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Family Planning Practices among Tribal women: An insight from Northeast India

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Abstract

Despite widespread knowledge of family planning among the tribal population, the contraceptive prevalence is dismal. The present study is an attempt to examine the prevalence and determinants of contraception use in the North-eastern states of India. Methods: We have utilized the fourth round of the National Family Health Survey (NFHS-4, 2015-16) dataset. The final sample size used in the present study is 65,941 women aged 15-49 years. Bivariate and multivariate techniques have been used. This study used the Chi-square test to confirm the relationship between variables for a robust multivariable model. Results: Despite widespread knowledge about contraception across North-eastern states, only 35% of women used modern contraception. The Pill is the most commonly preferred contraception among tribal and non-tribal women. About 60% of tribal women were not using any contraceptives as against 48% of non-tribal women. Tribal women in the age group 20-24, 25-29, and 30-34 are about two times more likely to use any methods of contraception than tribal women in the age group 15-19. Conclusion The study indicates that having extensive knowledge about family planning does not promote the use of contraception. Family planning is crucial, and subsequent efforts are needed to improve access and strengthen the health system to cater to the unmet need for family planning. There is also a need to prioritize Information, Education, and Communication (IEC) activities among tribal women. Since settlements are scattered over the vast area in north-eastern states, there is a need to have strategies that allow easy access to contraception among tribal and non-tribal women.

Keywords: Family Planning, Contraception, Tribes, North-East, India

Introduction

Family planning services have the potential to improve the health of the mother, which in turn assists social and economic uplift of the family. The rapid increasing numbers of births has got an adverse effect on the national economy. Besides, high parity harms maternal as well as child health in terms of nutritional problems and sometimes leads to even deaths. Considering the magnitude of the problem, many developed and developing countries have given prime importance to family planning issue. Family planning in India has a longstanding history. It was way back in 1952 when India launched its state-sponsored unique family planning program and hence, becoming the first country in the world to adopt population control measures [1].

India, as being the second most populous country after China, is considerably variant, not only by different geographical settings, but has the diversity in economy, culture, tradition, and attitudes also. In particular, geographically, India's share of the total world land is only 2.4 percent, but it has to abide by the burden of 17.33 percent of the world's population [1]. According to the 2011 census, the tribal population in India was 104 million, constituting 8.6 per cent of country's population, up from 8.2 per cent in 2001 census [2]. A possible explanation behind uneven distribution of people, is significant differentialities of family planning usage among diverse socio-economic groups across the country [3]. As against 8.6 % of the tribal population in India, North-eastern states constitute around 25.8% of the tribal population from 145 tribal communities [4]. Northeast states have an overwhelming and almost incredible ethnic diversity, and it engulfs large-scale variations and diversities in the demographic situation and socio-economic and cultural backdrop between and within the states and regions [5].

From the perspective of family planning and reproductive health, northeast India has its problems undelivered. Despite widespread knowledge of family planning (especially, permanent method, 96.1 percent) among the tribal population in the NE India, the contraceptive prevalence rate is insignificant compared with other social groups [6]. As per latest National Family Health Survey report, 2015-16, prevalence of not using any contraception methods is high in Northeastern states (Arunachal Pradesh- 73.5%, Manipur- 75%, Meghalaya- 67.2%, Nagaland- 68.7%, Sikkim- 63.2%, and Mizoram- 61.5%). Not only in Northeast Indian states, but other states also, the prevalence of not using any contraception method is surprisingly quite high, especially in states like Uttaranchal, Rajasthan, Uttar Pradesh, Bihar, and Jharkhand [7-9].

The use of contraception is still perceived as a personal matter, and it is not easy to break the family barriers when it comes to modern contraception use among tribal communities [3,10]. The most common reasons for not using contraception include fear of side-effects, lack of knowledge, and phobia of adverse health consequences, religion, and past experiences [11-13]. Among the tribal population, the most common reasons for not using contraception include; the number of living children, education level of women, exposed to media, female autonomy [7,8,14-16].

There is a vast number of studies that have been published concerning tribes, their culture, health and development, food patterns,

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the participation of their rights, and cultural problems [12]. However, studies related to contraception use among the tribal population are somewhat limited [15]. There is a wide variation of the acceptance of the family planning method across and within the states of the north-eastern part of India [17]. Study on family planning has been lacking in the northeast states in India, to fill the research gap, this study is an attempt to examine the prevalence and its determinants on family planning use in eight states of Northeastern parts of India.

