



DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES

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ABSTRACT

Defence mechanisms (DM) were investigated in infertile couples (n = 60) waiting for their first infertility consultation, making use of the Defense Mechanisms Inventory (DMI). When compared with results of fertile couples (n = 60), infertile men and women showed a significant trend to avoid the use of defence mechanisms that enable the expression of aggressive impulses as well as a tendency to overuse defence mechanisms that enable the rationalization and negation of frustrating situations. Such data seem to indicate the presence of defensive inflexibility in couples affected by reproductive stress, while in common couples defensive flexibility is to be expected.

Keywords: infertility; infertile couples; fertile couples; defence mechanisms; Defense Mechanisms Inventory.

INTRODUCTION

Recent research has placed the incidence of infertility between 3.5% and 16.7% in developed countries, and between 6.9% and 9.3% in underdeveloped countries, suggesting that 56% of affected couples are looking for medical support to overcome this situation (Boivin, Bunting, Collins, & Nygren, 2007).



DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES

After being considered an exclusively feminine problem, and after the generalization of the psychosomatic hypothesis for infertility cases without an identifiable medical cause, infertility is now looked upon as a problem of the couple, where the contribution of male factors (volume, concentration, motility and morphology of sperm) is getting closer to the contribution of female factors (Yao & Schust, 2002). Several female factors (such as congenital malformations of the gynaecological apparatus, menstrual irregularities, endocrine malfunction and tubal lesions) proved to be important for the diagnosis and explanation of a good number of infertility cases (Yao & Schust, 2002). Although medical progress in this field has been significant, there remains an important percentage of couples ($\pm 10\%$) whose infertility is not explained by present diagnostic techniques (Yao & Schust, 2002).

The psychosomatic hypothesis for infertility was promoted by authors developing specific theories: a) anovulatory cycles of psychological origin (Benedek, Ham & Rubenstein, 1953), b) muscle movements expelling sperm from the gynaecological apparatus (Deutsch, 1945), c) fallopian tubes' spasm (Langer & Ochandorena, 1953), d) negative influences of stress on the gynaecological apparatus (Stieve, 1940 & 1942 as cited in Langer, 1983), e) cervix glair hostility (Seguy, 1980) and f) sexual difficulties (Cooper, 1985). Descriptions of feminine clinical cases based the notion that infertility could be the consequence of psychological or biological immaturity (Orr, 1941; Benedek et al., 1953; Deutsch, 1945; Langer, 1983; Reboul, 1976). Cases of spontaneous remission (Anselmino, 1947 as cited in Langer, 1983; Deutsch, 1945; Hanson, Rock & Mass, 1950) helped to support the psychosomatic vision about infertility.

Nevertheless, it is very difficult to discriminate between infertile and fertile women using psychometric data and, when possible, probably we are observing signals of psychological suffering resulting from infertility and not the opposite (Reboul, 1976). Suffering experienced by infertile couples is extensively documented (Abbey, Andrews & Halman, 1992). An important aspect in the experience of these couples is the intimate connection between psychological suffering and the extension of medical treatment; depression may be difficult to detect at the beginning of treatment and can rise to worrying clinical levels during the third year of intervention (Berg & Wilson, 1991), or while repeating IVF cycles (Beaurepaire, Jones, Thiering, Saunders, & Tennant, 1994).

Research shows that health behaviour and lifestyle are involved in infertility, namely smoking (Freour et al. 2008), alcohol (Klonoff-Cohen, Lam-Kruglick, & Gonzalez, 2003) and obesity (van der Steeg et al. 2008). Excessive physical exercise (Arce & De Souza, 1993), as well as prolonged medication (Martini, Molina, Tissera, Ruiz & Cuneo, 2003) contribute to alterations in sperm parameters.

