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## Modern contraceptive use and reproductive intention among currently married men in Northeast, India

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### Abstract

Effective use of contraceptive methods assists the couple in achieving their desired number of children and improves maternal and child health. Men's participation in family planning is critical to enhance the shared responsibility of reproduction. However, the lack of a wider basket of choice of male contraceptive methods restricts their involvement in family planning. Further, due to the patriarchal norms, myths, lack of proper information, and misconceptions about male contraceptive methods, men often shy away from family planning and women have to bear the burden. Thus, it is important to study the determinants of modern contraceptive use and reproductive intention among currently married men in North-Eastern states of India. The study utilizes NFHS-5 (2019-21) data of currently married men aged 15-54 years covering a sample size of 9,166 from northeast India. Appropriate bivariate and multivariate statistical techniques were applied to draw meaningful conclusions. It is found that the highest percentage of modern contraceptive use is in Sikkim (38%) whereas the lowest is in Manipur (8.9%) with only 22% male methods (male sterilization and male condom). It was found that around 45% of them were in deficit of sons while 41% of them had deficit of daughter. Logistic regression found significant association with social category, religion, place of residence, media exposure, wealth index, desire for more children, fertility status, number of living children and region. Overall, in the north-eastern state use of male method is low implying that contraceptive use is more inclined towards women's responsibility. Thus, more awareness and involvement of men in family planning is essential else contraceptive use will always remain a burden on the women.

### Keywords

Family Planning,  
Male Contraceptive  
methods, Northeast  
India, Reproductive  
health,  
Reproductive  
intentions

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## Introduction

Contraception is one of the most important determinants in improving sexual and reproductive health as it prevents unwanted pregnancies, unsafe abortions and can prevent unwanted maternal mortality. The Sustainable Development Goal (SDG-3, target 3.7.1) proposes to increase the demand for family planning satisfied with modern contraceptive methods to 75 percent by 2030, but achieving these targets will be a challenge without the involvement of men. There is a need for comprehensive sexuality education especially among young boys for creating a positive effect during adulthood, promoting critical reflections on masculinity and on gender equality.

Family planning is a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples (WHO, 2014). It is one of the most significant and fundamental health exercises for controlling the population (Chauhan & Prasad, 2021), reduce poverty, improve maternal and child health, enhance education, and promote gender equality (Cleland, 2006) and avoid pregnancy (Gold, 2005). There are various types of modern contraceptive methods which includes male and female condoms, oral hormonal pills, implants, male and female sterilisation, injectables, vaginal barriers and emergency contraception (UN, 2015 & Chauhan, 2021) and the Standard Days Method (SDM) (Hardee et al., 2017). In sexual and reproductive health, involvement of men could play a tremendous role (Davis et al., 2016) in reducing rates of unwanted pregnancy (Ling & Tong, 2017). Still in many societies, contraception is women's responsibility but if there is an increase in involvement of males on family planning it could positively influence access to contraception (Mwangi et al., 2016; Bruce,

2013).

Social system plays an important role in a society and in a country like India where there is a domination of patriarchal society, majority of the power lies with men, in terms of political leadership, household leadership, economic power, moral authority, social privilege and control of property (Malti-Douglas, 2007). High practice of gender restrictive norms, discrimination against women and strong kinship structures drives the burden of family planning on women (Seth et al., 2020; Mejía-Guevara et al., 2021) especially in a male-oriented patriarchal society (Kipgen et al., 2020). In a patriarchal society, women often do not have the autonomy to make their own decisions regarding the use of family planning methods, decision about number of children (Parija et al., 2022), therefore, women use contraceptives in secret in order to satisfy their reproductive goals and preferences (Vishwakarma & Shekhar, 2022).

In Indonesia, women's autonomy in matriarchal culture is more dominant than patriarchy (Amraeni et al., 2021). Although spousal approval still matters for women in the use of contraceptives, the matrilineal system appears to give them greater autonomy in decision-making (Adongo et al., 2013). A study in Meghalaya, India where matriarchal society is prevalent, found that among the rural Khasi couples use of "natural" and "traditional" contraception is prevalent (Oosterhoff et al., 2015).

Thus, various socio-economic factors influence a women's reproductive health, such as social, cultural, economic, and political factors, as well as power, practice, mass-media, literacy (Islam & Shahariar, 2021), cultural beliefs and wrong perceptions about family planning (Ali et al., 2022). But if informed choices about contraception and

proper guidance about its uses is available than it may improve the use of modern contraception (Narzary & Ao, 2019).