Data Source

The current study utilizes data from the fourth round of the National Family Health Survey (NFHS-IV), 2015-16. The NFHS-IV covered 601,509 households. This study covers only 65,941 married women in the age group 15-49 years as this age group is most appropriate for studies related to family planning. The information is extracted from the individual file of NFHS-IV for only eight states of North-eastern states on India, namely; Manipur, Meghalaya, Mizoram, Nagaland, Assam, Tripura, Sikkim, and Arunachal Pradesh. The NFHS data provide information on contraceptive use for currently married women aged 15-49 years. The use of the contraceptive method, a dichotomous variable where 1 means using and 0 means not using, was taken as a dependent variable. The predictor variables used for this study include Age group, education, and the current number of children (Parity), Sex composition, Religion, Wealth index, Place of Residence, Media exposure, and Exposure to Family planning.

Statistical Analysis

For presenting the prevalence of contraception among different social groups in the North-eastern states of India, the bivariate method was used. This study used the Chi-square test to enquire about the nature of the relationship between variables before using the variables in multivariate regression models. The multivariate regression model was used to estimate the odds ratio for contraceptive use among tribal and non-tribal married women by various background characteristics. For multivariate regression analysis, the variable of contraception use has been categorized as the Practice of contraception and Methods of contraception. Both the variables are dichotomous and are used for logistic regression analysis. The practice of contraception means whether a woman is using any method of contraception as against not using any contraception. Methods of contraception mean whether a woman is using the modern method of contraception as against the traditional method of contraception.

Results

Table 1 depicts the prevalence of knowledge of different contraceptive methods of family planning among married women in Northeastern India. In all the eight states of Northeastern India, more than 95% of married women knew modern methods of contraception. Around 9 out of 10 women in Manipur and Assam knew traditional methods of contraception. In contrast, about half of the women in Meghalaya and Mizoram knew any traditional methods of contraception. Only 23% of married women in Assam had experience with any conventional method of contraception. Table 2 presents the percentage distribution of contraceptive prevalence rates and methods of contraception by different background characteristics in the North-eastern states of India. The contraceptive prevalence rate is higher for modern methods as compared to traditional methods for all the background characteristics except for when married women had no child. More than 30% of the married women in the age group of 25-39 are using modern methods of contraception. The contraceptive prevalence rate is highest for the age group 30-34, where around half of the women are using contraceptive methods. Higher education, lower is the contraceptive prevalence rate. A higher percentage of illiterate women were using modern methods of contraception than women with higher education; whereas, a higher percentage of women with higher education were using traditional methods of contraception than illiterate women. One son and one daughter came out as the best scenario for mothers practicing contraceptive methods. The contraceptive prevalence rate decreases with an increase in wealth. Table 3 shows the result of contraception use in states by tribal and non-tribal populations. In every NE state, the use of modern methods of contraception is higher among non-tribal married women than in tribal married women except in Assam and Sikkim. Nearly 11% of tribal women used the traditional method of contraception, and around 30% of such women used modern methods of contraception. Table 4 presents the odds of contraceptive determinants among tribal and non-tribal married women in the Northeast of India. The practice of contraception determines whether women were using any method of contraception, whereas methods of contraception determine the type of contraception, either traditional or modern methods. For the dichotomous variable of the practice of contraception, not using any contraception is taken as the reference category for calculating odds. For methods of contraception, the use of the traditional method of contraception is taken as the reference category. Tribal women in the age group 20-24 and 25-29 are two times more likely to use any methods of contraception than tribal women in the age group 15-19. Results found that the use of modern contraception is two times higher among tribal women aged 30-34 and 35-39 than tribal women age 15-19 years. The practice of contraception, as well as methods of contraception, is higher among higher educated non-tribal women than illiterate non-tribal women. In the multivariate model, wealth does not seem to affect the practice of contraception and methods of contraception. The use of modern contraception is 1.23 times higher among non-tribal rural women than their counterparts. In contrast, tribal women in rural areas are 3% more likely to use modern contraception than their counterparts

