

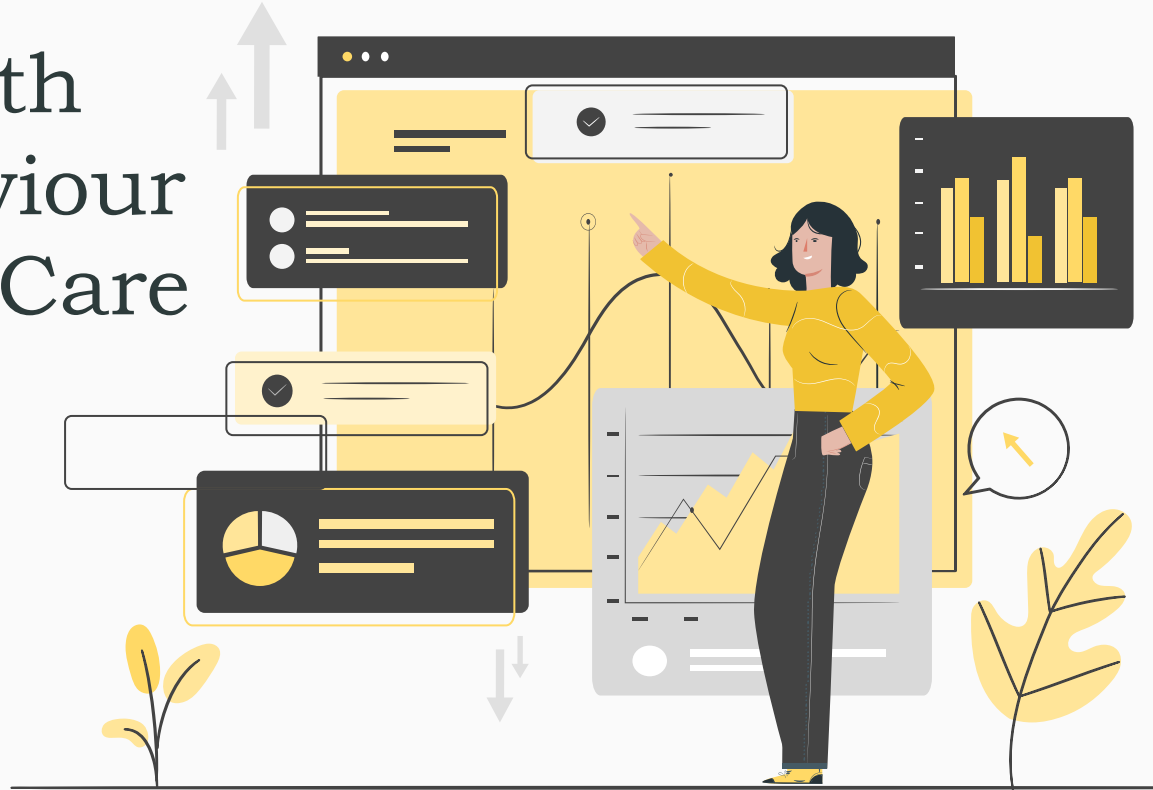
A Study on Maternal Health Seeking Behaviour And Neonatal Care

Group no.4

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INTRODUCTION



01

99% of maternal deaths globally occur in underdeveloped nations. India is no exception to this.

02

The maternal and neonatal are directly related to the socio-demographic factors.

03

Most of the schemes launched by the government(PMMVY, SUMAN) are primarily focused on the child's health than the mother's well being.

04

Factors such as cultural norms, awareness, and socio-economic conditions influence health seeking behaviour.

MOTIVATION

- ❑ Maternal and child health is a critical public health issue affecting India.
- ❑ Given the disparity in maternal mortality rate and infant mortality rate and the diverse socio-economic factors in India, we are motivated to take up a study on maternal health seeking behaviour and neonatal care in recent years.

