

Psychological Evaluation Test for Infertile Couples

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Purpose: The infertility can lead to various emotional changes (anxiety, depression, somatization, aggressiveness, etc.). The objective of the present study was to develop a psychological evaluation test (PET) in an attempt to identify couples requiring psychological support when they face the problem of infertility.

Material and methods: A total of 251 infertile couples were submitted to the PET of the Center for Human Reproduction, "Sinhá Junqueira" Maternity Foundation. The causes of infertility were male-related in 45% of cases, female-related in 48%, and both male- and female-related in 7%. Infertility was primary in 74% of cases and secondary in 26%. The mean age of the women was 34 ± 4.2 years and the mean age of the men was 36.8 ± 6.5 years. The PET of the infertile couples was evaluated using a questionnaire with 15 questions selected in order to detect emotional reactions. The responses were assigned four grades with respect to frequency (1 = *never or rarely*; 2 = *sometimes*; 3 = *many times*, and 4 = *always*). The sum of the responses corresponded to a PET score ranging from 15 to 60 points. A PET score of >30 points was defined as cut-off point for necessity of specialized psychological evaluation. Data were analyzed statistically by the Student's *t* test and the Mann-Whitney and Fisher tests, with the level of significance set at 5%. The reliability of the questionnaires was determined on the basis of the alpha coefficient of Cronbach.

Results: The mean PET score for women (27 ± 8) was significantly higher ($p < 0.01$, Mann-Whitney test) than the PET score for men (22 ± 7). The alpha coefficient of Cronbach was 0.88, and was identical for the female and male questionnaires.

Conclusions: The data demonstrate that one of the characteristics of Brazilian infertile couples is that women are habitually more affected by the situation of infertility than men. The PET is a simple and efficient tool for the identification of women and/or men requiring psychological support due to infertility. The team of the Center for Human Reproduction (employees, biologists, nurses, doctors etc.) has started to use the information provided by the PET in the daily routine, and all patients are informed and counseled about the factors generating emotional changes in infertility. Advice is provided (practicing sports, traveling, activating personal projects etc.) in order to help combat distress. A specialized psychological evaluation was indicated in selected cases (PET score >30 points).

KEY WORDS: Infertility; psychological evaluation; test.

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INTRODUCTION

Reproduction is considered one of the main basic necessities of humans, and a psychological crisis may occur when something interferes with their ability to reproduce. A crisis of infertility is a difficult emotional

experience since it has an impact on various aspects of marital or individual life such as social relationships, life objectives, self-image, and sexual relations, among others.

Because of the emotional consequences of infertility, it is clear that patients require psychological support as part of the medical treatment process, and it is the responsibility of all members of the team of a human reproduction center to provide this support (1). Interactions with each member of the team, from the administrative clerk to the physician, influence the perception of the patient concerning the care provided, thus modifying her level of stress.

Sensitivity, patience, and human warmth create a supportive environment for the patients. In addition, although the primary goal of doctors, nurses, and embryologists is the diagnosis and treatment of infertility, they should also remember that they are treating a patient, not a disease. In fact, the real hallmark of success of a reproduction center is the ability of the team to help the patients feel that they and the team did the best, even when treatment failed (2).

Based on these considerations, the Center for Human Reproduction, "Sinhá Junqueira" Maternity Foundation, Ribeirão Preto, Brazil, has started a study aiming at the establishment of a psychological evaluation test (PET).

MATERIAL AND METHODS

A total of 251 infertile couples were submitted to PET of the Center for Human Reproduction, "Sinhá Junqueira" Maternity Foundation, with 18 men not responding to the questionnaire. The causes of infertility in this population were male-related in 45%, female-related in 48%, and both male- and female-related in 7%. Infertility was primary in 74% of cases and secondary in 26%. The mean age of the women was 34 ± 4.2 years and the mean age of the men was 36.8 ± 6.5 years.

The PET of the infertile couple was evaluated using a questionnaire with 15 questions selected to detect emotional reactions (see questions in Tables I and II). The responses were assigned four grades with respect to frequency (1 = *never or rarely*; 2 = *sometimes*; 3 = *many times*, and 4 = *always*). The sum of the responses corresponded to a PET ranging from 15 to 60 points.

