ISSN: 0975-833X

Available online at http://www.journalcra.com

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

International Journal of Current Research
Vol. 13, Issue, 07, pp.18127-18130, July, 2021

DOI: https://doi.org/10.24941/ijcr.41819.07.2021

RESEARCH ARTICLE

DEPRESSION AMONGST THE INFERTILE WOMEN ATTENDING OUTPATIENT DEPARTMENT OF A TERTIARY CARE HOSPITAL IN KERALA: A HOSPITAL BASED STUDY

***Dr. Anjana Chakkarambath**

General Duty Medical Officer, Royal Malabar Hospital and Genesis IVF Center, Jubilee Road, Thalassery , Kerala

ARTICLE INFO

Article History:
Received 19th April, 2021
Received in revised form
27th May, 2021
Accepted 24th June, 2021
Published online 30th July, 2021

Key Words:

Infertility, Becks
Depression Scale.

ABSTRACT

Background: Infertility is one of the important and major problems in reproductive health. One of the major problems that concomitants with infertility is depression. Various factors play a role in causing depression. Infertility affects the emotional, mental, and physical aspects of the couples' health . Apart from all these problems the couples trying to conceive also face many financial challenges, as the treatment may involve expensive drugs and procedures. **Objectives:** To assess the depression amongst the infertile women attending outpatient department of a tertiary care hospital. **Methods:** The current study is a Cross-sectional descriptive study and the prevalence of depression was assessed by Beck Depression Inventory (BDI) Scale. **Results:** In the present study majority of the participants i.e. 44% belonged to the age group of 31-35 years, followed by the age group of 26-30 years which was 32%, 14% of the participants belonged to the 18-25 years age group and 10% belonged to the age group of more than 35 years. In the present study, the mean age of study participants increased as the severity of the depression increased. Women with the higher age group had severe depression, although it was not statistically significant. As the duration of the married life increased the severity of the depression also increased, this was statistically significant with a p-value of less than 0. 001. As the Infertility duration in years increased the severity of the depression increased, this was statistically significant with a p-value of less than 0.001.

Citation: Dr. Anjana Chakkarambath. "Depression amongst the infertile women attending outpatient department of a tertiary care hospital in kerala: a hospital based study.*", 2021. International Journal of Current Research, 13, (07), 18127-18130.*

INTRODUCTION

Infertility is one of the important and major problems in reproductive health. It is defined as "Infertility is a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. There is a high prevalence of infertility worldwide. Infertility is considered a health problem if the prevalence of infertility exceeds 15% in any nation (Infertility, 2012; World Health Organization, 1975). One of the major problems that concomitants with infertility is depression. Various factors play a role in causing depression, like, social stigma, family pressure, cultural and traditional beliefs of having children (Schmidt, 2006; Bushnik, 2013). Factors such as age, education, duration of married life, duration of infertility, affects the mental status of infertile couples. Infertility affects the emotional, mental, and physical aspects of the couples' health (Adamson, 2011; Yang, 2011). Apart from all these problems the couples trying to conceive also face many financial challenges, as the treatment may involve expensive drugs and procedures (Lakatos, 2017). It is estimated that the prevalence of infertility is highest in Canada at 11.5-15.7% (Bushnik, 2013); followed by 12.6% in India (Adamson, 2011), 10% in the United States[1] and 1.72% among Chinese (Yang, 2011). It adversely affects the quality of life of the married couple. It may also lead to a higher probability of divorce (Masoumi, 2013). The data available in India regarding depression in infertile couples is limited. More exhaustive research is needed in this area; Therefore, the present study aims to find the various aspects of depression among infertile women with the various other factors.

Corresponding author:** ***Dr. Anjana Chakkarambath,
General Duty Medical Officer, Royal Malabar Hospital and Genesis IVF Center, Jubilee Road, Thalassery , Kerala.

This study was conducted to assess the depression amongst the infertile women attending outpatient department of a tertiary care hospital

MATERIALS AND METHODS

The current study is a Cross-sectional descriptive study. Aim of the study was to assess the depression amongst the infertile women attending outpatient department of a tertiary care hospital. The study was conducted for 3 months. Participants who were unable to achieve conception despite unprotected sexual intercourse of at least one year were cases of primary infertility. The primary infertility patients were included in the study. Women with a family history or any history of depression, major chronic physical or mental health problems, previous head injury, and those who were on contraception were excluded from the study. Informed and written consent was obtained from all the study participants.