Recently, psychologists devoted to infertility gathered crucial information for the understanding of this problem: infertile women wishing to reproduce present higher levels of psychological suffering (either related to infertility or of a general kind) in comparison to common women (Jacob, McQuillan & Greil, 2007); among infertile couples, passive coping and dissatisfaction with social support are associated with increasing health complaints and higher anxiety and depression levels (Lechner, Bolman & van Dalen, 2007); infertile women present high levels of social stigma (Slade, Neil, Simpson & Lashen, 2007); psychological consequences due to infertility persist for decades, with negative marital, sexual and social impacts (Wirtberg, Moller, Hogstrom, Tronstad, & Lalos, 2007); in couples referred to IVF, women show more often confrontative coping styles, assuming full responsibility for the situation, seeking social support and using escape/avoidance strategies, while men more frequently show distancing, self-controlling and planful problem-solving (Peterson, Newton, Rosen & Skaggs, 2006); in couples conceiving after IVF, older women, compared to younger women, present significantly higher levels of resilience and lower levels of identification with motherhood, while older men, compared to younger men, present lower levels of satisfaction regarding their sexual life, as well as regarding relationship with their partner and with social life (McMahon, Gibson, Allen & Saunders, 2007).

Until now psychological variables used in infertility research were selected to represent the suffering of infertile couples. The way suffering is working at a deeper level is usually ignored. Variables supposed to structure emotional functioning, like DM, should participate in the psychological discussion



PSICOLOGÍA POSITIVA Y CICLO VITAL

about the adaptation that infertile couples must promote to cope with the negative consequences of infertility and with the demands of medically assisted reproduction.

The concept of DM was introduced in psychoanalytic theory as a contribution for the discussion of the origin of neurotic symptoms, suggesting that both disease and symptoms could be understood as the way sick people defend themselves from a suffering, a pain or from an unpleasant state for which a healthy alternative cannot be created (Freud, 1894). In this sense, defences are psychological resources at the service of the Ego, used to re-establish intrapsychic balance and generally working in an unconscious way. Although the term defence only reappears in Freudian literature thirty years later (Freud, 1926), the defensive concept underlies an important number of publications in which this author proposes different DM to explain several psychopathologies.

Other psychoanalysts proposed new DM. For instance, Anna Freud (1936) described identification with the aggressor and altruism, while Klein (1952) suggested that some defences are already operating at the beginning of human life (e.g., splitting, idealization, and projective identification). Klein (1937) also presented a theory about reparation mechanisms which can be considered healthy defences.

A new era emerged with the development of psychometric instruments exclusively concerned with DM, like the Defense Mechanism Test (Kragh, 1985), the hierarchy of DM using protocols of clinical interviews (Vaillant, 1971) and the DMI (Gleser & Ihilevich, 1969). This allowed DM research to spread to all fields of psychology (Ihilevich & Gleser, 1986; Ihilevich & Gleser, 1991; Cramer, 1991; Vaillant, 1992; Vaillant, 1993; Conte & Plutchik, 1995).

Of late, DM have shown their scientific utility in several important research fields, such as borderline personality organization (Chabrol & Leichsenring, 2006), psychiatric treatment results (Bowins, 2006), psychological development between childhood and adolescence (Cramer, 2007) and throughout adult life (Segal, Coolidge & Mizuno, 2007), immigrants' psychopathological reactions (Walsh & Shulman, 2007), intrapsychic and intersubjective conflicts (Shill, 2004; Stolorow, 2005, Shill, 2007), evolution of personality across life (Cramer and Jones, 2007), validity of psychometric instruments (Porcerelli, Shahar, Blatt, Ford, Mezza & Greenlee, 2006), therapeutic alliance (Ambresin, Roten, Drapeau & Despland, 2007), interface between neurosciences and psychoanalysis (Northoff, Bermpohl, Schoeneich, & Boeker, 2007), and so on.

DM of pregnant women in high risk obstetrical consultation (HROC) were compared with DM of pregnant women in routine consultation and compared with DM of non-pregnant women (Justo, 1990). Pregnant women in HROC showed significant changes in four different kinds of DM: lower levels of DM that enable the expression of aggressive impulses, attacking the frustrating object or projecting upon it, and higher levels of DM that enable the intellectualization and denial of frustrating situations. This suggests the existence of a defensive position structuring a 'stand-by' reaction, like a temporary suspension of the psychological development typical of pregnant women. In the case of pregnant women at HROC, this defensive reaction may be understood in three aspects: a) it forces a strong inhibition of the pregnant woman's emotional life (probably inducing a restriction of affective expression and fantasy); b) it must be a temporary reaction (coming to an end after the resolution of the obstetrical problem, or after the end of pregnancy) and c) it is set in motion by the information of the medical diagnosis that motivates HROC.