ANTENATAL CARE

LITERATURE REVIEW

AUTHORS(YEAR)	NAME & SOURCE	FINDINGS
Rani et al.(2008)	Maternal Healthcare Seeking among Tribal Adolescent Girls in Jharkhand, Economic and Political Weekly, Dec. 1 - 7, 2007, Vol. 42, No. 48 (Dec. 1 - 7, 2007), pp. 56-61	Women in South India had better access to antenatal care than women in North India.
Jat et al.(2011)	Factors affecting the use of maternal health services in Madhya Pradesh state of India: a multilevel analysis, 2011, International Journal for Equity in Health	Mother's education and their socioeconomic strata played an important role in women receiving ANC.
Zuhair and Roy (2017)	Socioeconomic Determinants of the Utilisation of Antenatal Care and Child Vaccination in India. Asia Pacific Journal of Public Health, November 2017, Vol. 29, No. 8 (November 2017), pp. 649-659	Health insurance and exposure to mass media have positive impact on ANC utilisation.

INSTITUTIONAL DELIVERY



AUTHORS(YEAR)	NAME & SOURCE	FINDINGS
Pathak et al.(2010)	Economic Inequalities in Maternal Health Care: Prenatal Care and Skilled Birth Attendance in India, 1992–2006, 2010, PLOS One	Slow progress in the utilization of PNC and SBA in India was recorded from 1992-2006 with disparities between poor and non poor mothers where the poor remained at a great disadvantage.
Saravanakumar et al.(2017)	Institutional Delivery in The Public And Private Sectors in The Urban Slums of Tamil Nadu, International Journal Of Engineering And Scientific Research, 7th July, 2017, vol no. 5\	Factors like age at marriage, past pregnancy records, cost and quality of hospital services, type of delivery, religion, caste, education, occupation, mass media exposure, and standard of living determine the choice of pregnant women in the place of delivery.
Mondal et al.(2022)	Women's autonomy and utilization of maternal healthcare in India: Evidence from a recent national survey, 2022, PLOS ONE.	Women's autonomy increased the maternal healthcare services but no correlation was found between women's autonomy and institutional delivery.

NEONATAL CARE

AUTHORS(YEAR)	NAME & SOURCE	FINDINGS
Willis et al.(2009)	Gender Differences in Perception and Care-seeking for Illness of Newborns in Rural Uttar Pradesh, India, Journal of Health, Population and Nutrition , FEBRUARY 2009, Vol. 27, No. 1 (FEBRUARY 2009), pp. 62-71	Households preferred to spend more on the wellness of the male neonates over the female neonates.
Willis et al.(2011)	Utilization and perceptions of neonatal healthcare providers in rural Uttar Pradesh, India.(2011) International Journal for Quality in Health Care, Vol. 23, No. 4 (August 2011), pp. 487-494.Published by: Oxford University Press Done	People in Shivgarh district preferred unqualified allopathically oriented providers' than qualified allopathically oriented providers.
Iyenger et al.(2012)	Early Postpartum Maternal Morbidity among Rural Women of Rajasthan, India: A Community-based Study, Journal of Health, Population and Nutrition , JUNE 2012, Vol. 30, No. 2, pp. 213-225.	Postpartum anaemia was the major maternal morbidity reason among women in Rajasthan but taking institutional deliveries didn't necessarily prevent life threatening morbidities of the neonates.

RESEARCH GAP

In the part of the literature studied for this project, no research has been found to have identified the causes of the low proportion of postpartum care, even though the respondents choose ANC and institutional delivery



OBJECTIVES



☐ To find whether mothers are taking ANC, ID, PPC and NNC, if so, then in which proportion.

☐ To see if ANC, ID, PPC and NNC depend on the following and if so, how :

- I. Education of father and mother.
- II. Household Income
- III. Religion
- IV. Caste
- V. Exposure to mass media
- VI. Occupation status
- VII. Confidence in Institutions
- VIII. Access to health insurance
- IX. Maternal and Anganwadi benefits
- X. No. of children

☐ To find the effect of delivery complications on the propensity to opt for PPC.

