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Psychological Distress among Women Suffering from Infertility in South Indian Population

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ABSTRACT

The objective of the study is to assess psychological distress quantitatively among women suffering from infertility and compare with normal pregnant women. A prospective study was conducted in 100 women. Stress level was assessed by using Depression anxiety stress scale (DASS) questionnaire. DASS, a standardized instrument for the measurement of depression, anxiety and stress, was administered to 50 women presenting to the infertility clinic of outpatient department of Sri Ramachandra Hospital. The control group comprised 50 normal pregnant women presenting to the antenatal outpatient department of Sri Ramachandra Hospital. Women suffering from involuntary childlessness scored significantly higher on all subscales of DASS questionnaire, when compared to controls. Involuntary childlessness is associated with high levels of psychological distress. This result is in keeping with other qualitative studies from India which describe infertility as an overwhelmingly negative and distressing experience. Cognizance needs to be taken of these experiences and effective interventions require medical, psychological and socio-cultural strategies. Pharmacists play a key role in counseling the patients to get rid of their distress.

Keywords: Infertility, psychological distress, DASS questionnaire, pregnant

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INTRODUCTION

Infertility is defined as one year of unprotected intercourse without pregnancy and is classified as primary in which no previous pregnancy has occurred and secondary in which prior pregnancy has occurred irrespective of its outcome [1]. The inability to conceive children is experienced as a stressful situation by individuals and couples all around the world [2]. Infertility signifies the most severe emotional crisis [3]. Infertility, besides being a medical condition, is a social situation. Infertility is a low-control, chronic stressor with severe long-lasting negative social and psychological consequences [4]. Although men are not immune to the suffering associated with infertility [5], women appear to carry the main burden as they are often blamed for non-conception and are more vulnerable to the negative social and economical consequences. The incidence of depression in infertile couples presenting for infertility treatment is significantly higher than in fertile controls, with prevalence estimates of major depression in the range of 15–54% [6]. Anxiety has also been shown to be significantly higher in infertile couples when compared to the general population, with 8-28% of infertile couples reporting clinically significant anxiety [7]. As we were not aware of any previous quantitative study assessing psycho-social distress among infertile women in India, this study was carried out to explore whether the distress described in the qualitative studies was measurable in quantitative terms.

The aim of this study was to assess whether women from South Indian population who were suffering from infertility had higher levels of distress when compared to non-infertile controls.

MATERIALS AND METHODS

A prospective study was conducted in one hundred women. 50 women presenting to the infertility clinic of outpatient department of Sri Ramachandra Hospital constitute the study population and 50 normal pregnant women presenting to the antenatal outpatient department of Sri Ramachandra Hospital were taken as controls. Those having male factor of infertility or an associated condition which can alter the level of stress viz., hypertension, diabetes mellitus, heart disease, malignancy and antioxidant therapy were excluded from the study. Each subject and control was subjected to detailed clinical history and physical examination. The infertile group had undergone baseline investigations of infertility. DASS questionnaire (Appendix 1) was administered to 100 women. In addition, socio-demographic information and all other data pertaining to the study was captured through a structured questionnaire designed for the purpose of this study.

DASS, a 21-item questionnaire, is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three DASS scales contains 7 items. Although the test is intended as a self-report measure, it was administered to



all participants in order to facilitate better understanding. The questions were translated in vernacular language also (Appendix 2). Each item is rated on a four-point scale of severity.

