

The development of the Psychological Inflexibility Scale – Infertility and study of its psychometric properties

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INTRODUCTION

Infertility is described as an emotionally challenging condition and the identification of emotion regulation processes such as the ones involved in psychological inflexibility may be relevant for psychological intervention programs targeting people with fertility issues and for research purposes in this particular population. Considering that general measures may not capture specificities of the infertility context, the current study aimed to develop a new self-report instrument, the Psychological Inflexibility Scale – Infertility (PIS-I), and explore its factor structure and psychometric properties.

METHOD

Participants: 313 subjects presenting an infertility diagnosis (287 women and 26 men) for 5.01 years ($SD = 4.32$). Participants' age ranged from 25 to 50 years old with a mean age of 35.78 ($SD = 4.60$) years. The majority of participants were married ($n = 254$; 81.2 %) or living with a partner ($n = 59$; 18.8 %). Concerning years of education, participants presented a mean of 15.00 years ($SD = 3.13$).

Instruments: Sociodemographic and clinical questionnaire; The Psychological Inflexibility Scale – Infertility (PIS-I; Galhardo, Cunha, Monteiro & Pinto-Gouveia, 2018) is a 14-item self-report instrument aimed to assess psychological inflexibility in people facing infertility. Depression Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995; Pais-Ribeiro, Honrado & Leal, 2004), assessing depression, anxiety and stress symptoms. Acceptance and Action Questionnaire - II (AAQ-II; Bond et al., 2011; Pinto-Gouveia, Gregório, Dinis, & Xavier, 2012), measuring psychological inflexibility. Fertility Problem Inventory (FPI; Newton et al., 1999; Moura-Ramos et al., 2012), addressing infertility-related stress. Infertility Self-Efficacy Scale (ISE; Cousineau et al., 2006; Galhardo, Cunha & Pinto-Gouveia, 2013), measuring the perception of self-efficacy to deal with infertility.

Procedures: Participants were recruited through the Associação Portuguesa de Fertilidade (infertility patients' associations) website. Women gave their written informed consent and completed online the set of self-report instruments.

An initial pool of 14 items was developed based on literature review and clinical expertise, both in infertility and Acceptance and Commitment Therapy (ACT). The items were answered in a response rate similar to ones of other psychological inflexibility measures.

RESULTS

Principal Component Analysis revealed a single-component accounting for 63% of variance. Factor loadings ranged from .69 to .87. Cronbach alpha was .95, and the elimination of any item would not increase the scale reliability. Item-total correlations were all high, ranging from .65 to .84 (Table 1). Criterion validity was assessed by calculating correlation coefficients between the PIS-I and AAQ-II. The PIS-I showed a significant positive association with AAQ ($r = .68$; $p < .001$). Concurrent validity was assessed by testing the associations between the PIS-I and Depressive symptoms ($r = .64$; $p < .001$), Anxiety symptoms ($r = .44$; $p < .001$), Stress symptoms ($r = .52$; $p < .001$), FPI ($r = .68$; $p < .001$) and ISE ($r = -.46$; $p < .001$). Significant gender differences were found ($t = -2.35$; $p = .019$) with women showing a higher score ($M = 54.79$; $SD = 22.17$) when compared to men ($M = 43.92$; $SD = 26.55$).

DISCUSSION

To our knowledge this is the first self-report measure aiming to assess psychological inflexibility within the specific context of infertility. The PIS-I showed to be a reliable and valid measure of psychological inflexibility targeting people who are dealing with an infertility diagnosis. The PIS-I items refocus the general AAQ-II items, as well as items similar to the ones of other disease-specific psychological inflexibility measures, to infertility. This may be beneficial given that content-specific measures of psychological inflexibility seem to more precisely predict changes in specific behaviors (Blackledge & Hayes, 2006).

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Table 1

Means, standard deviations, factor loadings and item-total correlations of the PIS-I

Items	M	SD	Factor loadings	r (item-total)
1. I feel that I am not the person I would like to be due to my fertility problem.	4.31	1.97	.79	.76
2. Not being able to have children defines me as person	3.13	2.04	.73	.69
3. I spend a lot of time thinking/analysing the reasons and consequences of my infertility	4.11	1.97	.78	.74
4. I need to control my negative thoughts and feelings about infertility.	4.44	1.91	.77	.73
5. I am invaded by thoughts and fantasies about the future (e.g., results of medical tests and treatments, whether or not I will be able to become a parent).	4.69	1.86	.69	.65
6. I often do not persist in doing things that could be important (e.g., being with friends, invest in the relationship with my partner).	3.43	1.91	.77	.73
7. I avoid situations that remind me of my infertility condition (e.g., family meetings, visiting friends with young children, etc.).	3.50	2.19	.73	.68
8. I see myself as different/inferior because I cannot have children.	3.53	2.20	.84	.80
9. Infertility has made me move away or deviate from things that are important in my life.	3.46	2.06	.86	.83
10. I get caught up in my thoughts and feelings about the infertility experience and this is very painful.	4.06	2.09	.87	.84
11. When I start thinking about my infertility it is difficult to do anything else	3.63	2.03	.87	.84
12. I find myself thinking about things from my past that may have influenced this situation of infertility.	3.70	2.28	.71	.66
13. The infertility experience prevents me from getting involved with other important things in my life.	3.42	2.11	.82	.79
14. I feel that I am an incomplete person due to this fertility problem	4.48	2.18	.82	.78