0.38	3.56	0.44	1 > 2	2 nd trimester (b)	2.06	0.52	2.09	0.47	1 = 2
3 rd trimester (c)	3.67	0.34	3.60	0.43	1.94 1 > 2	3 rd trimester (c)	2.03	0.53	2.12	0.54	1.37 1 = 2
Childbirth (d)	3.68	0.37	3.57	0.42	1 > 2	Childbirth (d)	2.01	0.48	2.11	0.53	1 < 2
3 months (e)	3.67	0.37	3.54	0.47	1 > 2	3 months (e)	2.02	0.49	2.12	0.50	1 < 2
	a = b = c = d = e		a = b = c = d = e			a > c, d, e		a = b		a = b = c = d = e	
						b = c = d = e					

Notes. M = Mean; SD = Standard Deviation;

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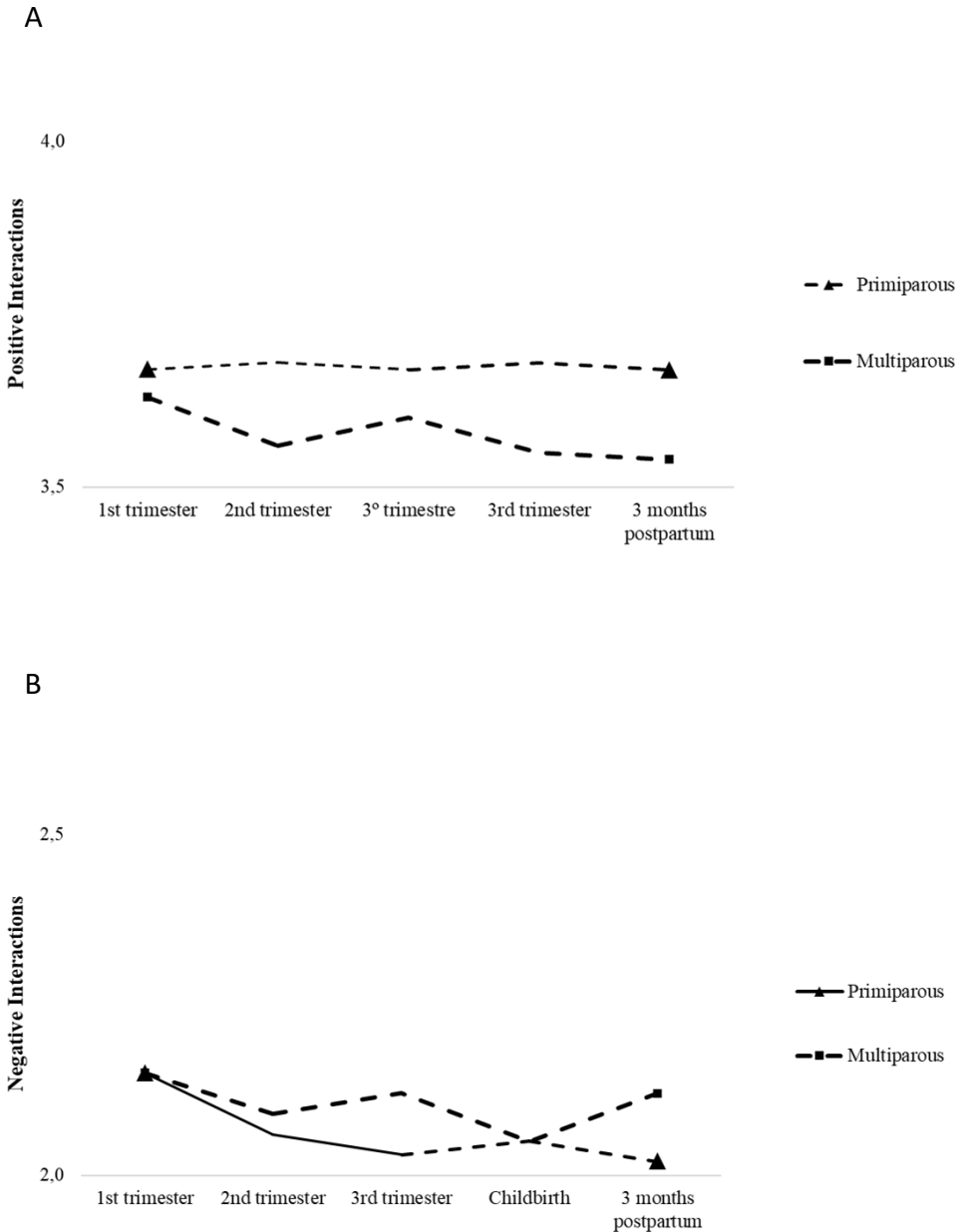


