

First- and second-time parents' couple relationship: from pregnancy to second year postpartum

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First- and second-time parents' couple relationships were studied from early pregnancy to the second year postpartum. The Relationship Questionnaire (RQ) was administered to Portuguese couples ($N = 82$), first- or second-time parents, at the first, second and third pregnancy trimester, childbirth, 3 and 18 months postpartum. Adverse changes in positive and negative partner relationship dimensions were reported from early pregnancy to the second year postpartum by all participants; in the same way by mothers and fathers and by first- and second-time parents. Second-time parents reported a worse couple relationship (lower RQ-positive scores) than first-time parents, but only during pregnancy. Results from the present study suggest a decline in partner relationship quality during the transition to parenthood both in mothers and fathers, as well as in first- and second-time parents.

Keywords: gender differences; marital satisfaction; parenthood; parity; pregnancy

Introduction

Several studies have suggested that the most difficult transition for couples to make is the birth of their first child. Tasks to be performed involve the reorganization of previous interactions, the new definition of work and roles, as well as the preparation for the joint responsibility of taking care of the baby (e.g. Colman & Colman, 1971; Cowan & Cowan, 1992, 2003). However, the lack of parenting experience is not the only source of stress during the transition to parenthood. For second-time parents, adjustment strains may come from the process of incorporating a new member into a preexisting system (Katz-Wise, Priess, & Hyde, 2010; Krieg, 2007).

Becoming a parent may come to be both rewarding and detrimental. Nonetheless, with the exception of greater social integration, parents when compared with couples without children, state more negative life-dimensions, namely more housework and marital conflicts (e.g. Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008; Nomaguchi & Milkie, 2003). A recent meta-analysis of 90 studies found that compared with non-parents, parents specifically show lower marital satisfaction (Twenge, Campbell, & Foster, 2003). Rarely first-time parents have been reported as more satisfied with their marriage than childless couples (e.g. Guttmann & Lazar, 2004).

Many parents reveal gains in their marriage due to having a child. However, more than 10% (Moss, Bolland, Foxman, & Owen, 1986) to 50% (Shapiro, Gottman, & Carrère, 2000) had significantly weakened marriages by the transition to parenthood end. Studies generally report that over time parents experience greater

decrease in marital satisfaction compared to non-parents (e.g. Cowan et al., 1985; Doss, Rhoades, Stanley, & Markman, 2009; Lawrence et al., 2008; Schultz, Cowan, & Cowan, 2006; Shapiro et al., 2000). Comparing parents with non-parents, other findings show that marital satisfaction started high and show only a slight decrease over the first 2 years of marriage (Moss et al., 1986). Diverse specific unfavorable changes were pointed out during the transition to parenthood in couple relationship: from less sexual activity/intimacy (e.g. Bouchard, Boudreau, & Hébert, 2006; Moss et al., 1986), less communication and shared personal interests (e.g. Belsky, Spanier, & Rovine, 1983; Osofky et al., 1985), less leisure time and activities (e.g. Claxton & Perry-Jenkins, 2008; Nomaguchi & Bianchi, 2004), to more women's housework (e.g. Baxter, Hewitt, & Haynes, 2008; Nomaguchi & Milkie, 2003) and partners' conflicts (e.g. Hackel & Ruble, 1992; Kluwer & Johnson, 2007).

Parents' deterioration on both positive and negative aspects of their relationship functioning has been described as well (Belsky et al., 1983; Doss et al., 2009). For example, regarding positive aspects, fewer joint leisure activities and lower perception of relationship as a romance, friendship and partnership (Belsky et al., 1983). Regarding negative aspects, more conflicts (e.g. Belsky & Pensky, 1988; Cowan et al., 1985; Kluwer & Johnson, 2007) and moderate to severe violence (e.g. Gielen, O'Campo, Faden, Kass, & Xue, 1994) was pointed out. Overall, positive interchanges decrease whereas negative increase, and couples becomes less satisfied with their relationship (e.g. Belsky & Isabella, 1985;

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Belsky & Pensky, 1988; Belsky & Rovine, 1990; Cowan et al., 1985; Elek, Hudson, & Bouffard, 2003; Hackel & Ruble, 1992; Hirschberger, Srivastava, Marsh, Cowan, & Cowan, 2009; Lawrence, Nysten, & Cobb, 2007; Moss et al., 1986; Osofsky et al., 1985; Perren, von Wyl, Burgin, Simoni, & von Klitzing, 2005; Shapiro et al., 2000).