In the field of infertility, especially during the first phase of hospital care where diagnostic procedures are extremely important, it is likely that infertile couples also experience a 'stand-by' defensive reaction. It is difficult to speak about psychological and clinical costs caused by this kind of reaction while infertile couples are being looked after in the hospital setting. However, if we realize that an important percentage of these couples are not able to reach their goal during the first years of treatment, it becomes clear that the persistence of the 'stand-by' reaction can only produce negative consequences, at both individual and family level.

According to the above mentioned study of pregnant women at HROC (Justo, 1990), we hypothesized that, at the beginning of infertility medical treatment, women and men of infertile couples would



DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES

show differences in their defensive profile when compared to fertile women and men. In this sense infertile couples were expected to show lower levels of DM that enable the expression of aggressive impulses (attacking the frustrating object or projecting upon it) along with higher levels of DM that enable the intellectualization and denial of frustrating situations.

METHOD

Participants

Two independent samples were compared: one sample of infertile couples (Infertile Group-IG) and one sample of fertile couples (Fertile Group-FG). For the IG, 60 couples from the Infertility Service of Dr. Alfredo da Costa Maternity hospital in Lisbon were interviewed while waiting for their first consultation. The project was reviewed by the Clinical Psychologist in charge to support the Infertility Consultation of the hospital and, subsequently the head of the Psychological Department and the head of the Infertility Consultation gave their authorization. Subjects were informed about the goals and methods of the investigation and gave verbal consent. The interviews were made consecutively and took place at the hospital during 2005. For the FG, 60 couples without fertility problems were interviewed. Those couples were recruited from the informal network of the investigators. We tried to replicate demographic variables of infertile couples except for the variable number of children.

In IG couples: men's age ($M = 31.97$; $SD = 4.3$) is slightly higher than women's age ($M = 30.53$; $SD = 3.76$); men's education ($M = 10.42$; $SD = 3.57$) is slightly lower than women's ($M = 11.62$; $SD = 3.48$); 65.1% of men have less differentiated occupations while 38.4% of women have such occupations; 90% are married couples and the remaining 10% are living together out of wedlock; 53.3% have been living together for less than six years; for 96.7% of these men and women this is their first marital relationship; 3.4% of men and 1.7% of women had children prior to this marital relationship; 1.7% of these couples have a common child from their present marital relationship; 20% of these couples have had one or more pregnancies during their present marital relationship; 72.7% of these pregnancies ended because of spontaneous abortion, 18.2% because of induced abortion and 9.1% with a normal delivery; the average time of infertility is 3.4 years; 6.7% of these couples have used psychological or psychiatric help.

In FG couples: men's age ($M = 33.58$; $SD = 5.06$) is slightly higher than women's age ($M = 30.78$; $SD = 4.08$); men's education ($M = 12.03$; $SD = 3.62$) is slightly lower than women's ($M = 12.93$; $SD = 3.25$); 38.3% of men have less differentiated occupations while 20% of women have this type of occupation; 78.3% are married and the remaining 21.7% are living together out of wedlock; 51.7% have been living together for less than six years; for 98.3% of men and for 100% of women this is their first marital relationship; 3.4% of men and 3.4% of women had children prior to their present marital relationship; at present 68.3% of these couples have 1 child and 31.7% have 2 children; in their present marital relationship the incidence of pregnancies is equal to the number of children; so, there were no abortions, either spontaneous or induced, and only 6.7% of these couples used psychological or psychiatric help.

Instruments

With respect to socio-demographic variables, specifically as regards reproductive history, we constructed an interview protocol concerning age, race, residence, occupation (Departamento de Certificação da DSAC, 2001), education (number of years in school with achievement), marital status, number of years in marital relation, number of marriages, number of children born before the present relationship and their ages, number of pregnancies during the present relationship and their outcome, infertility (lack of reproduction after one year of sexual intercourse without contraceptive barriers), duration of infertility, cause of infertility, and use of psychological or psychiatric help.