☐ To find the effect of woman's autonomy in terms of occupation and other factors on the propensity to opt for ANC, ID, PPC and NNC.

DATA SOURCES AND METHODOLOGY

- ❑ For the purpose of our project we have used Eligible Woman, Household, Individual datasets from 2011- 12 IHDS 2 data.
- ❑ We have used Venn diagram to illustrate the sets pictorially as circles or closed curves within a universal set, common elements of the sets being represented by intersections of the circles.
- ❑ Logistic Regression is a statistical test used to predict a single binary variable using one or more other variables. It also is used to determine the numerical relationship between such a set of variables.
- ❑ Pairwise Correlation is a statistical measure that allows us to detect highly correlated features which bring no new information to the dataset.

DESCRIPTIVE STATISTICS

Variable	Frequency	Percentage	Mean
h_edu1 (illiterate)	7521	20.41	-
h_edu2 (primary)	3190	8.66	-
h_edu3 (secondary)	18221	49.45	-
h_edu4 (upper secondary)	7914	21.48	-
w_edu1 (illiterate)	15163	38.37	-
w_edu2 (primary)	2876	7.28	-
w_edu3 (secondary)	16146	40.86	-
w_edu4 (upper secondary)	5335	13.50	-
mm_exposure	30208	76.43	-
health_insurance	4357	11.02	-
LB_delivery_complications	30306	76.68	-

Variable	Frequency	Percentage	Mean
Confidence in Govt institutions			
Great deal of confidence	21418	54.27	-
Only some confidence	13787	34.94	-
Hardly any confidence	4258	10.79	-
Confidence in Private institution			
Great deal of confidence	28749	72.87	-
Only some confidence	9022	22.87	-
Hardly any confidence	1683	4.27	-

DESCRIPTIVE STATISTICS

Variable	Frequency	Percentage	Mean
Age group			
15-21	2201	5.57	-
22-28	8092	20.48	-
29-35	8960	22.67	-
36-42	8942	22.63	-
43-49	7086	17.93	-
50-56	3752	9.49	-
57-63	438	1.11	-

Variable	Frequency	Percentage	Mean
religion1 (Hindu)	32326	81.79	-
religion2 (Muslim)	4774	12.08	-
religion3 (Christian)	926	2.34	-
religion4 (Others)	1497	3.79	-
caste1 (Brahmin/General)	11222	28.44	-
caste2 (OBC)	16023	40.61	-
caste3 (SC)	8415	21.33	-
caste4 (ST)	3274	8.30	-
caste5 (Others)	523	1.33	-

