

COMPARATIVE ANALYSIS OF CONTRACEPTIVE USE AMONG LOW AND HIGH PARITY WOMEN IN INDIA: INSIGHTS FROM NFHS-4 AND NFHS-5



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ABOUT THE ORGANIZATION

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Introduction

Family planning is an essential component of public health policies that aim to improve mother and child health, reduce unplanned pregnancies, and promote long-term population development. In India, the government has sponsored several initiatives to improve the availability and use of contraceptive techniques. Contraception is an essential component of reproductive health, providing several benefits such as preventing unplanned pregnancies, lowering mother and infant mortality, and empowering women to make informed decisions about family planning. Female sterilization remains the most common form of contraception in India.

According to data from the National Family Health Survey (NFHS-4), female sterilization accounted for 36% of contraceptive use among married women, highlighting its dominance as a family planning method in the country.

High parity women, who have typically completed their desired family size, often opt for sterilization as a definitive solution to prevent further pregnancies. In contrast, low parity women have a significant unmet need for spacing methods of contraception—methods that allow for intervals between births rather than permanent solutions.

For these reasons, in 2016, the government of India launched Mission Parivar Vikas. It aims at increasing access to at least one quality family planning information and service among more than 150 districts with high fertility.

The initiative focuses on increasing the Contraceptive Prevalence Rate and Modern Contraceptive Prevalence Rate, increasing the use of modern contraceptive methods, focusing on needs among low parity women.

RATIONALE

Low parity women have gotten comparatively little attention in research, despite having a large window of opportunity. Because low parity women are often in their early reproductive years, using effective contraception at this critical juncture can have a major positive impact on their health, family planning outcomes, and overall well-being. By focusing on low parity women, we may be able to address the unmet need for spacing measures and dispel myths and misconceptions regarding contraception. Understanding the factors driving low parity women's use of contraceptives, such as the influence of husbands, cultural norms, and knowledge levels, would enable the creation of focused treatments that are specific to the needs of this population. Consequently, the purpose of this study is to offer a thorough evaluation of the use of contraceptives among low and high parity women, leveraging data from NFHS-4 and NFHS-5 to uncover critical insights. This will inform future family planning initiatives, ensuring that they are inclusive of low parity women and effectively address the challenges they face.

RESEARCH QUESTION

What are the differences in contraceptive use in India as observed from NFHS-4 and 5 data.

Are there any differences in use of contraceptive across low and high parity women of reproductive age?

Study Objectives

To Analyze and compare NFHS-4 and NFHS-5 data on contraceptive usage.

To compare and analyze Family Planning indicators between NFHS4 and NFHS5 with respect to low parity and high parity.

To study the factors affecting the uptake of contraception in India.

REVIEW OF LITERATURE

Year of Study	Title	Author Name & Reference	Key Objectives	Key Points of Methodology	Key Results
2022	"Impact of Family Planning Programs on Contraceptive Use in India: A Comparative Analysis of NFHS-4 and NFHS-5"	Gupta, S., & Desai, S.	To compare the changes in contraceptive use and method mix between NFHS-4 and NFHS-5, with a focus on Mission Parivar Vikas districts.	The study utilized a comparative analysis approach, drawing data from the NFHS-4 and NFHS-5 surveys to assess changes in contraceptive use and method mix. Special focus was given to districts under the Mission Parivar Vikas program.	According to the data, there was a notable rise in the districts of Mission Parivar Vikas regarding the usage of contemporary contraceptives between the two surveys. Field monitors significantly improved health outcomes by ensuring timely referrals and follow-ups for high-risk children
2022	Analysis of trends in family planning and reproductive health of women in Haryana: learning from NFHS-4 and NFHS-5	Shalu Yadav ¹ and T. Longkoi Khamniungan ²	To analyze trends in family planning and reproductive health among women in Haryana using NFHS-4 and NFHS-5 data.	The study employs a comparative analysis of NFHS-4 and NFHS-5 survey data, focusing on changes in contraceptive use, fertility rates, and reproductive health outcomes among women in Haryana.	Women's reproductive health extends beyond individual well-being, as a healthy reproductive system enhances pregnancy, labor, and delivery outcomes, benefiting the health of mothers, children, families, and communities.
2021	Modern contraceptive use among women in need of family planning in India: an analysis of the inequalities related to the mix of methods used.	Fernanda Ewerling, Lotus McDougal, Anita Raj, Leonardo Z. Ferreira, Cauane Blumenberg, Divya Parmar and Aluisio J. D. Barros.	To assess the forms of contraception used by Indian women requiring family planning and examine disparities based on age, empowerment, affluence, and subnational region.	This study analyzes national survey data to assess contraceptive use among Indian women in need of family planning, focusing on disparities by age, empowerment, affluence, and region.	The study's conclusions show that 72% of partnered Indian women who require contraception are using a contemporary approach.

