

## An Exploratory Study to Assess The Utilization of Contraceptive Methods and their Effectiveness Among Women in A Selected Community

<sup>1</sup>Honey Gangadharan, <sup>2</sup>Sheeba P Joseph, <sup>3</sup>Clarice Adeline Lyngdoh

<sup>1</sup>M. Sc (Nursing), Guru Gobind Singh Indraprastha University, New Delhi, India ,

<sup>2</sup>M. Sc (Nursing), Vice Principal cum Professor, St. Stephen's Hospital College of Nursing, Delhi , <sup>3</sup>M. Sc (Nursing), Assistant Professor, St. Stephen's Hospital College of Nursing, Delhi

**How to cite this article:** Honey Gangadharan, Sheeba P Joseph, Clarice Adeline Lyngdoh. An Exploratory Study to Assess The Utilization of Contraceptive Methods and their Effectiveness Among Women in A Selected Community. International Journal of Nursing Care / Vol 14 No. 01, January - June 2026

### Abstract

This was an exploratory study conducted to assess the utilisation of contraceptive methods and their effectiveness among women residing in a selected community in India's capital city of Delhi. The study was aimed at understanding the contraceptive choices of married Indian women in a semi-urban community and link it with the larger picture of contraception use in India. It also sought to gauge the understanding of family planning practices in Indian women, contraceptive decision-making in Indian households and the effectiveness of the birth control methods used in India.

The study also aimed to understand the factors influencing contraception in India by determining the association of contraceptive utilisation with selected demographic variables. The subjects were quizzed using a structured questionnaire to accomplish the stated objectives in the study.

This study actually gave us few important insights into married women's contraception behaviour and the socio-cultural factors influencing contraception in India. The results confirmed that 97.5% of the subjects had good utilisation of contraceptives compared to only 0.75% reporting poor utilisation. This is a win for the numerous government schemes for family planning in India.

97% of subjects did not encounter any unwanted or unintended pregnancies which showcases high effectiveness of contraception. It was also found that there was significant association of utilisation of contraceptive methods with multiple demographic variables including - monthly income of subjects, their level of access to healthcare services and previous source of information about contraception; all at 0.05 level of significance.

**Keywords:** Contraceptive use among married women in India, Utilisation of Contraception in India, Effectiveness of contraception in Indian women, Socio-cultural factors influencing contraception in India, Family planning practices in India, Contraceptive choices of Indian women.

---

**Corresponding Author:** Ms. Honey Gangadharan, M. Sc (Nursing), Guru Gobind Singh Indraprastha University, New Delhi, India -110078

**E-mail:** honey.gangadharan87@gmail.com

**Submission:** Aug 11, 2025

**Revision:** September 8, 2025

**Published date:** April 20, 2026

---

## Introduction

India being the first country to introduce a nationwide Family Planning Programme in 1952 still struggles to create an impressive impact in the realm of family planning. The contraceptive usage of any method in India by 2030 is estimated to be only 64.6% by WHO (World Health Organization) (median estimate).<sup>1</sup> Family planning services can help in controlling Indian population growth which is mainly due to the following three reasons. The first one is the unmet need of family planning which is always higher for reversible methods. The second cause is the age at marriage and first child birth. In India 22.1% of the girls get married below the age of 18 years.<sup>1</sup> The third being the spacing between births which improves the chances of survival of infants and also helps in reducing the impact of population momentum on population growth if a minimum of 3 years of spacing is maintained.

With nearly 150 crore people, India suffers from the problem of overpopulation. According to a study published in March 2024 in *Lancet*<sup>2</sup>, India's current fertility rate is 2.2 births per woman. A fertility rate of this value drastically increases a population over time.

According to the National Family Health Survey 5 (NFHS 5, 2019-21), the average utilisation of contraception in India among married women of age 15-49 is 66.7%; which is better than the WHO estimate for 2030 and up from 53.5% in NFHS 4 (2015-16). But this is skewed in favour of urban women who have a utilisation percentage of 69.3% compared to rural women at 65.6%. The data also shows that female sterilisation is the most popular modern method of contraception at a whopping 37.9%. Compared to this male sterilisation is at a lowly 0.3% even lower than the injectables method which is chosen by 0.6% of women. While condoms are the next method of choice at 9.5% [urban (13.6%) and rural (7.6%)] pills find 5.1% takers. Centchroman (Ormeloxifene), was developed at CDRI, Lucknow in 1967. This drug was launched as Saheli and Choice-7 in 1992. The Ministry of Health and Family Welfare,

India introduced Centchroman in the National Family Planning Programme under the trade name "Chhaya" from April 2016.

