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## The experience of pre- and post-partum in relation to support, stress, and parenthood representation

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### Abstract

This study explored the effects of the experience of partum on perceived support, stress, and representation of motherhood and fatherhood in 40 Sicilian primiparous mothers recruited from two Public Hospitals in Sicily (Italy). We used the Perceived Support Scale (De Caroli & Sagone, 2011), Perceived Stress Scale (Cohen et al., 1983), and 4 Semantic Differentials to value the representation of Parental Self, motherhood, fatherhood, and the experience of partum (De Caroli & Sagone, 2011). Results demonstrated that levels of perceived support post-partum were lower than those of pre-partum; levels of perceived stress post-partum were higher than those of pre-partum; the representation of motherhood and fatherhood in post-partum period had a significant improvement respect to pre-partum one. Future research will analyze the similarities and differences between primiparous and multiparous mothers in relation to the experience of partum.

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*Keywords:* primiparous mothers, stress, social support, motherhood;

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### 1. Introduction

The childbirth and the experience of partum have a psychological, emotional, and physical impact on the life of the individuals, especially primiparous women, and involve the acquisition of a new role and care-taking tasks with which mothers must cope. Several factors affect both the management of this new experience and the well-being of future mothers: e.g., prenatal stress, anxiety, feeling of parental inefficacy, social support, symptoms of physical unease, and maladaptive coping strategies. As found by Christiaens and Bracke (2007) in Belgian and Dutch maternity-care systems, satisfaction with childbirth benefited from the fulfillment of expectations, personal control, and maternal self-efficacy; in addition, personal control also had a positive impact on the alleviation of labor pains. Similarly, in Chou et al.'s research (2008), carried out with 243 pregnant women in Taiwan, high frequency of pregnancy-related nausea and vomiting, high levels of perceived stress, low levels of social support, and reduced pregnancy planning negatively characterized maternal psychosocial adaptation.

In a study with a sample of 113 Brazilian women in the early post-partum period, Faisal-Cury and his colleagues (2004) found that the way of coping with distancing, low educational levels, and high number of children, but not the stressful life event as childbirth, were associated with high levels of postpartum depression. These results are in contrast with the work of Areias et al. (1996) and the meta-analysis of Wilson et al. (1996), according to which there

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was a strong association between stressful life events and postpartum depression in new mothers. The seemingly conflicting findings could be explained with the incidence of coping styles (Demyttenaere et al., 1995; Faisal-Cury, Savoia, & Menezes, 2012) as mediating variables on the relationship between stress and depressive symptomatology, deriving from childbirth and delivery. In fact, in a more recent investigation with 312 Brazilian pregnant women, Faisal-Cury et al. (2012) found that confronting, accepting responsibility, and escape-avoidance coping styles were positively associated with antenatal depressive symptomatology, while problem-solving was negatively associated with this symptomatology.

The influence of stress, social support, repertoire of coping strategies, and personality traits during pregnancy and post-partum in primiparous mothers has recently received an extensive attention (see Lobel, 1994; Levy-Shiff et al., 1998; Leigh & Milgrom, 2008; Razurel et al., 2011a; Razurel, Desmet, & Sellenet, 2011b; Ngai & Chan, 2012a; Ngai & Chan, 2012b). For example, Lobel (1994) found that the relationship between multidimensional stress measures and adverse birth outcomes is stronger for shortened gestation than for birth weight or fetal growth. In addition, women who obtained high scores on the indicators of stress (anxiety, perceived chronic stress, and life events distress) reported lower infant birth weight and shortened gestation than women with low scores on stress measures (Wadhwa et al., 1993; Hedegaard et al., 1996; Nordentoft et al., 1996; Killingsworth Rini et al., 1999). In relation to the relevance of partner support, Glazier et al. (2004) found that Canadian pregnant women with low levels of support showed stronger relationships between stress and symptoms of depression and anxiety than pregnant women with high levels of support provided by their partner, friends, and family members.

In the longitudinal study of Levy-Shiff and her colleagues (1998), 140 primiparous women from 7<sup>th</sup> months of pregnancy to 12 months postpartum were valued on some measures of parenting cognitive appraisals, maternal adjustment, use of coping strategies, and supportive coping resources. Results showed that stress and coping variables had significant effects in predicting both maternal adjustment (emotion-focused coping) and infant development (activity-focused coping). Furthermore, in relation to the effects of personality traits, Bresser and Priel (2003) demonstrated that dependency was positively associated with high approach and low emotional/avoidance coping strategies, while self-criticism was positively correlated with high emotional/avoidance and low approach coping strategies. Likewise, in a sample of 244 young mothers, Vliegen et al. (2006) found that self-critical perfectionism (maladaptive personality dimension related to self-definition and relatedness), but not efficacy (adaptive dimension), was related to depressive experience in the postpartum period and relatedness (adaptive dimension), but not dependency (maladaptive dimension), was associated with severity of depression and anxiety. More recently, Johnston and Brown (2012) examined the relationship between personality traits and childbirth experience in a large sample of 755 mothers with their infants aged 0-6 months: mothers who scored low in extraversion and emotional stability were significantly more likely to have a caesarean section (vs. vaginal delivery) and to experience a greater number of complications during labor and delivery (including an assisted birth, fetal distress, failure to progress and severe tear) than mothers with high scores in the same personality traits.

