

Depression among Women using Different Contraceptive Methods

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ABSTRACT

Objective: To determine the frequency of depression among women using different contraceptive methods.

Methodology: It was a cross-sectional study conducted at the Department of Gynaecology, Jinnah Hospital, Lahore. Women of age between 20-45 years using contraception (oral contraceptive pill, condom, and intrauterine device) for 6 months were included in this study. A total of 196 women were enrolled after informed consent by non-probability convenience sampling technique. The participants were assessed for depression using Beck's depression inventory-II (BDI-II). The data was obtained by using a self-devised proforma. The women scoring 14 and above were classified to have depression.

Results: The mean age of women was 32.5 ± 7.8 years. Out of 196 women, 112(57.1%) were between 31-45 years of age, while 84(42.9%) were between 20-30 years of age. Ninety four (48%) women had been using contraceptives for <1 year, while 39(19.9%) and 63(32.1%) reported using contraception for 1-2 years and >2 years, respectively. Sixty two (31.6%) women using contraception for at least 6 months had depression. Females with age more than 30 years and prolonged use of different contraceptive methods were found to have a significant association with depression.

Conclusion: The frequency of depression is high among women using different contraceptive methods.

Keywords: Depression. Contraception. Intrauterine device.

INTRODUCTION

Contraception is a way to prevent pregnancy. It gives couples the control to choose, when and how many children they want to have, so that they can provide better care for their children and invest in their future. For developing countries, contraception can also help control overpopulation, and benefit their environment, economy, and education.¹ Therefore, The Universal Declaration of Human Rights has included contraception as a basic human right.²

Globally, nearly 100 million women use various contraception methods.¹ There are two major types of contraception methods, hormonal and non-hormonal. Hormonal methods include oral contraceptive pills (OCPs), hormonal intrauterine devices (IUD), patches, implants, and injections. Barriers (male and female condoms), mechanical methods (like copper IUD), and surgical methods (i.e. male or female sterilization) are included in the non-hormonal methods group.¹

Factors like spousal communication, combined decision-making, knowledge about using different contraception methods and their side effects, etc. play an important role in contraceptive use. Based on

research, the side effects of contraceptives are the major reason of discontinuation of contraception; the fear of side effects and misconceptions about contraceptive methods are the main factors contributing to their underutilization.³

None of the available contraceptive methods is without side effects.¹ Two most common side effects that lead women to stop using contraceptives are mood swings and sadness.⁴ Hormonal changes during reproductive years, along with mood swings are significant contributors to depression in women.⁵

Depression is one of the most disabling conditions worldwide, characterized by persistent feelings of sadness, loss of interest, emptiness & irritability, accompanied by physical and psychological changes that can significantly disturb daily functioning and can lead to suicide.⁶ Women using hormonal contraceptives report a higher prevalence of depression, use of antidepressants, and even suicidal attempts.¹

The objective of this study was to determine the frequency of depression among Pakistani women using different contraceptives. This is important because there is no previous research on this topic in the local population. The findings of this study can help women who are considering using contraception to understand the risks and benefits of different methods and make informed decisions about their reproductive and mental health. The study will also help healthcare providers to identify women who are at risk for depression and suggest suitable contraception methods accordingly.

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METHODOLOGY

It was a cross-sectional study conducted at the Department of Gynaecology, Jinnah Hospital, Lahore from January to July, 2022. Using non-probability convenience sampling technique, a total of 196 women fulfilling inclusion criteria were enrolled after informed consent. The inclusion criteria were females of age between 15-45 years and using any contraceptive method i.e. OCP, condom, and IUD for at least 6 months. The exclusion criteria were females with a history of depressive illness, infertility issues, in-vitro fertilization, and currently pregnant. The calculated sample size was 196 with a 7% margin of error and 95% confidence level taking an expected percentage of depression among women using different contraceptive methods as 47.8%.⁷

Depression was measured by the BDI-II questionnaire. It is a reliable and valid questionnaire with 21 item self-report inventory that identifies symptoms and attitudes of depression. Each item is evaluated on a severity scale ranging from 0-3 with a total score range from 0-63. A score of 14 or above was considered as depression.⁸ All those females reporting depression were referred to psychiatry OPD as per standard hospital procedure.

STATISTICAL ANALYSIS

The data was entered and analyzed with Statistical Package for the Social Sciences (SPSS) version 25.0. Statistics for quantitative variables such as age, duration of contraception used, and BDI-II score were shown as Mean \pm SD. Qualitative data like contraceptive methods and depression were provided as frequencies and percentages. Data was stratified according to age, contraceptive technique, and contraceptive duration to account for potential impact modifiers and Chi-square test was performed to determine this association. A p-value of ≤ 0.05 was taken as significant.

RESULTS

A total of 196 females using different contraceptive methods for at least 6 months were included. The age range in this study was from 20 to 45 years with mean age of 32.5 \pm 7.8 years. Most of the females [112(57.1%)] were in the 31-45 years age group, while 84(42.9%) were in the 20-30 years age group.

Most of the females [107(54.6%)] were condom users, while 24(12.2%) and 65(33.2%) were IUD and OCP users, respectively. Majority of the females [94(48%)] were using contraceptives for <1 year, while 39(19.9%) and 63(32.1%) were using contraceptives for 1-2 years and >2 years, respectively. Out of 196 females, 62(31.6%) reported depression, whereas 134(68.4%) had no depression (Figure 1). It was found that age >30 years (p=0.001) and longer use of contraception was associated with depression (p=0.001) (Table 1).