Men exert a strong influence on couple's contraceptive decisions in developing countries (Fennell, 2011), but in India more than one-third of men believe that "contraception is women's business and that men should not have to worry about it", also 20% of men believe that a "woman who uses contraception may become promiscuous" (IPS & ICF, 2021), therefore more awareness on contraceptive use among men is necessary, as it is a shared responsibility of both men and women. Therefore, integrating males in family planning programmes is extremely important for reaching objectives related to reproductive health as well as gender equity. But as there is a dearth of studies concerning use of modern contraception among men especially in Northeast India, it is imperative to understand men participation, reproductive intentions and perception of family planning. Thus, the objective of the study is to understand the determinants of modern contraceptive use and reproductive intentions among currently married men in Northeast India.

## Materials and Methods

### *Study Area and Data source*

Figure 1. shows location of the study area. Northeast, it is the easternmost region of India comprising of eight states viz., Assam, Nagaland, Manipur, Tripura, Meghalaya, Mizoram, Arunachal Pradesh and Sikkim. The region shares an international border with several neighbouring countries. It shares an international border with China in the North, Myanmar in the east, Bangladesh in the South-West, with Nepal in the West and with Bhutan in the North-West. The Northeast constitutes over 220 ethnic groups mostly dominated by indigenous tribal

population. States like Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland are predominantly inhabited by tribal people with a degree of diversity even within the tribal groups. Out of the eight (08) North-Eastern states only one state i.e. Meghalaya follows a matriarchal culture and the rest seven (07) North-Eastern states follows a patriarchal culture.

### *Dependent variable*

Modern contraceptive use: 1 "Yes"; 0 "No"  
Currently married men and/or his partner, who are current user of any modern contraceptive methods (male condom, female condom, pills, IUD, injections, Diaphragm, male Sterilization, female Sterilization, Standard days method, Lactational amenorrhea method (LAM), Foam or jelly, Emergency contraception, and other modern method).

### *Independent variables*

Age: 1 "15-24 years" 2 "25-34 years", 3 "35-44 years" and 4 "45-54 years"

Social category: 1 "Scheduled caste", 2 "Scheduled Tribe", 3 "OBC" 4 "Others"

Currently working: 0 "No", 1 "Yes"

Religion: 1 "Hindu", 2 "Muslims", 3 "Christian" and 4 "Others".

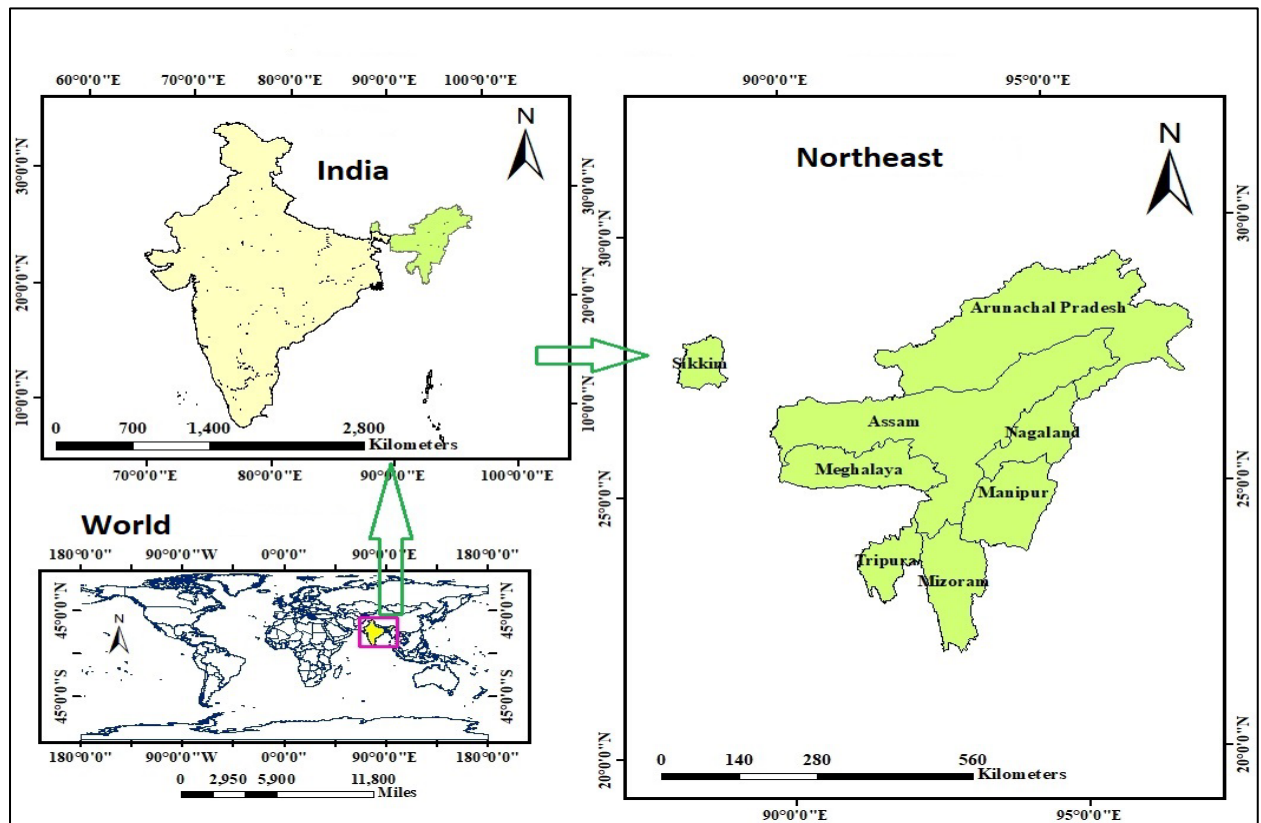
Education: 1 "No education", 2 "Primary", 3 "Secondary", 4 "Higher"