PSICOLOGÍA POSITIVA Y CICLO VITAL

DM assessment was carried out using the DMI (Gleser & Ihlevich, 1969; Ihlevich & Gleser, 1986, 1991), which comprises five scales: TAO (turning against object) – DM that deal with frustration directing the aggressive impulse against the frustrating object; PRO (projection) – DM that deal with frustration attributing negative characteristics or intentions to the frustrating object; PRN (principalization) – DM that deal with frustration separating affection from content and repressing the former (e.g., intellectualization, isolation, rationalization); TAS (turning against self) – DM that deal with frustration directing the aggressive impulse towards the subject; REV (reversal) – DM that deal with frustration generating positive or neutral reactions when negative reactions are expected (e.g., negation, reaction formation, repression). The DMI is still one of the most used instruments for DM assessment (Zoccali et al. 2006; Drageset & Lindstrøm, 2003; Drageset & Lindstrøm, 2005; Geiser, Imbierowicz, Conrad, Wegener, & Liedtke, 2005; La Grutta et al. 2006).

The Portuguese version of the DMI was developed in a sample of adult women and in a sample of adult men. In adult women, internal consistency was $\alpha = .846$ for TAO, $\alpha = .728$ for PRO, $\alpha = .774$ for PRN, $\alpha = .755$ for TAS and $\alpha = .814$ for REV. In adult men, internal consistency was $\alpha = .860$ for TAO, $\alpha = .705$ for PRO, $\alpha = .741$ for PRN, $\alpha = .745$ for TAS and $\alpha = .810$ for REV.

Statistical Analyses

Statistical analyses were performed with SPSS Version 15.0. Demographic variable data were inspected to prevent biases. Differences between the two groups were not significant concerning men's age ($t = -1.886$; $p = .062$), women's age ($t = -0.349$; $p = .728$) and number of years of marital life ($t = -0.721$; $p = .472$). Significant differences were found concerning men's education ($t = -2.462$; $p = .015$) and women's education ($t = -2.142$; $p = .034$). The internal consistency of DMI scales was checked for fertile and infertile women (for TAO, $\alpha = .830$; for PRO, $\alpha = .683$; for PRN, $\alpha = .769$; for TAS, $\alpha = .745$; for REV, $\alpha = .786$) as well as for fertile and infertile men (for TAO, $\alpha = .861$; for PRO, $\alpha = .695$; for PRN, $\alpha = .796$; for TAS, $\alpha = .690$ and for REV, $\alpha = .834$).

Because a significant difference was detected between IG and FG regarding education, both between IG and FG women, and between IG and FG men, two MANCOVA's were performed to assess if that variable had any impact upon the testing of the hypothesis. To use MANCOVA we confirmed distribution normality, homogeneity of variances and correlations between dependent variables. Fertility vs. infertility was the between subjects factor, while education was the covariant.

RESULTS

According to our hypothesis, we expected IG women to present lower average results in the TAO and PRO scales as well as higher average results in the PRN and REV scales, when compared to FG women. MANCOVA analyses between IG and FG women (Pillai's Trace, Wilks' Lambda, Hotteling's Trace, Roy's Largest Root) do indicate the presence of a significant influence ($F = 3.070$, $p = .012$) due to education. That influence only impacts scales PRO ($F = 6.638$, $p = .011$) and REV ($F = 6.937$, $p = .010$), while among the rest of the DMI scales significant differences are not found (TAO: $F = 0.048$, $p = .827$; PRN: $F = 0.401$, $p = .528$; TAS: $F = 0.001$, $p = 0.978$). This way, after controlling the effect of education, differences between IG and FG women remain significant for the scales TAO, PRN and REV, but are not significant for scales PRO and TAS, as can be seen in Table 1.



DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES

Table 1: Mean values and standard deviations of IG women (n=60) and of FG women (n=60) on DMI scales, and effects of fertility vs. infertility after controlling the effect of education

DMI scales	IG women Mean (SD)	FG women Mean (SD)	<i>F</i>	<i>p</i>
TAO	31.93 (8.61)	38.97 (8.50)	19.708	.000
PRO	21.18 (4.55)	20.63 (4.17)	1.420	.236
PRN	38.17 (6.04)	35.60 (6.13)	5.681	.019
TAS	21.23 (5.27)	20.87 (4.92)	.144	.705
REV	19.83 (5.00)	17.23 (3.91)	7.187	.008

Also according to our hypothesis, we expected IG men to present lower average results in the TAO and PRO scales and higher average results in the PRN and REV scales when compared with FG men. Regarding the comparison between IG and FG men, MANCOVA analyses (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, Roy's Largest Root) do not indicate the presence of a significant effect ($F = 2.142$, $p = .065$) due to education. So, after controlling the effect of education, differences between IG and FG men are significant for all DMI scales, as can be seen in Table 2.

Table 2: Mean values and standard deviations of IG men (n=60) and of FG men (n=60) on DMI scales, and effects of fertility vs. infertility after controlling the effect of education

DMI scales	IG men Mean (SD)	FG men Mean (SD)	<i>F</i>	<i>p</i>
TAO	32.70 (8.58)	43.20 (9.14)	36.954	.000
PRO	21.38 (4.53)	23.93 (4.36)	7.436	.007
PRN	34.68 (5.93)	30.40 (5.08)	20.370	.000
TAS	22.72 (5.14)	20.47 (4.61)	4.017	.047
REV	31.03 (6.24)	24.60 (5.99)	27.402	.000



PSICOLOGÍA POSITIVA Y CICLO VITAL

Following these results, we can state that the defensive profiles of infertile men and women waiting for their first consultation are different from those of fertile men and women. Differences point to a smaller use of mechanisms which enable the expression of aggressive impulses, together with an increased use of mechanisms which enable the rationalization and negation of intrapsychic conflict. These trends point to a peculiar psychological reality among couples trusting health professionals with their reproductive hopes. After all, this is about couples living together after some years of frustration related to one of the most important aspects of marital life. What awaits these couples, after a chapter of their life marked by psychological suffering at various levels, is a clinical process in which chances to carry a pregnancy to the end are not high. For that reason, psychopathological variables such as depression may develop, which will increase difficulties in coping with both infertility and medically assisted reproduction. Thus, the defensive profile presented by infertile couples at the beginning of medical treatment can be interpreted as a 'stand-by reaction', i.e., a momentary way to avoid contact with the most painful emotional situations linked to accepting and experiencing infertility, as well as to those associated with life changes caused by seemingly never ending diagnostic procedures and medical interventions performed with the purpose of increasing reproductive chances.

Probably, this 'stand-by reaction' is important for clinical psychologists to understand some peculiar aspects of infertile couples' life. One of these is the commonly found inhibition of emotional communication that can extend into sexual intimacy. The other one is the difficulty of psychological change when psychotherapy is offered to those couples. In recent years, this difficulty has been surpassed by group psychotherapy interventions (Domar, Clapp, Slawsby, Kessel, Orav & Freizinger, 2000). It should be noted that group psychotherapy seems to have a positive impact on pregnancy rates of infertile women (Domar, Clapp, Slawsby, Dusek, Kessel, & Freizinger, 2000). It also seems to influence the decrease of NK-cell activity (Hosaka, Matsubayashi, Sugiyama, Izumi & Makino, 2002) which probably is the bridge for the efficacy of psychotherapy on fertility rates.

Once we now know that the 'stand-by reaction' is present in both infertile women and men, it should be interesting to see if group interventions efficacy could be enhanced by the inclusion of infertile men in group sessions that, so far, seemed to be organized mainly for women. It also should be interesting to monitor if psychological changes observed along group sessions for infertile couples do give signals of change about the use of psychological mechanisms involved in this situation; namely, reducing couples proneness for rationalization and denial and increasing possibilities of emotional expression and working through.

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**DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES**

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PSICOLOGÍA POSITIVA Y CICLO VITAL

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DEFENCE MECHANISMS OF INFERTILE COUPLES VS. FERTILE COUPLES

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