Table I. Responses of Infertile Women to the PET Questions

	1	2	3	4
1. Are you irritated by the fact of not having children?	71	113	45	22
2. Relatives and friends usually ask about the fact that we don't have children and I don't feel well in this situation	36	124	48	43
3. I am upset when I am invited to a children's birthday party	172	39	22	18
4. I am annoyed when a friend or relative becomes pregnant	122	87	23	19
5. Are you depressed every time you menstruate?	66	85	45	55
6. Is your sexual relationship being impaired by the fact that you have not become pregnant up to now?	169	57	21	4
7. Is your professional activity being impaired due to the lack of children?	199	34	11	7
8. Do you feel inferior to other women due to the fact of not having children?	107	95	28	21
9. Are you a person who is always suspicious or afraid of treatments?	145	80	22	4
10. Do you think you might go crazy if you don't have children?	203	29	12	7
11. Do you feel tachycardia, shortness of breath, pressure in the chest, tremors, and hand sweating when thinking about the fact of not having children?	173	53	16	9
12. Do you feel a sensation of emptiness due to the fact of not having children?	49	109	50	43
13. Is your daily relationship with your husband impaired by the fact of not having children?	168	58	21	4
14. Does the difficulty in having children make you want not to leave home as you used to do and to think that it is better to be isolated from others?	192	44	13	2
15. Do you think about your difficulty in having children during daily life?	45	94	68	44

Note. 1: *never or rarely*; 2: *sometimes*; 3: *often*; 4: *always*.

The questionnaires were routinely answered separately by women and men after ovarian stimulation and before the application of assisted reproduction techniques. A PET score >30 points was defined as cut-off point for necessity of more specific psychological advices.

Data were analyzed statistically by the Student's *t* test and the Mann-Whitney and Fisher tests, with the level of significance set at 5%. The reliability of the questionnaire was determined using Cronbach's alpha coefficient.

RESULTS

The mean PET score for women (27 ± 8) was significantly higher ($p < 0.01$, Mann-Whitney test)

Table II. Response of Infertile Men to the PET Questions

	1	2	3	4
1. Are you irritated by the fact of not having children?	114	96	13	10
2. Relatives and friends usually ask about the fact that we don't have children and I don't feel well in this situation	75	104	31	23
3. I am upset when I am invited to a children's birthday party	176	35	11	11
4. I am annoyed when a friend or relative becomes pregnant	186	32	11	4
5. Are you depressed every time your wife menstruates?	122	73	19	19
6. Is your sexual relationship being impaired by the fact that your wife has not become pregnant up to now?	180	39	10	4
7. Is your professional activity being impaired due to the lack of children?	201	26	4	2
8. Do you feel inferior to other men due to the fact of not having children?	178	40	9	6
9. Are you a person who is always suspicious or afraid of treatments?	126	78	19	10
10. Do you think you might go crazy if you don't have children?	215	12	5	1
11. Do you feel tachycardia, shortness of breath, pressure in the chest, tremors, and hand sweating when thinking about the fact of not having children?	203	26	3	1
12. Do you feel a sensation of emptiness due to the fact of not having children?	81	101	28	23
13. Is your daily relationship with your wife impaired by the fact of not having children?	158	56	18	1
14. Does the difficulty in having children make you want not to leave home as you used to do and to think that it is better to be isolated from others?	207	19	5	2
15. Do you think about your difficulty in having children during daily life?	72	111	36	14

Note. 1: never or rarely; 2: sometimes; 3: often; 4: always.

than the PET score for men (22 ± 7). Tables I and II show the responses (Grades 1–4) to each of the formulated questions for the female and male population.

We then compared women and men with respect to two types of questions: low frequency responses (the sum of responses with a score of 1 and 2) and high frequency responses (the sum of responses with a score of 3 and 4). Statistical analysis of these data using the Fisher test revealed that women showed a significantly higher level of responses of the high frequency type ($p < 0.0001$) than men, i.e., Brazilian women are more affected by the fact of not having children than Brazilian men (Question 1). Women gave significantly more responses of the high frequency type than men when questioned about the lack of children by relatives and friends (Question 2;

$p = 0.0016$), regarding the aspect of being upset when invited to a child's birthday party (Question 3; $p = 0.04$), when learning about the pregnancy of a friend or relative (Question 4; $p = 0.006$), and when learning about the fact that they menstruated during the treatment cycle (Question 5; $p < 0.001$). With respect to the aspect of alterations in their sexual relationship due to the lack of children, women, and men showed a similar behavior (Question 6; $p = 0.13$).