In the past two decades, we found numerous studies which studied any one or compared two methods of contraception being used in India. We also found studies linking contraception use to rural and urban settings, regional differences and economic constraints. But there was very less data to determine what factors influenced a woman's decision to use contraception, and which one, if it was available and not scorned upon. We needed a broader sub-section of female population which could be observed in one setting but have a range of age and educational background along with differing socio-political influences. Once we found such a setting and population, we were sure it will give us invaluable insight into the contraceptive choices of a semi-urban Indian woman.

This study is being conducted to understand the impact and effectiveness of contraception utilisation in our communities, so that we can improve our approach to educate the population and increase its prevalence. We need to understand why a certain section of women choose to use contraception? Why do they prefer a certain contraception method over the other and what is the reason for switching methods if they do. Having a clearer idea of these relationships will help us develop better and more effective family planning schemes and take us closer to our goals of population control and maternal health.

## Main Objectives

1. To assess the utilisation of contraceptive methods among women residing in a selected community in Delhi.
2. To explore the effectiveness of the usage of contraceptive methods in terms of family planning and birth control among women residing in a selected community in Delhi.
3. To determine the association of the level of utilisation of contraceptive methods with selected demographic variables.

## Research Methodology

For the present study, a quantitative research approach and an exploratory research design was employed to gain a comprehensive understanding of the utilisation and effectiveness of family planning methods among women in the selected community in Delhi.

Before conducting the study, Ethical permission (Ref: SSHEC/R0320 dated 13.03.2024) was obtained from the Institutional Ethical Committee (IEC) of St. Stephen's Hospital. Administrative approval was obtained from RHTC, Najafgarh for the final study. Written informed consent was also obtained from the subjects after explaining the purpose of the study. The confidentiality of their response and anonymity was assured throughout the study.

The **demographic variables noted were** - age, marital status, education, occupation, number of children, income level, access to healthcare, and previous sources of family planning information.

The target population for this study includes married women residing in the selected community and the setting selected for the present study was the rural community in Delhi's Najafgarh area. Purposive sampling technique was used for a total sample size for the present study is 400 married women. A structured questionnaire was used as the tool to collect data from the eligible women in the selected community. To ensure the content validity of the tool, it was submitted to 9 experts from the department of community medicine, obstetrics and gynaecology and medical surgical nursing.

After incorporating their suggested modifications, the reliability of the tool was established using Kuder-Richardson 20 (KR 20) method for the structured questionnaire and it was found to be 0.8. Therefore, the tool was found to be reliable.

The final study was conducted from May 06, 2024 to May 25, 2024 in the rural community of Delhi's Najafgarh region

## Data Analysis

### *Findings related to demographic characteristics of subject*

**Table 1. Frequency and Percentage Distribution of Socio-Demographic Characteristics of the Subjects**

N = 400

S No	Demographic Variables	Frequency	Percentage (in %)
1	<b>Age (in years)</b>		
	18-25	148	37.00
	26-35	197	49.25
	36-45	55	13.75
	> 45	0	0.00
2	<b>Level of education</b>		
	No Formal Education	14	3.50
	Primary School	86	21.50
	Secondary School	110	27.50
	Graduate	190	47.50

Continue....

3	<b>Number of children</b>		
	None	14	3.50
	1-2 children	312	78.00
	3-4 children	72	18.00
	5 or more children	2	0.50
4	<b>Monthly household income (in Rupees)</b>		
	0 - 7,000	17	4.25
	7,001 -15,001	275	68.75
	15,001 - 25,000	97	24.25
	25,001 - 40,000	11	2.75
	> 40,000	0	0
5	<b>Access to healthcare services</b>		
	Very Difficult	0	0.00
	Difficult	14	3.50
	Neutral	62	15.50
	Easy	294	73.50
	Very Easy	30	7.50
6	<b>Previous source of family planning information</b>		
	Educational Institutions	13	3.25
	Family and Friends	207	51.75
	Healthcare Provider (doctor, nurse, etc.)	133	33.25
	Television & Radios Programmes	47	11.75
	Others	0	0