As for the resources that affected maternal competence, Ngai, Chan and Holroyd (2011) explored the Chinese women's perception of maternal role competence and factors contributing to maternal role competence during early motherhood. A group of 26 Chinese primiparous mothers participated in a childbirth psycho-education program in public hospitals and were interviewed at 6-weeks post-partum. The authors found that women valued a competent mother as being able to make a commitment to caring for physical and emotional well-being of child; additionally, personal knowledge and experience of infant care, success in breastfeeding, infant's well-being, availability of social support, and information from various sources were the most important factors affecting maternal role competency. Subsequently, in a sample of 181 Chinese primiparous mothers, Ngai & Chan (2012a) found that learned resourcefulness and social support had a direct impact on maternal role competence and satisfaction and on postnatal depression; stress affected postnatal depression directly and maternal role competence and satisfaction indirectly, by means of learned resourcefulness and social support.

Using a qualitative approach via semi-structured interviews with 60 mothers at the Geneva University Hospitals (Switzerland), Razurel et al. (2011a) found that prenatal education and postpartum social support seemed to mismatch mothers' needs and expectations. Moreover, Razurel et al. (2011b) carried out the content analysis of 30 semi-structured interviews to primiparous mothers at 6-weeks post-partum, reporting that the breastfeeding and the

crying of baby had the most impact respect to professional social support and external information on perceived parental self-efficacy.

Among risk factors that negatively affected stress and parental self-efficacy it is possible to highlight the reduced preparedness to childbirth. Recently, in a large sample of nulliparous pregnant women with an intense fear of childbirth, Salmela-Aro and her colleagues (2012) found that promoting the preparedness for childbirth and enhancing positive parenting with the RCT intervention (randomized control trial) represented one of the most efficient strategies for the improvement of maternal well-being during pregnancy and after childbirth. The comparison between pregnant women with severe fear of childbirth and control group demonstrated that the first group of women rated themselves more positively on preparedness and motherhood than the latter group.

Little is known about the incidence of one of the most important and stressful life events as the partum on the perceived stress, social support, and representation of motherhood and fatherhood in primiparous mothers (see Pajulo, Helenius, & Mayes, 2006) and it constituted the rationale of this investigation carried out in Italian context.

## 2. Methodology

The general aim of this longitudinal study was to explore the effects of the experience of partum on the social support (partner, friends, and gynecologists) and maternal perceived stress and on the representation of Parental Self, motherhood and fatherhood in a sample of Sicilian primiparous mothers attending childbirth-preparation courses at Public Hospitals in Catania, Italy. We hypothesized that the social support perceived by primiparous mothers after partum experience will be smaller than that valued before partum experience ( $H_1$ ); levels of perceived stress by primiparous mothers after partum experience will be greater than those attained before partum experience ( $H_2$ ); the representation of Parental Self, motherhood and fatherhood, and partum expressed by primiparous mothers after partum experience will be more positive than that expressed before the partum ( $H_3$ ). As corollary, we hypothesized that the more the mothers will perceive high social support by various sources, the more they will obtain low levels of stress ( $H_4$ ); the more the mothers will perceive high social support, the more they will express a positive representation of Parental Self, motherhood, fatherhood, and partum ( $H_5$ ); finally, the more the mothers will attain low levels of stress, the more they will express a positive representation of Parental Self, motherhood, fatherhood, and partum ( $H_6$ ).

### 2.1. Participants

Forty Sicilian primiparous mothers, aged from 21 to 42 years ( $M=30,6$ ,  $sd=5,6$ ), and recruited from maternity units of two Public Hospitals in Catania, Sicily (Italy), were invited to participate to this research. The 7,5% of mothers had secondary education ( $n=3$ ), the 67,5% higher education ( $n=27$ ), and the 25% university degree ( $n=10$ ). Mothers were chosen from the childbirth-preparation courses and selected without depressive symptomatology or psychiatric treatment and previous abortions. All mothers had a full term delivery with natural childbirth and delivered a healthy baby.