ASSESSMENT OF PREVALENCE OF DEPRESSION

The prevalence of depression was assessed by Beck Depression Inventory (BDI) Scale[9]. It is a mood-measuring device originally developed by Dr. Aaron T Beck and it is used for screening purposes. It is one of the most widely used screening instruments for detecting symptoms of depression. It was designed to document a variety of depressive symptoms the individual experienced over the preceding week. This scale has been tested and validated. It is a 21-item instrument that is scored on a 4-point scale, ranging from 0 to 3, and the total score is 63. A score of 0-13 is considered as normal, 14-19 borderline clinical depression or mild depression, 20-28 moderate depression, and 29-63 as severe depression. Sample size: The sample size was estimated using the Open Epi 1.2.3 software considering the prevalence of depression as 56.4 according to the study by Verma et al. (2015) with a confidence level of 95%, and confidence limits of 10%, the sample size was calculated to be 95, which was rounded off to 100 participants. Statistical analysis: Data was entered in an excel spread sheet. Data were expressed in terms of proportion or percentages. The association of each of the variables with depression was assessed by using Fisher exact and Chi-square test. P values <0.05 were considered statistically significant. An unpaired t-test was used for the comparisons mean and standard deviation.

RESULTS

In the present study majority of the participants i.e. 44% belonged to the age group of 31-35 years, followed by the age group of 26-30 years which was 32%, 14% of the participants belonged to the 18-25 years age group and 10% belonged to the age group of more than 35 years. Most of the women were unemployed i.e. 77% and 23 % were employed. 20% of the women were married for a period of 0 to 5 years. 12% of the study participants had problems of infertility for 11-15 years, 38% and 20% of the study participants had problems of infertility for 6-10 years and 0-5 years respectively. The correlation was found to be statistically significant with a p-value of 0.046. In the present stud, the majority of the study participants belonged to the age group of 31-35 years, out of the 63.6% of them had minimal depression, 18% had moderate depression, and 13.6% and 4.8% of them had mild and severe depression respectively.

32% of the study participants belonged to the 26-30 years' age group .37.5%,31.2%,25%, and 6.3% of these women had minimal, mild, moderate, and severe depression respectively. In women aged above 35 years and above, minimal, moderate, and severe depression was seen in 30% of study participants and 10 % were mildly depressed.14% of the study participants belonged to the 18-25 years age group, majority of them were had minimal depression and no one was severely depressed. Unemployed women had a higher percentage of severely depressed women, i.e. 8% minimal depression was more in employed women and moderate depression was more in unemployed women i.e. 28.5%. The correlation was found to be statistically significant with a p-value of 0.022. 70.5% of women who were married for 11-15 years had minimal depression. Women who were married for more than 15 years made up the highest percentage of the severely depressed group with 12.5%, 37.5% of this group were also moderately depressed. 30% of women with 0-5 years married life belonged to the mild depression group. This correlation was not statistically significant with a p-value of 0.253.

66% of Women whose period of infertility was 1-5 years were minimally depressed, followed by 30.5% of women having 6-10 years of infertility .30% of women who were unable to conceive from 6-10 years had minimal and moderate depression, 13% had severe depression, women who couldn't conceive for 11-15 years a41.5% had minimal depression and moderate depression,8.5% had severe depression. Of women with more than 15 years of infertility 50% had mild and moderate depression. The correlation was found to be statistically significant with a p-value of 0.012 [Table 1]. In the present study, the mean age of study participants increased as the severity of the depression increased. women with the higher age group had severe depression, although it was not statistically significant. As the duration of the married life increased the severity of the depression also increased, this was statistically significant with a p-value of less than 0. 001. As the Infertility duration in years increased the severity of the depression increased, this was statistically significant with a p-value of less than 0.001 [Table 2]