Several hypotheses were proposed to explain the decrease in marital satisfaction after the birth of a first child. Adjustments and new responsibilities required on the part of both parents during the transition to parenthood affect particularly their couple relationship. Role conflicts and restriction of freedom (Twenge et al., 2003), as well as disconfirmation of expectations regarding the sharing of childcare and housekeeping responsibilities – as, for example, stability in men's housework time contrasts with a considerable increase in women's household duties – was proposed as leading to less marital satisfaction and poorer relationship adjustment (Hackel & Ruble, 1992; Harwood, McLean & Durkin, 2007; Lawrence et al., 2007). Work overload (Baxter et al., 2008; Belsky, Lang & Huston, 1986; Krieg, 2007; Moller, Hwang, & Wickberg, 2008) and decline in couple leisure activities (Belsky & Pensky, 1988; Claxton & Perry-Jenkins, 2008; Perry-Jenkins, Goldberg, Pierce, & Sayer, 2007), as well as changes in social networks (Bost, Cox, Burchinal, & Payne, 2002), were also proposed to lead to more conflicts, and conflicts are likely to be a determinant of lower relationship quality (e.g. Cowan et al., 1985; Kluwer & Johnson, 2007).

More than from marriage to pregnancy or throughout pregnancy, couple relationship seems to decline after childbirth (e.g. Doss et al., 2009; Gloger-Tippelt & Huerkamp, 1998; Harwood et al., 2007; Lawrence et al., 2007, 2008; Shapiro et al., 2000; Waldron & Routh, 1981), and the decline tends to persist over several years (e.g. Belsky & Rovine, 1990; Bost et al., 2002; Doss et al., 2009; Hirschberger et al., 2009; Lawrence et al., 2008). However, some controversial results were obtained in the literature regarding timing of the decline in the couple relationship. Whereas some studies show that the decline is initiated or limited to pregnancy (e.g. Claxton & Perry-Jenkins, 2008), others illustrate this decline only after childbirth (e.g. Lawrence et al., 2007; Shapiro et al., 2000), although extended to the first postpartum years (e.g. Belsky & Rovine, 1990; Doss et al., 2009; Hirschberger et al., 2009; Lawrence et al., 2008). Nonetheless, most studies were limited to one time-point assessment in pregnancy and/or the immediate postpartum period. This limitation was considered as this study included six assessments from early pregnancy to 18 months postpartum.

More negative changes in the couple relationship during the transition to parenthood have been reported in women (Belsky & Pensky, 1988; Fitzpatrick, Vangelisti, & Firman, 1994; Katz-Wise et al., 2010; Lawrence et al., 2007; Shapiro et al., 2000; Wilkinson, 1995), but gender

differences have not been always found (Doss et al., 2009; Elek et al., 2003; Figueiredo et al., 2008; Goldberg, Michaels, & Lamb, 1985; Hackel & Ruble, 1992; Moss et al., 1986; Wilkinson, 1995). While female marital satisfaction seems to decline from pregnancy to the first year postpartum, for men this decline may only occur in the second year of the child's life (e.g. Cowan & Cowan, 2003). Gender differences need to be tested in a larger period of time, as proposed in the present study.

The negative effect of parenthood on marital satisfaction seems to be more evident among mothers of young children, but a significant negative correlation was obtained between the number of children and marital satisfaction (Twenge et al., 2003). Many studies referred that the transition to parenthood affects more adversely first-time than second-time parents (e.g. Wilkinson, 1995; Windridge & Berryman, 1996). However, same or higher levels of couple distress have been also found in second- compared to first-time mothers or fathers (DiPietro, Costigan, & Sipsma, 2008; Krieg, 2007; Moller et al., 2008; Wilkinson, 1995). Empirical studies have mainly included first-time parents and only a few have considered the effect of a second transition to parenthood in the couple relationship. This limitation was also considered as the present study included first- and second-time parents.

Results regarding time, gender and parity effects and differences in couple relationship decline during the transition to parenthood are mostly limited or controversial. Therefore, the principal target of the present study was the couple relationship during the transition to parenthood. Aiming to study (a) changes over time, and (b) gender and (c) parity effects and differences, the study included the first, second and third pregnancy trimester, childbirth, and 3 and 18 months postpartum, mothers and fathers, first- and second-time parents.

A different pathway of positive and negative couple relationship changes was hypothesized in mothers and fathers, as well as in first- and second-time parents, from early pregnancy to 18 months postpartum, consistent with different developmental tasks implied in the transition to parenthood (Cowan & Cowan, 2003; Gameiro, Moura-Ramos & Canavaro, 2009; Katz-Wise et al., 2010; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). In view of the recent literature, (a) both a decrease in positive and an increase in negative couple relationship dimensions were hypothesized to occur only after childbirth (e.g. Lawrence et al., 2007; Shapiro et al., 2000) and to be extensive to the second year postpartum (e.g. Bost et al., 2002; Lawrence et al., 2008); (b) with no gender differences (e.g. Doss et al., 2009; Elek et al., 2003; Figueiredo et al., 2008; Moller et al., 2008); but (c) with parity differences. First-time parents are expected to show lower positive and higher negative couple relationship compared to second-time parents (e.g. Wilkinson, 1995; Windridge & Berryman, 1996).