DISCUSSION

This study found that depression is more common among females aged 31-45 years [52(46.4%)] than those aged 20-30 years [10(11.9%)]. Among contraceptive users, IUD users have the highest rate of depression [11(45.8%)], followed by OCP users [22(33.8%)] and condom users [29(27.1%)]. Additionally, the longer the duration of contraceptive use, the higher is risk of depression (p-value=0.001). Overall, depression was reported by women using contraception for 6 months and longer [62(31.6%)]. There was no statistically significant difference found in the prevalence of depression among users of OCP, condom, and IUD (p-value=0.183). However, a higher prevalence of depression was noted among women who were older than 30 years (p-value=0.001). These findings may suggest a link between the older age of women and the longer use of contraceptives with the increased risk of depression.

Alfaifi et al. reported that the prevalence of clinical depression among Saudi women using hormonal contraception was 43.3%, which is similar to those reported in Norwegian (24%) and Australian women (30%).⁹ However, it is still unclear whether OCPs, IUDs, or condoms directly cause or exacerbate depression.

A study was conducted at King Fahad University Hospital to determine the prevalence of depression in women taking hormonal & non-hormonal contraception. They reported that 29% of females had depression. The rate of depression was higher in women using hormonal contraception as compared to non-hormonal contraception. They concluded that due to the use of hormonal contraceptive methods, the risk of depression increased by 1.267 times as compared to non-hormonal methods.¹⁰ Another study reported that hormonal contraception is strongly linked to depression & mood changes.¹¹ A placebo-controlled randomized trial was conducted to determine the effect of combined oral contraception on mental health. At the end of the trial, they found no association of oral contraception with impaired cognition. The mental health impact of contraceptive interventions seems to be more closely linked to the users' psychological experiences & anxiety rather than to the therapeutic properties of the methods themselves.¹² Another study was conducted by de Wit et al. to evaluate the association between the use of oral contraceptives and depression. They reported that symptoms of depression were more prevalent in the young age group (16 years).¹³

You et al. found lower scores of sadness and suicidal ideation in non-condom users as compared to condom users. This may be attributed to the release of endorphins and dopamine during unprotected sexual

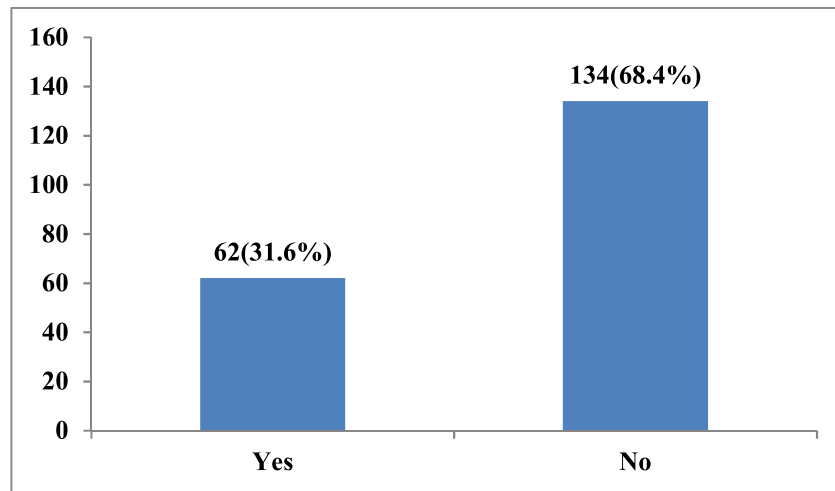


Figure 1: Frequency Distribution of Depression

Table 1: Association of Depression with Age and Contraceptive Use

Variables		Depression		Total	p-value
		Yes	No		
Age (Years)	20-30	10(11.9%)	74(88.1%)	84(100%)	0.001*
	31-45	52(46.4%)	60(53.6%)	112(100%)	
Contraceptive Methods	OCP	22(33.8%)	43(66.2%)	65(100%)	0.183
	Condom	29(27.1%)	78(72.9%)	107(100%)	
	IUD	11(45.8%)	13(54.2%)	24(100%)	
Duration of Contraceptive Use (Years)	<1	8(8.5%)	86(91.5%)	94(100%)	0.001*
	1-2	9(23.1%)	30(76.9%)	39(100%)	
	>2	45(71.4%)	18(28.6%)	63(100%)	

*Significant p-value

activity, reducing depression scores and improving the mood of women.¹⁴ A population based cohort study conducted in the UK suggested that the risk of depression increases during the first 2 years of use of contraceptive pills.¹⁵

Another study was conducted to evaluate the association between hormonal contraception and adverse mood changes. They concluded that women with a history of or ongoing mental health problems, as well as those who begin hormonal contraception at a younger age, are more likely to experience adverse mood symptoms caused by hormonal contraception. It emphasizes the importance of addressing both past and present mental health concerns during contraceptive counseling, emphasizing the need for appropriate treatment of ongoing mental health disorders.¹⁶

CONCLUSION

The frequency of depression among women using different contraceptive methods is high. The relationship between using different contraceptive methods and mental health is complex and determined by the interplay of biological, psychological, and social

factors. Healthcare professionals can reduce the risk of depression among women using contraception by regularly screening for depression.

LIMITATIONS & RECOMMENDATIONS

It was a cross-sectional study and conducted in a single setting, so the results may not be generalizable to other populations. Further controlled trials in multiple settings are recommended to increase the generalizability of the findings.

Conflict of Interest: None.

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