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Gender, Socio-Economic Inequality and Reproductive Choices: Modern Contraceptive use among Rajbanshi Women

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ABSTRACT: Family planning is a critical component of reproductive health, with significant implications for individual well-being and public health. Yet, the access to and experiences of family planning are determined by social, cultural, and community-specific influences that have yet to be thoroughly explored in marginalized populations. The Rajbanshi, the largest Scheduled Caste community in West Bengal, appear rarely in public health research. This study examines the use of traditional and modern family planning methods among Rajbanshi women in Gopalpur Gram Panchayat, Cooch Behar district, West Bengal, India, with particular attention to the socio-economic factors influencing modern contraceptive use. Very few studies have explored how Rajbanshi partners determine the utilization of modern contraceptive methods. Using a mixed-methods approach, the study draws on a survey of 409 Rajbanshi mothers who had given birth within the 12 months preceding the survey, conducted in September–October and December 2024, and four focus group discussions with frontline healthcare providers. Quantitative data were analyzed using univariate analysis with Chi-2 test in STATA 14.2, while qualitative data were analyzed thematically. The study examines the influence of literacy, household income, occupational conditions, reproductive history, access to information, and gender relations on contraceptive choices. It also explores barriers to the use of modern family planning, including lack of awareness, concern about side effects, partner preferences, geographical constraints and challenges in providing health services. The study highlights the necessity of understanding reproductive choices when considering socio-economic circumstances, gender relations, community contexts and access to healthcare services. The findings can inform more inclusive and community-responsive family planning interventions for marginalized populations.

1. INTRODUCTION

Family planning (FP) is an essential component of sexual and reproductive health, enabling individuals and Partners to make informed decisions about the timing and spacing of pregnancies. Access to FP services and modern contraceptive methods is recognised as a fundamental human right and contributes to Sustainable Development Goal (SDG) Target 3.7[1]. However, the availability of contraceptive methods does not necessarily ensure their adoption or continued use. FP practices are shaped by the interaction of individual preferences, household resources, gender relations, cultural expectations, and the accessibility and acceptability of healthcare services. In India, FP policies have traditionally emphasised population control, with a strong focus on female sterilisation. The 2014 FP2020 Action Plan subsequently expanded the programme to include reversible modern

contraceptives, including injectable contraceptives and weekly non-hormonal pills[2]. Understanding contraceptive use therefore requires attention not only to the methods available but also to the social and economic conditions that shape women's reproductive choices.

The use of modern FP methods varies across geographical and social contexts in India. Cultural norms and fertility-related expectations influence reproductive behavior, while socioeconomic circumstances can shape people's access to information and services and their ability to make contraceptive decisions[3,4]. These differences highlight the importance of examining FP within specific communities rather than treating contraceptive use as a uniform or exclusively individual behavior. A focus on gender and social inequalities is particularly important because reproductive decisions may be influenced by household relationships, women's access to information and resources, and the responsiveness of local healthcare services.

The Rajbanshi community of eastern and north-eastern India provides an important context for examining these issues. The community is present across northern West Bengal, lower Assam, and parts of eastern Bihar, including the Purnia and Kishanganj districts and surrounding areas[5]. Its historical identity is closely associated with the Koch dynasty, which emerged in the sixteenth century from the Kamrupa-Kamata kingdom and played a significant role in the political, commercial, and artistic life of the region[6]. The community's origins and identity, however, have remained subjects of scholarly debate[7,8]. Charu Chandra Sanyal associated the Rajbanshi identity in North Bengal with Koch people, whereas Suniti Kumar Chatterji classified the Koch as an Indo-Mongoloid Bodo people. Indigenous Rajbanshi scholars and intellectuals have also asserted Aryan descent and an Indo-Aryan linguistic affiliation[9]. These differing interpretations demonstrate that Rajbanshi identity has been shaped by competing historical accounts, external classifications, and claims to community identity.

Rajbanshi identity politics, then, are shaped by a tension between how the community defines itself and how others have classified it. In the larger identity debates this community has distinct categorizations, while the Rajbanshi community is enlisted under the SC community in West Bengal, while in Assam, they are continuously demanding their Scheduled Tribe (ST) status[10]. In India, West Bengal has the second largest SC population following Uttar Pradesh and this Rajbanshi community is the largest SC community in West Bengal[11].

Caste is also relevant to understanding inequalities in healthcare utilization in India[12]. Although scholars such as Mondal (2026); Halder(2022);Paul (2022) have examined the historical identity and political movements of the Rajbanshi community, comparatively less attention has been directed towards its everyday socioeconomic challenges and access to healthcare29,30,31. Reproductive and sexual healthcare, in particular, offers an important area for further investigation. FP must also be examined in relation to women's social and economic circumstances, gendered expectations, access to information, and experiences of healthcare services.

Against this background, the present study examines FP practices among women in the Rajbanshi community of West Bengal. It investigates the prevalence and patterns of FP method use, the socioeconomic, cultural, and demographic factors associated with contraceptive practices, and the barriers and facilitators encountered by women and healthcare providers. By bringing women's experiences into conversation with the perspectives of frontline healthcare providers, the study examines FP as both a matter of reproductive choice and an issue shaped by social inequalities and healthcare-service conditions. This approach provides a basis for understanding how household circumstances, gender relations, community expectations, and service delivery may influence the use of modern contraceptives in a marginalized community.

Research questions

The study addresses the following key research questions:

(i) What is the prevalence and pattern of family planning (FP) method use among women in the Rajbanshi community?

(ii) How does the use of modern FP methods vary by socio-economic, demographic and reproductive characteristics, and which cultural and household circumstances do mothers and providers describe?

(iii) What barriers to and facilitators of FP service utilisation are perceived by Rajbanshi women and healthcare providers?

This paper is organised into six sections. Following this introduction, Section 2 describes the research methodology, including the study setting, the mixed-methods design, the household survey of all eligible mothers, the focus group discussions with frontline healthcare providers, the methods of analysis and ethical considerations. Section 3 sets out the theoretical framework,

which draws on Penchansky and Thomas's framework of access to healthcare, Andersen's behavioural model of health services uses and Connell's theory of gender and power. Section 4 presents the findings. It begins with the mothers' profile and the pattern of family planning use, then shows how modern method use differs by marriage, education, household resources, and delivery and reproductive history. It then offers a gendered reading of the non-use of modern contraceptives, followed by the health-system barriers described by providers and mothers. Section 5 interprets these findings in light of the theoretical framework and earlier research, and Section 6 concludes with the key findings and their implications for policy and practice

2. RESEARCH METHODOLOGY

2.1 Study Setting

The study was conducted in Gopalpur Gram Panchayat (GP), located in Mathabhanga-I block of Cooch Behar district, West Bengal, India [Figure 1]. Gopalpur GP was selected because of its high concentration of Rajbanshi households. Administrative information obtained from the Block Development Office of Mathabhanga-I and Gopalpur GP indicated that approximately 90% of the population belonged to the Rajbanshi community. The GP comprises 18 villages: Gopalpur, Bara Gopalpur, Chhat Gopalpur, Chhota Gopalpur, Madhya Chhat Gopalpur, Uttar Kharija Gopalpur, Dakshin Kharija Gopalpur, Patchara Gopalpur, Uchal Pukhari, Dakshin Rangapani Balasi, Upnirpar, Kharija Panigram, Dhandhania, Chhota Chhat Dhandhania, Chhat Khagribari, Buraburi, Bhogramguri and Uttar Tetuler Chhara [Figure 2].

