

## ORIGINAL RESEARCH

### **An Epidemiological Study of clinic-demographic Profile of Patients with Infertility in Tertiary Hospital of North India**

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#### **ABSTRACT**

**Background:**Infertility is not merely a health problem, it is also a social injustice and inequality. Infertility have a serious impact on both the psychological wellbeing and the social status of the women in the developing world. **Objectives:** to find out clinic-demographic characteristics of patients with infertility attending Obstetrics and Gynaecology OPD of RMCH Bareilly.

**Materials and Methods:** This was a one-year hospital based cross-sectional comparative study carried out in Department of Obstetrics and Gynaecology, Rohilkhand Medical College and Hospital, Bareilly, a tertiary care and teaching hospital in western Uttar Pradesh from 1<sup>st</sup> November 2019 to 31<sup>st</sup> October 2020 in women with age group 18-45 years presented with indications of primary and secondary infertility and the estimated sample size was 50.

**Results:** Highest percentage of cases (48%) have been reported for 21-30 age group, followed by 31-40 (38%), above 40 (12%) and below 20 age group (2%). The mean + SD value has been calculated as 31.96 + 7.77. Incidence among patients in high school is highest (34%), followed by primary school (32%), illiterate (22%), post high school (8%) and patients with graduate level education have reported lowest cases (4%). Homemaker profession has the highest percentage of cases (72%), followed by daily wage worker (14%), other professions (8%) and working women (6%). Class III SES represents the highest percentage (48%), followed by Class IV (40%), Class V (6%), Class II (4%) and Class I represents the least percentage (2%). Most common symptom is menstrual dysfunction (40%), followed by abnormal vaginal discharge (28%), pelvic pain (16%), Fever/Malaise/loss of weight (8%) and very few have been asymptomatic (4%).

**Conclusion:** There is urgent need of regular health checkups and appropriate preventive, promotive and therapeutic interventions.

**Keywords:** Infertility, PID, STI, HIV

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## INTRODUCTION

Infertility is a global health issue, affecting approximately 8-10 percent couples worldwide. World Health Organization estimates that 60-80 million couples worldwide currently suffer from infertility.<sup>[1,2]</sup> The WHO estimates the overall prevalence of primary infertility in India to be between 3.9% to 16.8%. Among India women reporting primary infertility and PID, STI prevalence is high. Estimates of infertility vary widely among Indian states from 3.7% in Uttar Pradesh, Himachal Pradesh and Maharashtra to 5% in Andhra Pradesh.<sup>[1]</sup>

Total infertility is divided into primary and secondary infertility. WHO defines primary infertility as the "Inability to conceive within two years of exposure to pregnancy (i.e. Sexually active, non-contracepting, and non-lactating) among women 15 to 49-year-old. Secondary infertility refers to the inability to conceive following a previous pregnancy.<sup>[3]</sup> Globally most infertile couple suffers from primary infertility.

Infertility is not merely a health problem, it is also a social injustice and inequality. Infertility have a serious impact on both the psychological wellbeing and the social status of the women in the developing world.

The current study aims to find out clinicodemographic characteristics of patients with infertility attending Obstetrics and Gynaecology OPD of RMCH Bareilly

## MATERIALS & METHODS

This was a one-year hospital based cross-sectional comparative study carried out in Department of Obstetrics and Gynaecology, Rohilkhand Medical College and Hospital, Bareilly, a tertiary care and teaching hospital in western Uttar Pradesh from 1st November 2019 to 31st October 2020 in women with age group 18-45 years presented with indications of primary and secondary infertility and the estimated sample size was 50. Permission for the study was obtained from the College authorities prior to commencement.

### Inclusion Criteria:

The study included females in the age group of 18-45 years, presented with complaints of primary infertility, secondary infertility.

### Exclusion Criteria

Women who have taken or on the regimen of Anti-tuberculosis drug were excluded from the study. Also, HIV positive women were non-included in the study.

**Statistical Analysis:** Percentage Analysis.

## RESULTS

It represents distribution of patients correlating percentage of cases with respective age groups. Highest percentage of cases (48%) have been reported for 21-30 age group, followed by 31-40 (38%), above 40 (12%) and below 20 age group (2%). The mean + SD value has been calculated as 31.96 + 7.77. [Table 1]

**Table 1: Distribution of patients according to Age Groups**

Age Group (Years)	No. Of Cases	Percentage
Below 20	1	2%
21-30	24	48%
31-40	19	38%
Above 40	6	12%
Total	50	100%
Mean + SD	31.96 + 7.77	

It represents distribution of patients according to their respective level of education. Incidence among patients in high school is highest (34%), followed by primary school (32%),

illiterate (22%), post high school (8%) and patients with graduate level education have reported lowest cases (4%). [Table 2]

