



**Network Support and Parenting in Mothers and Fathers who Conceived Spontaneously or through Assisted Reproduction**

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**Abstract**

Background: Little is known about the contribution of other significant relationships for parental adjustment and care in parents who conceived through Assisted Reproductive Technologies (ART).

Objective: This study examined the role of perceived network support on parenting stress and investment in the child in parents who conceived spontaneously or through ART, during their transition to parenthood.

Methods: Thirty five couples who conceived through ART and 31 couples who conceived spontaneously completed self-report questionnaires regarding perceived emotional and instrumental support from their social network members (i.e. nuclear and extended family members and friends) during pregnancy (twenty-fourth week) and regarding parenting stress and investment in the child four months after the partum.

Results: Regardless of method-of-conception, instrumental support from nuclear family was positively associated with maternal investment in the child and that emotional and instrumental support from extended family was positively associated with paternal stress while support from friends was negatively associated with it.

Conclusion: Results suggest that parents who conceive through ART and spontaneously are alike in that their adjustment to parenthood and the quality of the care they provide to their children depends on support perceived from nuclear and extended family and friends.

Keywords: infertility; assisted reproductive technologies; social support; adjustment to parenthood; parenting

## Introduction

In view of the now fairly documented distress experienced by infertile couples who undergo assisted reproduction (ART) in order to conceive (Greil, 1997; Verhaak et al., 2007) several studies have tried to examine the role of social relationships in this context (e.g. Abbey, Andrews, & Halman, 1991; Slade, O'Neill, Simpson, & Lashen, 2007). However, because empirical research on the transition to parenthood after successful ART has mostly focused on the couple and parents-child dyads (cf. Hammarberg, Fisher, & Wynter, 2008), little is known about the contribution of other significant relationships after pregnancy is achieved, despite evidence suggesting that the social context and needs of parents that conceived spontaneously and through ART may differ.

Indeed, due to the long and repeated treatments infertile couples usually have to undertake in order to achieve conception and to the increased obstetrical risks associated to pregnancy after ART (Helmerhorst, Perquin, Donker, & Keirse, 2004), parents that conceived through assisted reproduction have increased concerns about pregnancy loss and foetal health (Hjelmstedt, Widström, Wramsby, Matthiesen, & Collins, 2003), but restrain from discussing them with significant others (McMahon, Ungerer, Tennant, & Saunders, 1999) and may therefore not experience adequate support. Empirical evidence also shows that, compared to parents with a spontaneous conception (SC), parents that conceived through ART show less self-confidence and confidence in their parenting abilities (Gibson, Ungerer, Tennant, & Saunders, 2000; McMahon, Ungerer, Tennant, & Saunders, 1997) and may thus be in need of increased reassurance and help from significant others regarding child care issues.

In summary, parents who conceived through ART may be in need of increased support but may lack intimate relationships that could be of assistance. Because

