Self-reported psychosocial factors among In Vitro Fertilization patients interviewed alone or with the partner

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Abstract

The purpose of this study was to compare the sociodemographic and psychosocial characteristics reported by female In Vitro Fertilization (IVF) patients interviewed alone or with the partner in heterosexual couples. During 12 months (2011-2012), all patients undergoing IVF or Intracytoplasmic Sperm Injection at one public reproductive medicine unit, in Portugal, were interviewed on the day of the diagnosis of pregnancy, being recruited 221 women interviewed with the partner and 92 interviewed alone. Interviewers collected data on sociodemographic and obstetric characteristics; and anxiety, depression, social support and partner relationship were collected by self-administered questionnaires. Chi-square test was used to assess the independent association between the categorical variables and being interviewed alone or with the partner. For continuous variables, mean or median differences were compared by the t-test or the Mann-Whitney test, according to data distribution. No statistically significant differences were found in the self-reporting of depression, anxiety, social support and partner relationship or in sociodemographic and obstetric characteristics between women interviewed alone or with the partner. Although women interviewed alone were older and more frequently had children than women interviewed with the partner, no significant associations were observed. Thus, having a male partner present in the research setting during a self-administered questionnaire seems not to influence women's responses to psychosocial measures. Other outcomes and settings need to be evaluated to support evidence-based guidelines for research on infertility.

Keywords: infertility, self report, In Vitro Fertilization, psychosocial factors, data collection

Introduction

Qualitative studies show that being alone or in the presence of the partner shape the reporting of experiences and emotions (Machado & Silva, 2010; Bjornholt & Farstad, 2012). Psychological variables should be addressed when a holistic approach is intended to the care of infertile women (Batool & Visser, 2014) and men (Schmidt, 2009). However, there is no quantitative data about the influence of participating alone or with the male partner in self-reporting in research on infertility. Studies have focused on the preferential mode of questionnaire completion by women in infertility surveys (Morris, Edwards, Doyle, & Maconochie, 2013), the interaction and mutual influence of both members of the couple (Donarelli et al., 2012), the heterogeneity across individuals (Weinberg & Wilcox, 2008), and the strengths and weaknesses of the use of dyadic data analysis when the participant is a couple (Peterson et al., 2009).

This study seeks to contribute to fill this gap, by exploring whether having a male partner present in the research setting during a self-administered questionnaire influences women's responses to psychosocial measures, taking advantage of an opportunity that emerged during fieldwork conducted within an observational cross-sectional project about embryo disposition. The research protocol was designed to recruit heterosexual couples on the day of the diagnosis of pregnancy. This choice was based on the fact that, in Portugal, IVF users must be heterosexual and married (or in a stable relationship for 2 years) (Silva & Barros, 2012). Furthermore, this procedure may require the presence of the couple, after a physically and emotionally challenging treatment (Boivin, Griffiths, & Venetis, 2011; Hammarberg, Fisher, & Wynter, 2008). However, several women attended this medical appointment without their male partner. It raised two main concerns: was it helpful, from a basic research perspective, not to have to exclude the women who went alone in a setting

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where they are available? If so, were there differences in self-reporting of psychosocial variables when women or couples were recruited?

Therefore, the objective of this study was to compare the self-reporting of sociodemographic and psychosocial characteristics by female IVF patients interviewed alone or with the partner in heterosexual couples.

Methods

Participants and procedures

Between August 16, 2011 and August 15, 2012, all patients undergoing homologous IVF or Intracytoplasmic Sperm Injection (ICSI) at a public reproductive medicine unit in Porto, Portugal, were consecutively and systematically recruited and interviewed on the day of Human Chorionic Gonadotropin test – βhCG (n=329). In most situations both members of the couple attended this medical appointment (n=226), while 103 women went to the hospital alone. In the first case, women and men were invited to participate in the study; in the latter, women were invited to participate alone, with participation rates of 97.8% among couples and 89.3% among women alone. The final sample comprised two independent groups: 221 "women interviewed with the partner" and 92 "women interviewed alone".

Ethical approval was granted by the Ethics Committee for Health of the S. João Hospital. All participants signed an informed consent.

Measures

Self-reported data on sociodemographic characteristics and obstetric history were assessed in face-to-face interviews conducted by two female trained interviewers using structured questionnaires. Women interviewed alone were asked to report their partners'

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sociodemographic characteristics. When at least one member of the couple had a child, participants were classified as having "children".

The following were collected through self-administered questionnaires fulfilled individually, and partners did not talk to each other during the administration.