Place of residence: 1 "urban", and 2 "rural"

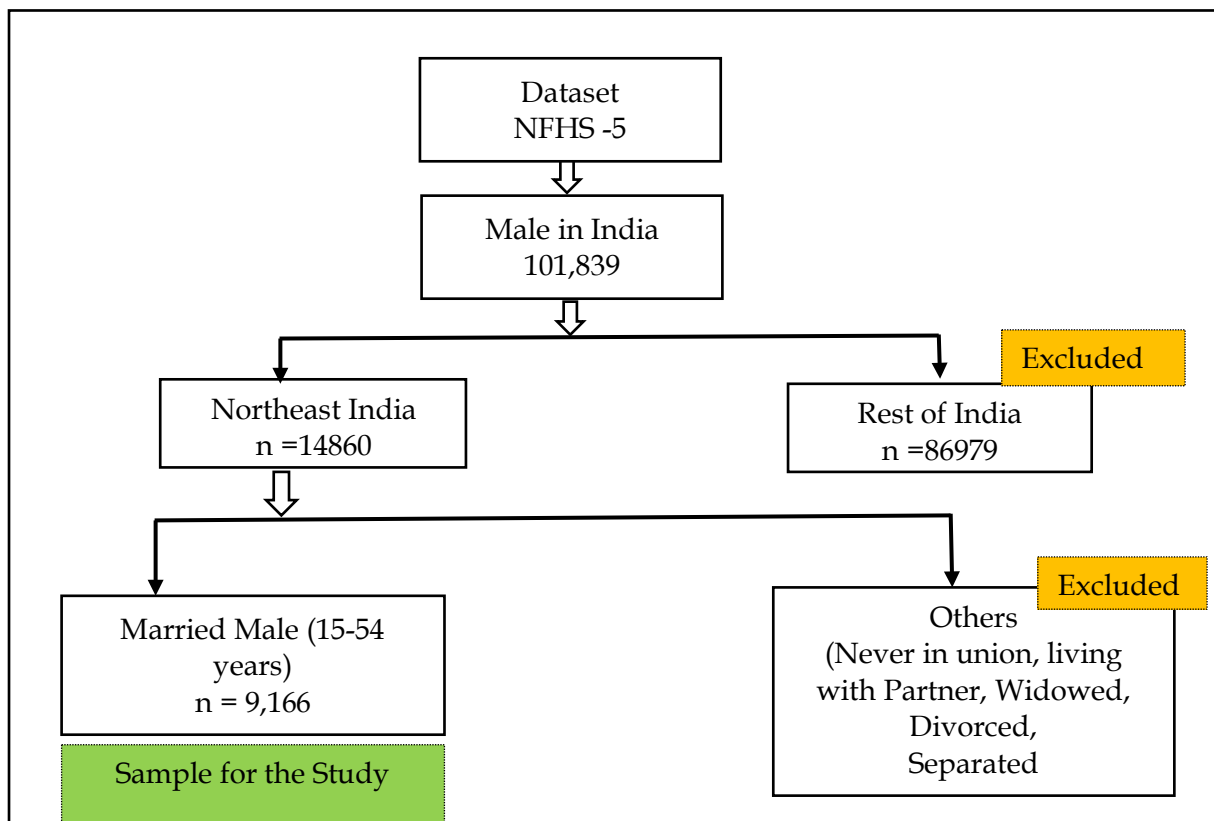
Wealth index: 1 "poorest", 2 "poorer", 3 "middle", 4 "richer" and 5 "richest"