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2  
3 support from intimate relationships has been consistently related to a range of  
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5 different outcomes, including parental adjustment (e.g. Glazier, Elgar, Goel, &  
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8 Holzzapfel, 2004), quality of care provided (e.g. Bradley, Whiteside-Mansell, &  
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11 Brisby, 1997) and child adjustment (e.g. Collins, Dunkel-Schetter, Lobel, &  
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13 Scrimshaw, 1993), it is vital to understand if the support that parents who conceive  
14  
15 through ART perceive from their intimate network members has the same protective  
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17 value as it is known to have when conceptions is achieved spontaneously. The purpose  
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19 of the present study was to examine the relationships between prenatal emotional and  
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21 instrumental social support and parental adjustment and care four months after the  
22  
23 partum, in mothers and fathers that conceived spontaneously or through ART.  
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27 Parental adjustment was conceptualized considering the magnitude of stress  
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29 associated to infant care and parenthood, that is, considering parenting stress. Parental  
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31 care was conceptualized as the parents' investment in the child, a measure of the  
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33 parents' attitudes towards childbearing and their child that has proved to be predictive  
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35 of positive parental interactions with the child and of infant-parent security  
36  
37 attachment (Cox et al., 2004). Because social support can be provided by different  
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39 social actors, three different categories of support providers were considered: nuclear  
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41 family (parents and siblings), extended family (parents-in-law and other relatives) and  
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43 friends.  
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49 Although several studies have documented the value of support from extended  
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51 family members and friends in parenting (e.g. Leinonen, Solantaus, & Punamäki,  
52  
53 2003), nuclear family members are regarded as more important support providers for  
54  
55 new parents because they have strong filial ties with the parents and the newborn and  
56  
57 are usually more frequently inside the household (Belsky & Rovine, 1984). In the  
58  
59 specific case of parenthood after ART, support from nuclear family members may  
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2  
3 have an even stronger value because nuclear family members are usually aware of the  
4  
5 couples' previous infertility problems and might also have had expectations regarding  
6  
7 their achievement of parenthood (Peronace, Boivin, & Schmidt, 2007). As such they  
8  
9 may be particularly motivated and have adequate knowledge of the specificities of  
10  
11 these parents' atypical pathway to parenthood in order to provide sensitive and  
12  
13 adequate help. However, the same may not happen regarding other family members  
14  
15 and friends. Receiving adequate support may imply disclosing the method-of-  
16  
17 conception and parents may not be willing to do so to less intimate family members  
18  
19 and friends because they may fear infertility-related stigma and unsupportive  
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21 responses (Ellison & Hall, 2003; Mindes, Kathleen, Kliwer, & James, 2003; Slade et  
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23 al., 2007).

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With this review in mind, we hypothesized that emotional and instrumental support from nuclear family members would be negatively associated with parenting stress and positively associated with parental investment in the child, but stronger associations were expected for those parents that conceived through ART. Support from extended family members and friends would also be negatively associated with parenting stress and positively associated with parental investment in the child, but weaker associations were expected for those parents that conceived through ART. Instrumental support, i.e. practical help, was expected to be of special value to mothers, who are much more involved in the daily care and supervision of children.

## Method

### *Participants and procedures*

The Ethics Committee of the University of Coimbra Hospitals provided ethical approval.

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3 The final sample consisted of 35 couples that conceived through ART (in vitro  
4 fertilization and intracytoplasmic sperm injection, using the couple's own gamete)  
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6 and 31 couples that conceived spontaneously.  
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10 Couples that conceived through ART and spontaneously were recruited during  
11 their first month of pregnancy while attending their obstetrical consultation at the  
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13 Genetics and Human Reproduction Service and at the Dr. Daniel de Matos Maternity,  
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15 respectively, both in the University of Coimbra Hospitals. Inclusion criteria were age  
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17 (18 years or older), nulliparity, singleton pregnancy and literacy skills to complete the  
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19 assessment protocol.  
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24 If participants agreed to collaborate, they filled a consent form and were later  
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26 contacted prior to their twenty-fourth pregnancy week ( T1), while attending their  
27  
28 obstetric consultation. Questionnaires were then delivered with the instructions that  
29  
30 they should complete them separately during the following week and bring them to  
31  
32 the next consultation. One week before the second assessment point (four months  
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34 postpartum, T2), questionnaires were sent by mail together with a preaddressed  
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36 envelope, and parents were instructed to complete them separately and post them back  
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38 to the research team.  
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43 In the ART group, 44 couples completed the questionnaires during pregnancy  
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45 and, from these, 39 women and 35 men also completed the questionnaires at 4 months  
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47 postpartum (attrition rate of 14.77%). In the SC group, 50 couples completed the  
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49 questionnaires during pregnancy and, from these, 33 women and 32 men also  
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51 completed the questionnaires at 4 months postpartum (attrition rate of 35%). In the  
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53 present study we only considered those couples in which both partners completed the  
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55 questionnaires at both assessment points.  
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## Social Network Support and Parenting

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Sample socio-demographic characteristics are presented in Table 1. Women that conceived with ART were older than women that conceived spontaneously ( $t(1, 64) = 6.63, p < .001$ ) and were with their partner for a longer time ( $t(1, 64) = 9.98, p < .001$ ). Men that conceived with ART were also older than men that conceived spontaneously ( $t(1, 64) = 5.92, p < .001$ ) and were with their partner also for a longer time ( $t(1, 64) = 9.96, p < .001$ ). No significant group differences were found regarding education, socioeconomic status and women's employment status after the partum.