The State-Trait Anxiety Inventory (Gonçalves, Almeida, Machado, & Simões, 2006) is constituted by two scales of 20 items each, Trait (permanent condition of anxiety) and State (anxiety in a specific situation), on a 4-point Likert scale. Good internal consistency was achieved in the Portuguese validation (α=0.93[State]; α=0.89[Trait]) and in the present study (α=0.94[State]; α=0.89[Trait]).

The Edinburgh Postnatal Depression Scale (Areias, Kumar, Barros, & Figueiredo, 1996) consists of 10 items on a 4-point Likert scale, presenting good reliability, both originally (α=0.85) and in this study (α=0.84). It is reliable for the evaluation of depressive symptoms not only in the postnatal period but also in the prenatal (Tendais, Costa, Conde, Figueiredo, 2014).

The Relationship Questionnaire (Figueiredo et al., 2008) comprises 12 items on a 4-point Likert scale and assesses two dimensions: positive dimension (sense of support and care, affection, closeness, joint interests and activities); and negative dimension (anxiety, irritability and criticisms). It is reliable originally (α=0.90[positive subscale]; α=0.72[negative subscale]) and in the present study (α=0.81[positive subscale]; α=0.58[negative subscale]).

The Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) measures the perceived social support from a significant other, family and friends, through 12 items on a 7-point Likert scale. A good internal consistency was registered originally (α[total scale]=0.88; α[significant other]=0.91; α[family]=0.87; α[friends]=0.85) and in the present study (α[total scale]=0.91; α[significant other]=0.90; α[family]=0.92; α[friends]=0.94).

Data analyses

Chi-square test was used to assess the independent association between the categorical variables and being interviewed alone or with the partner. For continuous variables, mean or median differences were compared by the Independent Samples t-test or the Mann-Whitney test, according to data distribution. Analyses were conducted using SPSS, version 20.0 for *Windows*.

Results

There were no statistically significant associations between the sociodemographic and obstetric characteristics of women interviewed alone or with the partner (Table 1). Although not reaching statistical significance, women interviewed alone were older (>35 years) and more frequently had children than women interviewed with the partner (44.5% versus 33.0%, and 18.5% versus 10.4%, respectively). Comparison between sociodemographic data of the partners of women interviewed alone and women interviewed with the partner showed no significant differences in any of the variables (data not shown).

[Insert Table 1 about here]

Regarding anxiety, mean value was similar between the groups, both in state-anxiety and in trait-anxiety. Likewise, no statistically significant differences were found regarding depression symptoms among those interviewed alone or with the partner. Partner relationship dimensions were similar between both groups, with no statistically significant differences in the median of positive or negative subscales. Perceived social support was similar among women interviewed alone and those interviewed with the partner concerning the total score and the significant other, family and friends subscales scores (Table 2).

[Insert table 2 about here]

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Discussion

In this study, the self-reporting of anxiety, depression, social support and partner relationship did not differ between women interviewed alone and those interviewed with the partner. Additionally, women's sociodemographic and obstetric characteristics were not significantly different, as well as those of their male partners. Findings from this study have implications mainly in two areas: firstly, data sustain the idea that researchers and clinical psychologists working on infertility can assess anxiety, depression, social support and partner relationship through the measures used in this study, regardless the presence of the couple; second, tThese results support an overall analysis of all the female IVF patients when assessing self-reported psychosocial factors, independently of being interviewed alone or with the partner.

Although the association between being interviewed alone or with the partner and both age and parental status hadn't achieved statistical significance, we cannot understate the risk estimate obtained. Women interviewed alone were older and more frequently had children than women interviewed with the partner. This may be explained by the fact that the experience of being a mother may help diminishing the psychological distress (McKenzie & Carter, 2013) and the negative emotional consequences of infertility (Cousineau & Domar, 2007).

A high number of hospital visits in a short period of time prior to the pregnancy diagnosis, in articulation with the organization of public healthcare services in Portuguese fertility centers, may have hampered the male availability to attend all the medical appointments, because they occur on working days, usually during the morning. Additionally, the perception of infertility as a female problem (Chachamovich et al., 2010; Inhorn & Patrizio, 2015) and the election of the female body as the main factor underlying the success

of IVF treatments (Silva & Machado, 2010) may explain the sub-representation of males in this study.

All the interviewees were heterosexual couples involved in homologous techniques, which may dissipate any possible differences resulting from single motherhood and the use of heterologous techniques. Furthermore, in studies aiming to analyse the interdependence between both members of the couple and the magnitude of its influence on the results (e.g. the analysis of the impact of one partner's coping on the stress of the other partner), the unit of observation should be the couple and a dyadic data analysis cannot be disregarded (Peterson et al., 2009).

