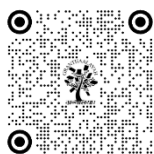# INFERTILITY DETERMINANTS AMONG MARRIED COUPLES IN COIMBATORE DISTRICT

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ABSTRACT

The study was aimed at determining the factors associated with infertility among married couples in Coimbatore district. The relationship between infertility and psychological stress is complex. On the one hand, infertile couples are subject to greater stress and have a greater risk of developing psychological disorders compared with normal, healthy couples. On the other hand, high levels of psychological distress have been indicated to increase infertility. The study has given four factors namely, Lifestyle, Physiological, Health Risk Factors in Men and Health Risk Factors in Women using Factor Analysis. Therefore, the research team suggests a couple turn to the assessment and treatment of marital dissatisfaction in Infertile Couple. Sexuality is paradoxical-sexual dysfunction, especially lowered desire, and it increases as infertility problems continue. In addition, males feel more shameful, but deny their infertility and do not seek psychological support. Thus, comprehensive psycho-bio-social approach in couple therapy and counselling can improve sexual, marital satisfaction and quality of life in infertile couple.

Keywords: Infertility, Marital, Couples, Coimbatore, Factors

1. INTRODUCTION

Infertility is defined as failure to conceive after one year of regular unprotected sexual relationship. Infertility classified as primary, when there is no history of pregnancy having occurred, or secondary, when inability to conceive occurs after one or more successful pregnancies. Infertility in a couple can be due to problems in either women or men, not necessarily both. roughly it is estimated that 1/3rd of the time fertility problems lie with the man,1/3rd of the time with women and 1/3rd of the time with both men and women. Infertility is termed primary if conception has never occurred; secondary infertility means the patient fails to conceive after having achieved a previous conception. Optimal age for conception is 20-35 years in women. Over the age of 40 years reduces the fertility rate as well as increases the risk of chromosomally and other malformed fetus. Both partners contribute varyingly to the occurrence of the infertile state. Hence the couple should be counselled individually and then together.

2. STATEMENT OF THE PROBLEM

Infertility is growing at an alarming pace, especially in the cities according to a survey conducted by an International Institute of Population Sciences. Out of 250 million individuals estimated to be attempting parenthood at any given time, 13 to 19 million couples are likely to be infertile. Nearly 30 million couples in the country suffer from infertility, making

the incidence rate 10%. Infertility is a worldwide health problem with one in six couples suffering from this condition and with a major economic burden on the global healthcare industry. Today, infertility is no longer recognized as only a female problem. In fact, the term infertility is a broad term, often loosely used. It actually refers to a range of disorders some of which affect the male, and some the female, and contribute to childlessness in a couple. Although infertility is not a life-threatening issue, it is still considered a stressful life experience for couples. The high stress of infertility might be attributed to the fact having a child is considered to be important in general society. Furthermore, infertile couples often conceal their emotions, ideas and beliefs because infertility is still considered to be a private subject. Therefore, infertile couples may be exposed to social pressure. In addition, an individual relationship with their partner as well as that with friends and family members may suffer. These family members or friends may provide meaningful views and suggestions that may cause further distress. Therefore, couples with infertility problems may reduce social interaction, especially with pregnant women and friends who have children. The impact of infertility generates individual or marital problems and emotions and can also contribute to instigating and/or worsening marital problems. Sex can become a duty dissociated from pleasure; furthermore, sexual frequency may be reduced. All of these factors contribute directly or indirectly to increasing gestational failure. Thus, multidisciplinary teams that counsel and care for infertile couples must have broad knowledge regarding the main alterations that can occur in the couple's emotional, sexual and marital relationships, thus allowing the team to provide quality care and achieve better outcomes.

2.1. OBJECTIVES OF THE STUDY

- To study the factors affecting infertility among married couples in Coimbatore District.

3. RESEARCH METHODOLOGY

The study was conducted in various fertility centres and hospital in and around Coimbatore, and researcher managed to collect 75 samples of married couples who visited the hospital for a period of three months from November 2020 to January 2021. Purposive sampling technique has been used. The study samples were married couples in selected infertility clinic in Coimbatore District. The study has applied Factor Analysis.

4. RESULTS AND DISCUSSION

The present study was done to study the factors affecting infertility among married couples.