The two groups were also compared regarding obstetrical and perinatal data. The frequency of male infants conceived spontaneously was significantly higher than those conceived by ART ( $\chi^2(1, 66) = 4.29, p = .034$ ). There were no significant group differences concerning the occurrence of problems during pregnancy, mode of delivery and the baby's gestational age and birth weight.

### **Materials**

Social support was assessed at the twenty-fourth pregnancy week using the Portuguese version of the Convoy Model diagram (Kahn & Antonucci, 1980). Network information was obtained by asking individuals to map their relations hierarchically onto a concentric circle diagram. Network members were described by the type of relationship they had with participants and this description was used to assign the member to the nuclear family (parents and siblings), extended family (in-laws and other relatives) or friends category. Participants were then asked to rate, from 0 (minimum) to 5 (maximum), perceived support regarding eight different support functions for each person included in the Convoy (to a total maximum of 12 persons). The Portuguese version of the Convoy Model has shown sound psychometric properties and revealed two support dimensions, emotional (four items; e.g., confiding about important things) and instrumental (four items; e.g., helping with

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3 household tasks) (Gameiro, Soares, Moura-Ramos, Pedrosa, & Canavarro, 2008).  
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5 Average summed emotional and instrumental support scores were calculated for each  
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7 type of relationship, ranging from 0 (minimum) to 20 (maximum). In the present  
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9 sample, Cronbach alpha coefficients for emotional support in women and men were  
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11 of .88 and .84 and for instrumental support were of .73 and .77.  
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15 Parenting stress was assessed four months after the partum with the  
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17 Portuguese version of the Parenting Stress Index - PSI (Abidin, 1983), a measure of  
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19 the magnitude of stress existing in the parent-child system. The Portuguese version of  
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21 this instrument proved to be valid and reliable (Santos, 2008). The total stress score  
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23 ranges from 104(minimum) to 520 (maximum) and in the present sample Cronbach  
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25 alpha coefficients were of .93 for women and of .87 for men.  
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29 Parental investment in the child was assessed four months after the partum  
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31 with the Portuguese version of the Parental Investment in the Children – PIC  
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33 (Bradley, Whiteside-Mansell, & Brisby, 1997) scale, a 19-item questionnaire  
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35 designed to assess parents' socioemotional investment in their children, that ranges  
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37 from 4 (minimum) to 76 (maximum). The Portuguese version of the scale revealed  
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39 sound psychometric properties (Gameiro, Martinho, Canavarro, & Moura-Ramos,  
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41 2008). In the present sample Cronbach alpha coefficients for the total index were of  
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43 .75 for women and of .80 for men.  
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49 Sociodemographic data were collected directly from the participants and  
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51 obstetrical and perinatal data (occurrence of obstetrical complications during  
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53 pregnancy; mode of delivery; gender, gestational age and birth weight of the baby)  
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55 were collected from the women's medical records.  
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### *Statistical Analyses*

Data were statistically analysed using SPSS, v.15.0. Missing data were random and low level (<5%) and were handled by simple group means substitution. Demographic data were not substituted.

Analyses were based on the Actor–Partner Interdependence Model using the couple as the unit of analysis (Cook & Kenny, 2005). This model was used because it could be expected that support perceived by one spouse would be associated with the other spouses' parenting stress and investment and vice-versa. In accordance to this model, in one set of analyses the mother outcome variables were regressed on the father and mother predictor variables and, in the other set of analyses, the father outcome variables were regressed on the mother and father predictor variables.

In a first moment product moment correlations were calculated between support scores (actor and partner) and parenting stress and parental investment in the child. Product moment and point-biserial correlations were also calculated regarding those variables for which the ART and SC group differed (i.e. age, years in current relationship and gender of the baby). When significant associations were found, these variables were controlled for in the regression models.