DESCRIPTIVE STATISTICS

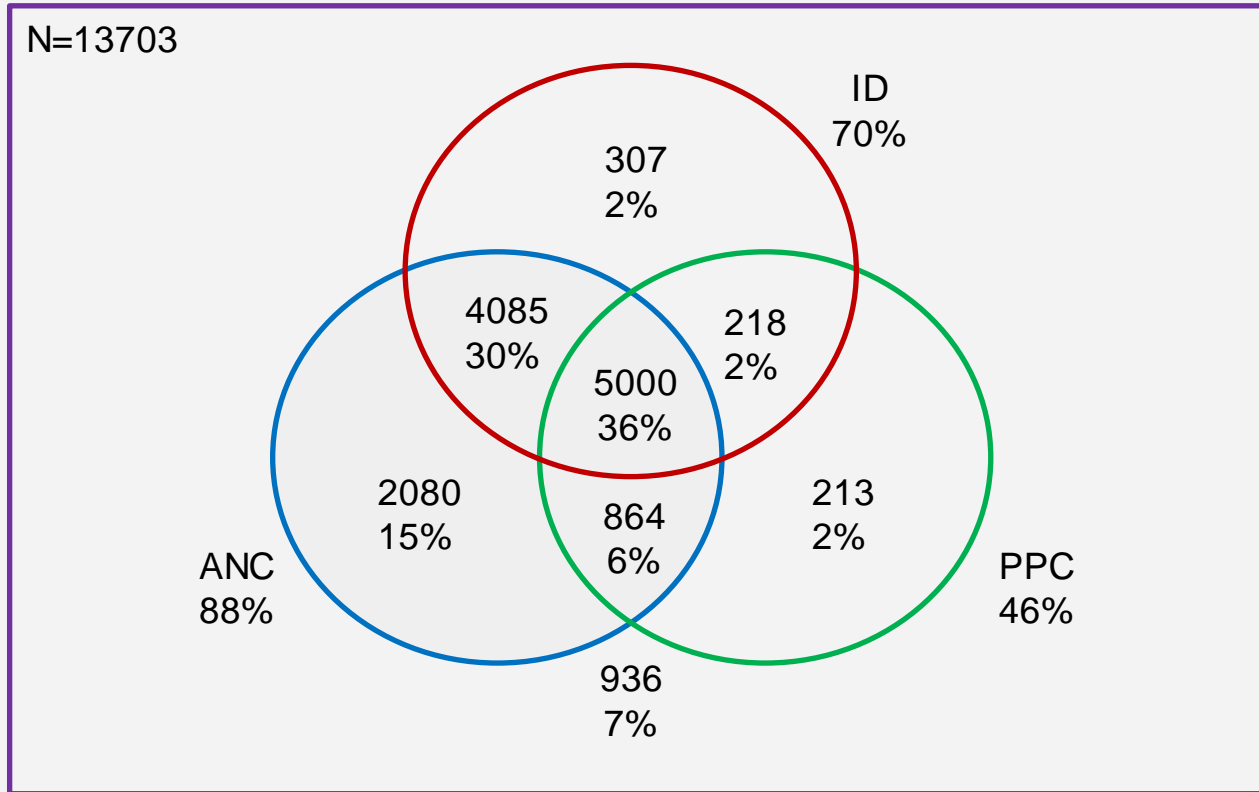
Variable	Frequency	Percentage	Mean
no_children (0)	2861	7.24	-
no_children (1)	6119	15.49	-
no_children (2)	12712	32.17	-
no_children (3)	9114	23.07	-
no_children (4)	4644	11.75	-
no_children (5)	2189	5.54	-
no_children (6)	1071	2.71	-
no_children (7)	477	1.21	-
no_children (8)	206	0.52	-
no_children (9)	75	0.19	-
no_children (10)	27	0.07	-
no_children (11)	8	0.02	-
no_children (12)	4	0.01	-
no_children (13)	2	0.01	-
INCOMEPC	-	-	27700.86