Method

Participants

The sample involved 41 Portuguese couples ($N = 82$), recruited in an outpatient obstetrics unit (Oporto, Portugal) before 14 weeks' gestation (16% of the initially contacted couples). The convenience sample of the present study was derived from a larger longitudinal study that was conducted according to prevailing ethical principles and received previous approval from the Maternity Hospital Ethical Commission. Further details on study design are described elsewhere (Figueiredo & Conde, 2011).

Participation in the present study was voluntary and required the fulfillment of the following inclusion criteria: (1) both partners were susceptible to be contacted and participate in the study since the first pregnancy trimester to 18 months postpartum; (2) returned completed questionnaires for all the six measuring time points; (3) reading and writing Portuguese; and (4) residence in Portugal for over a year, in the case of foreign participants.

Nearly all the participants were aged between 20 and 39 years old (85.7%) (mothers: $M = 30.02$, $SD = 5.41$; fathers: $M = 31.78$, $SD = 5.33$), Catholic (80.5% of mothers and 85.4% of fathers), living with the partner (75.6% were married, 20.7% living together and only 3.7% were not married nor living together) and working at the time of the first interview. For the most part, participants had medium education level and socioeconomic status (69.4%) (see Table 1). Half of the mothers and fathers were first-time parents (54%) and half second-time parents. All the parents were the biological mother

or father of the child. All couples were homogamous except in three cases: in one case, the mother was a second-time parent and the partner was a first-time parent, and in two cases the fathers was a second-time parent and the mother was a first-time parent. Children were male (61.4%) or female. Couples had usually no more family members in the household (92.2%). Mothers generally returned to work when the infant was 4 months or older (63.4%), and 59.4% of the infants were at home during the day with their mother or another relative. At 18 months postpartum, none of the participants was pregnant again, and only one couple was divorced.

No significant differences were found between the participants of the present study and the initially contacted participants from the larger longitudinal study, except for mother's socioeconomic status ($\chi^2(4) = 12.02$, $p = 0.02$) and mother's ($\chi^2(2) = 10.50$, $p = 0.003$) and father's parity ($\chi^2(2) = 17.04$, $p = 0.000$). Participants of the larger study had lower socioeconomic status and were second-time parents.

Procedure

The aims and procedures were explained to the pregnant women and the partner, and those who agreed to participate signed an informed consent form. Information about the mothers/fathers (e.g. age, ethnicity, nationality, occupational status, marital status, household arrangements, level of education), childbirth (e.g. type of delivery) and the infant (e.g. gender, gestational age) was collected through a socio-demographic questionnaire separately answered by the mothers and fathers in an independent meeting with the researcher, at the first pregnancy trimester, childbirth, and 3 and 18 months postpartum.

The Portuguese version of the RQ was administered separately to the mother and the father at six measuring time points: first trimester (between 8 and 14 weeks of gestation), second trimester (between 20 and the 24 weeks of gestation), third trimester (between 30 and the 34 weeks of gestation), childbirth (between the first and third day after delivery), 3 months postpartum (between 10 and 14 weeks after childbirth) and 18 months postpartum (between 14 and 20 months after childbirth). When the participants had routine appointments matching with the measuring time points, assessments were undertaken individually with each member of the couple in a meeting with the researcher. Otherwise, the questionnaires were sent with instructions to the couples to independently complete the questionnaires, filled-in by each spouse and returned by mail.

Measures

Relationship questionnaire (RQ). The Portuguese version of the RQ is comprised of 12 items on a four-point Likert

Table 1. Socio-demographics: frequencies.

	Mothers $n = 41$ (%)	Fathers $n = 41$ (%)	Total $N = 82$ (%)
<i>Age (years)</i>			
≤19	4.4	2.6	3.6
20–29	26.7	17.9	22.6
30–39	62.2	64.1	63.1
≥40	6.7	15.4	10.7
<i>Education (years)</i>			
<9	22.2	33.3	27.4
9–12	60.0	51.3	55.9
>12	17.8	15.4	16.7
<i>Occupational status</i>			
Employed	73.2	87.8	84.3
Unemployed	26.8	12.2	15.7
<i>Socioeconomic status</i>			
High	15.8	8.8	12.5
Medium high	13.2	23.5	18.1
Medium	21.0	17.6	19.4
Medium low	36.8	26.5	31.9
Low	13.2	23.5	18.1