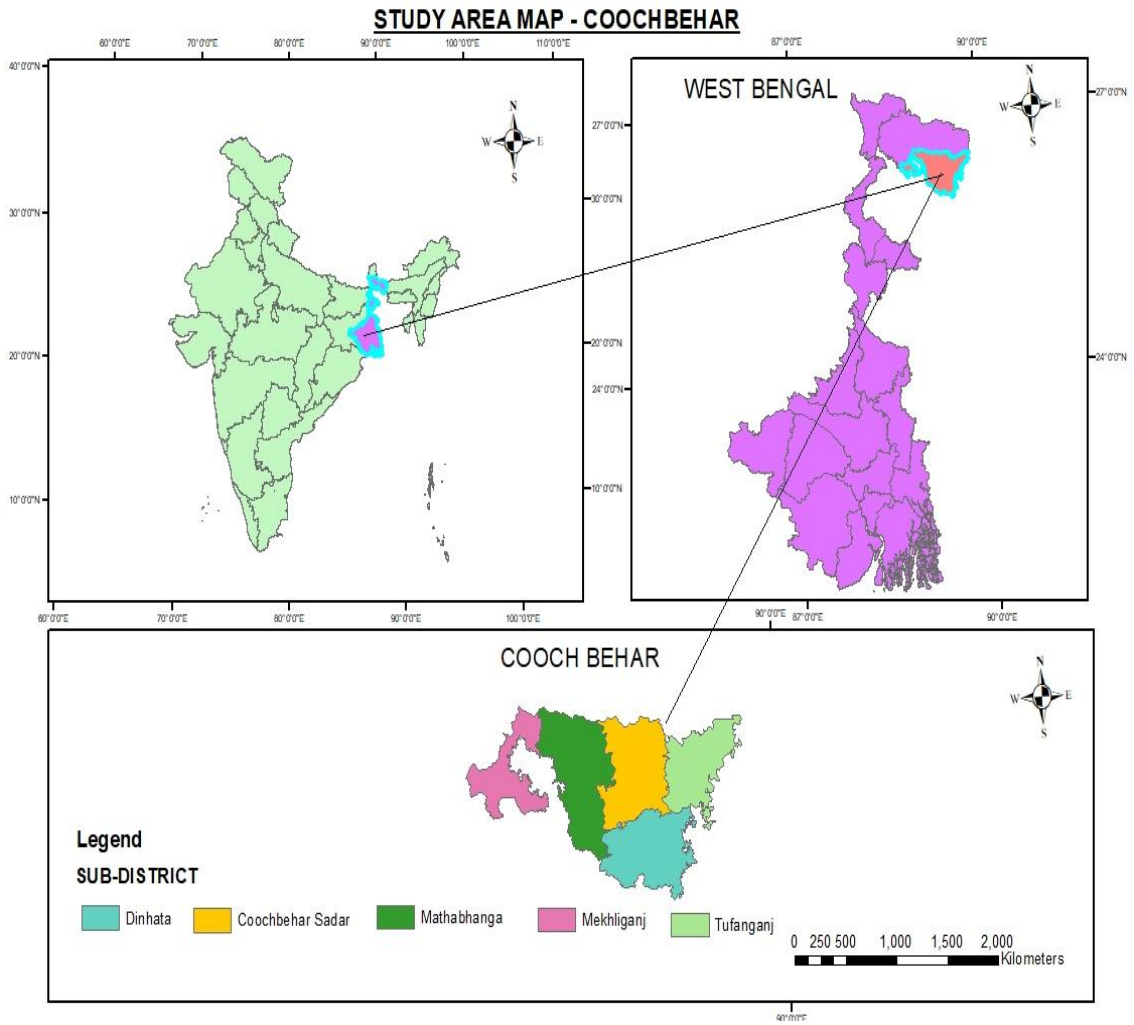


Figure 1. Administrative map of Cooch Behar district, West Bengal, India.

Source: Generated by Author.

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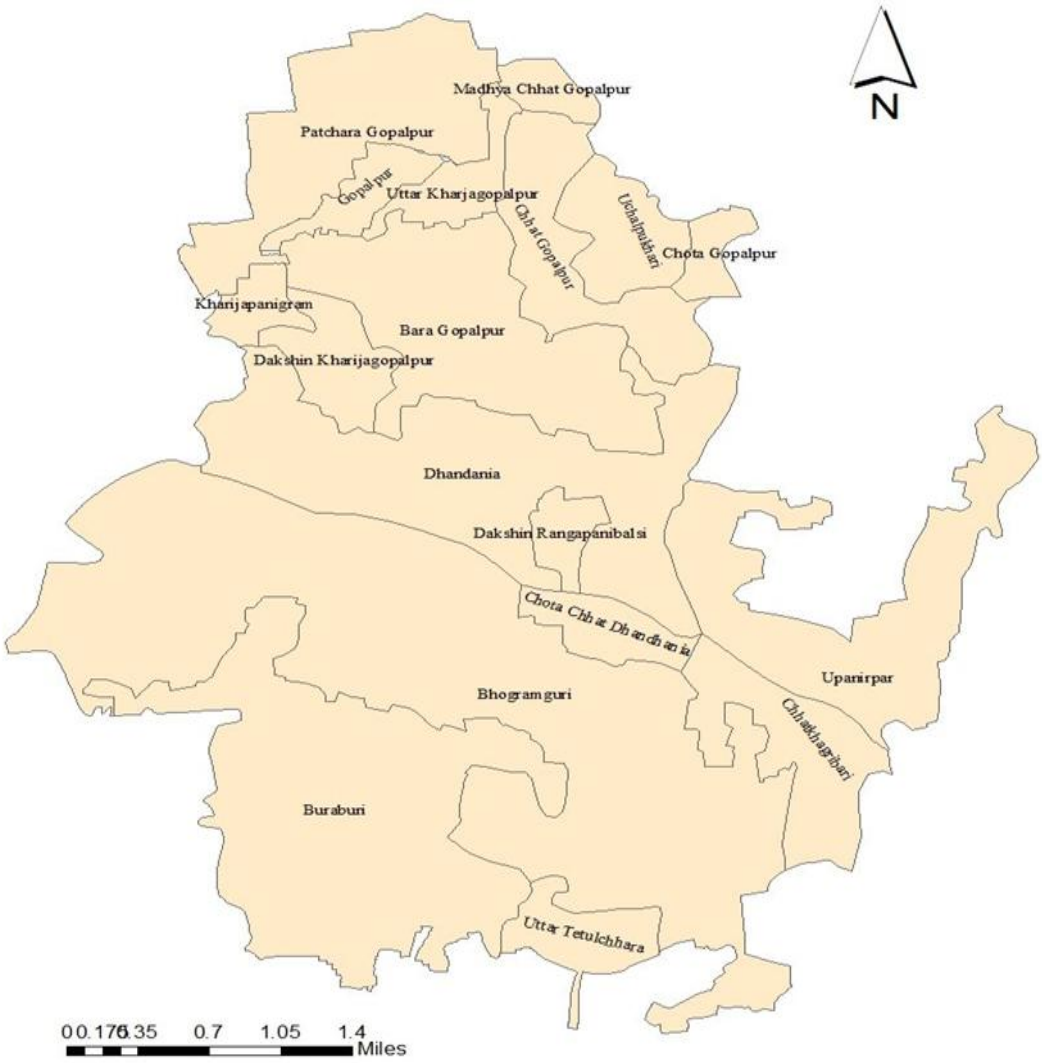


Figure 2: Village Map of Gopalpur Gram Panchayat, Mathabhanga-1 Block, District-Cooch Behar, West Bengal

Source: Generated by Author

2.2 Study Design

A mixed-methods design was employed, combining a household survey with open-ended questions and focus group discussions (FGDs) with frontline healthcare providers. The survey examined family planning practices and associated sociodemographic and reproductive characteristics. Open-ended responses provided additional context for interpreting the survey findings, while the FGDs explored healthcare providers' perspectives on contraceptive services and barriers to access.