To investigate associations between support from the three different categories of providers considered and parenting stress and investment in the child and to see if these associations varied across method-of-conception, several hierarchical regression models (method enter) were developed. Because perceived instrumental and emotional support scores were highly correlated (Pearson  $r$  scores varied between .752 and .838 for women and between .706 and .811 for men) and this would create a collinearity problem, separate regression models were developed for instrumental and emotional support. As such, for each gender, two hierarchical regressions were

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3 performed for parenting stress (one including emotional support scores and other  
4 including instrumental support scores from the three different categories of providers  
5 considered) and two for parental investment in the child (with the same independent  
6 variables).

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12 Following Aiken and West (1991) recommendations, in each regression model  
13 the main effects of support from the different categories of providers considered and  
14 of the moderator (method-of-conception) were entered on the first step of the  
15 regression (unless there were partner social support variables and socio-demographic  
16 variables that needed to be controlled and were thus entered in the first step of the  
17 model, in which case the regression model had one more step). The products of  
18 method-of-conception and each on the support scores (i.e. interaction terms) were  
19 entered on the following step. Continuous variables were transformed to standard  
20 scores to reduce collinearity between the main effect and product terms. Post hoc  
21 power analyses showed that medium to large effects could be detected (effect size =  
22 .22,  $p < .10$ , power = .83, G\*Power, Faul, Erdfelder, Lang, & Buchner, 2007).  
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## 40 **Results**

41 Table 2 shows mean and standard deviation scores of the main study variables. Table  
42 3 shows Pearson's correlation indexes between actor and partner support scores and  
43 parenting stress and investment in the child for women and men.

44 Parents' age and years in current relationship and the child's gender were not  
45 significant correlated to parenting stress and parental investment in the child, neither  
46 for women nor men, and were thus not included in the regression models developed.  
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48 Father's perceived instrumental support from friends was positively associated with  
49 maternal investment in the child (cf. Table 3), as such this variable was included as  
50 predictor in the regression model of maternal investment in the child developed.  
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### *Parenting stress*

Table 4 presents significant hierarchic regression analyses for fathers' parenting stress.

For women, the overall regression model including main effects from emotional support from nuclear and extended family and friends was not significant ( $F(4, 61) = .235$ ;  $p = .918$ ; Adjusted  $R^2 = .00$ ), neither was the regression model that included both main and interaction effects ( $F(7, 58) = .749$ ;  $p = .632$ ; Adjusted  $R^2 = .00$ ).

The regression model that included main effects from instrumental support was also non significant ( $F(4, 61) = .054$ ;  $p = .994$ ; Adjusted  $R^2 = .00$ ), and neither was the regression model that included both main and interaction effects ( $F(7, 58) = .909$ ;  $p = .506$ ; Adjusted  $R^2 = .00$ ).

For men, the overall regression model including main effects from emotional support from nuclear and extended family and friends was significant ( $F(4, 61) = 2.716$ ;  $p = .038$ ). Both emotional support from extended family ( $\beta = .334$ ;  $p = .016$ ) and friends ( $\beta = -.283$ ;  $p = .026$ ) were associated with parenting stress, explaining 10% of its total variance. The addition of the interaction terms to the regression model did not significantly contribute to an increase in the total of explained variance ( $F$  change (3, 58) = .173;  $p = .914$ ;  $R^2$  change = .008).

The overall regression model including main effects from instrumental support was significant ( $F(4, 61) = 3.303$ ;  $p = .016$ ). Both emotional support from extended family ( $\beta = .367$ ;  $p = .006$ ) and friends ( $\beta = -.255$ ;  $p = .037$ ) were associated with parenting stress, and method-of-conception was also marginally associated with parenting stress. Together these variables explained 12% of the parenting stress total variance. Adding the interaction effects to the regression model ( $F(7, 58) = 2.486$ ;  $p = .027$ ) did not significantly contribute to an increase in the total of explained variance ( $F$  change (3, 58) = 1.326;  $p = .275$ ;  $R^2$  change = .053).

