



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2015; 1(10): 920-925  
www.allresearchjournal.com  
Received: 06-07-2015  
Accepted: 07-08-2015

**Dr. Ruchi Galundia**  
Senior Research Fellow,  
College of Home-Science,  
Maharana Pratap University  
of Agriculture & Technology,  
Udaipur-313001, Rajasthan,  
India.

**Dr. Radhica Sethia**  
Contractual Lecturer, College  
of Home-Science, Maharana  
Pratap University of  
Agriculture & Technology,  
Udaipur-313001, Rajasthan,  
India.

**Dr. Vinita Sharma**  
Senior Lecturer, Home Science,  
Govt. Meera Girl's College,  
Udaipur-313001, Rajasthan,  
India.

**Correspondence:**  
**Dr. Ruchi Galundia**  
Senior Research Fellow,  
College of Home-Science,  
Maharana Pratap University  
of Agriculture & Technology,  
Udaipur-313001, Rajasthan,  
India.

## Comparative Study of Depression Level among Fertile and Infertile Couples

**Ruchi Galundia, Radhica Sethia, Vinita Sharma**

### Abstract

Infertility being a medical problem leads to serious psychosocial problem. Due to many life style factors, infertility is rising at an alarming pace. The stress of the non-fulfilment of a wish for a child has been associated with emotional squeal such as anger, depression, anxiety, marital problems and feelings of worthlessness among the parents. Depression is one of a most common reaction to infertility problem. It is the response to the excessive losses and prolonged stress created by the infertility process. Infertile couples may have feelings of failure, loss, disappointment and betrayal due to depression. Present research also focuses on the study of depression level among fertile and infertile couples. The sample of the study comprised of 60 fertile and 60 infertile couples who are registered at Infertility clinics of the Udaipur district in Rajasthan. A self-prepared Performa was administered for obtaining background information and Beck depression inventory was used for collecting the data. Statistical analysis was done by utilizing frequency, percentage distribution, mean, Standard deviation and t-test. Results revealed that there was a significant difference between fertile and infertile couples in scores of depression. Findings showed that depression level of infertile couples was significantly high as compare to fertile couples. As psychological factors play an important role in the pathogenesis of infertility, exploration of such factors is also an important task to manage this devastating problem which has cultural and social impact.

**Keywords:** Fertility, Infertility, Couples and Depression

### 1. Introduction

Marriage is the most important institution of human society. Human beings have certain urges like hungers, thirst and sex. Society works out certain rules and regulation for satisfaction of these urges. The rules and regulations which deal with regulation of sex life of human beings are dealt in the marriage institution. It lays foundation for the institution of family. It is doubtful that there is any innate urge to become a parent. Probably the most fundamental reason why people want children is that they themselves were reared in the family and have come to feel a want to rear the child themselves or they feel obliged. According to Hindu belief, an offspring is necessary for salvation. In many cases the desire to have an heir for the family motives the person to get married.

In India, which is mostly a patriarchal society, motherhood has connotations of respect and power. A woman is considered as complete only when she becomes a mother. Moreover she proves her womanhood by bearing children and feels secure in her marriage because it is believed that children bond not only the spousal relationship but in fact all the familial bonding. As a mother a woman feels she has accomplished what she was supposed to do as an adult being. In such case if couples come to know about their infertility, they get depressed.

Infertility is not always women's problem. Both women and men may have problems that result in infertility. Almost one-third of infertility problems are due to women, another one-third of cases are caused by men and the other one-third of cases is caused by a combination of both women and men problems or by unknown reasons (Centers for Disease Control and Prevention, 2012) [4]. However, irrespective of which couple is infertile, infertility is a serious psychological trauma and a terrible emotional distress for infertile couples ever (Boivin J, Griffiths E, Venetis CA, 2011) [3].

Now-a-days there are many factors which contributes to infertility such as changes in lifestyle, mental stress, alcohol consumption, increase work pressure, lack of physical activity, lack of meditation, medication, obesity, smoking and the recent trend of late marriages due to high ambition towards career especially among females contribute to infertility and further give rise to psychological problems. According to a report by the International Institute of Population Sciences, infertility is growing at an alarming pace, especially in the cities. Out of around 250 million individuals estimated to be attempting parenthood at any given time, 13 to 19 million couples are likely to be infertile. Couples walking into infertility clinics and asking about assisted methods of reproduction is common these days unlike in the past. This explains the rising number of infertility clinics in metros and urban parts of the country and long queues outside them. The in-vitro fertilization industry, in fact, reportedly has a year-on-year growth of 20 to 30 percent with around 40,000 in-vitro fertilization cycles done every year. In 2005-06, the Institute of Sexual Medicine, Bangalore, conducted a study on the reported problems of information technology professionals in the city, 900 were examined out of which 300 had infertility problems such as low sperm count, problem in the vagina and hymen, defects in the Fallopian tube or the uterus; 200 suffered from erectile dysfunction or ejaculation problem; 100 had dyspareunia pain during sexual intercourse; 99 were observed with libido sexual anorexia.