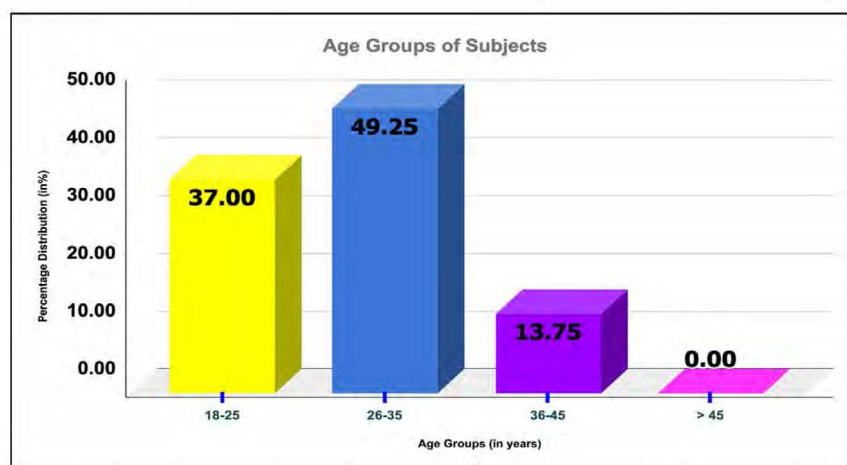
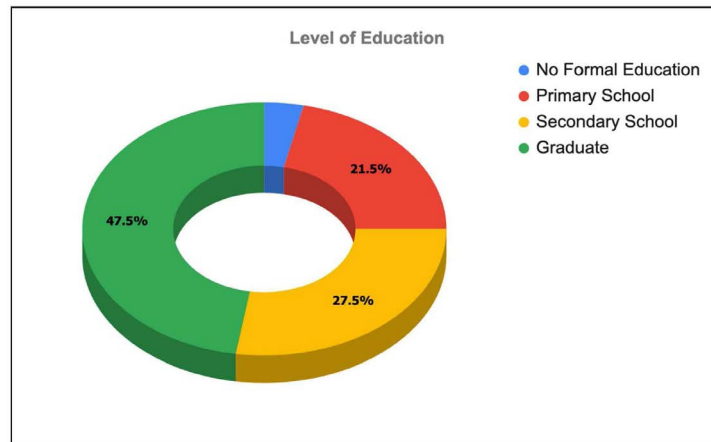
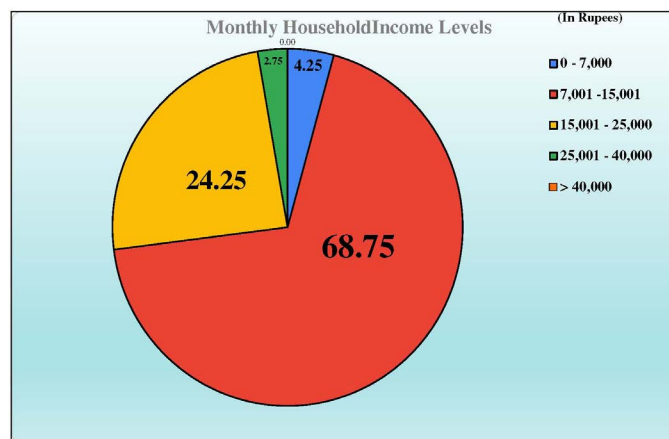


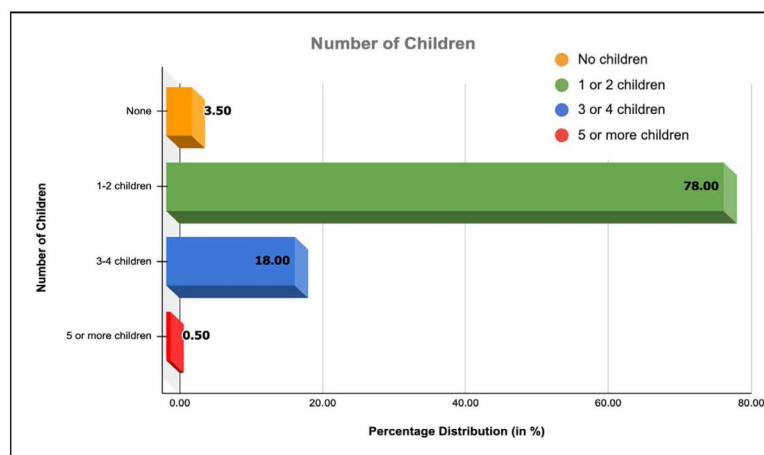
Figure 1: Bar Graph Depicting Percentage Distribution Related To Age Of The Subjects.