*Parental investment in the child*

Table 5 presents significant hierarchic regression analyses for maternal investment in the child.

For women, the overall regression model including main effects from emotional support from nuclear and extended family and friends was not significant ( $F(4, 61) = 1.385$ ;  $p = .250$ ; Adjusted  $R^2 = .02$ ), neither was the regression model that included both main and interaction effects ( $F(7, 58) = .917$ ;  $p = .500$ ; Adjusted  $R^2 = .00$ ).

The regression model that included main effects from instrumental support was marginally significant ( $F(4, 60) = 2.048$ ;  $p = .099$ ). Instrumental support from nuclear family was associated to maternal investment in the child ( $\beta = .266$ ;  $p = .034$ ), explaining 9% of its total variance (cf. Table 5). The addition of the interaction terms to the regression model did not significantly contributed to an increase in the total of explained variance ( $F \text{ change}(3, 57) = .577$ ;  $p = .632$ ;  $R^2 \text{ change} = .025$ ). Although the partner effect (i.e. father's perceived instrumental support from friends) was not significant in this model, it was marginally significant in the single regression model ( $\beta = .229$ ;  $p = .074$ ).

For men, the overall regression model including main effects from emotional support from nuclear and extended family and friends was not significant ( $F(4, 61) = .078$ ;  $p = .989$ ; Adjusted  $R^2 = .00$ ), neither was the regression model that included both main and interaction effects ( $F(7, 58) = .206$ ;  $p = .983$ ; Adjusted  $R^2 = .00$ ).

The regression model that included main effects from instrumental support was also non significant ( $F(4, 61) = .116$ ;  $p = .976$ ; Adjusted  $R^2 = .00$ ), and neither was the regression model that included both main and interaction effects ( $F(7, 58) = .139$ ;  $p = .995$ ; Adjusted  $R^2 = .00$ ).

### Discussion

Findings from this prospective study are innovative in that they showed that parents who conceive through ART are just like all parents in that their adjustment to parenthood and the quality of the care they provide to their children depends on support perceived from their family and friends. As such, results add to empirical research that has been showing that there are more similarities than differences in the parenting experience of couples that conceive through ART and spontaneously (Colpin, 2002; Hammarberg, Fisher, & Wynter, 2008).

Our results substantiate that parenting is affected by other social actors beyond the parents and the parents-child dyads. More precisely, results showed that, regardless of method-of-conception, perceived instrumental support from nuclear family was positively associated with maternal investment in the child. During the early postpartum period, women tend to be on childbirth leave (70% of the women in our sample) and to take over more household and childcare tasks (Cowan & Cowan, 2000) and, as such, opportunities for socialization diminish. Nonetheless, contact with nuclear family members increases (Belsky & Rovine, 1984; Bost, Cox, & Payne, 2002) and this may reflect on the amount of practical help perceived (Gameiro, Boivin, Canavarro, Moura-Ramos, & Soares, in press) that may free mothers to increase dedication to their parental duties. Our results substantiate not only this idea but also the claim that the beneficial impact of support from less intimate network members on parenting is secondary in relation to nuclear family support (Belsky & Rovine, 1984; Antonucci, Akiyama, & Takahashi, 2004).

For men, parental stress proved to be positively associated with perceived emotional and instrumental support from extended family members and negatively associated with perceived emotional and instrumental support from friends. Men are socialized to be the family breadwinners and consequently have fewer opportunities to acquire