Women showed a significantly higher level of high frequency responses than men regarding the question whether the lack of children was impairing professional activity (Question 7; $p = 0.02$) and regarding the feeling of inferiority in relation to another person of the same sex who already had children (Question 8; $p < 0.0001$). Women and men showed an identical behavior ($p = 0.56$) when asked about fear of treatment (Question 9). Women had significantly higher levels of responses of the high frequency type than men regarding the possibility of becoming "crazy" due to the lack of children (Question 10; $p = 0.01$). Women gave significantly ($p = 0.0001$) more responses of the high frequency type regarding the fact of presenting psychosomatic symptoms caused by infertility, while Brazilian men was less sensitive and usually did not show these symptoms (Question 11). The question regarding a sensation of emptiness due to the fact of not having children (Question 12) received significantly ($p = 0.0003$) more responses of the high frequency type from women than men. With respect to the question whether daily relationships were impaired by the lack of children (Question 13) and to the depressive aspect of isolation due to the lack of children (Question 14), women and men showed similar levels of high frequency responses ($p = 0.56$ and $p = 0.13$, respectively). Women gave significantly ($p < 0.0001$) more high frequency responses to the question whether they thought daily about their difficulty in having children than men (Question 15).

In addition, the questions that most frequently resulted in responses of the high frequency type in both women and men were the following: I—Do you think about your difficulty in having children during daily life? (women: 44.6%; men: 21.6%); II—Are you depressed every time you menstruate? (women: 39.8%; men: 16.3% share this depression); III—Do you feel a sensation of emptiness due to the fact of not having children? (women: 37%; men: 21.9%); IV—Do relatives and friends usually ask

Table III. Variations in Cronbach's Alpha Coefficient After Removal of One of the Questions

Question removed	PET (Cronbach's alpha coefficient)	
	Women	Men
1	0.872	0.871
2	0.881	0.875
3	0.882	0.875
4	0.880	0.876
5	0.884	0.878
6	0.881	0.886
7	0.880	0.883
8	0.882	0.881
9	0.889	0.892
10	0.879	0.884
11	0.878	0.882
12	0.873	0.870
13	0.883	0.883
14	0.878	0.879
15	0.876	0.875

about the fact that you cannot have children and does this make you feel bad? (women: 36.2%; men: 23.2%).

Cronbach's alpha coefficient was 0.88 and was identical for the female and male questionnaires. The questionnaires were homogenous since exclusion of any question did not lead to drastic alterations in the alpha value (Table III).

DISCUSSION

The mean PET score was significantly higher for women than for men. These data demonstrate that one of the characteristics of Brazilian infertile couples is that women are habitually more affected by the situation of infertility than men. In addition, some questions of the PET questionnaire identified a significantly higher proportion of high frequency responses in women than in men. The fact of not having children disturbs the Brazilian women to a greater extent than the Brazilian man, but it should be kept in mind that 9.9% of the men were annoyed by the situation of infertility.

Insistence by relatives and friends provoked high frequency responses in both women (36.2%) and men (23.2%). The identification of this fact facilitates the discussion between the team and the infertile couple in order to find a comfortable way of dealing with this situation. In addition, stimuli provoked by social stress (birthday parties, learning about the recent pregnant relatives or friends) also identified an

important percentage of responses of the high frequency type among the infertile population, with women again being more sensitive than men.

Menstruation was a significant factor of depression in women (39.8%), although approximately 16.3% of the men showed their solidarity on this occasion. Oddens *et al.* (3) reported that one of four (24.9%) patients presents scores indicative of depressive problems.

With respect to sexual relationships, the literature persistently describes that this factor is worsened by the situation of infertility (4), while in the present study only 9.9% of the women and 6% of the men reported to be sexually impaired by infertility.

The contribution of women to the family income has been increasing in Brazil. The present data showed no significant impairment in professional activity in Brazilian women or men due to the problem of infertility. Probably, for many couples professional activity is a form of alleviating the stress provoked by the difficulty in having children.

The feeling of inferiority in relation to a person of the same sex who has children was significantly more distinct among the infertile female population than among the male population, with only 6.5% of men being affected.

The aggravation of anxiety of the fertile couple due to the lack of children may, on some occasions, produce somatic reactions. Women showed a significantly higher rate of somatization than men. This fact confirms the tendency of Brazilian women to be more susceptible to confronting the spectre of infertility than Brazilian men.

The sensation of emptiness due to the fact of not having children and the daily thinking about the difficulty in having children was significantly higher in infertile women than in infertile men, again indicating the susceptibility of women to the emotional problems of infertility.

Finally, the PET is a simple and efficient tool for the identification of women and/or men with psychological problems caused by infertility. The team of the Center for Human Reproduction (employees, biologists, nurses, doctors, etc.) has started to use the information provided by the PET in the daily routine, and patients with an PET score >30 are informed and counseled about the factors generating psychological problems due to infertility. Advice is provided (practicing sports, traveling, activating personal projects, etc.) in order to combat the emotional changes.

However, although the PET provides important information for the team to individualize a strategy for the treatment of the psychological problems provoked by the situation of infertility, specialized psychological evaluation is always welcome in selected cases.

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