**Figure 2: A Doughnut Chart Depicting Percentage Distribution Related to Educational Level of the Subjects.**



**Figure 3: Pie Chart Depicting Percentage Distribution Related to Monthly Household Income of Subjects.**



**Figure 4: A Bar Chart Depicting The Percentage Distribution Related to The Number of Children the Subjects Have.**

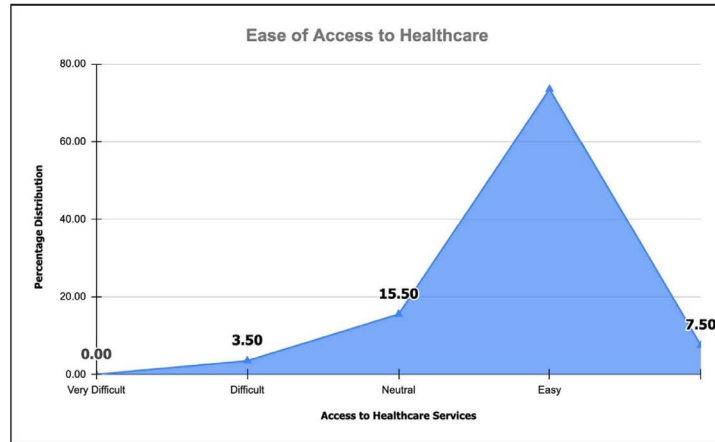


Figure 5: An Area Chart Depicting Percentage Distribution Related to Access to Healthcare Services for Subjects.

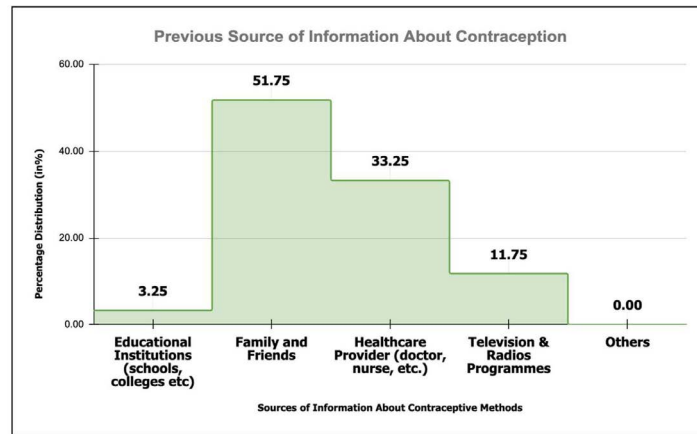


Figure 6: Stepped Area Chart Depicting Percentage Distribution Related to Source of Previous Information Regarding Family Planning.

*Findings related to the Utilisation of Contraceptive Methods*

Data presented in Table 2, signifies that:

**Table 2. Frequency and Percentage Distribution of Utilisation Level of Contraceptive Methods Among the Subjects** N = 400

Level of Utilisation	Utilisation Score	Frequency	Percentage (in %)
Poor	0 – 9	3	0.75
Average	10 – 14	8	2.00
Good	15 - 20	389	97.25

- 389 (97.25%) subjects had good utilisation of contraceptives.
- 8 (2%) subjects had average utilisation of contraceptives.
- 3 (0.75%) subjects had poor utilisation of contraceptives.