scale, range from 1 (never) to 4 (always). This questionnaire assesses the positive (eight items, such as ‘Do you share activities that are of interest for both, you and your partner?’) and negative dimensions (four items, such as ‘Do you and your partner get irritable with each other?’) of the partner relationship (Figueiredo et al., 2008). The positive relationship subscale includes dimensions as sense of support and care, as well as affection, closeness, and joint interests and activities. The negative relationship subscale includes dimensions as anxiety, irritability, arguments and criticisms that have been associated with undesirable outcomes. A higher score on the positive relationship subscale means that positive relationship aspects are more prevalent, while having a higher score on the negative relationship subscale means that negative relationship aspects are more prevalent. Moreover, the higher the RQ total score, the better the couple relationship, as assessed by the participant. The RQ showed a good internal consistency (with Cronbach alpha of 0.79 for the total scale, 0.90 for the positive subscale and 0.72 for the negative subscale) and test–retest reliability ($r = 0.74$ for the total scale) (Figueiredo et al., 2008). The 12 items of the RQ were subjected to a principal components analysis using the software SPSS 11.5 Windows (© SPSS Inc., Chicago, IL, USA). The two-factor solution found explained 55.9% of the variance, with component 1 (positive subscale: items 1, 2, 3, 4, 6, 7, 8 and 9) contributing to 38.7% of the variance and component 2 (negative subscale: items 5, 10, 11 and 12) contributing to 17.2% of the variance. In the present sample, coefficient alphas ranged from 0.79 to 0.88 in the positive subscale, and from 0.45 to 0.64 in the negative subscale, for the total sample.

Statistical analysis

Repeated-measures analysis of variance (ANOVA) (factorial mixed-design ANOVA) were used to study changes throughout pregnancy (first, second and third trimester), childbirth and the postpartum period (3 and 18 months postpartum), as well as gender and parity effects and differences in positive and negative couple relationship. In each model, positive and negative RQ subscale scores were included as measures of the same within-subjects factor with six levels (first, second and third trimesters, childbirth, and 3 and 18 months postpartum). Gender and parity were included in the analysis as between-subjects effect factors. Time*Gender, Time*Parity, Time*Gender*Parity and Gender*Parity interaction effects were also tested in order to analyze gender and/or parity effects in positive and negative couple relationship and pattern of changes. The assumption of sphericity for repeated-measures application has not been verified for any of the analysis, so the correction factor Greenhouse–Geisser was always applied.

When a significant or marginally significant main effect of time was found, post hoc pairwise comparisons with Bonferroni correction were applied to analyze mean differences among measuring time points. When a significant or marginally significant main effect of gender and/or parity was observed, repeated-measures ANOVA (factorial mixed-design ANOVA) was followed by one-way ANOVAs in order to analyze gender and parity differences in positive and negative couple relationship for each of measuring time points.

An alpha level of 0.05 was used as a significance criterion for all statistical tests. When the p -value was <0.10 , the results were considered marginally significant (American Psychological Association [APA], 2010).

Results

Time effects and differences

Significant effects were found between measuring time points regarding RQ-positive subscale scores [$F(4.3, 338.6) = 6.10, p < 0.001$] and marginally significant effects for RQ negative subscale scores [$F(4.2, 327.1) = 1.97, p = 0.095$]. Significant differences between 18 months postpartum and: the first ($p < 0.001$), second ($p = 0.003$) and third trimester ($p = 0.011$) and childbirth ($p = 0.008$), and marginally significant differences between 18 months postpartum and 3 months postpartum ($p = 0.074$) were found, with lowest RQ-positive scores observed at 18 months postpartum (see Table 2). Marginally significant differences between the second trimester and 18 months postpartum ($p = 0.087$) were found, with higher RQ-negative scores observed at 18 months postpartum than at the second trimester (see Table 3).

Gender and parity effects and differences

Non-significant effects in both RQ-positive and RQ-negative subscales scores were found for the following interactions: Time*Gender [$F(4.3, 338.6) = 1.93, p = 0.10$; $F(4.2, 327.1) = 0.04, p = 0.998$], Time*Parity [$F(4.3, 338.6) = 1.31, p = 0.26$; $F(4.2, 327.1) = 1.38, p = 0.24$] and Time*Gender*Parity interaction [$F(4.3, 338.6) = 0.37, p = 0.84$; $F(4.2, 327.1) = 0.51, p = 0.73$].

Non-significant effects of gender were found neither for RQ-positive subscale [$F(1, 78) = 0.16, p = 0.69$] nor for RQ-negative subscale scores [$F(1, 78) = 0.09, p = 0.77$].

Marginally significant effects of parity were found in RQ-positive subscale scores [$F(1, 78) = 3.18, p = 0.08$]. Significant differences between first- and second-time parents' RQ-positive subscale scores were only found at the second [$F(1, 81) = 4.67, p = 0.03$] and third trimester [$F(1, 81) = 4.49, p = 0.04$] and marginally significant differences

Table 2. RQ-positive subscale: pregnancy (first, second and third trimesters), childbirth and postpartum (3 and 18 months) in mothers and fathers and in first- and second-time parents (mean and standard deviation).