2.3. Household Survey

The survey included mothers whose youngest child was under one year of age at the time of data collection. A complete enumeration approach was adopted across all 18 villages of Gopalpur GP. With assistance from Accredited Social Health Activists (ASHAs), lists of eligible mothers were obtained from four sub-centre areas: Gopalpur, Rangapani Balasi, Bhelakopa and Gyan Sadhak. All 409 identified eligible mothers participated in the survey.

The first author conducted face-to-face interviews at respondents' homes during September–October and December 2024. The Survey was conducted in Bengali, including the Rajbanshi dialect spoken by the first author, who belongs to the Rajbanshi

community. A structured questionnaire collected information on sociodemographic characteristics, reproductive history, access to family planning information and contraceptive use.

Contraceptive methods were classified as modern methods (female sterilization, Copper-T/intrauterine contraceptive device [IUD], oral contraceptive pills, injectables and condoms) and traditional methods (rhythm and withdrawal). Mothers not using a modern method were asked about their main reasons for non-use.

Open-ended questions were also asked of all mothers to capture their experiences, concerns and reasons for contraceptive use or non-use. Responses were recorded in writing during the interviews, and some were audio-recorded with permission. The first author translated the responses into English. Selected responses were used to explain and contextualize the quantitative findings.

2.4. Focus Group Discussions with Healthcare Providers

Four FGDs were conducted with healthcare providers associated with the Gyan Sadhak, Bhelakopa, Gopalpur and Rangapani Balasi sub-centres in the month of October in 2024. Participants included ASHAs, Auxiliary Nurse Midwives (ANMs) and Community Health Officers (CHOs). Discussions were conducted in Rajbanshi by the first author at the respective healthcare facilities. Each FGD lasted approximately 30 minutes and was audio-recorded with participants' consent. Group 1 FGD consisted of all healthcare providers of Gyan Sadhak Sub-centre (29 to 41 Years, n=6). Group 2 FGD consisted of all healthcare providers of Bhelakopa Sub-centre (25 to 46 Years, n=9). Group 3 FGD conducted with all healthcare providers of Gopalpur Sub-centre (28 to 51 years, n=8). Group 4 FGD of healthcare providers conducted in Rangapani Balasi Sub-centre (30 to 48 Years, n=6). After obtaining permission and confirming participants' availability, FGD was conducted at each sub-centre.

The discussions explored providers' experiences of family planning counselling and service delivery, including barriers to contraceptive access, service availability and follow-up care. All recordings were transcribed in full for analysis.

2.5 Data analysis

Quantitative data were analyzed using Stata/IC 14.2 software. Frequencies and percentages were calculated to describe respondents' characteristics and family planning practices. Chi-square tests were used to examine associations between respondents' characteristics and modern contraceptive use, with statistical significance set at $p < 0.05$. The Study area map has been prepared by ArcGIS 10.2 software.

Open-ended survey responses were used to provide context for the quantitative findings. After reviewing the FGD transcripts, the comments of providers were organized into themes, including counseling, the provision of methods, follow-up care, and the challenges of reaching women. These themes were used to interpret and contextualize the survey results.

2.6 Researcher's position and reflexivity

The first author is a member of the Rajbanshi community and conducted the interviews and the focus groups, and translated and analyzed the qualitative material herself. This helped with trust and language but may also have shaped how mothers and providers responded and how the material was interpreted.

2.7. Ethical Considerations

Before data collection, approval was obtained from the Department of Humanities and Social Sciences, Indian Institute of Technology Patna, Bihar in India on 28th August, 2024. The researcher explained the purpose of the study and what participation involved. Verbal consent was obtained from all mothers before the survey and from providers before the focus group discussions. Interviews were conducted in private wherever possible. Participants were told that their names, addresses and other identifying information would remain confidential and would not be disclosed in research outputs or publications.

3. THEORETICAL FRAMEWORK

This study adopts an integrated theoretical perspective combining Penchansky and Thomas's Access to Healthcare Framework, Andersen's Behavioral Model of Health Services Use, and Connell's Theory of Gender and Power. Together, these perspectives help explain how socioeconomic circumstances, healthcare-service constraints, and gender relations may shape modern contraceptive use among Rajbanshi women.

Penchansky and Thomas's framework identifies five dimensions of healthcare access: availability, accessibility, accommodation, affordability, and acceptability. These dimensions guide the interpretation of service-related barriers, including contraceptive supplies, availability of trained personnel, geographical distance, service arrangements, financial constraints, and concerns about contraceptive methods[13]. Andersen's model complements this perspective by organizing the socioeconomic, informational, and reproductive factors associated with healthcare utilization. In the present study, education, occupation, household income, access to information, and reproductive characteristics provide a basis for examining differences in modern contraceptive use[14].

Connell's Theory of Gender and Power brings in the gender dimension, showing how power between partners and expectations about gender roles can shape reproductive choices[15]. This perspective is relevant to the findings concerning husbands' preferences regarding condom use and the influence of family members on contraceptive acceptance. These results indicate that contraceptive behaviors may be influenced by personal awareness and access to services, as well as familial dynamics and gender expectations.

Singh et al.,2019 further highlights the importance of women's status and decision-making in understanding contraceptive use. Studies using National Family Health Survey data have examined the relationship between women's education, paid employment, participation in household decisions, and contraceptive practices in India. This kind of work helps place our findings on Rajbanshi women in an Indian context, especially how economic resources and gender relations affect contraceptive choices[16].

Overall, these perspectives suggest that whether a woman uses modern contraception depends on her economic situation, how easily she can reach services, her reproductive history, and the gender dynamics within her household. In this way, Penchansky and Thomas's framework helped to examine service barriers, Andersen's model guided this analysis of the factors linked to service use, and Connell's theory helped to make sense of the gender-related findings. The frameworks are used to guide interpretation rather than being treated as three independently tested models.