Contraceptives	Manipur	Meghalaya	Mizoram	Nagaland	Sikkim	Tripura	AP	Assam
Any method	99.7	96.3	98.9	96.7	99.7	99.9	94.3	99.6
modern Method	99.5	95.9	98.9	96.2	99.7	99.9	94.2	99.4
Pill	94.2	88.7	91.1	79	97.6	99.3	88.2	97.4
IUDs	94	70.6	86.9	72.6	93.3	70.5	71.7	78.8
Female ster.	84.5	95.9	90.2	96.2	94.6	98.3	82.3	95.4
Male ster.	74.5	75.4	45.5	77.1	93.6	72.6	51.6	79.2
Condom	98.2	87	96.7	87.1	96.4	92.3	84.3	87.3
Traditional M.	91.9	54.2	52.1	73.4	23.1	96.7	55.7	89.6
Rhythm method	63.6	35.5	25.7	51.5	6.9	77.4	37.7	69.4
Withdrawal	89.2	49.1	48.6	68.3	22.1	94	52.9	86.8
Total women	8795	5553	6501	6597	3336	3645	10157	20556

Table 1: Prevalence of knowledge, based on different contraceptives methods of the family planning by presently married women in northeastern part of India.

Variables	Traditional Methods (%)	Modern Methods (%)	CPR (%)
Age Group			
15-19	2.3	3.5	5.8
20-24	9.1	19.5	28.5
25-29	12.3	31.8	44.1
30-34	14	38.6	52.6
35-39	14.7	37.1	51.9
40-44	12.9	27.9	40.8
45-49	6.1	18.1	24.2
Education			
Illiterate	8.6	30.3	38.9
Primary	9.9	30.7	40.6
Secondary	10.6	22.9	33.5
Higher	10.8	13.8	24.6
Sex Composition			
No child	2.1	2	4.1
Only one son	19	30.4	49.5
Only one daughter	17.2	29.9	47
Son and one daughter	14.9	40.9	55.8
Others	11.3	37.6	48.9
Religion			
Hindu	12.1	26.1	38.2
Muslim	10	28.3	38.3
Christian	3.7	15.7	19.4
Others	5.1	18.5	23.6
Wealth Index			
Poorest	9.5	27	36.5
Poorer	9.9	26.5	36.4
Middle	10	24	34.1
Richer	10.9	22	33
Richest	10.4	19.8	30.3
Place of Residence			
Urban	9.3	22.4	31.8
Rural	10.3	25.4	35.7
Mass Media			
Not at all	10.7	25.5	36.2
Less than a week	9.2	26.3	35.5
At least a week	8.5	23	31.6
Almost every day	10.4	24.5	35
Caste			
Tribal	7.1	20.1	27.2
Non-Tribal	11.1	23.8	34.9
Total	14.3	34.7	49.1

Table 2: Percentage distribution of contraceptive prevalence rate with methods of the contraception with background characteristics in the northeast India, 2015-2016.

State	Tribal		Non-Tribal	
	Traditional methods	Modern methods	Traditional methods	Modern methods
Arunachal Pradesh	3.9	23.5	8	33.7
Assam	16.4	37.2	15.6	36.5
Manipur	6.6	11.4	12.6	13.1
Meghalaya	1.9	19.9	5.6	34.3
Mizoram	0.1	34.8	0	43.9
Nagaland	5.4	20.4	4.7	26.5
Sikkim	0.9	48.9	0.6	44.2
Tripura	25	37.5	19.6	45.1
Total	10.7	29.9	15.4	36.2
Note: Tribal mean the only Scheduled tribe population and Non-Tribal mean except tribal population (Scheduled Caste, Other Backward Class & General Population)				

Table 3: Percentage distribution of currently married tribal and non-tribal women by contraceptive methods currently used according to states, 2015-16.