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3 and practice caregiving skills (Parke & Brott, 1999) and, when the child is born, tend  
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5 to concentrate more on work duties than on childcare tasks (Cowan & Cowan, 2000).  
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8 Research has shown that during the postpartum period men also feel that they are  
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10 prevented from achieving closeness with their child (Nyström & Öhring, 2004).  
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12 Perceived support from family members may increase feelings of exclusion and lower  
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14 sense of paternal competence and thus increase parenting stress levels. However, it  
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16 should be noticed that no associations between extended family support and paternal  
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18 investment in their child were found, which means that although support from  
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20 extended family increased fathers' parenting stress, their attitudes towards  
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22 childbearing and the child were not affected. In contrast, friendship relations,  
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24 probably with other male friends, may provide fathers' with opportunities for  
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26 reassurance and for comparing experiences, thus increasing feelings of self-efficacy  
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28 and normalizing their parenthood experience (Cutrona, 1984; Goldstein, Diener, &  
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30 Mangelsdorf, 1996).  
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37 As expected, for women stronger associations were found regarding perceived  
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39 instrumental support from family members. Nonetheless, for men it was the emotional  
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41 component of their friends' support that was more strongly associated with parental  
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43 adjustment. This reinforces the idea that, although friends are not usually inside the  
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45 household and may thus be less able to provide practical help, they can still be  
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47 supportive by offering reinforcement and advice (Leinonen, Solantaus, & Punamäki,  
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49 2003).  
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54 Despite the small sample size, the sound methodological approach of this  
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56 prospective study warrant confidence in the associations found. The measures were  
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58 reliable and were obtained from both mothers and fathers. Social support scores were  
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60 obtained in advance of the assessment of parental adjustment and care. Further, the

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3 inclusion of different categories of support providers allowed for the investigation of  
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5 their relative support value..  
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8 In summary, our results suggest that, when helping mothers and fathers in  
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10 adjusting to parenthood and providing adequate childcare, the parents' social network  
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12 should be taken into consideration as it may offer additional support beyond the  
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14 partners' support. In this need parents who conceived through ART are similar to  
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16 those who conceived spontaneously. Interventions directed to easy couples' transition  
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18 to parenthood have always encouraged the assessment and promotion of greater  
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20 support networks (Glade, Bean, & Vira, 2005) and our results confirm that this is  
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22 equally advisable when conception is achieved through ART but may not be equally  
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24 beneficial for men and women.  
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Table 1. Sample socio-demographic characteristics (N=132)

	Women				t	Men				t
	ART		SC			ART		SC		
	n=35		n=31			n=35		n=31		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Age	33.09	2.853	26.52	4.816	6.63***	35.11	3.802	28.90	4.721	5.92***
Years in current relationship	7.71	2.198	2.96	1.583	9.98***	7.71	2.198	2.96	1.583	9.96***
	n	%	n	%	$\chi^2$	n	%	n	%	$\chi^2$
Education										
Primary	2	5.7	5	16.1		5	14.3	5	16.1	
Secondary Junior	5	14.3	4	12.9	3.50 <sup>a</sup>	5	14.3	11	35.5	4.58
Secondary Senior	9	25.7	11	35.5		16	45.7	9	29.0	
University	19	54.3	11	35.5		9	25.7	6	19.4	
Socioeconomic status										
Medium low	10	28.6	15	48.4		10	28.6	16	51.6	
Medium	10	28.6	8	25.8	3.12	10	28.6	7	22.6	3.82
Medium high	15	42.9	8	25.8		15	42.9	8	25.8	
Employment status (four months postpartum)										
Working	8	25.9	10	33.3	.415					
Childbirth leave/unemployment/vacations	23	74.2	20	66.7						

Note: \*p < .05, \*\*p < .01, p < .001, <sup>a</sup> Cramer's V, SD = standard deviation, ART = Assisted Reproductive Technologies, SC = Spontaneous conception



Table 2

Mean and standard deviations among study variables, for women and men (N=132).

Variables	Mean (SD)			
	Women		Men	
	ART n = 35	SC n = 31	ART n = 35	SC n = 31
Social support				
Nuclear family - Emotional support	15,31 (4,24)	15,15 (5.54)	14,60 (5,21)	15,83 (4.16)
Nuclear family - Instrumental support	8,83 (3,33)	8,82 (4.55)	7,93 (4,12)	8,63 (3.75)
Extended family - Emotional support	10,47 (6,68)	10,79 (6.63)	11,65 (6,53)	9,54 (6.05)
Extended family – Instrumental support	5,34 (4,28)	4,77 (4.21)	5,71 (4,16)	4,17 (3.39)
Friends - Emotional support	8,83 (8,09)	8,08 (8.33)	5,31 (6,79)	6,09 (7.48)
Friends - Instrumental support	2,81 (3,20)	3,23 (4.51)	1,38 (2,40)	2,28 (3.70)
Parental adjustment				
Parenting stress	232.76 (33.25)	229.87 (30.91)	225.76 (30.63)	232.26 (20.03)
Parental care				
Parental investment in the child	55.03 (6.26)	55.42 (4.30)	54.91 (6.87)	54.54 (4.45)