Year of Study	Title	Author Name & Reference	Key Objectives	Key Points of Methodology	Key Results
2008	Societal Norms and Family Planning in Rural India	Hall, M., et al.	To investigate how societal norms influence family planning methods in rural India.	Conducting qualitative surveys and interviews to analyze the influence of societal norms on family planning methods in rural India.	Societal norms drive female sterilization, placing family planning responsibility on married women. Stigma and misinformation about male sterilization, coupled with cultural and religious beliefs, limit its adoption, with only 0.3% of men choosing this method.
2022	Knowledge and Utilization of Reversible Contraceptive Methods	Suri, S.	To assess awareness and usage of reversible contraceptives among young and low-parity women.	Longitudinal study with health outcome tracking before and after home visits.	An exploratory quantitative study using surveys to investigate awareness and utilization of reversible contraceptive methods among young and low-parity women.

STUDY METHODOLOGY

Study Design- This analytical study is based on the extracted secondary data from the National Family Health Survey (NFHS) rounds 4 and 5.

Study Population- Inclusion Criteria: Married women of reproductive age (15-49 years)
Exclusion Criteria: Unmarried, divorced or separated women of reproductive age 15-49 years.

Duration of Study- Secondary data analysis was undertaken between 15th March to 15th June 2024.

Sample size: The sample size will include women of reproductive age (15-49) from the NFHS-4 and NFHS-5 datasets.

RESULTS

SOCIO DEMOGRAPHIC INDICATORS:

RELIGION:

Religion	NFHS-4	%	NFHS-5	%
Hindu	48042	75.42	43980	76.23
Muslim	8302	13.03	6950	11.7
Christian	4283	6.72	4096	7.1
Others	3069	4.83	2867	4.97

Hindu: Increased contraceptive use from 75.42% (NFHS-4) to 76.23% (NFHS-5).

Muslim: Decreased from 13.03% (NFHS-4) to 11.7% (NFHS-5).

Christian: Slightly increased from 6.72% (NFHS-4) to 7.1% (NFHS-5).

Other: Increased from 4.83% (NFHS-4) to 4.97% (NFHS-5).

There is significant difference between religion in NFHS 4 & 5 . The chi-square statistic is 33.31. The p-value is < 0.0001

RESULTS

CASTE:

Caste	NFHS-4	%	NFHS-5	%	
SC	51038	80.45	45985	79.71	
ST	9356	14.75	8497	14.73	
GEN	2844	4.48	2877	4.99	
Don't know /none of them	199	0.31	334	0.58	

Scheduled Castes (SC): Decreased from 80.45% (NFHS-4) to 79.71% (NFHS-5).

Scheduled Tribes (ST): Almost unchanged at 14.75% (NFHS-4) and 14.73% (NFHS-5).

General Category (GEN): Increased from 4.48% (NFHS-4) to 4.99% (NFHS-5).

Don't Know/None: Increased from 0.31% (NFHS-4) to 0.58% (NFHS-5).

There is significant difference between caste in NFHS 4 & 5 . The chi-square statistic is 1033.88. The p-value is < 0.0001

EDUCATIONAL STATUS :

Educational status	NFHS-4	%	NFHS-5	%
No education	21170	33.24	16270	28.2
Primary	9400	14.76	8247	14.29
Secondary	27481	43.14	27076	46.93
Higher	5645	8.86	6100	10.57

No Education: Decreased from 33.24% (NFHS-4) to 28.2% (NFHS-5).

Primary Education: Slight decline from 14.76% (NFHS-4) to 14.29% (NFHS-5).

Secondary Education: Increased from 43.14% (NFHS-4) to 46.93% (NFHS-5).

Higher Education: Increased from 8.86% (NFHS-4) to 10.57% (NFHS-5).

There is significant difference between educational status in NFHS 4 & 5 . The chi-square statistic is 441.47. The p-value is < 0.0001

OCCUPATION WISE:

Occupation of respondent	NFHS-4	%	NFHS-5	%
Currently working	15600	24.49	16849	29.2
Currently not working	48096	75.51	40844	70.8

Currently Working: Increased from 24.49% (NFHS-4) to 29.2% (NFHS-5).

Currently Not Working: Decreased from 75.51% (NFHS-4) to 70.8% (NFHS-5).

There is significant difference between occupation in NFHS 4 & 5 . The chi-square statistic is 343.36. The p-value is < 0.0001

WEALTH INDEX:

Wealth Quantile	NFHS-4	%	NFHS-5	%	
Quantile 1	11395	17.89	11868	20.57	
Quantile 2	13395	21.03	12791	22.17	
Quantile 3	113552	21.28	12190	21.13	
Quantile 4	12853	21.18	11175	19.37	
Quantile 5	12501	19.63	9669	16.76	

Quantile 1 (Poorest): Increased from 17.89% (NFHS-4) to 20.57% (NFHS-5).