Desire for more children: 1 "yes", 2 "Undecided" and 3 "No"

Media Exposure: 0 "Not Exposed", 1 "Exposed"



**Figure 1** Location Map of Northeast States of India



**Figure 2:** Sample selection in the study

(Index of mass media exposure was constructed using three variables such as, 1) read about Family Planning in the last few months in read newspaper, 2) saw about Family Planning in the last few months On TV and 3) heard about Family Planning in the last few months on radio. The variable for media exposure was coded as “1” if they have either read in newspaper or watched on TV or heard on radio about family planning in the last few months else it was coded as “0”

“Contraception is woman's business, man should not worry”: 1 “disagree”, 2 “agree”, and 3 “don’t know”

“Women who use contraception become promiscuous”: 1 “disagree”, 2 “agree”, and 3 “don’t know”

Achieved fertility: 0 “Not achieved”, 1 “Achieved”

(The variable was constructed using four variables viz, a) Living number of sons, b) living number of daughters, c) ideal number of sons and d) ideal number of daughters. If living number of sons is equal to number of ideal sons, and if living number of daughters is equal to ideal number of daughters the couple is considered to have achieved fertility else not achieved).

Surplus/ Equal/Deficit of Son: 1 “Deficit” 2 “Equal” 3 “Surplus”

(The variable was constructed using two variables viz, a) Living number of sons, b) ideal number of sons. If living number of sons is greater than ideal number of son than it is coded as surplus. If living number of sons is less than ideal number of son than it is coded as deficit. If living number of sons is equal to the ideal number of son than it is coded as Equal)

Surplus/ Equal/Deficit of daughters: 1 “Deficit” 2 “Equal” 3 “Surplus”

(The variable was constructed using two variables viz, a) Living number of daughters, b) ideal number of daughters. If living number of daughters is greater than ideal number of daughter than it is coded as surplus. If living number of daughters is less than ideal number of daughter than it is coded as deficit. If living number of daughters is equal to the ideal number of daughter than it is coded as Equal).

Type of state: Meghalaya was considered as ‘matriarchal state’ and coded as “0” whereas the remaining 7 (seven) states viz. Assam, Manipur, Tripura, Nagaland, Mizoram, Sikkim and Arunachal Pradesh were grouped as ‘patriarchal state’ and coded as “1”.

### **Statistical methods**

The data was analysed using SPSS software version 20 using men's sample weight in the analyses, which is provided in the NFHS-5(2019-21) data. Descriptive and bivariate analyses were used for background characteristics, status of fertility and reproductive intention, while logistic regression was used for determinants of modern contraceptive use among the currently married men. For mapping of the study area QGIS 3.28. software was used.

### **Results**

#### ***Differentials in modern contraceptive use in Northeast, India***

Table 1 shows the percentage of current modern contraceptive use among currently married men/his partner by the background characteristics. Out of the total currently married men (n=9166), only 23% (n=2114) of them were currently using any modern contraceptive methods. It is evident from the analysis that middle aged men (35 -44 years) with primary level of education shows higher percentage of using modern contraceptive method. The use of modern contraceptive method is relatively higher among Other Backward Class and lowest

among Scheduled Tribe men (19.4%). By occupation it is evident that currently married men who are not working shows low use of modern contraceptive compared to working men in Northeast India, the use of contraceptive method is low among Christian and men professing 'other religion' (other than Hinduism, Islamic, and Christianity). It is found that the use of modern contraceptive method is comparatively lower among men in urban areas, whereas its use is nominally higher for men belonging to middle wealth quintile. Media exposure does make a difference in use of modern contraceptive among currently married men as it is evident from the analysis that those men who reads about family planning in newspaper almost every day, or listen to radio almost every day, or watch television almost every day had higher percentage of using modern contraceptive compared to men with lower media exposure. It is notable that the use of modern contraceptive method is very low (16.4%) among currently married men who are yet to decide about whether they would like to have another child, but those who does not want any more children, use of modern contraceptive method is significantly higher (26.1%). The analysis found that men who agreed that "Contraception is woman's business; man should not worry" showed higher percentage of using modern contraceptive compared to men who disagree. Meanwhile men agreeing on the statement on "Women who use contraception become promiscuous" show indifferent in terms of using modern contraceptive compared to men who disagree on the statement. By type of state it was found that use of modern contraceptive was only 9.3% in matriarchal state while it was 25% in patriarchal state. Overall, on an average, the current use of modern contraceptive method is only 23% in

Northeast, India.