Note: † p < .10, \*p < .05, <sup>a</sup> 0 = male, 1 = female, SC = spontaneous conception, ART = assisted reproductive techniques

## Social Network Support and Parenting

Table 3

*Correlations among social support variables, for women and men (N=66 couples).*

	Correlations			
	Women		Men	
	Parenting Stress	Parental Investment	Parenting Stress	Parental Investment
<b>Actor</b>				
Nuclear family - Emotional support	-,064	,234†	,128	,057
Nuclear family - Instrumental support	-,015	,301*	,154	-,015
Extended family - Emotional support	,032	,088	,225†	,022
Extended family - Instrumental support	-,014	,182	,286*	,008
Friends - Emotional support	-,070	-,111	-,184	-,016
Friends - Instrumental support	,022	-,075	-,170	,074
<b>Partner</b>				
Nuclear family - Emotional support	-,063	-,022	-,055	-,068
Nuclear family - Instrumental support	-,088	,041	,002	,039
Extended family - Emotional support	,107	-,101	,019	-,041
Extended family - Instrumental support	,074	-,051	-,013	-,118
Friends - Emotional support	,072	,041	-,038	-,031
Friends - Instrumental support	-,044	,221†	-,076	,016

Note: †  $p < .10$ , \* $p < .05$

## Social Network Support and Parenting

Table 4

*Significant hierarchic regression analyses for fathers' parenting stress (n = 66).*

Predictor	F	Adjusted R <sup>2</sup>	R <sup>2</sup> change	b	β	p
Step 1: Method-of-conception <sup>a</sup>				-10.248	-.197	.115
Emotional Support						
Nuclear family				-.125	-.005	.971
Extended family				8.899	.334	.016
Friends				-8.098	-.283	.026
	2.716	.10	.15			.038
Step2: Method-of-conception <sup>a</sup> x Emotional Support						
Nuclear family						
Extended family						
Friends						
			.01			.914
Predictor	F	Adjusted R <sup>2</sup>	R <sup>2</sup> change	b	β	p
Step 1: Method-of-conception <sup>a</sup>				-12.254	-.235	.060
Instrumental Support						
Nuclear family				.087	.003	.979
Extended family				10.041	.367	.006
Friends				-7.626	-.255	.037
	3.303	.12	.18			.016
Step2: Method-of-conception <sup>a</sup> x Instrumental Support						
Nuclear family						
Extended family						
Friends						
			.05			.275

Note: † p < .10, \*p < .05, <sup>a</sup> 0 = spontaneous conception, 1 = assisted reproductive techniques

Table 5

*Significant hierarchic regression analyses for maternal investment in the child (n = 66).*

Predictor	F	Adjusted R <sup>2</sup>	R <sup>2</sup> change	b	β	p
Step 1: Partner – Instrumental support from friends				1.363	.221	.074
	3.928	.03	.05			.074
Step 2: Partner – Instrumental support from friends				1.192	.194	.112
Method-of-conception <sup>a</sup>				-.604	-.056	.641
Instrumental Support						
Nuclear family				1.516	.281	.031
Extended family				.774	.150	.263
Friends				-.866	-.175	.174
	2.341	.09	.11			.052
Step 3: Method-of-conception <sup>a</sup> x Instrumental Support						
Nuclear family						
Extended family						
Friends						
			.03			.632

Note: † p < .10, \*p < .05, <sup>a</sup> 0 = spontaneous conception, 1 = assisted reproductive techniques

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