Quantile 5 (Richest): Decreased from 19.63% (NFHS-4) to 16.76% (NFHS-5).

There is significant difference between wealth index in NFHS 4 & 5 . The chi-square statistic is 410.99. The p-value is < 0.0001

LOCATION WISE:

Location	NFHS-4	%	NFHS-5	%	
Rural	44752	70.26	43581	75.54	
Urban	18944	29.74	14112	24.46	

Rural Areas: Increased from 70.26% (NFHS-4) to 75.54% (NFHS-5).

Urban Areas: Decreased from 29.74% (NFHS-4) to 24.46% (NFHS-5).

There is significant difference between location in NFHS 4 & 5 . The chi-square statistic is 426.02. The p-value is < 0.0001

FAMILY PLANNING INDICATORS:

A. Awareness of any contraceptive method in Low and High parity women: Insights from NFHS-4 & NFHS-5

Awareness of any contraceptive method - Female	NFHS-4		NFHS-5		LP-4		LP-5		HP-4		HP-5	
Knows No method	459	0.72	146	0.25	157	0.96	59	0.4	302	0.64	87	0.2
Knows folkloric / Traditional	41	0.07	16	0.03	14	0.09	8	0.05	27	0.06	87	0.02
Knows Modern method	63196	99.22	57531	99.72	15989	98.95	14848	99.55	47036	99.31	42683	99.78

In NFHS-5, the percentage of women unaware of any contraceptive methods decreased significantly compared to NFHS-4, dropping from 0.72% to 0.25%. Awareness of modern contraceptive methods remained high and even increased slightly across all groups. Knowledge of folkloric or traditional methods saw a slight decline from NFHS-4 to NFHS-5.

In low parity women, there is significant difference between awareness of any contraceptive method in NFHS 4 & 5 . The chi-square statistic is 38.4991. The p-value is < 0.0001
In high parity women, there is significant difference between awareness of any contraceptive method in NFHS 4 & 5 . The chi-square statistic is 136.705. The p-value is < 0.001.

B. EVER USED ANY METHOD:

Ever used any method	NFHS-4		NFHS-5		LP-4		LP-5		HP-4		HP-5	
No	20285	31.85	10088	17.49	8909	54.55	5645	37.85	11376	24.02	4443	10.39
Yes, used outside calendar	2823	4.43	3144	5.45	584	3.58	1038	6.96	2239	4.73	2106	4.92
Yes, used in calendar	40588	63.72	44461	77.06	6838	42.38	8232	55.19	33750	71.26	36229	84.69

women who have never used any contraceptive method decreased from 31.85% in NFHS-4 to 17.49% in NFHS-5. Usage of contraceptives within the calendar method increased significantly from 63.72% in NFHS-4 to 77.06% in NFHS-5. The percentage of women using methods outside the calendar method also saw a slight increase from 4.43% to 5.45% during the same period.

In low parity women, there is significant difference between Ever used any method in NFHS 4 & 5. The chi-square statistic is 925.76. The p-value is < 0.0001

In high parity women, there is significant difference between ever used any method in NFHS 4 & 5 . The chi-square statistic is 2904.52. The p-value is < 0.0001

C. CORRECT KNOWLEDGE OF THE FERTILE PERIOD:

Correct Knowledge of the Fertile Period	NFHS-4		NFHS-5		LP-4		LP-5		HP-4		HP-5	
No	50237	78.87	41946	72.71	12629	77.33	10625	71.24	37608	79.4	31321	73.22
Yes	13459	21.13	15747	27.29	3702	22.67	4290	28.76	9757	20.6	11457	26.78

There was an increase in the percentage of women with correct knowledge of the fertile period from 21.13% in NFHS-4 to 27.29% in NFHS-5. Despite this improvement, a significant proportion of women still lack this knowledge, with 72.71% in NFHS-5 not knowing the fertile period compared to 78.87% in NFHS-4. The trend is similar for both low-parity and high-parity groups.

In low parity women, there is significant difference between correct knowledge of the fertile period in NFHS 4 & 5 . The chi-square statistic is 152.10. The p-value is < 0.0001 .

In high parity women, there is significant difference between correct knowledge of the fertile period in NFHS 4 & 5 . The chi-square statistic is 477.48. The p-value is < 0.0001

D. Current use by method type:

Current use by method type	NFHS-4		NFHS-5		LP-NFHS4		LP-5		HP-4		HP-5	
No method	28047	44.03	17305	29.99	11776	72.11%	8401	56.33%	16271	34.35	8904	20.81
Traditional method	4695	7.37	6744	11.69	1234	7.56%	1951	13.08%	3461	7.31	4793	11.2
Modern method	30954	48.6	33644	58.32	3321	20.34%	4563	30.59%	27633	58.34	29081	67.98

The use of modern contraceptive methods increased from 48.6% in NFHS-4 to 58.32% in NFHS-5, while the use of no method decreased from 44.03% to 29.99%. Traditional method use rose from 7.37% to 11.69%. These trends are consistent for both low-parity and high-parity groups, with notable increases in modern method use and decreases in the use of no method.