	First trimester <i>M</i> (SD)	Second trimester <i>M</i> (SD)	Third trimester <i>M</i> (SD)	Childbirth <i>M</i> (SD)	3 months <i>M</i> (SD)	18 months <i>M</i> (SD)
<i>Mothers</i>						
First-time	3.74 (0.28)	3.70 (0.30)	3.66 (0.28)	3.64 (0.41)	3.62 (0.38)	3.39 (0.43)
Second-time	3.68 (0.34)	3.55 (0.39)	3.58 (0.45)	3.58 (0.36)	3.49 (0.49)	3.44 (0.41)
<i>Fathers</i>						
First-time	3.71 (0.29)	3.77 (0.30)	3.76 (0.30)	3.74 (0.37)	3.71 (0.38)	3.54 (0.36)
Second-time	3.48 (0.45)	3.58 (0.44)	3.48 (0.50)	3.59 (0.38)	3.55 (0.45)	3.49 (0.41)
<i>Total</i>						
First-time	3.72 (0.28)	3.74 (0.30)	3.71 (0.29)	3.69 (0.39)	3.66 (0.38)	3.46 (0.40)
Second-time	3.58 (0.41)	3.56 (0.41)	3.53 (0.47)	3.58 (0.36)	3.52 (0.46)	3.47 (0.40)
Total	3.67 (0.34)	3.67 (0.35)	3.64 (0.38)	3.65 (0.38)	3.61 (0.42)	3.47 (0.40)

Table 3. RQ-negative subscale: pregnancy (first, second and third trimesters), childbirth and postpartum (3 and 18 months) in mothers and fathers and in first- and second-time parents (mean and standard deviation).

	First trimester (SD)	Second trimester (SD)	Third trimester (SD)	Childbirth <i>M</i> (SD)	3 months <i>M</i> (SD)	18 months <i>M</i> (SD)
<i>Mothers</i>						
First-time	2.07 (0.57)	2.04 (0.51)	1.99 (0.52)	2.05 (0.43)	2.05 (0.54)	2.23 (0.60)
Second-time	2.03 (0.62)	2.02 (0.41)	2.15 (0.62)	2.13 (0.52)	2.20 (0.51)	2.12 (0.51)
<i>Fathers</i>						
First-time	1.90 (0.61)	1.98 (0.54)	2.00 (0.50)	1.93 (0.48)	2.01 (0.54)	2.18 (0.57)
Second-time	2.25 (0.58)	2.08 (0.55)	2.19 (0.62)	2.30 (0.51)	2.33 (0.42)	2.26 (0.49)
<i>Total</i>						
First-time	1.98 (0.59)	2.01 (0.52)	2.00 (0.51)	1.99 (0.45)	2.03 (0.54)	2.21 (0.58)
Second-time	2.14 (0.60)	2.05 (0.48)	2.17 (0.61)	2.22 (0.52)	2.27 (0.46)	2.19 (0.49)
Total	2.04 (0.60)	2.02 (0.51)	2.06 (0.55)	2.08 (0.49)	2.12 (0.52)	2.20 (0.55)

were found at the first pregnancy trimester [$F(1, 81) = 3.51$, $p = 0.06$], with first-time parents showing higher scores than second-time parents (see Figure 1). Non-significant effects of parity were found for RQ-negative subscale scores [$F(1, 78) = 2.15$, $p = 0.15$] (see Figures 1 and 2).

The effect of Gender*Parity interaction was also non-significant for both RQ-positive and RQ-negative subscales scores, respectively [$F(1, 78) = 0.57$, $p = 0.45$; $F(1, 78) = 1.12$, $p = 0.29$].

Discussion

A decline in the positive couple relationship, with lower RQ positive scores at 18 months postpartum than at all other measuring time points (between 3 and 18 months postpartum this decrease was found at the trend level), was observed. RQ-negative scores showed an increase particularly after childbirth, although at a trend level, with lower scores observed at the second pregnancy trimester and higher scores at 18 months postpartum.