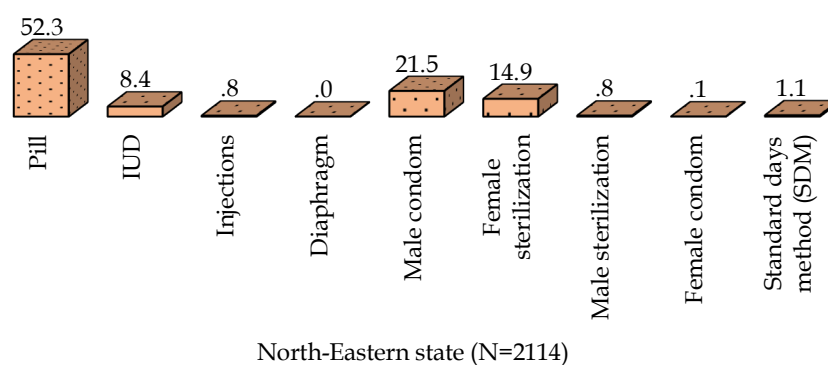
currently married men as it is evident from the analysis that those men who reads about family planning in newspaper almost every day, or listen to radio almost every day, or watch television almost every day had higher percentage of using modern contraceptive compared to men with lower media exposure. It is notable that the use of modern contraceptive method is very low (16.4%) among currently married men who are yet to decide about whether they would like to have another child, but those who does not want any more children use of modern contraceptive method is significantly higher (26.1%). The analysis found that men who agreed that "Contraception is woman's business; man should not worry" showed higher percentage of using modern contraceptive compared to men who disagree. Meanwhile men agreeing on the statement on "Women who use contraception become promiscuous" show indifferent in terms of using modern contraceptive compared to men who disagree on the statement. Overall, on an average, the current use of modern contraceptive method is only 23% in Northeast.

#### *Types of modern contraceptive use among currently married men in Northeast India*

Figure 3 presents the type of contraceptive use in Northeast India. From the figure it is visible that among the users of modern contraceptive methods more than half of them use pills followed by male condom (26%) and female sterilization (15%). It is clearly evident that the type of modern contraceptive use by currently married men is more inclined towards women's methods. The proportion of contraceptive method use by men is only around 22%. This shows that even in northeast India the responsibility of using contraceptive method rests upon women.

**Table 1** Percentage of modern contraceptive use among currently married men in Northeast India, 2019-21

Background characteristics		Modern contraceptive use	n
		Yes (%)	
Age group (in years)	15-24	19.5	88
	25-34	21.9	583
	35 -44	24.9	809
	45 to Above	22.6	634
Educational level	No education	22.3	320
	Primary	25.1	391
	Secondary	23.3	1189
	Higher	20.1	214
Social category	Schedule caste	26.0	212
	Schedule tribe	19.4	861
	OBC	27.3	396
	Others	26.3	645
Currently working	No	18.8	162
	Yes	23.5	1952
Religion	Hindu	25.9	960
	Muslim	32.2	434
	Christian	17.6	539
	Others	17.3	182
Place of residence	Urban	17.3	362
	Rural	24.7	1752
Wealth Index	Poorest	22.3	382
	Poorer	23.7	447
	Middle	24.1	460
	Richer	22.3	418
	Richest	22.9	408
Media Exposure	Not Exposed	19.7	783
	Exposed	25.1	1331
Desire for more children	Yes	20.1	500
	Undecide	15.4	186
	No	26.1	1428
No. of living children	zero	16.4	300
	One	22.3	446
	Two	27.7	697
	Three & over	29.9	671
Contraception is woman's business; man should not worry	Disagree	22.1	1440
	Agree	30.2	643
	Don't know	5.9	495
Women who use contraception become promiscuous	Disagree	24.5	1650
	Agree	24.5	386
	Don't know	9.1	78
Type of state	Matriarchal State	9.3	101
	Patriarchal State	24.9	2014
Total		23.1	2114

**Figure 3** Percentage distribution of use of modern contraceptive method by Men in Northeast India

An attempt is made here to find out the relationship between contraceptive use and the total fertility rate. Data (table 2) shows that out of the eight (08) North-Eastern states Sikkim (38%) has the highest prevalence of modern contraceptive and lowest in Manipur followed by Meghalaya (8.9% and 9.3% respectively), and while linking contraceptive use with fertility it is evident that Sikkim has the lowest TFR while Manipur and Meghalaya show the highest TFR. Pearson Coefficient of Correlation ( $r = -0.766$ ) shows a strong negative correlation between use of contraceptive method and total fertility rate.