4. RESULTS

4.1. Profiling the Rajbanshi Community through the social, demographic and econmiceconomic lens.

Table 1 represents social, demographic and economic characteristic of Rajbanshi mothers. Among the 409 respondents, most mothers were aged 25–34 years (55.26%), and 53.55% had married between the ages of 13 and 19 years. More than half (56.48%) had been married for 1–4 years, and 53.92% had one child. Regarding education, 70.42% of mothers and 54.03% of their husbands had secondary-level education (Table 1). Most mothers (70.42%) and their husbands (54.03%) had secondary-level education, but 96.09% of the mothers were housewives, and 63.81% lived in households earning less than ₹10,000 a month. 73.59% of them reported receiving sufficient information on family planning, whereas 26.41% did not. Internet use was limited: 26.65% did not use the internet and 40.59% used it very rarely (once or twice a month) (Table 1). In short, many of these women married young, lived in low-income households, and were rarely in paid work. These characteristics help set the background for family planning practices in this group.

Table 1. Socio-demographic and reproductive characteristics of the mothers (N = 409)

Socio-demographic Characteristics	%	N
Age of respondents (Years)		
15-24	155	37.9
25-34	226	55.26
35-49	28	6.85
Age of marriage (Years)		
13-19	219	53.55
20-24	164	40.1

25-31	26	6.36
Birth interval (Years)		
No spacing (1st Child)	188	45.96
3 or below 3 years	90	22.00
4 to 7 years	98	23.96
More than 7 years	33	8.06
Birth order		
1	220	53.92
2	159	38.97
3	22	5.39
4	7	1.72
Duration of marriage (Years)		
1 to 4 years	231	56.48
5 to 10 years	149	36.43
10 to 18 years	29	7.09
Sex of the last birth child		
Male	214	52.32
Female	195	47.68
Experience of abortion		
Yes	27	6.6
No	382	93.39
Education of respondents		
No education	2	0.49
Primary level education	60	14.67
Secondary level education	288	70.42
Higher education	59	14.43
Education of husband		
No education	8	1.96
Primary level education	130	31.86
Secondary level education	221	54.03

Higher education	50	12.25
Occupation of the respondents		
Housewife	393	96.09
Casual wage labor	14	3.42
Govt. Services	2	0.49
Monthly family income		
Below 10000	261	63.81
10000-20000	137	33.5
More than 20000	11	2.69
Using of Internet		
No	109	26.65
Yes	300	73.35
Mode of delivery		
Normal delivery	215	52.56
C-section delivery	194	47.43
Occupation of Husband		
Self Employed	10	2.43
Casual wage labor	179	43.55
Cultivators	194	47.20
Private Services	1	0.24
Govt. Services	5	1.22
Business	20	4.87

Source: Primary Survey Data

4.2 Patterns of family planning use (RQ i)

Among the 409 mothers surveyed, 219 (53.5%) reported using traditional contraceptive methods, while 190 (46.4%) used modern methods. Among modern-method users, the Copper-T was the most commonly used method (37.4%), followed by female sterilisation (26.3%), oral contraceptive pills (20.0%), injectable contraceptives (9.5%) and condoms (6.8%). Among modern-method users, Copper-T was the most popular choice (37.4%), then female sterilization (26.3%), oral pills (20.0%), injectables (9.5%) and condoms (6.8%).

Table 2. Family planning methods used by the mothers

Method	n	% within group
Modern methods: 190 mothers (46.4% of all mothers)		
IUD (Copper-T)	71	37.36
Female sterilisation	50	26.31
Oral contraceptive pill	38	20.00
Injectable contraceptive	18	9.47
Condom	13	6.84
Traditional methods: 219 mothers (53.54% of all mothers)		
Rhythm (safe period) method	155	70.77
Withdrawal	64	29.22

Source: Primary survey data.

Among these mothers, the rhythm or safe-period method was the single most common method (38.63%). Copper-T came next (17.36%), then withdrawal (15.65%), female sterilisation (12.22%), oral pills (8.80%), injectables (4.16%), condoms (3.18%) and emergency contraception (1.71%). (Figure 3).

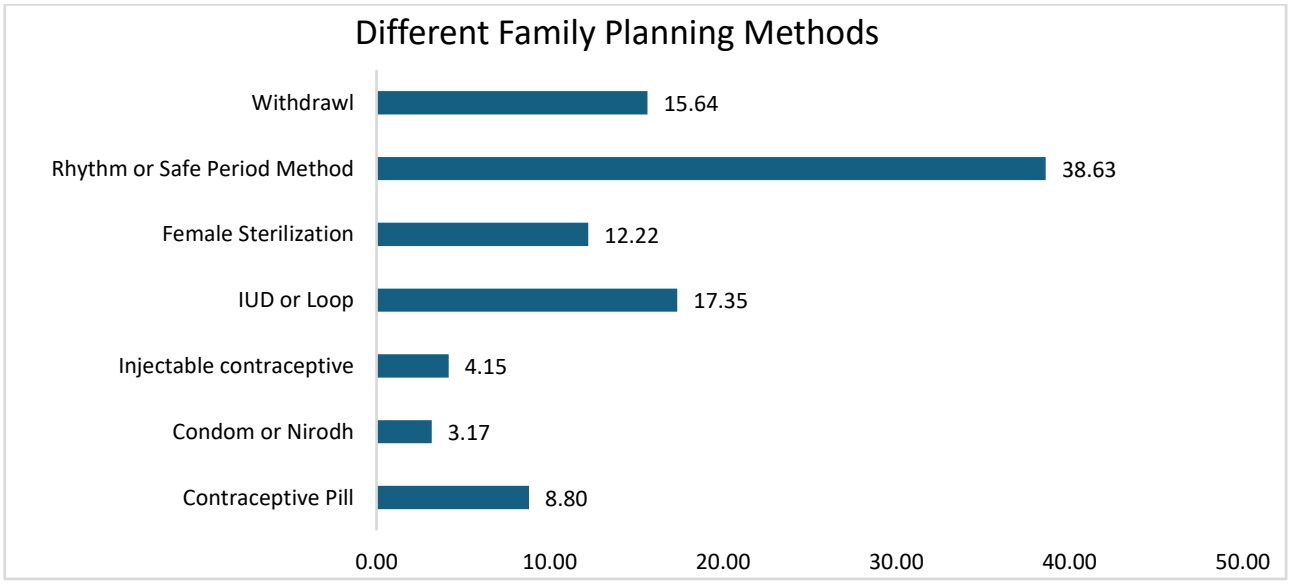


Figure 3: Different types of Family Planning Methods among Rajbanshi mothers

Source: Primary Survey data.

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4.3 Modern method use by socio-demographic and reproductive characteristics

Table 3 shows how the use of each modern method varied across groups of mothers. Each figure is the percentage of mothers in the group who used the method, and the Total is the percentage using any modern method. Differences between groups were tested with the chi-square test with P value.