Appendix 1

DASS (DEPRESSION, ANXIETY, STRESS SCALE) QUESTIONNAIRE

DASS21	Name: Age:	Date:
Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you <i>over the past week</i> . There are no right or wrong answers. Do not spend too much time on any statement.		
<i>The rating scale is as follows:</i>		
0 Did not apply to me at all		
1 Applied to me to some degree, or some of the time		
2 Applied to me to a considerable degree, or a good part of time		
3 Applied to me very much, or most of the time		
1	I found it hard to wind down (I found it hard to return back to normal)	0 1 2 3
2	I was aware of dryness of my mouth	0 1 2 3
3	I couldn't seem to experience any positive feeling at all	0 1 2 3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0 1 2 3
5	I found it difficult to work up the initiative to do things (I found it difficult to initiate things)	0 1 2 3
6	I tended to over-react to situations	0 1 2 3
7	I experienced trembling (eg, in the hands) (I experienced shivering)	0 1 2 3
8	I felt that I was using a lot of nervous energy (I felt that I was getting very nervous)	0 1 2 3
9	I was worried about situations in which I might panic and make a fool of myself (I was worried about situations in which I might be embarrassed)	0 1 2 3
10	I felt that I had nothing to look forward to	0 1 2 3
11	I found myself getting agitated	0 1 2 3
12	I found it difficult to relax	0 1 2 3
13	I felt down-hearted and blue (I felt depressed and sad)	0 1 2 3
14	I was intolerant of anything that kept me from getting on with what I was doing (I was intolerant of anything that was a hurdle in my work)	0 1 2 3
15	I felt I was close to panic (I felt I was scared)	0 1 2 3
16	I was unable to become enthusiastic about anything	0 1 2 3
17	I felt I wasn't worth much as a person	0 1 2 3
18	I felt that I was rather touchy (I felt that I was emotionally sensitive)	0 1 2 3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0 1 2 3
20	I felt scared without any good reason	0 1 2 3
21	I felt that life was meaningless	0 1 2 3



Appendix 2

பெயர்:	வயது :	தேதி:
<p>ஒவ்வொரு வாக்கியத்தையும் படித்து அது சென்ற வாரத்தைப் பொறுத்தவரை உங்களுக்கு எந்த அளவுக்கு பொருந்துகிறது என்பதை 0, 1, 2 (அ) 3 வட்டமிட்டு குறிக்கவும். எந்த வாக்கியத்துக்கும் அதிக நேரம் செலவிடாதீர்கள். இதில் சரியான பதில் தவறான பதில் என்று எதுவும் கிடையாது.</p> <p>0 உங்களுக்கு சுத்தமாக பொருந்தவில்லை</p> <p>1 சில சமயங்களில் அல்லது குறைவாக பொருந்துகிறது</p> <p>2 ஓரளவிற்கு நன்றாக பொருந்துகிறது</p> <p>3 எப்பொழுதும் அல்லது நிரம்ப பொருந்துகிறது</p>		
1	நான் மீண்டு வருவதில் கடினத்தைக் கண்டேன்	0 1 2 3
2	என் வாய் உலர்வாக இருப்பதை அறிந்துள்ளேன்	0 1 2 3
3	என்னால் எந்த நேர்மறையான உணர்ச்சிகளையும் அனுபவிக்க முடிந்ததில்லை	0 1 2 3
4	நான் மூச்சு விடுவதில் சிரமத்தை அனுபவித்தேன்	0 1 2 3
5	நான் எந்த செயலையும் செய்வதற்கு பற்றுதல் இல்லாமல் இருந்தேன்	0 1 2 3
6	நான் சூழ்நிலைகளுக்கு அதிகமாக செயல்பட்டேன்	0 1 2 3
7	நான் கைகளில் நடுக்கத்தை அனுபவித்தேன்	0 1 2 3
8	நான் என் நரம்பியல் சக்தியை பெருமளவு உபயோகிப்பதாக உணர்ந்தேன்	0 1 2 3
9	நான் பெரும்பீதிக்குள்ளாகும் மற்றும் என்னை முட்டாளாக்கும் சூழ்நிலைகளை எண்ணி கவலைப்பட்டேன்	0 1 2 3
10	நான் எதிர்பார்ப்பதற்கு எதுவுமில்லை என்று உணர்ந்தேன்	0 1 2 3
11	நான் நிம்மதியற்ற நிலையை அடைவதைக் கண்டேன்	0 1 2 3
12	நான் அமைதியாக இருப்பதில் கடினத்தைக் கண்டேன்	0 1 2 3
13	நான் மனச்சோர்வாகவும் வருத்தமாகவும் உணர்ந்தேன்	0 1 2 3
14	நான் செய்யும் வேலைகளை தொடரவிடாமல் செய்யும் எதையும் என்னால் பொறுத்துக்கொள்ள முடிவதில்லை	0 1 2 3
15	நான் பெரும்பீதிக்கு அருகில் இருப்பதாக உணர்ந்தேன்	0 1 2 3
16	என்னால் எதிலும் பேரார்வம் காட்ட முடிவதில்லை	0 1 2 3
17	நான் ஒரு மனிதனாக தகுதி இல்லாதது போல் உணர்ந்தேன்	0 1 2 3
18	நான் எளிதில் உணர்ச்சிவசப்படுவதாக உணர்ந்தேன்	0 1 2 3
19	நான் உடல் சிரமப்படாத நேரத்திலும் இதயத்தின் செயல்களை தெரிந்துள்ளேன்	0 1 2 3
20	நான் எந்தவொரு நல்ல காரணமும் இல்லாமல் பயப்படுவதாக உணர்ந்தேன்	0 1 2 3
21	நான் வாழ்க்கையே அர்த்தமற்றதாக உணர்ந்தேன்	0 1 2 3

The purpose of the study was explained to all potential participants and written informed consent was obtained. The study was approved by the Ethics Committee of Sri Ramachandra University, Chennai.