***Reproductive behavior/intentions among currently married men in Northeast, India***

The reproductive intentions among currently married men were analyzed using the information on two main variables viz: Desire for more children and ideal number of son/daughter/children. Table 3 shows that the mean CEB is nominally higher among user of modern contraceptive methods compared to non-user of modern contraception (2.15 and 2.02 respectively). From the analysis it is evident that the mean of living son and living daughter is slightly higher among user of modern contraceptive compared to non-user of modern contraception but in case of ideal number of children/ ideal number of son/ideal number of daughters the mean is marginally smaller among the users of modern contraceptive.

**Table 2** Correlation of modern contraceptive use and fertility by state, Northeast India, 2019-21

States of Northeast India	Modern contraceptive use by currently Married men	TFR* $r = -0.7663$
	Percentage (n)	
Sikkim	37.9 (92)	1.1
Arunachal Pradesh	23.7(441)	1.8
Nagaland	16.8(129)	1.7
Manipur	8.9 (65)	2.2
Mizoram	12.9 (75)	1.9
Tripura	31.0 (222)	1.7
Meghalaya	9.3 (101)	2.9
Assam	31.0 (989)	1.9
Total	23.1 (2114)	

Note: (\*NFHS-5 report, 2019-21)

**Table 3** Mean of actual fertility and ideal number of children among users of modern contraceptive in Northeast India, 2019-21

Variable	Mean	Mean of modern contraceptive use	
		Yes	No
Children Ever Born (CEB)	1.74	2.15	2.02
Number of living children	1.97	2.06	1.94
Number of living Son	1.01	1.06	1.00
Number of living daughters	0.95	1.00	0.94
Ideal number of children	2.55	2.34	2.60
Ideal number of daughters	1.10	1.05	1.12
Ideal number of sons	1.31	1.21	1.34

Thus, it reflects that among currently married men in Northeast India the ideal number of having children is higher than the number of living children and this may be a

barrier in using modern contraceptive among men/his partner. As such, there is a need to investigate whether couple use a modern contraceptive after achieving the

ideal number of children, more so the ideal sex composition of children or achieved fertility.

Table 4 shows the reproductive intentions among currently married men in Northeast and it is clearly evident that there are some relations between reproductive behavior/intentions with use of modern contraceptive. it was found that those currently married men who had surplus of son they were showing highest usage of modern contraceptive compared to having deficit of son (26% and 19% respectively). The similar pattern is observed among daughters, as if there is a surplus of having daughter it was found highest usage of

modern contraceptive compared to deficit of having a daughter (27% and 19% respectively). Thus, the analysis clearly shows that achieved fertility shows low usage of modern contraceptive compared to not achieved fertility (22% and 27% respectively).

Table 5 shows the percentage of desire for more children with the number of living daughters/sons. The reproductive intentions about men were asked to understand men's preferences about fertility. Here, it is evident that 38% of the men wanted to have children if they have zero number of daughters, while if the men had one living daughter than the desire for

**Table 4** Percentage distribution of reproductive intentions with use of modern contraceptive among currently married men in Northeast, India.

Variables		Modern contraceptive use	
		Yes	No
Son	Surplus	26.4(471)	73.6(1312)
	Equal	26.2(851)	73.8(2396)
	Deficit	19.1(792)	80.9(3344)
Daughter	Surplus	27(527)	80(3055)
	Equal	25.1(859)	74.9(2569)
	Deficit	19.2(729)	73(1428)
Fertility status	Not Achieved	22.2(1643)	77.8 (5752)
	Achieved	26.6(471)	73.4 (1300)
Total		23.1 (2114)	76.9 (7052)