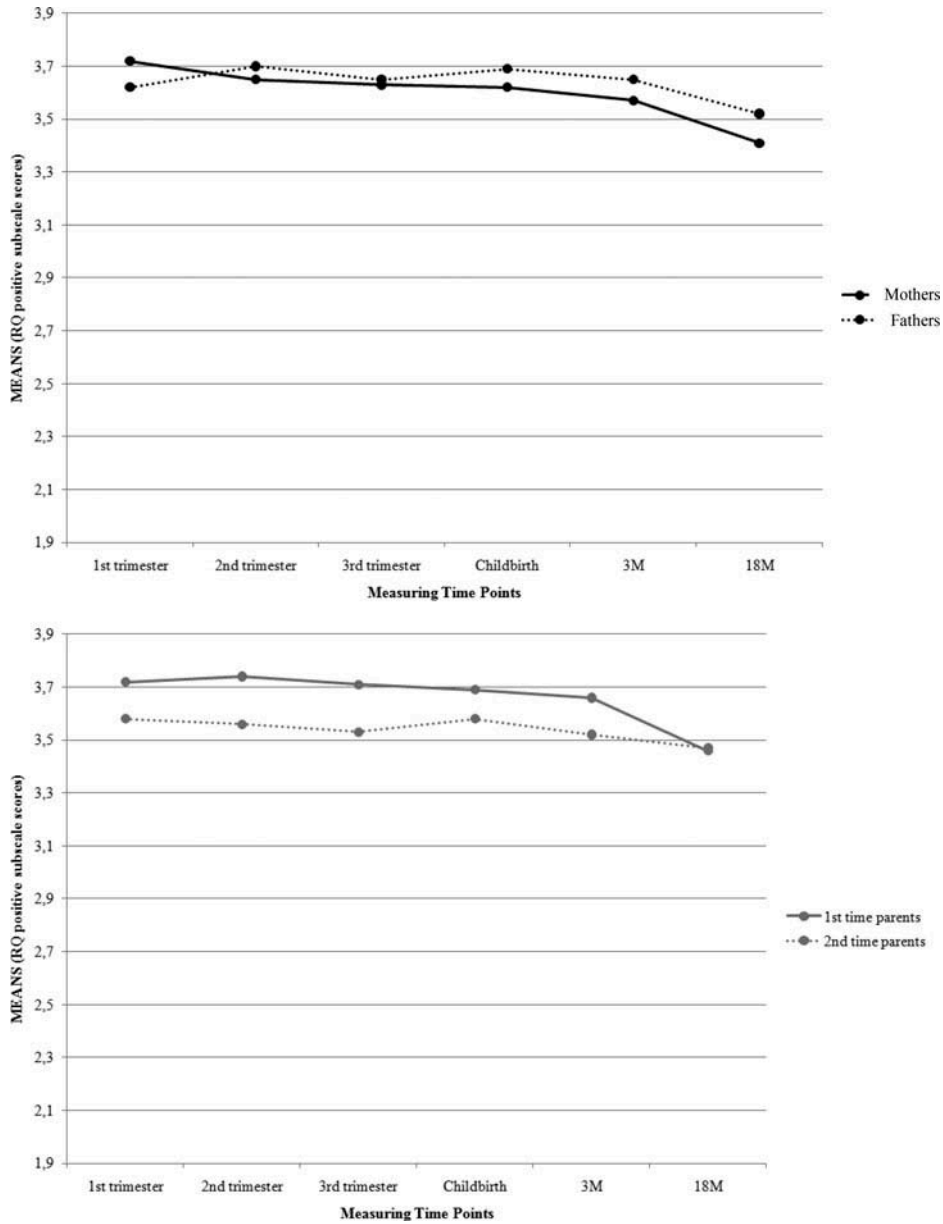


Figure 1. RQ-positive subscale: Pregnancy (first, second and third trimesters), childbirth and postpartum (3 and 18 months) in mothers and fathers and in first- and second-time parents.

Mothers and fathers, first- and second-time parents, all showed a similar pattern of changes in positive and negative partner relationship. No gender effects and differences were found on positive and negative RQ results. In turn, significant parity effects on RQ-positive scores were found, with second-time parents showing lower RQ-positive scores than first-time parents but only at the first (at the trend level), second and third pregnancy trimester.

Data showed a significant decline in positive couple relationship, with lower RQ-positive scores at 18 months postpartum than at all other measuring time points

(between 3 and 18 months postpartum this decrease was found at the trend level). This means that positive partner relationship drop off from early pregnancy to the second year postpartum, and that positive partner relationship aspects were not as mentioned during the first postpartum years than during pregnancy. A decline in the quality of the couple relationship during the transition to parenthood translated into a decrease of positive activities that the couple participated in together (e.g. Belsky et al., 1983; Osofsky et al., 1985) and of intimacy and communication between the couple (e.g. Osofsky et al., 1985) was largely reported in the literature. Results found may