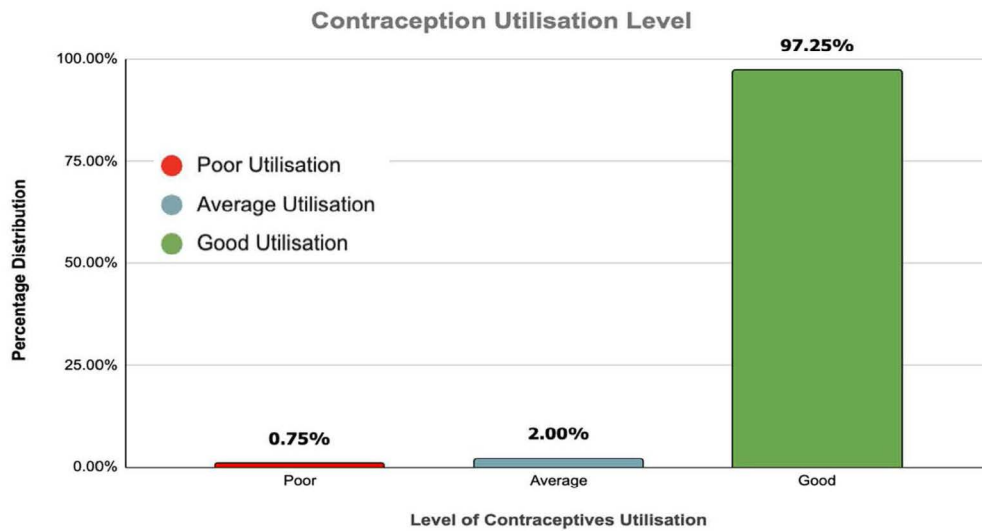


Figure 7: A Column Chart Showing the Percentage Distribution of Contraceptive Utilisation Levels for Subjects

*Findings Related to the Effectiveness of Contraceptive Methods*

Table 3. Frequency and Percentage Distribution of Effectiveness Score for Subjects

N = 400

Level of Effectiveness	Effectiveness Score	Frequency	Percentage (in%)
Effective	1	388	97.00
Ineffective	0	12	3.00

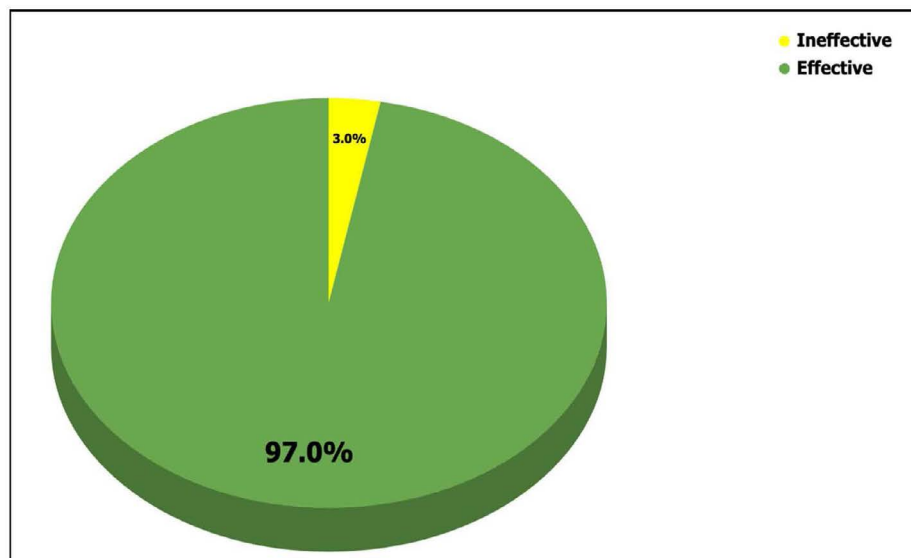


Figure 16: Pie Chart Depicting Percentage Distribution of Effectiveness Scores for Subjects



Continue....

<b>Access to healthcare services</b>						
Very Difficult	0.00	0.00	0.00	0.00	0.00	0.00
Difficult	57.14	21.43	7.14	7.14	7.14	0.00
Neutral	40.32	35.48	4.84	6.45	12.90	0.00
Easy	27.89	35.37	4.42	12.59	18.71	1.02
Very Easy	13.33	16.67	10.00	33.33	13.33	13.33
<b>Previous source of family planning information</b>						
Educational Institutions	15.38	61.54	0.00	7.69	15.38	0.00
Family and Friends	49.76	33.82	1.93	6.76	7.73	0.00
Healthcare Provider	7.52	24.81	9.77	24.06	29.32	4.51
TV & Radio Programmes	8.51	48.94	6.38	10.64	23.40	2.13
Others	0.00	0.00	0.00	0.00	0.00	0.00