### 2.2. Measures and procedure

The Italian version of *Perceived Stress Scale* (Cohen, Kamarak, & Mermelstein, 1983) was used to measure the levels of perceived stress during the last 12 months: it consisted of 14 items, each valuable on 5-points frequency scale, ranging from zero (never) to 4 intervals (always). A few examples of items are reported as follows: e.g., *Thinking about your pregnancy, how often have you felt that you were unable to control the important things in your life?*; *how often have you felt that you were effectively coping with important changes that were occurring in your life?* (item reverse); *how often have you felt nervous and stressed?*. High mean scores indicated high levels of perceived stress. Cronbach's alpha was equal to .70 for pre-partum and .81 for post-partum experience.

The *Perceived Support Scale* (De Caroli & Sagone, 2011) was administered to analyze the levels of perceived support respectively received by partner, friends, and gynecologists. It included three items, each valued on 5-points

frequency scale, ranging from zero (never) to 4 intervals (always): for example, *how often have you felt supported by your partner?*.

Four *Semantic Differentials* (De Caroli & Sagone, 2011) were used for the analysis of representation of Parental Self, motherhood, fatherhood, the experience of partum. These measures included pairs of opposite adjectives (e.g., strong-weak, desirable-undesirable), each valuable on 7-points Likert scale. For Parental Self, Cronbach's alpha was equal to .84 for pre-partum and .68 for post-partum experience; for motherhood, Cronbach's alpha was equal to .72 for pre-partum and .75 for post-partum experience; for fatherhood, Cronbach's alpha was equal to .86 for pre-partum and .84 for post-partum experience; finally, for partum, Cronbach's alpha was equal to .77 for pre-partum and .79 for post-partum experience. All measures were administered both at 6-months of pregnancy (pre-partum period) and after 3 months from delivery (post-partum period).

### 2.3. Data analysis

The examination of data was carried out by means of SPSS 15, using the *t* for paired sample and Persons' linear correlations among dependent variables analyzed both before and after the experience of partum.

## 3. Results

Data analysis demonstrated that in general the levels of perceived stress postpartum were higher than those of pre-partum (pre:  $M=1.52$ ,  $sd=.39$  vs. post:  $M=1.76$ ,  $sd=.44$ ;  $t_{(39)}=-2.12$ ,  $p=.03$ ): specifically, after partum primiparous mothers perceived themselves nervous and stressed (pre:  $M=2.23$ ,  $sd=.89$  vs. post:  $M=2.58$ ,  $sd=.71$ ;  $t_{(39)}=-2.33$ ,  $p=.025$ ) more than before partum experience; after partum, primiparous mothers expressed to deal successfully with day to day problems and annoyances less than before partum experience (pre:  $M=.93$ ,  $sd=.72$  vs. post:  $M=1.30$ ,  $sd=.55$ ;  $t_{(39)}=-2.30$ ,  $p=.03$ ); after partum, primiparous mothers reported that they cannot cope with all the things that they had to do more than before partum experience (pre:  $M=1.73$ ,  $sd=.90$  vs. post:  $M=2.23$ ,  $sd=.83$ ;  $t_{(39)}=-2.33$ ,  $p=.025$ ); finally, after partum, primiparous mothers felt to be angered because of things that happened that were outside of their personal control more than before partum experience (pre:  $M=1.55$ ,  $sd=.99$  vs. post:  $M=2.18$ ,  $sd=1.01$ ;  $t_{(39)}=-2.88$ ,  $p=.006$ ).

Levels of perceived support post-partum were lower than those of pre-partum (pre:  $M=3.12$ ,  $sd=.47$  vs. post:  $M=2.69$ ,  $sd=.54$ ;  $t_{(39)}=3.71$ ,  $p=.001$ ). Specifically, primiparous mothers perceived greater support by gynecologists before partum experience than after partum period (pre:  $M=3.53$ ,  $sd=.55$  vs. post:  $M=2.40$ ,  $sd=1.06$ ;  $t_{(39)}=5.37$ ,  $p<.001$ ). No differences for the support by partner and friends between pre- and postpartum period was found.

The representations of motherhood (pre:  $M=5.33$ ,  $sd=.56$  vs. post:  $M=5.84$ ,  $sd=.53$ ) and fatherhood (pre:  $M=5.45$ ,  $sd=.80$  vs. post:  $M=5.66$ ,  $sd=.71$ ) in postpartum period were more positively characterized than those in pre-partum period (respectively,  $t_{(39)}=-3.96$ ,  $p<.001$ ;  $t_{(39)}=-2.17$ ,  $p=.037$ ). No significant differences for the representation of Parental Self and the experience of partum emerged.