**Table 5** Percentage of Desire for more children with the number of living sons/ daughters

Variables	Desire more children		
	Yes	Undecided	No
No. of living Daughter	% (n)	% (n)	% (n)
Zero	37.9 (1422)	14.3 (538)	47.8 (1792)
One	23.4 (741)	12.9 (409)	63.7 (2018)
Two	16 (243)	11.5 (175)	72.5 (1103)
Three & over	10.8 (78)	12.1 (88)	77.1 (559)
No. of living Son			
Zero	41.2 (1395)	15.6 (530)	43.2 (1465)
One	25.9 (874)	11.7 (395)	62.3 (2100)
Two	9.2 (154)	11.2 (187)	79.6 (1331)
Three & over	8.3 (61)	13.2 (97)	78.5 (576)
Total	27.1 (2484)	13.2 (1210)	59.7 (5472)

having more children reduces. Thus, if the men had 3+ living daughters than about three-fourth of men do not want to have any more children. While in case the couple had

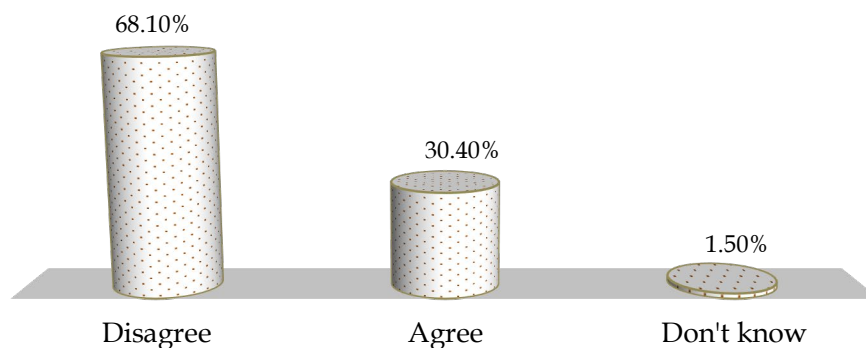
zero number of living son than 41% of the men responded the desire for having more children, in terms of number of 3+ living sons the desire for having more children is

8.3 % which is lower compared to the couple having 3+ living daughters. This is clearly evident about the son preference in Northeast, as the couple desire to have more children when they do not have any son versus when they do not have a daughter.

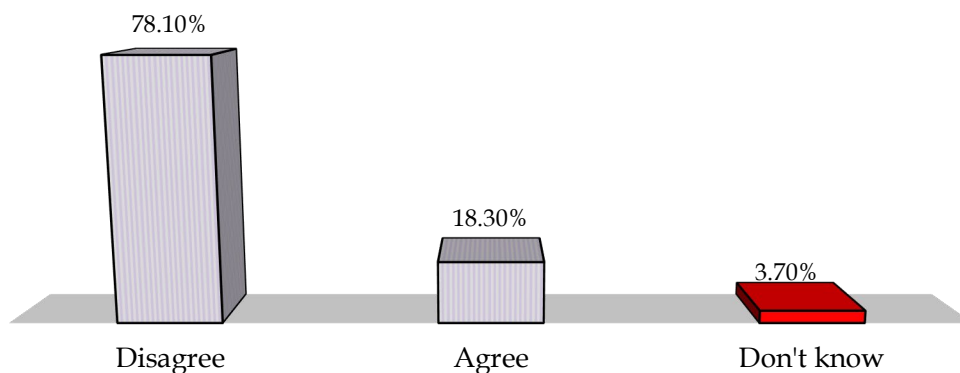
#### *Perception and attitude of men towards contraception*

Among men, misconception and stigma is associated with the use of contraception often towards women, as they are considered to be more vulnerable compared to men in the society be it in matriarchal or

patriarchal. From figure 4 and 5 it shows men attitude towards contraceptive use and it was found that nearly one-fourth of currently married men agreed on the statement that 'contraceptive is women's business, man should not worry', it reflects that men still do not take the responsibility or take initiative in family planning. The perception of men towards contraception use is even more gendered as less than one-fourth of currently married men agreed on the statement that "women who use contraception becomes promiscuous".



**Figure 4** Percentage of currently Married Men's Perception on the statements 'Contraception is woman's business; man should not worry'



**Figure 5** Percentage of currently Married Men's Perception on the statements 'Women who use contraception become promiscuous'

Therefore, it is 'the need of the hour' in ensuring stigma-free accessibility of information about contraceptives and family

planning focusing male method and if these issues are addressed than such taboos and misconceptions about contraceptives will reduce and ultimately increase male involvement in family planning.