Results were expressed in Mean \pm S.D.

RESULTS

Table 1: Number of women showing scores of various subscales

Subscales		Infertile women N=50				Pregnant women N=50	
		Primary N=35	Secondary N=15	Total N=50	%	N	%
Depression (n=50)	Mild (10 -12)	0	0	0	0	34	68
	Moderate (13 -19)	8	11	19	38	16	32
	Severe (20 – 26)	21	3	24	48	0	0
	Extreme (27+)	6	1	7	14	0	0
Anxiety (n=50)	Mild (7 - 9)	0	0	0	0	29	58
	Moderate (10 -14)	10	6	16	32	21	42
	Severe (15 – 19)	20	7	27	54	0	0
	Extreme (20+)	5	2	7	14	0	0
Stress (n=50)	Mild (15 -17)	0	0	0	0	20	40
	Moderate (18 -25)	6	9	15	30	30	60
	Severe (26 – 33)	25	5	30	60	0	0
	Extreme (34+)	4	1	5	10	0	0

Table 2: Comparison of DASS scores of infertile and pregnant women

Scores	Infertile Mean \pm S.D	Pregnant Mean \pm S.D	P value
Depression	22 \pm 7	12 \pm 4.3	*0.006
Anxiety	17 \pm 5	7 \pm 3.5	*0.006
Stress	30 \pm 8	18 \pm 5.5	*0.005

*P < 0.05 is statistically significant

Among the study population, 35 women were with primary infertility and 15 with secondary infertility. The mean age of women in the study population and control group were 29.3 and 28.2 respectively with the range of 22 – 40 and 19 – 35 respectively. Number of women showing mild, moderate, severe and extreme scores of depression, anxiety and stress are shown in Table 1. The subscales like depression, anxiety and stress were assessed for each woman and the scores from infertile women were significantly greater than those of pregnant women using paired student's t-test (Table 2).



Women with infertility exhibited moderate, severe and extreme depression, anxiety and stress scores compared to pregnant women who exhibited mild and moderate scores only. Among the infertile women, women with primary infertility showed higher depression, anxiety and stress compared to women with secondary infertility.

DISCUSSION

The negative impact of infertility on the reproductive health of women in India is gradually being recognized. This study contributes to the previous qualitative literature by adding a quantitative measure of the distress experienced by infertile women. This result demonstrates that women suffering from infertility in South India had significantly higher levels of distress when compared to normal pregnant women. Since anxiety, depression and stress are the psychological problems which have been most commonly investigated, many studies showed that anxiety, depression and stress were frequently observed in infertile women compared to controls [8]. Our results are consistent with this previous study in the western world, and we speculate that infertile women with anxiety, depression and stress may induce interpersonal sensitivity and may reduce vigor [9].

CONCLUSION

This study favors the significance of stress in infertility. Further research is needed to understand the association between distress and fertility outcome, as well as effective psychosocial interventions.

Infertile women in this study experienced higher levels of distress when compared to women not currently infertile. Cognizance needs to be taken of this finding and interventions have to be formulated. Infertility is not only a physiological or patho-physiological condition in need of bio-medical intervention but also an emotional, social, cultural, religious and economic reality [10, 11, 12]. Effective interventions require an understanding of these realities [12, 13, 14]. This study contributes to this understanding where it is currently most lacking, namely in communities from developing countries. Although bio-medical interventions focusing both on preventative measures as well as effective treatment options aimed at restoring fertility clearly have to form part of the strategy, they have to be underpinned by psychological, social and cultural strategies. Experience from the industrialized world has demonstrated the benefits of 'patient-centered care'. This term refers to psycho-social care provided as part of routine clinical practice by all health-care professionals involved in the management of the patient [15]. Furthermore some couples will benefit from counseling offered by professionals trained in mental health care.

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