Many studies showed that infertility and depression frequently go together. It is the response to the excessive losses and prolonged stress created by the infertility process. It is considered as one of the main psychological disorders associated with infertility and may play a significant role in the life of infertile individuals, their infertility treatment and follow-up and in their hopefulness for the future. Infertility has a tremendous psychological impact on infertile couples like anxiety and depression. This disorder may increase the duration of infertility. It is estimated that about 40% of infertile couples experience anxiety and 86% experience depression (Ramezanzadeh F, 2004) [20].

Depression is a serious condition that can impact on every area of life. It is a mental illness in which a person experiences deep, unshakable sadness and diminished interest in nearly all activities. It can affect person's social life, relationship, career, sense of self - worth and purpose. Depression is known as a set of psychological signs and symptoms caused by infertility (Cwikel *et al.*, 2004) [7]. Depression always pushes the person towards negativity. Infertility is clinically defined as "a disease in the reproductive system which causes failure to achieve a clinical pregnancy after one year or more after having regular sexual intercourse without any protection" (Zegers-Hochschild *et al.*, 2009) [25]. If the couple has never conceived despite cohabitation and exposure to pregnancy (not contraception) for a period of two years, it is called primary infertility. Fertility refers to the ability to become pregnant through normal sexual activity is defined as fertility. Husband and wife who are staying together under one roof were considered as couple.

Currently, infertility and depression are both common problems that young and active population is more affected by it. The prevalence of depression is also mentioned 15% of the total population in the various statistics. On the one hand, one of every 6 couples is infertile and is deprived of having

children. Depression developing and increase the annual incidence will cause that depression in future years, be at the forefront of world health problems (Guz *et al.*, 2003; Greil, 1997) [12, 10]. Depression is a common mental disorder affecting about 121 million people worldwide. Persons with depression exhibit low mood, loss of interest or pleasure in daily activities, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy and poor concentration, extreme feelings of hopelessness, overeating or lack of appetite. It may lead to lifestyle habits that can negatively impact fertility. People who are depressed are more likely to smoke or drink which can also hurt fertility.

In recent years, special attention has been paid to the psychological health of infertile couples. The problem of infertility is a rising issue in India and it needs to be uncovered. The impact of infertility on the psychological well-being of females and males involved has been the object of increasing attention in recent years. Recognizing the importance of infertility in Indian community and its impact on specific cultural, social aspects and the consequent depression among infertile couples, this study was undertaken to determine the depression among fertile and infertile couples.

**2. Research methodology**

**a. Sample and its selection** - The present research aimed to assess the depression level of fertile and infertile couples. The research was conducted in Udaipur district of Rajasthan. Total sample consisted of 60 fertile and 60 infertile couples. Participants were selected by systematic random sampling method. Those couples who were in the age range of 25-40 years, must have completed five years of marriage and were staying together were selected. In case of fertile couples, couples having at-least one child and no fertility problem during the period of five years of marriage were considered. In case of infertile couples, couples having infertility duration of more than one year, diagnosed with primary infertility and confirmed of the infertility by a specialist were selected.

**Table 1:** Sample Distribution (Fertile and Infertile Couples)

Types of couple	Husbands	Wives	Total Sample
Fertile	60	60	120
Infertile	60	60	120
Total	120	120	240

**b. Tools and its description** - A Self-prepared Performa was used for obtaining background information about certain variables including age; duration of marriage, educational level, occupation, duration of infertility and type of family was collected. Beck Depression inventory was used for collecting the data. The Beck Depression Inventory is a 21-item self-report instrument intended to assess the existence and severity of symptoms of depression. Test-retest reliability and validity of Beck questionnaire has been proven by several studies and researches. Each item of the inventory describes a specific behavioral, emotional and somatic manifestation of depression. The 21 items cover sadness, pessimism, and sense of failure, dissatisfaction, guilt, and expectation of punishment, self-dislike, self-accusations, suicidal ideas, crying, irritability, social withdrawal, indecisiveness, body image change, work retardation, insomnia, fatigability, anorexia, weight loss, somatic preoccupation and loss of libido. Scores on each

item can range from 0, indicating no depressive symptomatology, to 3, indicating a severe level of symptomatology. Total scale scores can thus range from 0 to 63. Scores of 17 or above indicates a clinically significant depression.