Table 1

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity Approx. Chi-Square		1471.055
		369
	Degrees of freedom	.002
	Significant	

Source Calculated and compiled from primary data.

Bartlett's test of sphericity has been applied to test whether the correlation matrix is having identity matrix. The test value (1471.055) and the significant level (P<.002), with the value of test statistics and as the associated level of significance is less than 0.05, it shows that the correlation matrix is not an identity matrix i.e, there is a correlation between the variables.

Communalities

Communalities of all variables are extracted by following the method of principal Component Analysis. The Communalities of all variables are presented in Table 2

Table 2

Factors	Initial	Extraction

Smoking	1.000	.670
Alcohol Consumption	1.000	.609
Tobacco Usage	1.000	.496
Emotional Instability during Sexual intercourse	1.000	.531
Some medical diseases (eg. Diabetes mellitus)	1.000	.570
Kind of occupation	1.000	.554
Ovarian Failure	1.000	.525
Ignorance of Fertile Periods	1.000	.553
Fallopian tube dysfunction	1.000	.663
Improper/ Poor Sexual Practices	1.000	.439
Age	1.000	.568
Previous reproductive tract infection/STI	1.000	.420
Menstrual disorders	1.000	.505
Erectile dysfunction	1.000	.437
Undescended testicles	1.000	.559
Semen abnormalities	1.000	.505
Use of Contraceptives	1.000	.528
Abnormal Weight	1.000	.599
Multiple miscarriages	1.000	.643
Fibroids	1.000	.588
Pelvic surgery	1.000	.620
Abnormalities of the uterus	1.000	.467
Exposure of the genitals to high temperatures	1.000	.556
Regular contact with radiation, radioactivity, or welding	1.000	.597
Regular contact with toxins such as lead	1.000	.623
Regular contact with ethylene dibromide or vinyl chloride	1.000	.543
Hernia repair	1.000	.482
Thyroid disorders	1.000	.491
Marijuana Consumption	1.000	.506
A problem that was present at birth (congenital)	1.000	.599

Source Calculated and compiled from primary data.

Extraction Method: Principal Component Analysis.

Communalities and KMO measure of sampling adequacy has been used to test the suitability of the factor model. Bartlett's test was used to test the null hypothesis is not correlated between the variables. The Chi-square value is 1471.055 as it is significant at 5% level, hence the test rejects the null hypothesis. The value of KMO statistics is 0.753 and the factor analysis is considered as the appropriate technique for analyzing the correlation matrix. The communalities table explains the initial and extraction values. The next step is to determine the method of factor extraction using Principal Component Analysis (PCA). This is used to transform a set of correlated variables into set of uncorrelated factors so that the factors are unrelated and the variables selected for each factor are related.

Table 3

Total Variance Explained

Components	Initial Eigen Values	Column1	Column2	Extraction of Sum of Squares Loading	Column3	Column4	Rotation of Sum of Squares Loadings	Column5	Column6
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	27.559	26.779	26.779	27.559	26.779	26.779	22.341	26.153	26.153
2	19.451	6.308	33.088	19.451	6.308	33.088	17.245	10.788	10.24
3	19.344	5.845	38.933	19.344	5.845	38.933	15.475	9.555	9.275
4	18.437	5.154	44.139	18.437	5.154	44.139	12.712	5.567	5.607
5	15.109	6.189	45.939						
6	14.257	6.356	51.308						
7	11.546	5.487	55.298						
8	10.955	4.563	57.809						
9	8.476	4.325	62.615						
10	5.487	4.119	66.858						
11	3.156	4.031	70.48						
12	2.117	4.007	72.898						
13	1.974	3.685	73.961						
14	1.874	3.414	75.147						
15	1.547	3.117	76.854						
16	1.354	2.894	79.445						
17	1.189	2.561	81.943						
18	1.057	2.247	84.374						
19	1.006	2.174	86.621						
20	0.874	2.072	88.731						
21	0.785	1.894	90.776						
22	0.458	1.756	92.592						
23	0.356	1.547	94.135						
24	0.201	0.997	95.619						
25	0.111	0.713	96.922						
26	0.105	0.326	98.126						
27	0.057	0.067	99.265						
28	0.035	0.026	99.974						
29	0.002	0.003	99.997						
30	0.001	0.001	100						

Source Calculated and compiled from primary data.