The development of evidence-based guidelines for conducting research on health conditions involving more than one person claims for studies assessing other outcomes and being conducted in other settings and sociocultural and economic contexts. It would be useful to assess the influence of differences in reproductive control and access to reproductive health care in a context of "stratified reproduction" (Greil, McQuillan, Shreffler, Johnson, & Slauson-Blevins, 2011). In conclusion, these results contribute with important information that should be taken into account when planning studies on infertility and in the psychosocial assessment of IVF patients in clinical psychology practice.

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Table 1. Sociodemographic characteristics and obstetric history in female IVF patients being interviewed alone or with the partner in heterosexual couples

	Overall N=313	Women interviewed alone n(%) n=92	Women interviewed with the partner n(%) n=221	p
Age (years)				
<30	41	11(12.0)	30(13.6)	0.152
30-35	158	40(43.5)	118(53.4)	
>35	114	41(44.5)	73(33.0)	
Education level				
≤12 years	181	49(53.3)	132(59.7)	0.352
>12 years	132	43(46.7)	89(40.3)	
Household monthly income (€)[a]				
≤1000	48	17(18.7)	31(14.4)	0.618
1001-2000	157	44(48.3)	113(52.6)	
>2000	101	30(33.0)	71(33.0)	
Length of relationship (years)				
≤5	83	25(27.2)	58(26.2)	0.910
6-7	87	24(26.1)	63(28.5)	
>7	143	43(46.7)	100(45.2)	
Cause of infertility				
Female	83	22(23.9)	61(27.6)	0.887
Male	102	31(33.7)	71(32.1)	
Combined	66	19(20.7)	47(21.3)	
Unexplained	62	20(21.7)	42(19.0)	
Duration of infertility (months)				
≤24	56	17(18.5)	39(17.6)	0.962
25-36	64	18(19.5)	46(20.8)	
>36	193	57(62.0)	136(61.6)	
Previous cycles				
0	130	33(35.9)	97(43.9)	0.413
1-2	126	40(43.5)	86(38.9)	
≥3	57	19(20.6)	38(17.2)	
Previous pregnancy				
No	203	54(59.3)	149 (67.4)	0.190
Yes, without children	70	21(23.1)	49(22.2)	
Yes, with children	39	16(17.6)	23(10.4)	
Parental status				
No children	273	75(81.5)	198(89.6)	0.078
Children	40	17(18.5)	23(10.4)	

[a]The total does not add 313 due to missing information.

Table 2. Anxiety and depression symptoms, partner relationship and perceived social support in female IVF patients interviewed alone or with the partner in heterosexual couples

	Overall *N*=313	Women interviewed alone *n*=92	Women interviewed with the partner *n*=221	*p*
STAI-state anxiety[a] (mean, ±SD)	47.07(12.84)	46.69(13.89)	47.22(12.42)	0.760
STAI-trait anxiety[a] (mean, ±SD)	38.62(8.00)	37.99(8.29)	38.88(7.88)	0.405
EPDS Depression Scale[b] (mean, ±SD)	9.51(4.58)	10.04(4.54)	9.29(4.59)	0.187
Partner relationship – positive subscale[c] (median,P25-P75)	30.0(27.0-31.0)	30.0(27.0-31.0)	30.0(27.0-31.0)	0.449
Partner relationship – negative subscale[d] (median,P25-P75)	8.5(7.0-10.0)	9.0(7.0-10.0)	8.0(7.0-10.0)	0.794
Social Support Scale (total)[e] (median,P25-P75)	76.0(68.0-81.0)	76.0(68.8-81.0)	76.0(68.0-81.0)	0.838
▪ Significant other subscale[f] (median,P25-P75)	28.0(25.0-28.0)	28.0(24.0-28.0)	28.0(26.0-28.0)	0.143
▪ Family subscale[f] (median,P25-P75)	26.0(21.0-28.0)	26.0(21.0-28.0)	26.0(22.0-28.0)	0.639
▪ Friends subscale[f] (median,P25-P75)	24.0(20.0-27.0)	24.0(20.0-28.0)	24.0(20.0-27.0)	0.659

[a]Lower values indicate lower anxiety symptoms (range: 20-80); [b]Lower values indicate fewer depressive symptoms (range: 0-30); [c]Higher scores mean that positive relationship dimensions are more present (range: 8-32); [d]Higher scores mean that negative relationship dimensions are more present (range: 4-16); [e]Higher values indicate better social support (range: 12-84); [f]Higher values indicate better social support (range for each subscale: 4-28).