**Table 5. The Percentage Distribution of Subjects Facing Side Effects While Using Various Contraceptive Methods.**

Contraceptive Method	Subjects using method	Side Effects	
		Reported by:	Percentage (in %)
IUCD	52	32	61.54
Pills	68	7	10.29
Injectables	100	10	10.00
Calendar Method	119	3	2.52
Condoms	134	3	2.24
Tubectomy	7	0	0.00

**Table 6. The Percentage Distribution of Subjects Facing Unwanted/Unexpected Pregnancies While Using Various Contraceptive Methods.**

Contraceptive Method Used	Subjects	Unintended Pregnancies	Percentage of Failure (in%)
Calendar Method	120	5	4.17
Condoms	135	5	3.70
Pills	68	2	2.94
IUCD	50	1	2.00
Injectables	20	0	0.00
Tubectomy	7	0	0.00

**The Association of Contraceptive Utilisation with Selected Demographic Variables.**

Data presented in Table 7(a) shows that:

**Table 7 (a): The Association of Contraceptive Utilisation With Selected Demographic Variables.**

N = 400

S No	Demographic Variables & Range	Utilisation			df	Chi Square Value (critical value)	P value
		Poor	Average	Good			
1	<b>Age (in years)</b>						
	18-25	2	2	144	4	5.397 *NS (9.49)	0.249
	26-35	1	6	190			
	36-45	0	1	54			
> 45	0	0	0				
2	<b>Level of education</b>						
	No Formal Education	0	0	14	6	5.924 *NS (12.59)	0.432
	Primary School	1	1	84			
	Secondary School	2	1	107			
	Graduate	0	7	183			
Post Graduate	0	0	0				
3	<b>Number of children</b>						
	None	0	0	14	6	1.137 *NS (12.59)	0.98
	1-2 children	2	7	303			
	3-4 children	1	2	69			
5 or more children	0	0	2				

- There is no significant association of the utilisation of contraceptive methods with the age group, education level or the number of

children they have as the calculated Chi square value is less than the table value at 0.05 level of significance.

Data presented in Table 7(b) shows that:

**Table 7 (b): The Association of Contraceptive Utilisation With Selected Demographic Variables.**

N = 400

S No	Demographic Variables & Range	Utilisation			df	Chi Square Value (critical value)	P value
		Poor	Average	Good			
4	<b>Monthly household income (in Rupees)</b>						
	0 - 7,000	0	0	17	6	13.475 **S (12.59)	0.036
	7,001 -15,001	1	5	269			
	15,001 - 25,000	1	4	92			
	25,001 - 40,000	1	0	10			
	> 40,000	0	0	0			

Continue....

5	<b>Access to healthcare services</b>						
	Very Difficult	0	0	0		13.702	
	Difficult	1	0	13		**S	0.036
	Neutral	0	0	62	6	(12.59)	
	Easy	1	8	285			
	Very Easy	1	1	28			
6	<b>Previous source of family planning information</b>						
	Educational Institutions	1	1	11			
	Family and Friends	2	5	200		14.022	
	Healthcare Provider	0	1	132	6	**S	0.029
	TV & Radio Programme	0	2	45		(12.59)	
	None	0	0	2			

- There is significant association of the utilisation of contraceptive methods with the monthly household income of subjects as the calculated Chi square value (13.545) is greater than the table value (12.59) at 0.05 level of significance.
  - There is significant association of the utilisation of contraceptive methods with access to healthcare services as the calculated Chi square value (13.702) is greater than the table value (12.59) at 0.05 level of significance.
  - There is also significant association of the utilisation of contraceptive methods with the previous source of family planning information as the calculated Chi square value (14.022) is greater than the table value (12.59) at 0.05 level of significance.
3. There is significant association of the utilisation of contraceptive methods with monthly income of the household, access to healthcare services and previous source of information about contraception at 0.05 level of significance.