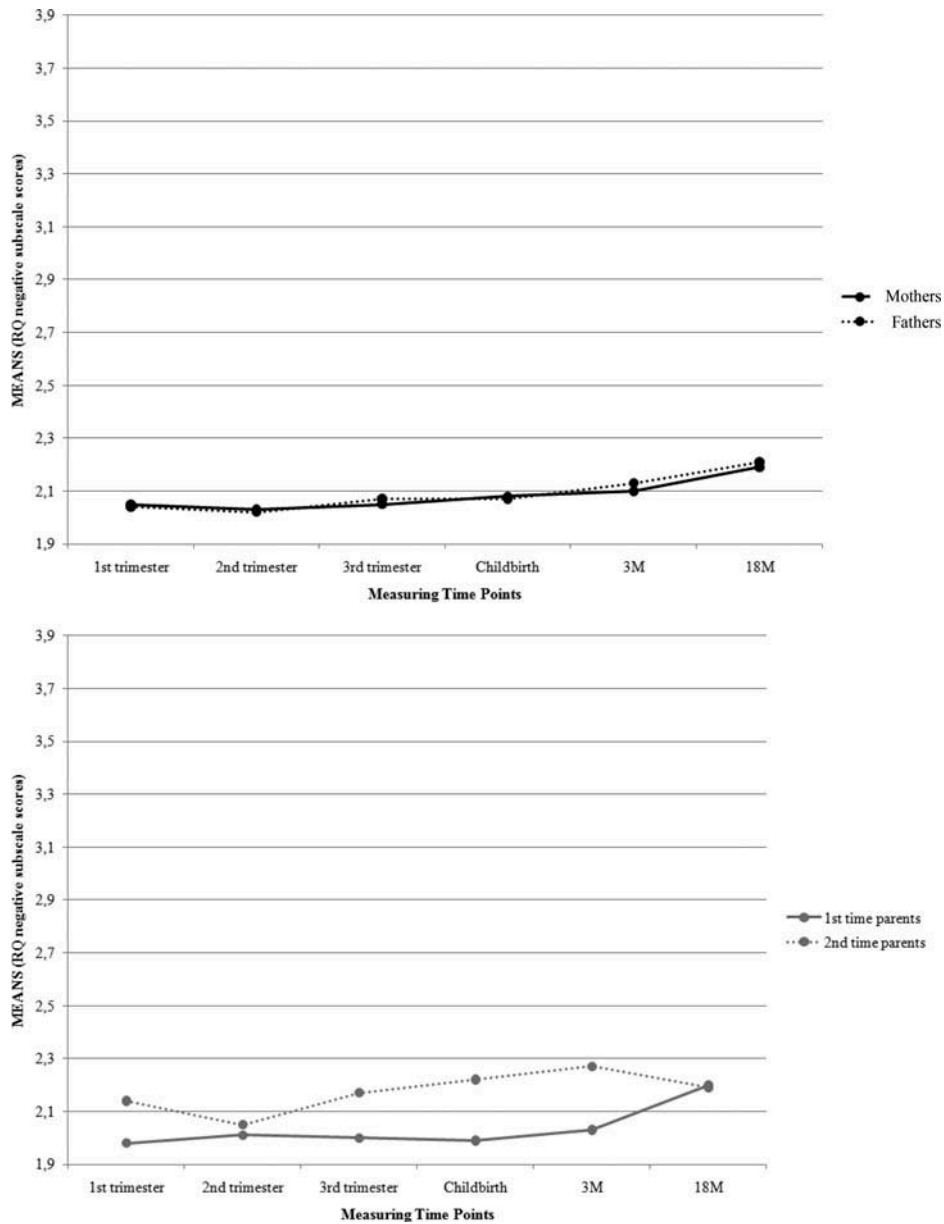


Figure 2. RQ-negative subscale: pregnancy (first, second and third trimesters), childbirth and postpartum (3 and 18 months) in mothers and fathers and in first- and second-time parents.

be related to the shift of the partner's attention to tasks relating to childcare, causing the couple relationship to become less dominant and providing less satisfaction in their life together (e.g. Hackel & Ruble, 1992; Lawrence et al., 2007). A decrease of leisure activities which the couple participated together (e.g. Claxton & Perry-Jenkins, 2008; Nomaguchi & Bianchi, 2004), the reduced time and opportunities to invest in the couple intimacy (e.g. Cowan & Cowan, 2003) and the lack of reciprocal fulfillment of each partner's need for affection and self-esteem (Fitzpatrick et al., 1994) were also referred in the literature. A child imposes several new readjustments to

the couple life and relationship; both parents need to attend to their baby's needs first and to adapt their patterns of sleep, eating and other activities between them and to those of their baby. Another possible reason for this decline on the positive partner relationship is the disconfirmation of positive expectations that parents had during pregnancy about their infant and about their parenting role (e.g. Hackel & Ruble, 1992; Harwood et al., 2007; Lawrence et al., 2007).

RQ-negative scores showed an increase particularly after childbirth, with lower scores at the second pregnancy trimester and higher scores at 18 months postpartum.