RESULTS AND ANALYSIS



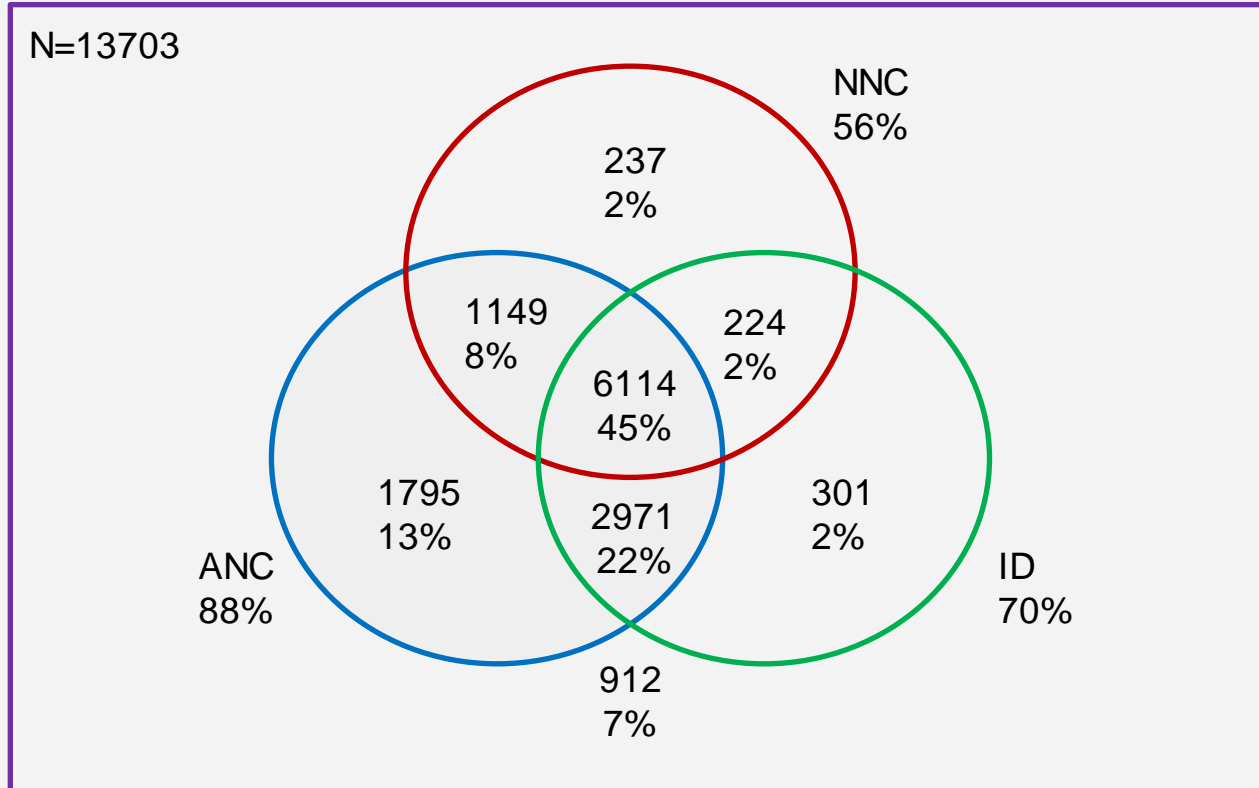
VENN DIAGRAM RELATING ANC, PPC AND ID

Figure 1



VENN DIAGRAM RELATING NNC, ANC AND ID

Figure 2



**Table to show correlation between income per capita with
ANC, ID, PPC, NNC**

Table 1

	ANC	ID	PPC	NNC
Log income	0.2089**	0.2552**	0.1095**	0.1599**



Per capita income is positively corelated to different maternal health seeking behaviour, ANC, ID, PPC, NNC. These are significant at 5%

Percentage of women opting for ANC, ID, PPC, NNC against education level

Table 2.1

	ANC	ID	PPC	NNC
Women's Education				
Illiterate	72.29	50.31	36.95	43.7
Primary	87.93	62.01	36.64	51.47
Secondary	93.73	76.14	49.53	60.59
Above Secondary	98.57	92.09	55.91	70.36
Spouse's Education				
Illiterate	72.98	49.65	35.59	43.49
Primary	83.67	59.55	36.86	49.08
Secondary	89.34	71.26	47.3	57.27
Above Secondary	95.74	85.78	53.78	66.89

All values are in percentages

Percentage of women opting for ANC, ID, PPC, NNC against religion and caste

Table 2.2

	ANC	ID	PPC	NNC
Religion				
Hindu	87.63	71.03	46.44	57.47
Muslim	84.35	62.58	39.83	49.11
Christian	96.75	83.52	55.68	64.39
Sikh, Buddhist, Jain, tribal, others, none	93.3	70	56.52	61.96
Caste				
Bramhin, Forward/general(except Bramhin)	92.97	75.99	46.6	58.07
OBC	85.47	71.23	48.63	57.95
SC	85.92	65.67	43.72	55.63
ST	83.64	54.92	37.97	45.7
Others	96.36	89.63	53.37	68.1