Figure 2. Couple’s positive (A) and negative (B) interactions from first trimester of pregnancy to three months postpartum in primiparous and multiparous

Interaction differences and effects between gender and parity on couple's positive and negative interactions from the first trimester to three months postpartum

No significant interaction effects between time, gender and parity were found on couple's positive interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 1.51, p = .196$. However, intraindividual pairwise comparisons revealed a significant decrease in the couple's positive interaction of multiparous mothers from the first trimester of pregnancy (1) to the second trimester of pregnancy, $p = .008$, (2) to childbirth, $p = .012$, and (3) to the three months postpartum, $p = .001$. Additionally, interindividual pairwise comparisons revealed significant differences between multiparous mothers and primiparous fathers on couple's positive interaction at the second trimester of pregnancy, $F(3,391) = 3.31, p = .020$, at childbirth, $F(3,391) = 3.76, p = .011$, and at three months postpartum, $F(3,391) = 4.65, p = .003$. Multiparous mothers reported fewer couple's positive interaction at the second trimester of pregnancy, childbirth, and at three months postpartum, compared to primiparous fathers. No significant differences were found between the four groups (primiparous and multiparous mothers, and primiparous and multiparous fathers) at the first, $F(3,391) = 1.92, p = .127$, and third trimester of pregnancy, $F(3,391) = 1.24, p = .295$.

No significant interaction effects between time, gender and parity were found on couple's negative interaction from the first trimester of pregnancy to three months postpartum, $F(4,1564) = 0.79, p = .532$. However, intraindividual pairwise comparisons revealed a significant decrease in the couple's negative interaction of primiparous fathers from the first trimester of pregnancy to childbirth, $p = .028$. No significant interindividual differences were found between the four groups at all the assessment waves of couple's negative interaction, range of $F = 0.34 - 1.47$, range of $p = .223 - .794$.

Discussion

The purpose of this study was to analyze changes in couple's positive and negative interactions from the first trimester of pregnancy to three months postpartum, considering gender and parity differences and effects. Main results showed a decrease on couple's negative interactions over the transition to parenthood. Gender and parity differences and effects were also found on couple's positive and negative interaction from the first trimester to three months postpartum.

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A decline was observed on couple's negative interactions from the first trimester of pregnancy to three months postpartum. Contrary, no changes were found on couple's positive interactions during the transition to parenthood. These findings are inconsistent with previous results, suggesting that couple's negative interactions tend to increase during the postpartum period (e.g., Don & Mickelson, 2012; Doss et al., 2009). Inconsistent findings may be related to the fact that most studies included only mothers and/or primiparous couples.

Gender differences and effects were found on couple's positive and negative interactions during the transition to parenthood. Mothers reported a decline in couple's positive interactions from the third trimester of pregnancy to three months postpartum, while no changes were observed on fathers. Additionally, mothers reported less couple's positive interactions at three months postpartum, compared to fathers. These results corroborate previous findings that identified a decline on couple's relationship quality, through a decrease on couple's positive interactions (e.g., Belsky et al., 1983; Osofsky et al., 1985), particularly for mothers (e.g., Katz-Wise et al., 2010, Lawrence et al., 2007) during the postpartum period (e.g., Halford & Petch, 2010; Kluwer, 2010). A deterioration on couple's relationship quality is often referred in the literature, regarding the decrease on positive interactions like shared activities and communication between the members of the couple (e.g., Osofsky et al., 1985). This deterioration reported by mothers may be related to the physical changes associated with pregnancy, the demands of parenting and the adjustment of their role as mother (e.g., Don & Mickelson, 2012; Doss et al., 2009; Lawrence et al., 2007). The lack of time to invest on couple's intimacy and to respond to the emotional needs of the other member of the couple, was also reported in the literature (e.g., Cowan & Cowan, 2003). Another possible explanation for the deterioration of couple's relationship quality are the needs associated with infant care that increases the workload, particularly for mothers who are with maternity leave (e.g., Moller et al., 2006; Twenge et al., 2003). This requires the reorganization of the couple's dynamics, consequently interfering on couple's relationship quality. Besides that, decisions directly related to the infant can trigger some disagreement, increasing irritability and criticism between the members of the couple (e.g., Belsky et al., 1986).

Likewise, parity differences were found on couple's positive and negative interactions during the transition to parenthood. Multiparous mothers and fathers reported no changes on couple's negative interactions, while primiparous mothers and fathers reported a decrease in couple's negative interactions from the first trimester to three months postpartum.