The objectives of the study were explained to the fertile and infertile couples and the questionnaire was completed separately and simultaneously. Beck depression

questionnaire is a self-report questionnaire to be completed by the respondent without assistance. Frequency, Percentage distribution, Mean, Standard deviation and t-test were used to analyze the data statistically. All data were collected in a secure and confidential environment.

### 3. Results & Discussion

**Table 2:** Frequency & percentage distribution of depression level in fertile and infertile couples

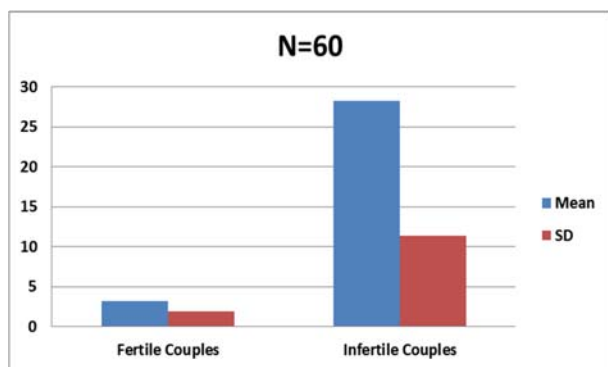
S. No.	Categories	Range	Fertile couples		Infertile couples	
			Frequency	%	Frequency	%
1.	These ups and downs are considered normal	1 - 10	52	86.66%	-	-
2.	Mild mood disturbance	11 - 16	8	13.33%	-	-
3.	Borderline clinical depression	17 – 20	-	-	-	-
4.	Moderate depression	21 - 30	-	-	46	76.67%
5.	Severe depression	31 - 40	-	-	14	23.33%
6.	Extreme depression	Over 40	-	-	-	-

N=60

**Table 3:** Depression level of Fertile and Infertile couples

Group	N	Mean	Standard Deviation	t -value
Fertile Couples	60	3.14	1.90	23.796*
Infertile Couples	60	28.23	11.39	

\* Significant at 0.01 level of significance level



**Fig. 1:** Mean and Standard Deviation of Fertile and Infertile Couples for their Level of Depression

In this study, the depression level among two groups - fertile couples and infertile couples was evaluated. As perceived from table 2 that majority of infertile couple's i.e 76.67% were having moderate depression whereas 23.33% were suffering from severe depression. On the other hand, fertile group had not shown any depressive symptoms. Perusal of the table 3 and fig. 1 shows that there are significant differences between two groups in depression scores. The mean and standard deviation in the fertile group was 3.14 and 1.90 and mean and standard deviation in the infertile group was 28.23 and 11.39 respectively. The table 3 clearly shows that mean values are higher for infertile couples which indicate that depression level of infertile couples was significantly high as compare to fertile couples. Depression level in infertile couples varies from moderate and severe levels whereas in fertile couples, depression level is mild.

Researcher in her study found that depression is more common and severe in infertile couples as compare to fertile couples. Lapane *et al* (1995) [16] have reported in a similar study that depression could have role in the pathogenesis of infertility. The sorrow caused by infertility is often strong and is considered important and in many cases the individual is not able to express it or find any place to relieve it.

The findings are in line with a previous study conducted by Anate and Akeredolu (1995) [2] who reported that the inability to conceive is correlated with social isolation, severe sense of guilt, anxiety and depression. This finding also corroborates the findings of the work by Argyle and Roth (2002) [1] who reported that infertility and infertility treatment result in anxiety and distress. This finding is in line with Coryell, Endicott, and Keller (1998) [5] who reported that among infertile couples, who never suffered from any psychopathology within a period of four years, 12% of the sample had an onset of major depressive episodes. It is apparent from the study that depression is not necessarily part of the past history of infertile couples but it is the result of infertility and compared to fertile couples the probability to develop depression is higher for infertile couples.

Depression is a reaction which appears as a consequence of sorrow. The feeling of depression is compounded by the loss of control over one's life that many infertile couples experience. For many couples who have been able to achieve almost any goal they have set for themselves, the inability to conceive a child may be the first time when they have lost control of their lives. In recent years, special attention has been paid to the psychological health of infertile couples. Grief reactions are common among infertile couples, however, these normal grief reactions may prolong into pathological grief leading to major depression (Williams KE & Zappert LN., 2006) [24].