### Discussion

The findings of the study indicate a high level of contraceptive utilisation among the married women in this community which is rural. This was in line with the 2021 cross-sectional survey by K. Sharma and Abhey Minhas carried out a to study the contraceptive usage and preferences among young married women in Himachal Pradesh<sup>3</sup>. Then they had found the current use of any contraceptive method (traditional and modern) was 85%. They also found younger women opting for traditional and temporary methods and women after age of 26 to be opting for more permanent solutions like tubectomy, which are concurrent with my study too.

Another aspect of the study was finding that over 61.54% of IUCD users experienced some kind of side-effect. Of the five women in our sample who changed contraceptive methods due to side-effects, 3 used IUCDs but only one of them was counselled

### Main Results of Thestudy

1. 97.25% of subjects had good utilisation of contraceptives and only 0.75% who had poor utilisation.
2. 97% of subjects did not encounter any unwanted or unintended pregnancies while using contraception; i.e. had effective contraception.

prior. This actually adds to the discoveries of Sunita Singal, S. K. Sikdar, S. Kaushik, Pragati Singh, Nidhi Bhatt, Ghazaleh Samandari, Manoj Pal, Levent Cagatay, Anupama Arya & Kathryn A. O'Connell from 2021<sup>4</sup>. In their cross-sectional household study to understand factors associated with continuation of IUCD use in Gujarat and Rajasthan, they found that. Clients experiencing side effects or other problems were 15 times more likely to discontinue IUCD use. Their study demonstrated the value and benefits of programmes offering IUCD services emphasising quality counselling and client-centred care to increase access, uptake, and continuation, which is one of our observations too.

Our studies did find some inconsistency when compared to the results of the community-based cross-sectional survey by Sowmya, Ansuya, V. Vinish from 2020 which meant to assess the utilisation and barriers for non- utilisation of contraceptives among married women of Udupi district, Karnataka, India<sup>5</sup>. The survey involved 323 married women aged 18–45 years. The result of the study showed low utilisation of contraceptives at 38.7%. The most frequently used method was tubectomy (73.6%). Copper T (14.4%) and male condom (8.0%) were predominant among the temporary family planning methods used by the study population. This shows a very different idea from our study where we have very high utilisation (97.25%), high usage of condoms and very low acceptance of IUCDS and opting in for Tubectomy.

### Conclusion

There is significant association of the utilisation of contraceptive methods with monthly income of the household, access to healthcare services and previous source of information about contraception.

As for limitations, the study's findings may not be applicable to women outside the selected community due to cultural, socioeconomic, or demographic differences. Also, the reliance on self-reported

data introduces the possibility of recall bias, social desirability bias, and inaccurate reporting.

We recommend that the study be conducted on a larger sample size in different settings. The future course of research will be to conduct longitudinal research to track contraceptive use and effectiveness over time, providing insights into how usage patterns and outcomes evolve. Such studies must include participants from multiple communities to enhance the generalizability of the findings and understand regional variations in contraceptive use. We can also expand the research to include the involvement of men in contraceptive decision-making and use, understanding how male partners influence contraceptive choices.

**Funding Sources:** NA

**Ethical Clearance:** was taken from institute ethics committee St Stephen's Hospital, Tis Hazari. Dated 14 March 2024, Ref no SSHEC/R0320 dated 13.03.24

**Declaration of Conflicts of Interest Statement:** Na

### References

1. National Family Health Survey (NFHS-5), 2019-21 for India
2. GBD 2021 Fertility and Forecasting Collaborators. Global fertility in 204 countries and territories, 1950-2021, with forecasts to 2100: a comprehensive demographic analysis for the Global Burden of Disease Study 2021. *Lancet* (London, England) [Internet]. 2024 Mar 19;403(10440):S0140-6736(24)005506.
3. Sharma K, Minhas A. Contraceptive usage and preferences among young married women in Himachal Pradesh. *International Journal of Clinical Obstetrics and Gynaecology*. 2021 Jul 1;5(4):150-3.
4. Singal S, Sikdar SK, Kaushik S, Singh P, Bhatt N, Samandari G, et al. factors associated with continuation of intrauterine device use in Gujarat and Rajasthan, India: a cross-sectional household study. *Sexual and Reproductive Health Matters*. 2021 Jun 21;29(2).
5. Sowmya, Ansuya, Vinish V. Contraceptives utilization and barriers in Karnataka, Southern India: A survey on women residing in slums. *Clinical Epidemiology and Global Health*. 2020 Apr;