**Table 2: Distribution of patients according to Education**

Education	No. Of Cases	Percentage
Illiterate	11	22%
Primary School	16	32%
High School	17	34%
Post High School	4	8%
Graduate	2	4%
Total	50	100%

Distribution of patients according to their occupation has been shown in the table. Homemaker profession has the highest percentage of cases (72%), followed by daily wage worker (14%), other professions (8%) and working women (6%). [Table 3]

**Table 3: Distribution of patients according to Occupation**

Occupation	No. Of Cases	Percentage
Homemaker	36	72%
Working Women	3	6%
Daily Wage Worker	7	14%
Others	4	8%
Total	50	100%

Distribution of patients according to their respective socioeconomic status has been shown in the table. Class III represents the highest percentage (48%), followed by Class IV (40%), Class V (6%), Class II (4%) and Class I represents the least percentage (2%). [Table 4]

**Table 4: Distribution of patients according to Socio-economic status**

Socio-Economic Status Distribution	No. Of Cases	Percentage
Class I	1	2%
Class II	2	4%
Class III	24	48%
Class IV	20	40%
Class V	3	6%
Total	50	100%

Distribution of patients according to the representative symptoms has been shown in the table. Most common symptom is menstrual dysfunction (40%), followed by abnormal vaginal discharge (28%), pelvic pain (16%), Fever/Malaise/loss of weight (8%) and very few have been asymptomatic (4%). [Table 5]

**Table 5: Distribution of patients according to Symptoms**

Symptoms	No. Of Cases	Percentage
Abnormal vaginal discharge	14	28%
Asymptomatic	2	4%
Fever/Malaise/Loss of weight	4	8%
Menstrual dysfunction	20	40%

Pelvic pain	8	16%
Others	2	4%

## DISCUSSION

The study was conducted in the Department of Obstetrics and Gynaecology, Rohilkhand Medical College and Hospital, Bareilly, after obtaining clearance from institutional ethical committee. Fifty women in the age group 18-45 years presented with indications infertility were enrolled, among which maximum (48%) were in the age group of 21-30 years. The mean age of study population was 31.96 + 7.77 years.

Along with patient's demographic characteristics, their socio-economic parameters were also evaluated. Most of the women (88%) belonged to lower middle and middle class. Among the total study population in current study, 72% were homemaker, while 14% worked as daily wage workers. There were 22% women who were illiterate, 32% had primary education, 34% had higher secondary school education and only the remaining 12% had post school higher education.

### Distribution of Patients According to Age

Sr No.	Study	Age categorise	
		20-30 years	30-40 years
1	Sharma D et (2015) <sup>[4]</sup>	72%	28%
2	Jindal N et (2017) <sup>[5]</sup>	45.7%	54.3%
3	Present study	50%	50%

In study by Sharma D et al,<sup>[4]</sup> the mean age of subjects was 27.91±5.88 years. Among the total 200 patients, 72% of women were in the age group of 20-30 years, while remaining in 30-40 years group. Further, our results are in concordance with Jindal et al,<sup>[5]</sup> where in they found maximum cases (45.7%) belonging to lower-middle socioeconomic strata of the society.

### Distribution of patients according to symptoms

	Study	Symptoms				
		Abnormal vaginal bleeding	Asymptomatic	F/M/loss of weight	Menstrual dysfunction	Pelvic pain
1	Ali AA et al (2012), <sup>[6]</sup>	-	-	20%	28%	80%
2	Goel G et al (2013), <sup>[7]</sup>	30%	-	13%	30%	9%
3	Potter J et al, (2014), <sup>[8]</sup>	10%	-	-	40%	50%
4	Present study	28%	4%	8%	40%	16%

The most common symptom in the present study was menstrual dysfunction (40%), followed by abnormal vaginal discharge (28%), pelvic pain (16%) and fever/malaise/loss of weight (8%). 4% of individuals were asymptomatic.

Ali AA et al (2012) observed pelvic pain (80%) as the most common symptom followed by menstrual dysfunction(28%) and fever/malaise/loss of weight (20%).<sup>[6]</sup>

Goel G et al (2013) observed abnormal vaginal bleeding (30%) and menstrual dysfunction (30%) as the most common symptoms followed by fever/malaise/loss of weight (13%) and pelvic pain (9%).<sup>[7]</sup>

Potter J et al (2014) observed pelvic pain (50%) as the most common symptom followed by menstrual dysfunction (40%) and abnormal vaginal bleeding (10%).<sup>[8]</sup>

## CONCLUSION

Infertility is not merely a health problem, it is also a social injustice and inequality. Infertility have a serious impact on both the psychological well being and the social status of the women in the developing world. There is urgent need of regular health checkups and appropriate preventive, promotive and therapeutic interventions to combat infertility and curb this social stigma.

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