DISCUSSION

Multiple studies indicate that the prevalence of depression among women suffering from infertility is high and is one of the major concerns (Alimohamadi, 2020). The depression in infertile women can be due to multiple factors, they increase the factor of psychological stress, factors like, multiple abortions, non-supportive spouse, or relatives, etc. Our study provides information about the severity of depression to the duration of infertility in women. In a study by Alhassan A in Ghana, the prevalence of depression in the infertile women of Ghana was however found higher (62%) than what we found in the present study (Alhassan, 2014). In one of the meta-analyses, it was found that depression was largely prevalent, with 86.8% depression in infertile women (Ramezanzadeh, 2004). Multiple studies from several countries show that the prevalence of psychiatric morbidity especially depression in infertile patients. In a study by Purewal S, where BDI was used to assess the depression, it was found that participants had mild to moderate depression in 28.3%, moderate to severe in 7.2%, and 1.2% having the most severe depression, this was less than our study (Purewal, 2017).

Table 1. Showing age occupation socioeconomic class, duration of married life and infertility and correlation

Parameters	Total N= 100	Percentage	Minimal depression n=49(49%)	Mild depression n=21(21%)	Moderate depression n=23(23%)	Severe depression n=7(7%)	P Value
AGE IN YEARS							
18-25	14	14%	6(42.8%)	4(28.5%)	4(28.7%)	0	0.046*
26-30	32	32%	12(37.5%)	10(31.2%)	8(25%)	2(6.3%)	
31-35	44	44%	28(63.6%)	6(13.6%)	8(18%)	2(4.8%)	
≥35	10	10%	3(30%)	1(10%)	3(30%)	3(30%)	
OCCUPATION							
Unemployed	77	77%	37(48%)	12(15.5%)	22(28.5%)	6(8%)	0.022*
Employed	23	23%	12(52%)	9(39%)	1(4.5%)	1(4.5%)	
MARRIED LIFE IN YEARS							
0-5	20	20%	8(40%)	6(30%)	5(25%)	1(5%)	0.253
6-10	38	38%	15(39.5%)	9(23.5%)	11(32.3%)	3(4.7%)	
11-15	34	34%	24(70.5%)	4(11.7%)	4(11.7%)	2(6.1%)	
>15	8	8%	2(25%)	2(25%)	3(37.5%)	1(12.5%)	
DURATION OF INFERTILITY IN YEARS							
1-5	50	50%	33(66%)	9(18%)	6(12%)	2(4%)	0.012*
6-10	36	36%	11(30%)	10(27%)	11(30%)	4(13%)	
11-15	12	12%	5(41.5%)	1(8.5%)	5(41.5%)	1(8.5%)	
>15	2	2%	0	1(50%)	1(50%)	0	

Table 2. Showing the mean age, duration

Variable	Minimal depression	Mild depression	Moderate depression	Severe depression	F statistic	P value
Age in years	29.52±3.56	29.84±4.21	30.04±3.14	31.51±3.49	0.762	0.517
Married life in years	3.37±1.55	3.94±2.67	5.65±2.85	7.14±2.69	8.65	<0.001*
Infertility duration in years	2.04±2.33	2.65±1.54	3.89±1.25	4.58±1.41	8.83	<0.001*

ANOVA test is used to compare the means and P VALUE <0.05 is statistically significant

In a study by Odden's BJ, the authors reported that 24.9% of participants had depressive disorders in infertile women (Purewal, 2017). One of the studies done in China, range of mental health morbidities in as many as 83.8% of study participants, of which 25 % had moderate or severe depression (Zhonghua Fu, 1995). In a study in Hongkong, depression and/or anxiety disorder was seen among 33%, and in another study in Scotland 32 % of women had depression (Lok, 2002).

In our study as the duration of infertility increase, the depression score increased, similar findings were seen in one study, women with lower stages of depression and anxiety can be seen during 1–5 years of infertility, but during 6-10 years after an infertility diagnosis, their signs and symptoms become more prominent, especially severe depression had the most common frequency in >15 years of infertility duration (Wang, 2015). In the present study, the prevalence of minimal depression and moderate depression was higher than mild and severe depression in the study subjects. Our study found that the Depression was more prevalent in Infertile women who belonged to the older age group, unemployed women.

CONCLUSION AND RECOMMENDATION

Women who are in the older age groups and have longer married life, with a longer period of infertility seem to be affected with depressive symptoms. The depression and anxiety component of the mental health seen in these women should not be underestimated.