From table 3, Initial Eigen Values, the variance column shows the new factors that were exclusively extracted. In the second column, the values are expressed in per cent of the total variance. Factor 1 accounts for about 26 per cent of the total variance, factor 2 about 6 per cent, factor 3 about 5 per cent and so on. As expected, the sum of the eigen values is equal to the number of variables. The third column contains the cumulative variance. The variances extracted by the factors are called the Eigen values. The factors with eigen value more than 1 can be considered. Based on this criterion (Principal Component) 6 factors have been retained. The total variance is explained by the six factors model in the original set of variables in the last column (52.406).

5. ROTATED COMPONENT MATRIX

Table 4

	Component			
	1	**2**	**3**	**4**
Smoking	0.856			
Alcohol Consumption	0.847			
Tobacco Usage	0.715			
Kind of Occupation	0.568			
Use of Contraceptives	0.548			
Marijuana Consumption	0.524			
Emotional Instability during Sexual intercourse		0.794		
Some Medical Diseases (eg. Diabetes mellitus)		0.745		
Ignorance of Fertile Periods		0.768		
Improper/ Poor Sexual Activities		0.657		
Age		0.687		
Previous reproductive tract infection/STI		0.545		
Abnormal Weight		0.647		
Erectile Dysfunction			0.623	
Undescended Testicles			0.617	
Semen Abnormalities			0.639	
Exposure of the genitals to high temperatures			0.546	
Regular contact with radiation, radioactivity, or welding			0.747	
Regular contact with toxins such as lead			0.856	
Regular contact with ethylene dibromide or vinyl chloride			0.475	
Hernia repair			0.546	
A problem that was present at birth (congenital)			0.589	
Ovarian Failure				0.814
Fallopian Tube Dysfunction				0.803
Menstrual Disorders				0.751
Multiple Miscarriages				0.729
Fibroids				0.71
Pelvic Surgery				0.625
Abnormalities of the Uterus				0.617
Thyroid Disorder				0.568

Source Calculated and compiled from primary data.

Extraction Method Principal Component Analysis.

Rotation Method Varimax with Kaiser Normalization.

The Rotated Component Matrix using Varimax Rotation has been shown in Table 4. In this table it is clear that each factor identifies itself with a few set of variables. Factor score coefficients are calculated for all variables which are used to calculate the factor scores for each individual. Since PCA was used in extraction of initial factors, all methods result in estimating same factor score coefficients.

Table 5

Factors Loaded

Factors	Statements	Factor Loading
I	Smoking	0.856
Lifestyle Factors	Alcohol Consumption	0.847
	Tobacco Usage	0.715
	Kind of Occupation	0.568
	Use of Contraceptives	0.548
	Marijuana Consumption	0.524
II	Emotional Instability during Sexual intercourse	0.794
Physiological Factors	Some Medical Diseases (eg. Diabetes mellitus)	0.745

	Ignorance of Fertile Periods	0.768
	Improper/ Poor Sexual Activities	0.657
	Age	0.687
	Previous reproductive tract infection/STI	0.545
	Abnormal Weight	0.647
III	Erectile Dysfunction	0.623
Health Risk Factors in Men	Undescended Testicles	0.617
	Semen Abnormalities	0.639
	Exposure of the genitals to high temperatures	0.546
	Regular contact with radiation, radioactivity, or welding	0.747
	Regular contact with toxins such as lead	0.856
	Regular contact with ethylene dibromide or vinyl chloride	0.475
	Hernia repair	0.546
	A problem that was present at birth (congenital)	0.589
IV	Ovarian Failure	0.814
Health Risk Factors in Women	Fallopian Tube Dysfunction	0.803
	Menstrual Disorders	0.751
	Multiple Miscarriages	0.729
	Fibroids	0.71
	Pelvic Surgery	0.625
	Abnormalities of the Uterus	0.617
	Thyroid Disorder	0.568

Source Calculated and compiled from primary data.

From table 6, four factors were identified as being maximum percentage variance accounted. Factor 1 consists of six statements, named as Lifestyle, Factor 2 comprises of seven statements that have been named as Physiological, Factor 3 includes nine statements, it is classified as Health Risk Factors in Men and Factor 4 contains eight factors, which is Health Risk Factors in Women.