Present study shows that most of the infertile couples exhibit low mood or sad, crying, loss of interest or pleasure in daily activities, feelings of guilt, punished or low self-worth, disturbed sleep and appetite, low energy, feel tired and poor concentration, difficulty in decision making, get annoyed or irritated at small issues, worried about physical problems, shows no interest in sex, discouraged about the future, considered as a failure, dissatisfied with everything and in extreme cases feel like killing themselves. It is important to realize that infertility is more than just a physical condition and involves many emotional issues such as intense feelings of depression, anger, anxiety, frustration, helplessness, loneliness, grief and even envy.

During this study, most of the infertile couples were staying in joint families. The joint family is the center of Indian society, where in-laws play an important part in a marriage. Women often complain of being ridiculed by their in-laws for not being able to conceive. She may feel constant

pressure from her in-laws and other elder members in the family. Such pressure from family members to get pregnant definitely contributes to depression. Lack of husband support is another important factor responsible for high depression level among infertile females. Since it is the woman who becomes pregnant and gives birth, society puts pressure on her to “mother” even though the male may be the one who is infertile (Juries, 2005) <sup>[15]</sup>. It has been reported that infertile couples experience emotional and relational difficulties due to infertility diagnosis and its treatment, namely high emotional reactivity and psychological distress, impairment in quality of life, marital problems and infertility stress and concerns (Cousineau and Domar, 2007; Watkins and Baldo, 2004) <sup>[6, 22]</sup>.

A child in the family is a concept deeply embedded in the Indian culture, supported by powerful norms. The publicity about new technologies can open the old wounds of those who truly felt they were done with, trying to conceive. News of IVF babies, tubal transplant, even post-menopausal pregnancy, may reawaken old yearnings. It is difficult to shut the door firmly on biological parenthood. The availability of new technologies makes it a great deal harder. They offer new hope and to more choices which are never ending (Lasker and Borg, 1994) <sup>[17]</sup>. Whether a couple adopts a child or decides to remain childfree takes great strength to decide to stop trying to conceive. Because of strong cultural expectation to procreate, the inability to carry out the social role can cause isolation and a sense of failure for infertile women (Maillet, 2003) <sup>[18]</sup>.

Man is a social animal and he cannot live in isolation. Infertility can cause couples to withdraw and feel a disconnection from their community, their friends and social events in which they once participated. As friends begin to have children, infertile women and men may question where they belong in their social network, which can increase isolation. Baby showers and events where there will be children may be painful event. In India, infertile women are considered as inauspicious even for auspicious occasions. In order to avoid this pain, couples may begin to avoid these situations and become even more isolated. This can lead to more feelings of depression. The more developed a person's community feeling is, the less diminished the inferiority feeling of that person which would indicate successful adaptation (Griffith & Powers, 2007) <sup>[11]</sup>. This would support that the more these couples isolate themselves from their community and social networks, the more inferior they will feel about themselves and their situation. These feelings of social isolation may push the person towards depression.

Couples struggling with infertility find themselves faced with many challenges. All of these challenges they face can cause undue chronic stress which can lead to depression. Not all infertile couples respond to infertility in the same way and many do not consider the ability to conceive as a major disaster. Couples, who felt that having children was only one of the reasons to get married, felt that they could do without children. On a personal level, at some point in life the infertile couples try to accept the child free lifestyle but at macro level, even though they enjoy good sexual and spousal relation, the societal and cultural pressure may stifle their pleasure of togetherness and make their acceptance of childfree lifestyle a difficult task. The importance given to biological child makes adoption also difficult.

Also, most of the infertile couples feel that God is punishing them for something wrong they have done in the past. This is

supported by Domar (2004) <sup>[9]</sup> who in his study found that many people experiencing infertility feel that their higher power may be punishing them for the things they have done. They may also be angry at their higher power for not blessing them with a child. When couples get angry with something that has provided them with a sense of peace, it is viewed as another loss of support leads to depression among infertile couples.

Depression among infertile female is related to a number of factors such as cause and duration of infertility as well as education level and occupation (Ramezanzadeh F., 2004) <sup>[20]</sup>. The present study also shows that duration of infertility, education level and occupational level may be the reasons which lead to depression caused by infertility. In the present study, majority of the couples experiencing depression have the duration of infertility between 1 – 6 years which shows that depression is at its peak during this period of infertility. In a similar study, women with 2–3 years of duration of infertility suffered from more depression compared with those who experienced less than 1 year or more than six years of infertility (Domar AD, Zuttermeister PC, Seibel MM, 1992) <sup>[8]</sup>. After six years there will be a reduction in psychological symptoms in women.