Table 3. Percentage of mothers using each modern method, by socio-economic and reproductive characteristics

Characteristics	Contraceptive pill	Condom	Injectable contraceptive	IUD	Female Sterilization	Total	P Value
Age Group (Years)							0.01
Age: 15-24	8.44	3.25	4.02	19.48	3.25	30	
Age:25-34	7.96	2.65	5.31	17.7	18.14	43.8	
Age:35-49	17.86	7.14	0	10.71	14.29	32.14	
Age of Marriage (Years)							0.62
Age: 13-19	8.68	3.65	4.11	16.89	13.24	46.57	
Age:20-24	9.82	1.84	4.91	20.25	12.27	49.09	
Age:25-31	3.85	7.69	0	15.38	3.85	30.77	
Duration of Marriage (Years)							0.01
1 to 4	7.39	3.91	4.35	20.87	3.04	39.56	
5 to 10	9.4	2.01	4.7	16.11	23.49	55.71	
11 to 18	17.24	3.45	0	3.45	27.59	51.73	
Birth Order							0.09
1	11.39	4.46	4.95	13.86	7.92	42.58	
2	5.08	2.26	2.82	22.6	15.25	48.01	
3	13.64	0	9.09	22.73	22.73	68.19	
4	14.29	0	0	0	28.57	42.86	
Birth interval (Years)							0.01
No Spacing (1st Child)	10.8	4.55	5.11	14.77	5.68	40.91	
3 or below 3	5.26	3.01	4.51	21.8	12.03	46.61	
4 to 7	10.98	1.22	2.44	18.29	23.17	56.1	

More than 7	5.88	0	0	17.65	29.41	52.94	
Respondents education							0.32
No education	0	0	0	0	0	0	
Primary Level Education	5	1.67	3.33	21.67	16.67	48.34	
Secondary Level Education	10.45	2.79	4.53	16.38	12.2	46.35	
Higher education	5.08	6.78	3.39	22.03	8.47	45.75	
Husband education							0.364
No education	0	0	0	12.5	25	37.5	
Primary Level Education	9.23	1.54	4.62	12.31	15.38	43.08	
Secondary Level Education	8.22	4.11	3.65	22.83	9.59	48.4	
Higher education	12	4	6	12	14	48	
Occupation of Respondents							0.01
Housewife	8.18	3.33	4.24	20.3	8.79	44.84	
Casual wage labour	11.84	2.63	3.95	7.89	27.63	53.94	
Govt. Services	0	0	0	0	0	0	
Occupation of Husband							0.08
Self employed	10	10	0	30	0	50	
Casual wage labour	8.99	3.37	1.69	17.42	11.8	43.27	
Cultivators	8.85	2.08	5.73	18.23	11.46	46.35	
Private Services	0	0	0	100	0	100	
Govt. Services	0	28.57	0	0	42.86	71.43	
Business	10	0	15	15	20	60	
Monthly Family Income (In rupees)							0.52
Below 10000	9.32	3.39	2.54	18.64	11.02	44.91	
10000-20000	8.24	2.94	6.47	16.47	14.12	48.24	

20000-30000	0	0	0	50	0	50	
Mode of Delivery							0.01
normal delivery	7.48	2.8	5.14	18.22	4.67	38.31	
C-section	10.47	3.66	3.14	17.8	20.94	56.01	
Experience of Abortion							0.01
Yes	12	4	4	8	4	32	
No	8.66	3.15	4.2	18.64	12.86	47.51	
Sex Composition of last child Birth							0.03
Male	5.63	3.29	3.29	16.43	14.55	43.19	
Female	12.31	3.08	5.13	19.49	9.74	49.75	

Source: Primary survey data. Percentages are row percentages (share of mothers in each group using the method); Total = any modern method. P value <=0.05 (95% Significant level), P <=0.01 (99% Significant level).

The characteristics examined here fall into three groups. The first, marriage and the reproductive life course, covers the mother's age, age at marriage, duration of marriage, birth order and the interval since the previous birth. The second, education and household resources, covers the education and occupation of mothers and their husbands and monthly household income. The third, delivery and reproductive history, covers the mode of delivery, any history of abortion and the sex of the last child. These were selected because earlier studies and our frameworks point to them as factors that affect whether a woman needs contraception, whether she can reach services, and whether she gets a say in using it. For each group, we first report overall modern method use, then look at which specific methods explain the differences between categories.

Marriage and the reproductive life course

Modern method use was lower among the youngest mothers (38.4% at ages 15-24) than among those aged 25-34 (51.8%) or 35 and above (50.0%) (P=0.01). It also rose with the duration of marriage, from 39.6% in the first four years to 55.7% at five to ten years(P=0.01), and it was higher at the third birth (68.2%, 22 mothers) than at the first (42.6%) or second (48.0%), although very few mothers had four or more births (P=0.09). Use of modern contraceptives tend to be higher with the interval since the previous birth (40.9% first births i.e. no previous interval, 46.6% for an interval of up to three years and 56.1% at four to seven years) (P =0.01). Age at marriage made little difference (46.6% for marriage at 13–19 years and 49.1% at 20–24 years) (P=0.62).

The method-wise pattern was driven mostly by female sterilisation. It was far more common among mothers aged 25-34 (18.1%) than among those aged 15-24 (3.3%). It also rose with the duration of marriage (3.0% in the first four years, 23.5% at five to ten years and 27.6% after eleven years), with birth order (7.9%, 15.3% and 22.7% at the first, second and third birth) and with birth interval (5.7% for first births, up to 29.4% beyond seven years) (P=0.01). Copper-T showed an opposite trend; it was most common in the first four years of marriage (20.9%) and least common after eleven years (3.5%).

"I had not used any contraceptive methods earlier; it was my first pregnancy after marriage. In government hospital, although Copper T was inserted but I wish to remove it within this month. As, it is getting loose and I am unable to do household work freely." [OPEN-ENDED RESPONSE, 20-year-old Rajbanshi mother, Gopalpur]

Mothers and providers both said that women who married early often did not begin using contraception right away. This fits with the lower use of modern contraceptives in the first years of marriage and among the youngest mothers.

A 19-year-old mother described how limited knowledge of contraception and pressure from her mother-in-law to conceive soon after marriage influenced her decision not to use contraception.

"I got married about a year and a half ago when I was only 17 years old. After marriage I did not use any contraceptive method because I was not having enough information about the different methods of modern contraception or its usage. Also, my mother-in-law told me to get pregnant as soon as possible. So, I never really considered using contraception." [open-ended response, 19-year-old Rajbanshi mother, Chhat Gopalpur]

Healthcare providers described the same problem when counselling newly married adolescent couples: it was hard to get them to consider contraception or to put off the first pregnancy.

"Nowadays, we are seeing more early marriages in this community. In our view, limited access to higher education and increasing romantic relationships among adolescents in the villages may be contributing to this situation. When we receive information about an early marriage, we advise the couple to visit the sub-centre or Primary Health Centre to collect a family planning kit containing condoms and OCP. However, many couples do not come to collect the kits. Even when we visit their homes and offer the supplies, they often refuse them. We repeatedly counsel them about the health risks associated with early pregnancy and explain the benefits of delaying the first pregnancy, but they are often unwilling to accept our advice." [FGD Group 1, P006]

Education and Household Resources

Modern methods use hardly differed by education or household resources. Use was similar across mothers' education levels (48.3% with primary, 46.4% with secondary and 45.8% with higher education); very small group of mothers with no education did not use a modern method. Among husbands, use was 37.5% where the husband had no education (eight husbands), 43.1% with primary, 48.4% with secondary and 48.0% with higher education (P=0.364). Use was 44.9% in households earning less than ₹10,000 a month and 48.2% in those earning ₹10,000–20,000, and very few households earned more (P=0.52). Use of modern methods was little differed by education or household resources(P=0.08). Mothers' occupation could not be compared, since almost all were homemakers. By method, sterilisation became less common as mothers' education rose, while condom and pill use was highest among mothers with higher or secondary education. Differences by husband's education, income and occupation were smaller. For example, injectables were least used where the husband was a casual labourer.