6. CONCLUSION

Infertility is a fairly common problem that affects approximately one-fifth of the world population. The researcher discovered that the knowledge about infertility is generally limited amongst the participants. There are a lot of misconceptions, such as beliefs that IUCDs and OPCs can cause infertility. People still believe in supernatural powers as the cause of infertility, and thus, seek treatment from faith healers. Alternative medicine is also a popular option for couples, in case they are not satisfied with orthodox medicine. Knowledge about treatment options is also lacking and its cultural and religious perspective is unclear, which has resulted in reduced acceptability of assisted reproductive technologies. Since couples eventually accept infertility and being childless, they will reduce stress and enhance acceptance and marital satisfaction. Therefore, the research team suggests a couple turn to the assessment and treatment of marital dissatisfaction in Infertile Couple. Sexuality is paradoxical-sexual dysfunction, especially lowered desire, and it increases as infertility problems continue. In addition, males feel more shameful, but deny their infertility and do not seek psychological support. Thus, comprehensive psycho-bio-social approach in couple therapy and counseling can improve sexual, marital satisfaction and quality of life in infertile couple.

CONFLICT OF INTERESTS

None.

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REFERENCES

Al-Homaidan, H. T. (2011). Depression among Women with Primary Infertility attending an Infertility Clinic in Riyadh, Kingdom of Saudi Arabia: Rate, Severity, and Contributing Factors. International journal of health sciences, 5(2), 108.

Amiri, S., Khousheh, M., Ranjbar, F., Fakhari, A., Mohagheghi, A., Farnam, A., . . . Alizadeh, A. (2012). Factors Related to Marital Satisfaction in Women with Major Depressive Disorder. Iranian journal of psychiatry, 7(4), 164.

Amrelahi, R., Roshan Chesly, R., Shairi, M. R., & Nik Azin, A. (2013). Marital Conflict, Marital Satisfaction, and Sexual Satisfaction: Comparison of Women with Relative Marriage and Women with Non-relative Marriage. [Research]. Clinical Psychology & Personality, 2(8), 11-22.

Bennett, L. R., Wiweko, B., Bell, L., Shafira, N., Pangestu, M., Adayana, I. P., . . . Armstrong, G. (2014). Reproductive knowledge and patient education needs among Indonesian women infertility patients attending three fertility clinics. Patient education and counseling.

Chachamovich, J., Chachamovich, E., Fleck, M., Cordova, F. P., Knauth, D., & Passos, E. (2009). Congruence of quality of life among infertile men and women: findings from a couple-based study. Human reproduction, dep177. http://dx.doi.org/10.1093/humrep/dep177

Chachamovich, J., Chachamovich, E., Zachia, S., Knauth, D., & Passos, E. (2007). What variables predict generic and health-related quality of life in a sample of Brazilian women experiencing infertility? Human reproduction, 22(7), 1946-1952. http://dx.doi.org/10.1093/humrep/dem080 www.ccsenet.org/gjhs Global Journal of Health Science Vol. 8, No. 5; 2016 106

Cizmeli, C., Lobel, M., Franasiak, J., & Pastore, L. M. (2013). Levels and associations among self-esteem, fertility distress, coping, and reaction to potentially being a genetic carrier in women with diminished ovarian reserve. Fertil Steril, 99(7), 2037-2044 e2033. http://dx.doi.org/10.1016/j.fertnstert.2013.02.033

Cwikel, J., Gidron, Y., & Sheiner, E. (2004). Psychological interactions with infertility among women. European Journal of Obstetrics & Gynecology and Reproductive Biology, 117(2), 126-131. http://dx.doi.org/10.1016/j.ejogrb.2004.05.004

El Kissi, Y., Romdhane, A. B., Hidar, S., Bannour, S., Ayoubi Idrissi, K., Khairi, H., & Ben Hadj Ali, B. (2013). General psychopathology, anxiety, depression and self-esteem in couples undergoing infertility treatment: a comparative study between men and women. European Journal of Obstetrics & Gynecology and Reproductive Biology, 167(2), 185-189. http://dx.doi.org/10.1016/j.ejogrb.2012.12.014

Faria, D. E. P. d., Grieco, S. C., & Barros, S. M. O. D. (2012). The effects of infertility on the spouses' relationship. Revista da Escola de Enfermagem da USP, 46(4), 794-801.