Analyzing the linear correlations among the abovementioned variables, results showed that, before the experience of partum, the levels of social support and perceived stress were negatively related ( $r_{(40)}=-.35$ ,  $p=.027$ ): the more the primiparous mothers perceived themselves to be supported in general, the less they felt themselves stressed. Specifically, the levels of support provided by friends and perceived stress were negatively related ( $r_{(40)}=-.63$ ,  $p<.001$ ): in fact, the more the primiparous mothers perceived themselves to be supported by their friends, the less they felt themselves stressed. Furthermore, the levels of social support and representation of Parental Self ( $r_{(40)}=.34$ ,  $p=.03$ ) and fatherhood ( $r_{(40)}=.39$ ,  $p=.014$ ) were positively related: the more the primiparous mothers perceived themselves to be supported in general, the more they expressed a positive representation of Parental Self and fatherhood. In addition, the levels of perceived stress and representation of Parental Self ( $r_{(40)}=-.63$ ,  $p<.001$ ), motherhood ( $r_{(40)}=-.64$ ,  $p<.001$ ), and the experience of partum ( $r_{(40)}=-.52$ ,  $p=.001$ ) were negatively related: the less the primiparous mothers felt themselves stressed, the more they expressed positive representations of Parental Self, motherhood, and partum. No significant correlations were found between these variables after the experience of partum.

#### 4. Discussion

The main purpose of this study was to verify the incidence of the experience of partum on the social support provided by partner, friends, and gynecologists, the maternal stress, and the representation of Parental Self, motherhood, fatherhood, and delivery in primiparous mothers attending childbirth-preparation courses at Public Hospitals in Catania, Sicily (Italy). According to  $H_1$ , the expected reduction of social support after partum was confirmed by results, specifically in relation to the support provided by gynecologists, who play a protective role and modulates the effects of stress on mothers' physical health and psychological well-being, as reported by Tarkka and Paunonen (1996) and Melender (2002). Our findings might be caused by participation to childbirth-preparation courses attended by this group of primiparous mothers: the organization of these courses is functional to support primiparous mothers and their partners during the pregnancy and this form of support finishes with the childbirth.

In relation to  $H_2$ , we expected an increase in perceived stress by primiparous mothers after partum and results corroborated this assumption. Primiparous mothers perceived themselves more nervous and stressed, managed everyday problems with difficulty, and claimed that they cannot cope with all the things that they need to do than before partum experience. This evidence could be explained with the beginning of all practices for the child-caring (such as the breastfeeding): in fact, the more the mothers took care of their baby for the first time, the more they felt stressed.

With reference to  $H_3$ , we expected that the representation of Parental Self, motherhood and fatherhood, and partum expressed by primiparous mothers would change after the childbirth. Results partially confirmed this prediction: after the childbirth, it was possible to notice a significant improvement only for motherhood and fatherhood representation. This finding could be justified by the assumption of parental role in primiparous mothers.

Only for pre-partum period, we found that the more the mothers perceived themselves to be supported by their friends, the less they felt themselves stressed, confirming the  $H_4$ ; the more the mothers perceived high social support, the more they expressed a positive representation of Parental Self and fatherhood, partially confirming the  $H_5$ ; finally, the more the mothers obtained low levels of stress, the more they expressed a positive representation of Parental Self, motherhood, and the experience of partum.

One of the two limitations of the current study consisted of absence of partners' primiparous mothers involved in this study. It would be interesting to compare the representation of parental self, motherhood and fatherhood expressed by mothers and their partners in the transition from pre- to post-partum period and their levels of perceived stress caused by the childbirth. For example, in the study conducted by Swiatkowska-Freund, Kawiak, and Preis (2007), one of the most important reasons for fathers to be present during labor was the desire to share the experience of the delivery with their partner; in addition, fathers perceived to be very helpful to their partners during labor and delivery and to experience the childbirth creating an intense bond between the two partners.

Few researches are interested in the analysis of social support, perceived stress, and transition to parenthood in fathers' expectations, overall in Italian context (see De Caroli and Sagone, 2011). Comparing a group of fathers and a group of men who are becoming fathers for the first time, De Caroli and Sagone (2011) found that the second group was stressed and believed that the partner received support by specialists and friends more than the first one; in addition, the group of men who are becoming fathers for the first time expressed a distance between the representation of Parental Self and fatherhood greater than that expressed by the group of fathers.

The second limit of this investigation is to address to the absence of comparison between primiparous and multiparous mothers in order to study the similarities and differences, as reported by Rutledge and Pridham (1987) in maternal perceived competence for infant feeding and care. Future research will fill these limits, involving other groups of mothers (primiparous vs. multiparous women) and their partners and using qualitative methods in order to understand the complexity of the psychological scenario connected to the experience of parenthood.

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