"My husband does not trust the contraceptives available at government hospitals and health centres. He says that these medicines are of poor quality and may cause harm. We are very poor, and my husband works as a daily wage labourer in another state. He usually comes home only once in six or seven months. We cannot afford to buy expensive contraceptive pills from private medical shops. Because of these problems, I usually do not use any contraceptive method." [open-ended response, 22-year-old Rajbanshi mother, Chhat Gopalpur]

Delivery and reproductive history

Mode of delivery made the biggest difference. Modern method use was higher among mothers who delivered by Caesarean section (56.0%) than among those who delivered vaginally (38.3%) (P=0.01), and nearly all of this gap came from female sterilisation (20.9% against 4.7%). Other methods were used at similar levels in both groups.

Mothers with a history of abortion used modern methods less often (32.0% against 47.5%, P=0.01). The gap came mainly from lower use of Copper-T (8.0% against 18.6%) and sterilisation (4.0% against 12.9%). This group was small (27 mothers), and the reasons were not explored. Overall use was slightly higher among mothers whose last child was a girl (49.8%) than among those whose last child was a boy (43.2%) (P=0.03); pills were more common after a girl (12.3% against 5.6%) and sterilisation after a boy (14.6% against 9.7%). Possible explanations for these patterns are examined in Sections 4.4 and 4.5.

One mother who delivered in a private hospital described why a Copper-T was not inserted:

"In my last pregnancy, I was admitted in Private hospital because of good services. Besides, we could afford the cost in private hospital. In private hospital, inserting Copper T or IUD is not mandatory. That's why, I did not insert it again after coming back home" [Open-ended response, 21-years-old Rajbanshi mother, Upnirpar village]

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4.4 Gender, Family Influences and Reasons for Non-use of Modern Contraceptives

Mothers who did not use a modern method gave six main reasons: their husbands' preferences, health concerns, beliefs about the postpartum period, infrequent sex, lack of access to services and lack of information. Table 4 shows how many mothers gave each reason. These reasons are examined below using the survey findings and mothers' and providers' accounts.

Table 4. Main reasons for not using modern contraceptive methods among mothers not using modern methods (n = 219)

Reason	n (%)	What mothers described (Open-ended responses)
Husband's preference	83 (37.7)	Husbands, many of them casual or migrant workers, dislike condoms (reduced sensation, shyness) and doubt the quality of condoms supplied free of charge by the government health system through sub-centres and ASHAs.
Health concerns	56 (25.5)	Fear that Copper-T, Chhaya, Mala-D or Mala-N damage the uterus or future fertility; advice from relatives and neighbours
Postpartum amenorrhoea	47 (21.4)	Belief that breastfeeding fully protects against pregnancy, or that contraception harms milk or the newborn
Infrequent sex	18 (8.2)	Contraception seen as unnecessary when intercourse is occasional
Lack of access	9 (4.1)	Distance of more than 5 km from the sub-centre in several villages
Lack of information	7 (3.2)	Unaware of methods, side effects or when to start

Source: Primary survey data.

• Husbands' preferences

Husbands' preferences were the most frequently reported barrier to modern FP use, accounting for 83 of the 220 non-users (37.7%). Mothers described husbands' reluctance to use condoms because of reduced sexual sensation and embarrassment. Some husbands also questioned the quality and reliability of condoms provided free of charge at sub-centres. For couples unable to afford contraceptives from private pharmacies regularly, the availability of free condoms did not necessarily overcome these concerns:

"My husband does not want to use this contraceptive such as Condoms as he did not get proper feelings while doing intercourse. Besides, he also heard about some side effects of consuming OCP. So, he always tries to avoid such things." [open-ended response, 24-year-old Rajbanshi mother, Patchhara village]

Beyond husbands' preferences, healthcare providers described how other family members, particularly mothers-in-law, could influence women's contraceptive decisions. They also suggested that women's financial circumstances affected their ability to make reproductive choices independently.

"Following childbirth, we typically visit the mother's and the baby's homes to assess their health. During these visits we also advised the mothers about the necessity of utilizing contraceptives. Some highly educated mothers are aware of the advantages of contraception and willing to make use of it. But they might be dissuaded by their mothers-in-law and be reluctant to use contraceptive methods. In contrast, women who are financially independent or come from families with a good financial

situation are usually in a better position to decide for themselves, without being influenced by family members or others." [FGD Group 1, P006]

• Health concerns

Health concerns were reported by 56 of the 220 mothers not using modern methods (25.5%). Mothers feared that Copper-T and pills such as Chhaya, Mala-D and Mala-N could damage the uterus or make it hard to conceive later. Some had also been told by relatives and neighbours not to use them.

"I am not interested in taking contraceptive pills or using other family planning methods because I have heard that they can cause side effects. Many of my relatives and neighbours have advised me not to use them. They are worried that I may not be able to become pregnant in the future or that the contraceptives could damage my reproductive organs." [open-ended response, 21-year-old Rajbanshi mother, Uchhal Pukhari village]

Another mother's concern was different: she had pain after Copper-T insertion, and the nurse did not listen when she objected.

"After the birth of my second child, a Copper-T (IUCD) was inserted at the hospital. I repeatedly asked the nurse not to insert it because I had experienced severe pain when using it after my previous delivery. I was feeling very uncomfortable and I was unable to perform my daily activities properly. However, she did not listen to my concerns. After returning home, I had it removed with the help of my aunt within a month. I had also heard about the possible side effects of contraceptive pills, which made me hesitant to use them. Therefore, I have decided to undergo tubal ligation at a government hospital next year." [open-ended response, 24-year-old Rajbanshi mother, Chota Gopalpur]

• Postpartum-Amenorrhea

Postpartum amenorrhea is the time after childbirth before periods return, which is usually while a woman is breastfeeding. Ovulation is often suppressed during this time, so many mothers believed they could not get pregnant and did not need contraception. In fact, this protection lasts only for a limited period and only with exclusive breastfeeding. This protection is reliable only for a limited time and under specific conditions, such as exclusive breastfeeding.In this study, 21.4% of non-users gave this as their reason. Some believed breastfeeding protected them fully as long as their periods had not returned. Others worried that contraception might affect their breast milk or harm the baby.

"My baby remains on breast milk, and my menstruation have not resumed. So, I think I can have sexual intercourse without any contraceptives during this period." [Open-ended response, 28-year-old Rajbanshi mother, Chhat Dhandhunia]

• Infrequent Sexual Activity

Infrequent sexual activity was reported by 18 of the 220 non-users (8.2%) as a reason for not using modern FP methods. These mothers perceived contraception as unnecessary because sexual intercourse occurred only occasionally. This finding suggests that some mothers' contraceptive decisions were influenced by their perceived frequency of sexual activity rather than by a consistent approach to pregnancy prevention.

"Most of the time, my husband stays away from home for work and usually returns every two to three weeks. Even when he comes home, sexual intercourse does not happen very frequently. Besides, my husband is very skilled at withdrawing before ejaculation and has good control over it. Therefore, I do not feel the need to use contraceptives and am not worried about becoming pregnant."[open-ended response, 22 years old Rajbanshi mother, Madhya Chhat Gopalpur Village]

· Lack of Access

Nine of the 220 non-users (4.1%) said the main reason was that they could not get family planning services, such as supplies, counselling and follow-up care, at the sub-centre. Four villages (Patchhara Gopalpur, Madhya Chhat Gopalpur, Buraburi and Gopalpur) are more than 5 km from the nearest sub-centre, which may make it hard for women there to get supplies, advice or help with side effects.