All values are in percentage form

Percentage of women opting for ANC, ID, PPC, NNC against confidence in institution

Table 2.3

	ANC	ID	PPC	NNC
Confidence in Govt. Institution				
Great deal of confidence	89.29	71.14	47.21	57.48
Only some confidence	85.81	68.80	43.62	54.66
Hardly any confidence	84.21	67.61	46.90	56.97
Confidence in private Institution				
Great deal of confidence	87.20	69.90	47.84	56.88
Only some confidence	88.38	69.67	40.78	55.29
Hardly any confidence	87.80	71.78	39.66	54.89

All values are in percentage form

Table 2.4

Percentage of women opting for ANC, ID, PPC, NNC against different parameters of community involvement and Anganwadi benefits

	ANC	ID	PPC	NNC
Member & benefits				
Self Help Group	94.49	78.69	47.68	63.23
Mahila Mandal	96.66	80.47	54.15	68.69
Anganwadi benefit				
Yes	92.16	70.08	45.33	58.80
No	82.61	69.65	46.62	53.77

All values are in percentage form

Table 2.5

Percentage of women opting for ANC, ID, PPC, NNC against age group of women

	ANC	ID	PPC	NNC
Age group				
15-21	90.66	77.46	45.16	53.49
22-28	90.62	74.32	47.25	57.87
29-35	86.66	67.13	46.27	57.73
36-42	77.56	57.66	41.37	51.48
43-49	63.25	38.66	33.90	37.71
50-56	50.00	12.50	23.53	23.53
57 and above	25.00	25.00	25.00	25.00

All values are in percentage form

Percentage of women opting for ANC, ID, PPC, NNC against women's autonomy parameters

Table 2.6

	ANC	ID	PPC	NNC
Decides the number of children to have	87.8	70.26	45.27	56.2
Decides what to do if the child falls sick	88.14	70.23	45.59	56.44
Decides what to do if own falls sick	88.36	70.33	45.56	56.91
Can visit health center alone	88.53	70.07	46.61	57.16
Ever worked for wages/ pay	84.81	62.53	46.79	56.47

All values are in percentage form

Table showing regression results

Table 3.1

	ANC	ID	PPC	NNC
Log income	0.343*** (0.0361)	0.299*** (0.0272)	0.0826*** (0.0224)	0.186*** (0.0229)
Women's education: primary	0.547*** (0.121)	0.254*** (0.0883)	-0.103 (0.0845)	0.156* (0.0812)
Women's education: secondary	1.118*** (0.0804)	0.562*** (0.0551)	0.292*** (0.0502)	0.409*** (0.0500)
Women's education: above secondary	2.357*** (0.212)	1.366*** (0.102)	0.378*** (0.0716)	0.618*** (0.0738)
Spouse's education: Primary	0.246** (0.114)	0.0712 (0.0871)	-0.0711 (0.0836)	-0.0135 (0.0814)
Spouse's education: secondary	0.324*** (0.0749)	0.214*** (0.0610)	0.196*** (0.0570)	0.129** (0.0559)
Spouse's education: above secondary	0.546*** (0.125)	0.456*** (0.0852)	0.255*** (0.0720)	0.242*** (0.0721)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3.2

Table showing regression results

	ANC	ID	PPC	NNC
Confidence in Govt. institution(only some confidence)	-0.210***	-0.0771	-0.148***	-0.101**
	(0.0658)	(0.0471)	(0.0397)	(0.0401)
Confidence in Govt. institution(hardly any confidence)	-0.382***	-0.145**	0.0381	0.0136
	(0.0946)	(0.0702)	(0.0595)	(0.0611)
Confidence in private institution (only some confidence)	0.0566	-0.0154	-0.274***	-0.0507
	(0.0732)	(0.0526)	(0.0444)	(0.0443)
Confidence in private institution (hardy any confidence)	0.0688	0.0607	-0.332***	-0.114
	(0.173)	(0.115)	(0.0976)	(0.0970)
Govt. insurance	-0.327***	-0.223***	0.211***	0.176***
	(0.100)	(0.0787)	(0.0666)	(0.0684)
Private insurance	0.398	0.498**	-0.123	0.0501
	(0.383)	(0.219)	(0.136)	(0.146)
Occupation status	-0.00644	-0.243***	0.247***	0.191***
	(0.0661)	(0.0469)	(0.0402)	(0.0408)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3.3