The treating obstetrician should also be aware of the psychological morbidity that these women have. It can be recommended that Screening these women for depressive symptoms and assisting them with counselling from a trained specialist would decrease and prevent depression in women with infertility.

LIMITATIONS

The present study is a hospital-based study with a limited sample size, Therefore, a multicentric study across a larger area, with a large sample size would give us more insights into the extent of the psychological morbidities and influencing factors of the infertile women

REFERENCES

Adamson PC, Krupp K, Freeman AH, Klausner JD, Reingold AL, Madhivanan P. 2011. Prevalence & correlates of primary infertility among young women in Mysore, India. *Indian J Med Res.*,134:440–46.

Alhassan A, Ziblim AR, Muntaka S. 2014. A survey on depression among infertile women in Ghana. BMC Women Health. 14:42.

Alimohamadi Y, Mehri A, Sepandi M, Esmaeilzadeh F, Rashti R. 2020. The prevalence of depression among iranian infertile couples: an update systematic review and meta-analysis. Middle east fertility society journal. dec;25:1-2.

Beck AT, Steer RA, Brown GK. 1996. Manual for the Beck Depression Inventory-II. 1st ed San Antonio, TX: Psychological Corporation, 1996, 18.

Bushnik T, Cook JL, Yuzpe AA, Tough S, Collins J. 2013. Estimating the prevalence of infertility in Canada. Hum Reprod. 27(3):738–46.

Infertility FAQ's. 2021. Centers for Disease Control and Prevention; Atlanta: CDC; 2012. [updated September 14, 2011; cited June 27, 2021]; Available: http://www.cdc.gov/reproductivehealth/Infertility/index.htm#1.

Lakatos E, Szigeti FJ, Ujma PP, Sexty R, Balog P. 2017. Anxiety and depression among infertile women, a cross-sectional survey from Hungary. *BMC Women Health*. 17:48.

Lok IH, Lee DT, Gheung LP, Chung WS, Lo WK, Haines CJ: Psychiatric morbidity amongst infertile Chinese women undergoing treatment with assisted reproductive technology and the impact of treatment failure. Gynecol Obstet Invest. 2002; 53:195-9.

Masoumi SZ, Poorolajal J, Keramat A, Moosavi SA. 2013. Prevalence of Depression among Infertile Couples in Iran: A Meta-Analysis Study. *Iranian Journal of Public Health*., 42(5):458-66.

Purewal S, Chapman SCE, van den Akker OBA. A systematic review and meta-analysis of psychological predictors of successful assisted reproductive technologies. BMC Res Notes. 2017; 10:711

Purewal S, Chapman SCE, van den Akker OBA. A systematic review and meta-analysis of psychological predictors of successful assisted reproductive technologies. BMC Res Notes. 2017; 10:711.

Ramezanzadeh F, Aghssa MM, Abedinia N, Zayeri F, Khanafshar N, Shariat M. A survey of relationship between anxiety, depression and duration of infertility. BMC Womens Health. 2004; 4:9.

Schmidt L. 2006. Infertility and assisted reproduction in Denmark. Dan Med Bull. 53:390–417.

Verma P, Rastogi R, Sachdeva S, Gandhi R, Kapoor R, Sachdeva S. 2015. Psychiatric morbidity in infertility patients in a tertiary care setup. Journal of clinical and diagnostic research: JCDR. Sep;9(9):VC01.

Wang YJ, Shan Li Y, Chen CJ, Liang WM, Yang CT, Chang Lee Y. Investigating the Relationships among Stressors, Stress Level, and Mental Symptoms for Infertile Patients: A Structural Equation Modeling Approach. PLoS One. 2015; 10:e0140581

World Health Organization. The Epidemiology of Infertility. WHO; Geneva: 1975. pp. 5–8.

Yang YQ, Shen H, Chen J, Chen ZW. 2011. A prevalence survey of infertility in Beijing, China. Zhongguo Bing Du Bing Za Zhi. 91(5):313–16.

Zhonghua Fu, Chan Ke, Za Zhi: Mental status and personality of infertile women. 1995; 30:34-37.

****