• Lack of Information

Only 7 of the 220 non-users (3.2%) gave lack of information, such as how methods work, their side effects and what to do when problems arise, as their main reason. However, 26.4% of all mothers reported that they did not know about effective

modern contraceptives, their alternatives, probable side effects and solution (Table 1). So the real information gap was larger than this figure suggests. Some mothers said they did not know what else to try after a method caused problems.

"I did not know much about contraceptive methods. After the birth of my first child, a nurse inserted a Copper-T at a government hospital. But I could not continue with it for long due to spotting. I did not know what other contraceptive methods I could use that would be effective and cause fewer side effects. The ASHA workers had not told me much about other options, so I did not know what alternative method I could choose." [open-ended response, 19-year-old Rajbanshi mother, Dakshin Kharija Gopalpur]

Another mother first knew little about contraception and feared side effects, but online health information later changed her mind to use contraception.

"I was married at an early age and was unaware of birth control methods after marriage. Later, ASHA workers told me about contraception but I was hesitant to use it because of fear of health problems and side effects. After a couple of months, I saw some advertisements and videos on Facebook Reels and YouTube where doctors also explained and advised on the use of contraceptives. That's why, after my first pregnancy, I started taking CHHAYA oral contraceptive pills (OCPs) from the health centre." [Open-ended response, 24 Years old Rajbanshi mother in Uttar Kharija Gopalpur Village]

4.5 Health-system barriers: providers' and mothers' accounts

The focus group discussions explored barriers to FP service delivery across three dimensions: accessibility, availability and acceptability. Table 5 summarises the challenges reported by frontline healthcare providers, their perceived effects on mothers, and their links to the survey findings. The following subsections examine these dimensions in greater detail, drawing on provider accounts and relevant evidence from mothers' interviews.

Table 5. Challenges reported by frontline providers, by dimension of access

Dimension	Challenges reported	Effect on mothers	Link to survey
Accessibility	Some workers cover more than two villages and over 1,000 people; 25–30 minutes to reach each village; telephone counselling replaces home visits	Follow-up is missed; mothers dislike telephone counselling and some stop using modern methods	Patchhara, Madhya Chhat and Buraburi lie over 5 km away and have the highest traditional use
Availability	No CHO at Dakshin Rangapani Balasi and Gyan Sadhak sub-centres and too few ANMs; no staff trained in IUD insertion or removal; no tubal ligation at sub-centres or PHC (Sub-divisional Hospital in Mathabhanga is over 25 km away); only pills and the Antara injection stocked; no counselling room; supply interruptions	Mothers remove the IUD themselves or ask older women to; a permanent method requires a long journey	IUD and sterilisation make up 64% of modern use; modern use is higher after Caesarean delivery
Acceptability	Fear of side effects of the Copper-T and pills; mothers-in-law discourage use; Antara gaining acceptance; mothers ask for a long-acting injection; adolescent couples refuse FP kits	Hesitancy, discontinuation, delayed spacing	25.5% of non-users cite health concerns; modern use is lowest at the first birth and with early marriage

Source: FGDs with frontline providers, Gopalpur Gram Panchayat.

• Accessibility

Frontline health workers said that heavy workloads and long distances made it hard to deliver FP services. Some ASHAs covered more than two villages and over 1,000 people, so they could not visit every household regularly. When they could not travel, providers counselled mothers by phone, though some mothers did not feel comfortable with this. Distance from the sub-centre also made it harder for mothers to get supplies and counselling.

"I am responsible for providing services not only in Kharija Panigram but also in Dakshin Rangapani Balasi, Dhandhunia, and Uttar Kharija Gopalpur. It takes me approximately 25 to 30 minutes to reach these villages. Because of the long distance and travel time, I sometimes contact mothers by telephone instead of visiting them. However, many mothers are uncomfortable with telephone counselling, and some eventually stop using modern contraceptive methods." [FGD Group 1, P002]

This mother's account shows what the provider described from the other side: the long trip to the sub-centre made it hard to get supplies regularly and keep using her method.

"The sub-centre is far away from my village. Sometimes, after completing a pack of oral contraceptive pills (OCPs), I find it difficult to travel to the sub-centre for another pack. […] Thus, I intermittently overlook doses or face interruptions in my use of contraception." [open-ended response, 23-year-old Rajbanshi mother, Bhogramguri]

• Availability

Healthcare Providers said that too few staff, limited clinical services and gaps in contraceptive supplies got in the way of family planning care. Providers said Dakshin Rangapani Balasi and Gyan Sadhak had no Community Health Officers (CHOs), and Auxiliary Nurse Midwives (ANMs) were in short supply. No staff at the sub-centres were trained to insert or remove intrauterine contraceptive devices (IUDs), and there was no separate room for counselling. Sub-centres mostly kept oral pills and Antara injections. For an IUD or tubal ligation, women had to go to the Sub-divisional Hospital in Mathabhanga, more than 25 km away.

"There is not sufficient trained staff who could insert and remove Copper T or IUD. Only in the sub-divisional govt. hospital, after vaginal delivery, this IUD is inserted. Sometimes, after delivery of the second baby, permanent sterilisation is also conducted in govt. hospital only. Whereas, this system is not available in other healthcare facility and also in private hospital. This creates gap in accessing equal services of contraceptives." [FGD Group 3, P005].

• Acceptability

Healthcare Providers said mothers were put off modern methods by fear of side effects, bad past experiences and pressure from family. Some mothers were hesitant about pills or Copper-T, and mothers-in-law sometimes discouraged contraception. Providers also said mothers asked for longer-acting methods that need fewer doses or clinic visits.

"Many Rajbanshi mothers refuse oral contraceptive pills or Copper-T because they are worried about side effects. Their previous experiences and fear of side effects often lead them to discontinue modern contraception. Many mothers ask for a special contraceptive injection that would remain effective for more than five years. They would prefer a long-acting option that does not require repeated visits or regular-doses." [FGD-Group4,P004]