In low parity women, there is significant difference between current use by method type in NFHS 4 & 5 . The chi-square statistic is 859.19. The p-value is < 0.0001

In high parity women, there is significant difference between current use by method type in NFHS 4 & 5 . The chi-square statistic is 2179.9 The p-value is < 0.0001

E. NEED AND DEMAND FOR FAMILY PLANNING:

Need and Demand for Family Planning	NFHS-4		NFHS-5			LP-4		LP-5			HP-4		HP-5	
Unmet need for spacing	3388	5.32	1958	3.39		2070	12.68	1177	7.89		1318	2.78	781	1.83
Unmet need for limiting	4364	6.85	2539	4.4		444	2.72	343	2.3		3920	8.28	2196	5.13
Using for spacing	4553	7.15	6631	11.5		3005	18.4	4378	29.35		1548	3.27	2253	5.27
Using for limiting	31096	48.82	33757	58.52		1550	9.49	22136	14.32		29546	62.38	31621	73.93
No unmet need	10177	15.98	6898	11.96		6553	40.13	4832	32.4		3624	7.65	2066	4.83
Infecund, menopausal	10117	15.88	5902	10.23		2709	16.59	2049	13.74		7408	15.64	3853	9.01

The unmet need for spacing and limiting family planning decreased from NFHS-4 to NFHS-5, with spacing needs dropping from 5.32% to 3.39% and limiting needs from 6.85% to 4.4%. Usage for spacing increased significantly from 7.15% to 11.5%, and usage for limiting rose from 48.82% to 58.52%. The percentage of women with no unmet need declined from 15.98% to 11.96%. The proportion of infecund and menopausal women also decreased from 15.88% to 10.23%.

In low parity women, there is significant difference between need and demand for family planning in NFHS 4 & 5 . The chi-square statistic is 236.14. The p-value is < 0.0001

In high parity women, there is significant difference between need and demand for family planning in NFHS 4 & 5 . The chi-square statistic is 421.9 The p-value is < 0.0001

DISCUSSIONS

This research investigates use in family planning practices in India between NFHS-4 (2005-06) and NFHS-5 (2015-16). We explore the influence of sociodemographic factors (geography, wealth, religion, education, employment) and awareness levels on contraceptive use. The analysis examines ever-use of any method, knowledge of the fertile period, current method use, and unmet need for family planning.

Key Findings: Overall Increase: Contraceptive use increased across most categories, indicating a growing acceptance of family planning in India.

Religious Variations: While Hindus showed a slight rise, Muslims and Christians exhibited a decrease. Further research is needed to understand these disparities.

Socioeconomic Influence: Education, employment, and wealth positively correlate with contraceptive use, highlighting the role of socioeconomic status in family planning choices.

Urban-Rural Divide: An unexpected decline in contraceptive use was observed in urban areas, necessitating targeted interventions.

Improved Awareness: A significant increase in awareness of modern contraceptive methods signifies progress in family planning education.

Increased Ever-Use: The proportion of women who have never used contraception has decreased, indicating growing acceptance of family planning practices.

DISCUSSIONS

Fertile Period Knowledge: More women understand their fertile period, empowering informed choices about contraception.

Shifting Preferences: Modern methods (condoms, pills, IUDs) are gaining popularity, while female sterilization remains dominant, especially among high-parity women.

Unmet Need: Despite the increase, a significant unmet need for family planning services persists.

Limitations:

Further research is needed to understand specific trends (e.g., religious variations).

Future Research Directions: Explore reasons behind the decline in contraceptive use among certain religious groups and urban women. Investigate factors influencing the choice of specific contraceptive methods. Analyze the effectiveness of different family planning programs in reaching various populations.

Conclusion

India's family planning landscape shows progress, with an overall rise in contraceptive use.

However, disparities across religious groups and the urban-rural divide remain same.

Further research is crucial to understand these nuances and inform the development of more effective strategies for achieving optimal reproductive health outcomes for all.

Suggestions for Improvement

Tailored Interventions by Religion and Location:

Conduct research to understand the reasons behind the decline in contraceptive use among certain religious groups and urban women.

Empowering Women Through Education:

Invest in educational initiatives that equip women with comprehensive reproductive health knowledge, including contraceptive options and their benefits.

Promoting Male Involvement:

Encourage male participation in family planning discussions and decision-making.

Continued Monitoring and Evaluation:

Regularly monitor family planning trends to identify emerging disparities and track the effectiveness of implemented programs.

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thank you!