Predictors	Practice of Contraception [a]		Methods of Contraception [b]	
Age group	**Tribal Women**	**Non-tribal women**	**Tribal Women**	**Non-tribal women**
15-19	(Ref.)	(Ref.)	(Ref.)	(Ref.)
20-24	1.90***[1.43-.52]	1.61*** [1.35-1.91]	1.78*[1.13-2.82]	1.39[1.10-1.75]
25-29	2.06***[1.55-.74]	1.70*** [1.42-2.02]	1.91*[1.20-3.04]	1.50***[1.18-1.89]
30-34	1.98***[1.49-.65]	1.84*** [1.54-2.21]	1.99***[1.25-3.17]	1.67***[1.31-2.13]
35-39	1.36[1.01-1.84]	2.02*** [1.68-2.43]	2.01***[1.24-3.25]	1.86***[1.46-2.38]
40-44	0.77[0.57-1.05]	1.79*** [1.48-2.16]	1.29[0.77-2.15]	1.60***[1.24-2.05]
45-49	1.48[1.11-1.97]	0.84[0.68-1.0]	1.61**[1.02-2.53]	0.65***[0.49-0.85]
Education				
Illiterate	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Primary	1.21[.06-1.40]	1.32*** [1.19-1.47	1.10[0.86-1.41]	1.28***[1.09-1.50]
Secondary	1.54***[1.36-.75]	1.39*** [1.26-1.53]	1.42***[1.12-1.81]	1.30***[1.12-1.51]
Higher	1.41***[1.24-.60]	1.72*** [1.57-1.88]	1.30**[1.04-1.62]	1.60***[1.39-1.83]
Parity				
0 Parity	(Ref.)	(Ref.)	(Ref.)	(Ref.)
1 parity	12.13***[7.8-.76]	5.87*** [4.36-7.89]	6.59***[3.36-12.90]	4.39***[2.90-6.64]
2 parity	18.6***[12-28.2]	6.78*** [5.11-9.00]	8.87***[4.67-16.83]	4.87***[3.25-7.29]
Above 2 parity	20.5***[13.5-.08]	5.97*** [4.47-7.96]	6.35***[3.30-12.21]	4.13***[2.72-6.26]
Sex Composition				
No child	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Only One Son	2.16***[1.4-3.18]	2.03*** [1.55-2.66]	1.88[1.03-3.44]	2.39***[1.63-3.51]
Only One Daughter	2.12***[1.4-3.11]	1.87*** [1.42-2.45]	1.83[0.99-3.36]	2.17***[1.48-3.18]
One Son And One Daughter	2.55***[1.8-3.66]	1.52*** [1.17-1.97]	1.35[0.76-2.41]	1.61***[1.11-2.35]
Others	2.16***[1.5-3.06]	1.47*** [1.14-1.89]	1.19[0.68-2.09]	1.63***[1.13-2.36]
Religion				
Hindu	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Muslim	0.68[0.28-1.64]	0.84***[0.77-0.91]	1.65[0.51-5.29]	0.89[0.80-1.00]
Christian	0.27***[0.2-0.30]	0.92[0.76-1.12]	0.25***[0.22-0.30]	0.89[0.66-1.19]
Others	0.41***[0.3-0.46]	0.46***[0.39-0.55]	0.31***[0.24-0.41]	0.62***[0.47-0.81]
Wealth Index				
Poorest	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Poorer	0.95[0.84-1.08]	1.15***[1.05-1.26]	0.87[0.71-1.05]	1.09[0.96-1.23]
Middle	0.85[0.74-0.99]	1.09[0.97-1.22]	0.70[0.55-0.90]	1.16[0.99-1.35]
Richer	0.87[0.73-1.03]	1.05[0.92-1.21]	0.65[0.49-0.88]	1.25[1.05-1.49]
Richest	0.97[0.79-1.21]	1.22*[1.02-1.46]	0.65[0.44-0.96]	1.341.07-1.68 []
Place of residence				
Urban	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Rural	1.00[0.90-1.12]	1.07[0.98-1.16]	1.03**[0.80-1.25]	1.23***[1.10-1.38]
Exposure media				
Not at all	(Ref.)	(Ref.)	(Ref.)	(Ref.)
Less than once a week	1.13[0.99-1.29]	1.05[0.94-1.16]	0.89[0.71-1.11]	0.77***[0.66-0.89]
At least once a week	1.30***[1.1-1.47]	0.99[0.89-1.10]	0.97[0.78-1.20]	0.71***[0.62-0.82]
almost everyday	1.37***[1.2-1.55]	1.22***[1.12-1.34]	1.01[0.83-1.23]	0.73***[0.65-0.82]

Note: a whether a currently married women using a particular method of contraceptive if YES=1 then NO=0, b Whether a Currently married women using which particular method of contraception either Tradition or Modern contraception, if Modern method=0 & Traditional method=1. At 95% confidence Interval (if "P<.001=***", "P<.005=**", P<.01=*"), Ref. indicate reference category of a particular variable.