Although these changes were only found at the trend level, they suggest the progressive presence of more negative interaction between the two members of the couple throughout the transition to parenthood, characterized by more conflicts and disagreements, particularly at 18 months postpartum compared to pregnancy and the weeks following childbirth (e.g. Belsky & Pensky, 1988; Hackel & Ruble, 1992). After a time where the parents are enthusiastic by the good news, to decide about childcare may be a matter of disagreement. The addition of more issues to decide and to take care together imposed by parenting, the difficulty of combining work and childcare responsibilities, after the birth of a child, and mainly after the mother return to work, seems to imply more opportunities to disagree, as much as more anxiety, irritability and criticisms for the majority of the couples (e.g. Belsky et al., 1986).

No significant interaction between gender and measurement time points was observed, suggesting the partner relationship declines equally and in the same way for both the mother and the father during the transition to parenthood (e.g. Goldberg et al., 1985; Hackel & Ruble, 1992). Mothers and fathers may share the same developmental tasks and the same difficulties to adjust their couple relationship. However, some authors suggest a slight decline for mothers compared to fathers in levels of satisfaction with the partner relationship during the transition to parenthood (e.g. Katz-Wise et al., 2010; Lawrence et al., 2007). No significant interaction between parity and measurement time points was also obtained, meaning that both first- and second-time transitions to parenthood are associated with unfavorable changes in couple relationship, with a similar pathway, and a particular decline after childbirth. As both fathers and mothers and first- and second-time parents show this similar pattern of partner relationship decline, these issues may be part of both experiences: the transition to parenthood and the process of negotiating the demands of and incorporating a new member into a preexisting system, and to be implied for all parents independently of gender or parity (e.g. Katz-Wise et al., 2010).

Genders effects and differences on RQ results were not significant; corroborating previous studies results, the couple relationship during the transition is similarly perceived by men and women (e.g. Doss et al., 2009; Figueiredo et al., 2008; Goldberg et al., 1985; Moss et al., 1986). In turn, parity effects on RQ-positive scores were found. Second-time parents provided lower RQ-positive scores than the first-time parents at the first (at the trend level), second and third pregnancy trimester (significant differences); but differences between first- and second-time parents were not statistically significant during the postpartum period. No significant differences between first- and second-time

parents were found for RQ-negative scores. These results suggest that maintain shared activities and a positive relationship by the couple during pregnancy can be more difficult when there is another child in the family than for first-time parents, in accordance with some (Twenge et al., 2003), but conversely to other studies (e.g. Wilkinson, 1995; Windridge & Berryman, 1996). In second-time parents, results suggested that the experience of pregnancy does not buffer with such efficacy the decrease on positive relationship aspects. Interestingly, at 18 months no differences were noted between first- and second-time parents, a result that supports some data regarding no differences between first- and second-time mothers' psychological distress at 2 years' postpartum despite different pathways during pregnancy and the postpartum period (DiPietro et al., 2008). These results are particularly significant for prevention, as contrary to what have been majorly supposed, second-time seem more at risk for relationships problems than first-time mothers and fathers during pregnancy.

Some methodological limitations should be acknowledged and determine that findings should be interpreted with caution. First, the voluntary nature of the participation in the study may have led to a selection bias, in the sense that those who agreed to participate, and also those who complied with all evaluations, may in fact be those who feel more involved and satisfied with the pregnancy experience and with couple relationship. Second, the relatively small number of couples involved in the present study with a lack of statistical power in some analyses. Repeating the study with larger numbers would serve to further test present results. Finally, it is also important to notice that a larger period considered between measuring time points 5 and 6 can increase differences obtained between these and the fact of repeatedly answering the same questions for six times could influence the results. Thus, it requires a cautious approach in interpreting the results.

Results from the present study support previous literature and offer more evidences about adverse changes in the quality of the partner relationship during the transition to parenthood. Results clarify the direction as well as the timing, gender and parity extension of these changes, providing new data as these adverse changes occur: (a) in positive (significant changes) and negative (changes at the trend level) partner relationship dimensions, throughout an extensive period; (b) for all participants, and in the same way in mothers and fathers and in first- and second-time parents; and (c) with second-time parents showing a worse couple relationship during pregnancy (lower RQ-positive scores), but not at postpartum. Couple relationship conflicts or lack of satisfaction and intimacy during the transition to parenthood may lead to psychological disorders both

in women and men (e.g. Bost et al., 2002; Feeney, Alexander, Noller, & Hohaus, 2003), and predict poor parent-child relationships (e.g. Cox, Owen, Lewis, & Henderson, 1989; Gloger-Tippelt & Huerkamp, 1998), which highlights the relevance of studying and intervening in the partner relationship during the transition to parenthood for the well-being and psychological adjustment of all family.

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