Table showing regression results

	ANC	ID	PPC	NNC
Muslim religion	0.306*** (0.0905)	-0.160** (0.0637)	-0.157*** (0.0558)	-0.133** (0.0558)
Christian religion	1.367*** (0.454)	0.450** (0.191)	0.259* (0.134)	0.138 (0.137)
Others religion	0.463** (0.221)	-0.284** (0.115)	0.394*** (0.101)	0.150 (0.104)
OBC caste	-0.447*** (0.0907)	0.144** (0.0577)	0.231*** (0.0473)	0.141*** (0.0483)
SC caste	-0.285*** (0.105)	-0.0722 (0.0667)	0.00386 (0.0558)	0.0561 (0.0569)
ST caste	-0.391*** (0.126)	-0.451*** (0.0866)	-0.193** (0.0786)	-0.321*** (0.0779)
Others caste	0.458 (0.468)	1.082*** (0.280)	0.326* (0.170)	0.482*** (0.183)
Last birth delivery complications			0.0624 (0.0386)	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3.4

Table showing regression results

	ANC	ID	PPC	NNC
Mass media exposure	-0.121	0.155***	-0.128***	-0.113***
	(0.0745)	(0.0501)	(0.0427)	(0.0436)
Number of children	-0.271***	-0.302***	-0.102***	-0.115***
	(0.0203)	(0.0175)	(0.0151)	(0.0150)
Maternity benefits	0.322**	2.069***	0.201***	0.0880
	(0.130)	(0.147)	(0.0730)	(0.0747)
Anganwadi benefit	1.042***	0.0761*	-0.0384	0.264***
	(0.0651)	(0.0448)	(0.0378)	(0.0384)
women's autonomy about their own health	0.168***	0.0140	0.0485	0.000464
	(0.0638)	(0.0457)	(0.0390)	(0.0395)
women's autonomy about their child's health	0.362***	0.201***	-0.0993*	-0.0689
	(0.0861)	(0.0658)	(0.0567)	(0.0576)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

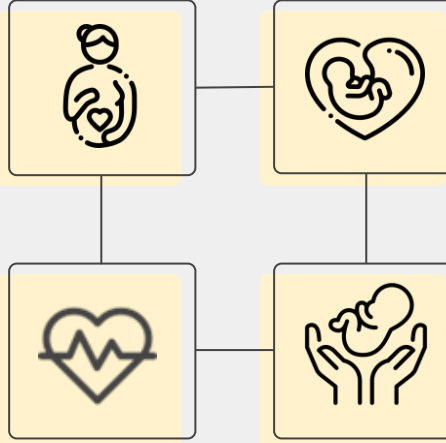
CONCLUSION

01

Positive trend in ANC and ID but under-utilisation of PPC and NNC

02

Woman and husband education, community involvement, religion, caste, decision making autonomy, maternal and Anganwadi benefits, occupation status have significant impact



03

Delivery complications do not affect postpartum care

04

Need of comprehensive approach

05 Limited time and data prevented us from studying the impact of role of gender of a child on PPC and NNC





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APPENDIX

The India Human Development Survey (IHDS) is a nationally representative, multi-topic panel survey of 41,554 households in 1503 villages and 971 urban neighborhoods across India. IHDS has been jointly organized by researchers from the University of Maryland and the National Council of Applied Economic Research (NCAER), New Delhi.

Datasets are downloaded from:- <https://ihds.umd.edu/data>

**THANK
YOU**