In this research, most of the infertile females were graduated and were house wives. Considerable evidence exists that education is expected to enhance communication between husband and wife. Educated women are more likely to discuss various family concerns with their husbands (Jeejeebhoy S., 1998) <sup>[14]</sup>. Therefore, education plays a considerable role in decreasing their depression levels.

With regard to occupation, it seems being at work outside home decreases psychological signs of depression as they get engage in workplace which helps to divert their mind and thoughts. Therefore it is necessary for infertile couples to keep themselves busy in activities outside home which includes job, business or any social activity. Furthermore, absence from work may raise psychological consequence of depression by more tending to problem. Low level of education and absence from work may lead to high depression level among infertile women.

In addition, depression may lead to lifestyle habits that can negatively impact fertility. For example, depression often causes overeating or lack of appetite and being overweight or underweight can cause infertility. People who are depressed are more likely to smoke or drink, which can also hurt fertility. Infertility is a stressful condition, having a strong impact on sex life, relationship, sense of self-worth and daily life. In the midst of testing and treatments, infertility may literally feel like it has become entire life, as one has to go to and from doctor appointments. All of this stress can potentially contribute to the development of depression.

Noorbala (2007) <sup>[19]</sup> reported that the prevalence of depression and low self-esteem in infertile patients is far more than fertile couples. Many other studies also indicated that incidence of major depression is higher in infertile couples than fertile couples and it ranges 15-54% (Domar AD, Zuttermeister PC, Seibel M, Benson H., 1992) <sup>[8]</sup>. The struggle to have children can lead to strained relationships, depression, anxiety and financial hardship. For employers, infertility leads to reduced job performance and productivity and increased absenteeism and costs.

The results of this meta-analysis could highlight an important and growing mental disorder among infertile couples that cannot be ignored. Depression, as a major mental disorder,

should be the focus of special attention by gynecologists, who manage infertile couples, as policy makers, who plan preventive programs. However, many individual, social, and cultural characteristics play important role in both occurrence and exacerbation of depression especially among infertile couples. Depression may occur in people of any age, genders or backgrounds. According to the reported of world health organization, depression contributes to the global burden of diseases and is estimated to become the second leading cause of disability by the year 2020 (WHO, 2012).

After discussing various factors leading to depression among infertile couples, it can be concluded that parenting is different objective experience for men and women. The role of parents is one of several adult roles achieved by a large percentage of men and women. Motherhood is believed to be the most important role for women and the perceived essence of a woman's identity. It is seen as a central and defining role for woman. When this is thwarted, there is often the feeling of having failed as proper woman.

#### 4. Conclusion

It can be inferred from the above results that depression is significantly low among fertile couples as compare to infertile couples. Infertility leads to depression in infertile couples and this has been supported by various studies mentioned above. Regarding high rate of depression among infertile couples, it seems more necessary for infertile couples to pay attention to infertility centers that offer psychological and psychiatric services. Medical treatments must also be supplemented with counseling, so that regardless of the outcome of the treatment, the couples can learn to understand their situation and learn to cope with it.

#### 5. Recommendations

Findings of the study would be useful for parents, counselors, psychiatrists, social workers, policy makers, educationists and researchers to gain deeper understanding regarding emotional aspects of infertility and to cope with it. Future research could be carried out to find the other emotional aspects related to infertility like stress, distress, anger, sexual satisfaction, coping styles and socio cultural attitude towards infertility. A longitudinal research study can be undertaken to track changes in anxiety and depression of infertile couples and their coping strategies over time. Cross-sectional designs that replicate this study using infertile populations not pursuing treatment or who recently completed treatments can be undertaken which will allow researchers to more fully understand the relationship between infertility anxiety, depression and marital satisfaction across the various phases of the infertility experience. Study can be extended to other SES categories and age-groups and comparative studies can also be conducted between rural and urban population. The results of the present investigation will be useful for infertility clinics and counselors in handling the emotional side effects of infertility. Researcher suggests that as Government of India is making people aware about right age of marriage similarly there is a dire need to create awareness regarding right age of conception.

#### 6. Acknowledgement

Author expresses indebtedness to the Almighty God, who is the apostle of her strength. Author is extremely thankful to the Doctors, respondents and admin staff of the clinics for their help and cooperation that has made her completes this research work.

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