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Additionally, multiparous mothers and fathers reported less positive and more negative interactions, both during pregnancy and the postpartum period. The present results are in accordance with the literature, suggesting lower couple's relationship quality in multiparous couples, particularly during the postpartum period, comparing to the primiparous ones (e.g., DiFlorio et al., 2014). This suggests that multiparous mothers and fathers may have more couple's relationship problems and deterioration than the primiparous ones, across the transition to parenthood. Multiparous mothers and fathers are more likely to experience conflicts and disagreement, given the increase of parenting tasks associated with adding another infant to the family (e.g., Belsky et al., 1986; Moller et al., 2007; Schwerdtfeger et al., 2013; Twenge et al., 2003). This growing amount of work can result on the lack of time to invest on the couple's intimacy and shared activities (e.g., Cowan & Cowan, 2003). These implications may increase distress in multiparous mothers, as they have to manage the care of two or more children (e.g., Twenge et al., 2003).

Interaction differences between gender and parity were also found on couple's positive and negative interactions during the transition to parenthood. Multiparous mothers reported a decrease on couple's positive interactions, while no changes were observed in the other groups – primiparous mothers, and primiparous or multiparous fathers. Moreover, multiparous mothers presented less couple's positive interactions both during pregnancy and the postpartum period. Otherwise, primiparous fathers reported a decrease on couple's negative interactions from the first trimester of pregnancy to childbirth, while no changes were found on the other groups. Thus, multiparous mothers appear to be more at risk of couple's relationship quality deterioration, while primiparous fathers are the group reporting better couple's relationship quality during the transition to parenthood.

Limitations and strengths

The voluntary nature of participation may be a limitation of the present study. The couples who agreed to participate in the study, could be the couples who felt more involved in the experience of the transition to parenthood and with better couple's relationship quality. Despite the measure used to assess couple's relationship quality is a self-reported measure, the RQ presents the advantage of assessing both positive and negative dimensions of couple's relationship quality. Additionally, this measure presented good internal consistence in this study, both for positive and negative dimensions. Also, this study suggested that the RQ has good psychometric characteristics to assess both mothers and fathers. The strengths of this

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study included the five assessment waves, the large sample size, as well as the assessment of both positive and negative couple's relationship interactions. In addition, both mothers and fathers, primiparous and multiparous were included in the study.

Implications for clinical practice and research

This study's results have important implications for clinical practice as it sets forth information on who seem to be more at risk to experience the implications that the transition to parenthood bares. Brought into practice, this can improve the screening process by identifying couples at risk for couple's relationship quality deterioration during the transition to parenthood and needing early intervention. These can be the first steps to improve promotion and prevention interventions during the transition to parenthood. Couple-focused interventions over the transition to parenthood have demonstrated good outcomes on variables such as parental mental health, parenting and child adjustment (e.g., Feinberg et al., 2016). Future studies would benefit from focusing on exploring the variables that may explain why multiparous mothers are at greater risk of couple's relationship quality deterioration during the transition to parenthood.

Conclusion

The present study provides and adds more evidence about the changes in couple's relationship quality during the transition to parenthood. The findings suggested that the changes observed on couple's positive and negative interactions during the transition to parenthood are different according with gender and parity. Although no overall deterioration was found on couple's relationship quality, a decrease on couple's positive interactions was reported by mothers during the postpartum period and from the first trimester of pregnancy to three months postpartum reported by multiparous mothers. This is an important advance to the literature on couple's relationship. These data highlighted the importance of the couple's relationship during the transition to parenthood for both mothers and fathers, and primiparous and multiparous.

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Appendix

Declaração Subcomissão Ética



Universidade do Minho

SECVS

Subcomissão de Ética para as Ciências da Vida e da Saúde

Identificação do documento: SECVS 042/2016

Título do projeto: *Psychophysiological processes involved on Breastfeeding and Infant Self-regulation*

Investigador(a) responsável: Professora Barbara Figueiredo, da Escola de Psicologia da Universidade do Minho

Subunidade orgânica: Escola de Psicologia, Universidade do Minho

PARECER

A Subcomissão de Ética para as Ciências da Vida e da Saúde (SECVS) analisou o processo relativo ao projeto intitulado "*Psychophysiological processes involved on Breastfeeding and Infant Self-regulation*".

Os documentos apresentados revelam que o projeto obedece aos requisitos exigidos para as boas práticas na experimentação com humanos, em conformidade com o Guião para submissão de processos a apreciar pela Subcomissão de Ética para as Ciências da Vida e da Saúde.

Face ao exposto, a SECVS nada tem a opor à realização do projeto.

Braga, 29 de setembro de 2016.

A Presidente

MARIA CECÍLIA
DE LEMOS
PINTO ESTRELA
LEÃO

Digitally signed by MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO
DN: c=PT, o=Cartão de Cidadão, ou=Cidadão Português, ou=Assinatura Qualificada do Cidadão, ou=DE LEMOS PINTO ESTRELA LEÃO, givenName=MARIA CECÍLIA, serialNumber=B014512203, cn=MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO
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