5. DISCURSIVE UNDERSTANDING OF THE FINDINGS: SOCIO-ECONOMIC DETERMINANTS AND SHAPING OF THE REPRODUCTIVE CHOICES

This study examined FP practices among Rajbanshi mothers in Gopalpur G.P, West Bengal, combining a household survey which included open-ended questions for mothers, with focus group discussions with frontline healthcare providers. Mothers continued use of traditional methods does not simply mean they lacked knowledge. National evidence suggests that rhythm and withdrawal continue to be practiced in India even where modern contraceptive methods are known, although their use varies across age groups and stages of reproductive life[17]. Here, traditional methods may suit some partners situations. When couples marry early, are expected to have a baby soon, or live apart because the husband works away, a method that needs regular clinic visits may seem less necessary. Traditional methods also let couples manage contraception without going to a health facility, which matters when services are far away and counselling is limited. But these methods carry a risk of unintended pregnancy, especially when couples trust breastfeeding or postpartum amenorrhea too much, or use withdrawal without understanding how often it fails.[18] The narrow range of modern methods in use also points to the health system, not only to

what women and couples prefer. Modern-method use was concentrated on Copper-T and female sterilisation, while pills, injectables and condoms accounted for a smaller share. This pattern needs to be read against India's FP programme, which has long emphasised sterilisation and has recently expanded postpartum IUD services, while a wider range of methods is still needed19. Penchansky and Thomas's dimensions of availability and accommodation show how the way services are organized can limit women's choices [13]. When insertion, removal and sterilisation services are available only at a distant hospital, women may face practical difficulties in accessing these methods and obtaining follow-up care. Some mothers accepted a method around childbirth but later stopped it or removed it themselves, which shows that starting a method is not the same as continuing it[20]. These findings suggest that modern contraceptive use in this community is shaped by the interaction between household decision-making and the services available locally. The heavy reliance on traditional methods and the focus on just two modern methods is probably linked, not separate problems. When access to services and follow-up is limited, couples may find it more practical to utilize methods that do not require regular contact with healthcare providers. In this community, the decision about modern contraception often rests more with the people around a woman than with the woman herself. Husbands' preferences were the reason mothers gave most often for not using modern methods, and mothers-in-law and other relatives were described as shaping whether a woman started, continued or stopped a method. This is consistent with Connell's theory of gender and power. Men hold most of the power over decisions about sex and reproduction, while women carry the work of preventing pregnancy and bear the consequences when it fails[15,21].

Husbands' preferences shaped contraceptive use in more than one way. Objections centred on methods that men themselves would have to use, especially condoms, where reduced sensation and embarrassment were cited, and on doubts about the quality of free supplies. Where male cooperation is required, women's options narrow quickly. Yet the same husbands were often absent for long periods as migrant workers, and mothers described using methods only when their husbands returned, or relying on withdrawal and infrequent contact as protection. There was a second kind of constraint too. A woman's contraceptive use followed her husband's schedule and his control over sex, not her own plans for having children. So, programmes that only hand out condoms, or only counsel women, address just half of the decision decision[21,22].

Mothers-in-law matter too. In many households, having children is a family matter, so a young wife's choice often reflects what her in-laws expect, especially soon after marriage. Providers described educated women who understood the benefits of contraception but were dissuaded by their mothers-in-law, while financially independent women were better placed to decide for themselves. This is consistent with Indian evidence that women's education matters most where it is accompanied by economic resources and a voice in household decisions[23]. In this community, where almost all mothers were housewives, women have little economic base from which to negotiate. This is why better health services alone may not be enough. The health system barriers discussed in the next section matter, but a woman who reaches a well-stocked, well-staffed facility may still be unable to use what it offers if her husband or in-laws disapprove.

Mothers and healthcare-providers both described how constraints in the health system, as well as household preferences, affect what women choose and whether they keep using it. Penchansky and Thomas's framework helps sort these barriers. Limited availability of trained staff and the absence of Copper-T insertion, removal and sterilisation services at sub-centres require women to travel to distant hospitals. Consequently, access to long-acting methods and follow-up care may be restricted, particularly for women who experience side effects or wish to change their method[24].

Distance and ASHAs' heavy workloads make things harder, leaving little time for regular counselling or home visits. Although, few mothers identified access as their main reason for non-use, providers described distance and service limitations as important obstacles. This suggests that access barriers may operate indirectly, making it harder to obtain contraceptives, seek advice or address concerns. Quality of care matters too. Mothers feared side effects, and one was ignored when she complained of pain after Copper-T insertion. Both highlights the need for respectful counselling, informed consent and follow-up care[25]. Services must be accessible locally, provide women with adequate information and support, and enable them to continue, discontinue or change methods according to their preferences.

Information shaped contraceptive decisions in more complex ways than the survey findings alone suggest. Although few mothers identified lack of information as their main reason for non-use, mother's open-ended responses indicated that their knowledge was sometimes incomplete or shaped by hearsay. Andersen's model helps distinguish awareness from the ability to act on it. Advice from relatives and neighbours about side effects and future fertility could carry more weight than brief

counselling from healthcare providers[14]. Similarly, beliefs about breastfeeding and postpartum amenorrhea may encourage women to delay contraception when they overestimate the protection these provide[18].

Early marriage is a separate but connected problem. Mothers' and providers' accounts suggest that expectations of early childbearing, family encouragement to conceive and reluctance to use contraception can shape decisions among young couples. In these cases, women may not use contraception because their family expects a baby soon, not only because they lack knowledge. Providers' reporting obligations concerning pregnancies involving underage girls may also affect couples' willingness to approach health services[26]. Comparing the results by method reveals that differences in modern use are mostly due to the methods women use at different stages, not whether they use any method at all. Female sterilisation rose with age, length of marriage, birth order and birth interval, and was far more common after Caesarean delivery. This suggests that sterilisation is largely a method for women who have completed their families, and that childbirth in hospital is the main opportunity for obtaining it, a pattern also reported elsewhere in India[27]. The Copper-T showed a different pattern. It was most common in the early years of marriage and among the youngest mothers, which is consistent with insertion after delivery, and the mother's accounts of discomfort and removal at home suggest that this early uptake was not always sustained. Education, income and husband's occupation made little difference to overall use, so household and service conditions seem to matter more. The small groups in some categories limit what can be said[28].

These results should be interpreted in the context of the Rajbanshi community, a large SC community in West Bengal. The everyday health circumstances of this community have received less attention in policy making than its history and politics. The challenges identified in this study, including limited local healthcare services, women's dependence on husbands and in-laws in reproductive decision-making, and early marriage, are not unique to the community. However, they may be compounded by low household incomes, limited participation in paid employment among women, and geographical barriers to healthcare[32]. Thus, in this scenario, disadvantage seems to arise from the factors governing service accessibility and women's decision-making, rather than from any inherent feature of community culture. As the study did not compare Rajbanshi women with other social groups, it cannot establish that caste itself explains the observed patterns. The findings should instead be understood as illustrating how gender relations and service gaps shape contraceptive choices within one marginalized setting.

6. CONCLUSION

The study finds that FP practice among Rajbanshi mothers in Gopalpur G.P. is dominated by traditional methods. These findings indicate that non-use of modern contraceptives should not be viewed simply as an individual choice; rather, it reflects broader issues related to the availability, accessibility, affordability, and acceptability of FP services. The study also reveals the challenges faced by healthcare providers in delivering FP services such as geographical barriers, staff shortages, limited contraceptive supplies, and inadequate health infrastructure which reduce their ability to provide regular counselling and follow-up care. The study concludes that increasing contraceptive availability alone will not be sufficient. Modern contraceptive methods will become more acceptable when Rajbanshi mothers receive accurate information, respectful counselling, convenient services, reliable follow-up, and support from their families and communities. Addressing these interconnected barriers can help reduce dependence on traditional methods, prevent unintended pregnancies, promote healthy birth spacing, and improve the reproductive health and well-being of Rajbanshi mothers.

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Data Availability: As the research is completely based on the primary survey data, so the data is not publicly accessible. As per the research ethics, all the names and identity address of the respondents have been kept confidential. That's why, the data can be shared upon reasonable request to the corresponding author, a statement should be included to this effect.

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