Table 4: Determinants of contraceptive and method of contraception among tribal and non-tribal married women in northeast India.

in urban areas. Exposure to media does not have a significant effect on tribal women when measured for methods of contraception.

Discussion

This paper attempted to study the use of contraception among tribal and non-tribal married women in the north-eastern states of India. The utilization of contraceptive methods among the tribal population is not a new but unexplored phenomenon. This issue has been a focal theme of debate for the public health scientist for several decades. Despite receiving the attention of the policy-makers, the use of contraception by large remained in concussion in north-eastern states. What makes family planning system failed critically in north-eastern states, is the inaccessible terrain and settlements that are scattered over a vast area [17].

The study revealed that the knowledge of family planning methods is almost universal in these states. Still, there is a huge disparity between awareness of contraception and the prevalence of contraception use. In various other studies also conducted in Indian settings, it was found that almost all the tribal women were known to at least one method of family planning [18,19]. The knowledge and awareness of contraception are highly prevalent or nearly universal in almost every society, but the use of contraception is dismal [20]. Major findings from

the study are similar to many other micro and state-level studies that have implemented on targeting the socially deprived population in India [3, 18, 19].

The study found that the use of modern contraception is higher than the use of traditional methods among women in all the states of north-eastern India. Not only in north-eastern states but also in other states of India and in developed [21-23], and developing countries [24,25], the use of modern contraceptive methods remains higher than the traditional methods of contraception.

The result from cross-tabulation found that with the increase in educational status, the use of modern methods of contraception declines, and traditional methods of contraception increase, and overall, the utilization of contraception decreases with an increase in education. A deviation from our study concluded that education does not affect the use of traditional methods of contraception among women [26]. Why uneducated women use contraception is a topic of discussion and needs further investigation from researchers. The results from the odds ratio depict the other side of the story, where an increase in education is found significant with the usage of contraception among women, after controlling the confounder variables. The highly literate women are more likely to use modern methods of contraception than illiterate women; the educated couples have a better understanding of modern methods of contraception which led to higher utilization of contemporary contraceptive among them [27].

The parity and combination of children (number of sons and daughters) also influence the use of contraception among tribal as well as non-tribal women. A combination of children is one of the prominent factors in the utilization of contraception use as son preference is very noticeable in Indian culture. The number of living sons is found to be associated with the use of contraception in India [28]. The higher purpose of contraception follows the increasing parity as with the growing parity, and women attain a suitable combination of children.

In the multivariable model, the result of the utilization of contraception and wealth is insignificant. The study found that wealth does not affect the utilization of contraception. An increase in wealth does not promote the higher utilization of contraception among tribal as well as non-tribal women in the north-eastern states of India. This study deviates from previous studies where it was established that an increase in wealth promotes the utilization of contraception among tribal and non-tribal women in India.[2] Few believe that household asset and women education are the two overemphasized variables in the study of contraception use in India [29].

Conclusion

The results concluded that the utilization of family planning methods is still dismal in the north-eastern states of India, the stark differences between tribal and non-tribal women with regards to the utilization of family planning methods remains ubiquitous. In five out of eight states, namely; Assam, Mizoram, Nagaland, Sikkim, and Tripura, a higher percentage of tribal women use traditional methods of contraception than their counterparts. Moreover, in only two out of eight states (Assam and Sikkim), a higher rate of tribal women use modern methods of contraception than their counterparts. It signifies that the use of modern contraception is higher among non-tribal women. The tribal women depend upon traditional methods of contraception. A significant gap between knowledge and use of contraception exists among tribal as well as non-tribal women; however, the contraceptive prevalence is significantly lower among tribal women than their counterparts. The more economical utilization of family planning methods among tribal women is a cause of concern.

There is a need to bring improvements in the contraceptive prevalence rate among women with a particular focus on tribal women. Moreover, addressing the unmet need for contraception also needs to be strengthened. Improving literacy among tribal women would surely follow the higher use of contraception. There is also a need to prioritize Information, Education, and Communication (IEC) activities among tribal women. Since settlements are scattered over the vast area in north-eastern states, there is a need to have strategies that allow easy access of contraception among tribal as well as non-tribal women.

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