### *Determinants of using modern contraceptive use*

To understand the determinants of modern contraceptive use among currently married men/his partner a logistic regression model was applied. Table 6 shows the odds of using modern contraceptive among currently married men by various background characteristics. It is observed that by social category men belonging to 'other' were less likely to use modern contraceptive compared to men belonging to scheduled caste category [Exp(B)= 0.739], and also working men were more likely to use modern contraceptive compared to not working men [Exp(B)= 1.24]. The present analysis found a quite interesting result, which indicates that the men belonging to Muslim religion were more likely to use modern contraceptive compared to Hindu men [Exp(B)=1.649], whereas men belonging to other religion were less likely to use modern contraceptive. Another interesting finding is that men in rural areas were 1.6 times more likely to use modern contraception compared to men in urban areas [Exp(B)= 1.63], while men belonging to richest wealth quintile were more likely to use modern contraceptive compared to poorest [Exp(B)= 1.33].

In conformity to other studies, the analysis also found that media exposure increases the odds of using modern contraceptive method [Exp(B)=1.2]. Fertility status shows a significant association with the use of modern contraceptive as the odds of using modern contraceptive were more likely among men who had achieved their fertility [Exp(B)= 1.2], similarly men with no desire

for additional children were more likely to use modern contraception [Exp(B)= 1.2] compared to those men who wanted more children. The odds of using modern contraceptive increases as the number of living children in the family increases [Exp(B)= 1.514–1.588]. Regarding the attitude and perception on contraception, currently married men who agreed that 'contraception is women's business, man should not worry' were found more likely to use modern contraception [Exp(B)= 1.5], it clearly shows that those men who had negative perception about contraception were also more likely to use modern contraception. As such, to understand the cultural factors affecting the use of contraception, the Northeast states were regrouped into matriarchal and patriarchal states. Due to the existing cultural practices, the state of Meghalaya was considered as matriarchal state whereas the remaining 7 states were grouped as patriarchal state. From the analysis it was clear that the odds of using modern contraception was 2 times more among the patriarchal states [Exp(B)= 2.6].

### **Discussion**

The present study tried to understand men involvement in family planning, their attitude towards contraceptive use and reproductive intentions in North-eastern states of India. Overall, the use of modern contraceptive is found to be 23% in Northeast India, lowest in Manipur followed by Meghalaya (8.9% and 9.3% respectively) and these two states shows the highest fertility among all the north-eastern states.

**Table 6** Odds of modern contraceptive use by background characteristics in Northeast India

Variables	Modern contraceptive use	
	Exp(B)	P-value
Age Group	15-24®	
	25-34	0.989
	35 -44	1.036

Educational level	45 to Above	0.859	0.286
	No education®		
	Primary	1.081	0.389
	Secondary	1.006	0.939
Social category	Higher	0.866	0.207
	Schedule caste®		
	Schedule tribe	1.052	0.637
	OBC	0.962	0.704
Currently Working	Others	0.739	0.004
	No®		
Religion	Yes	1.241	0.022
	Hindu®		
	Muslim	1.649	0.000
	Christian	0.865	0.094
Place of residence	Others	0.640	0.000
	Urban®		
Wealth Index	Rural	1.635	0.000
	Poorest®		
	Poorer	1.009	0.912
	Middle	1.087	0.324
	Richer	1.086	0.357
Media exposure	Richest	1.331	0.004
	Not Exposed®		
Fertility status	Exposed	1.202	0.001
	Not Achieved®		
Desire for more children	Achieved	1.231	0.004
	Yes®		
No of Living Children	Undecided	0.896	0.275
	No	1.213	0.009
	Zero®		
	One	1.514	0.000
	Two	1.715	0.000
Contraception is woman's business; man should not worry	Three and above	1.588	0.000
	Disagree®		
	Agree	1.572	0.000
	Don't know	0.417	0.000
Women who use contraception become promiscuous	Disagree®		
	Agree	0.886	0.095
	Don't know	0.672	0.006
Northeast State	Meghalaya		
	(Matriarchal State) ®		
	Rest of Northeast State (Patriarchal State)	2.620	0.000

Note: ® reference category

Interestingly the study found an inverse relationship between fertility and modern contraceptive use ( $r = -0.7663$ ). One of the unique findings from the study is that in Northeast India the achieved fertility is very low (16%) and among them only 26.6% were using modern contraception. Understanding the reproductive intentions and contraceptive use from the lens of men's perception is helpful to get an insight about men's involvement in family planning. The use of male contraceptive method accounts

for only about one-fifth of the total users in the region and for the remainder, the women have to shoulder the responsibility of using a method. Further, the tilted nature of family planning method use is evident from the fact that if the couple desires not to have any more children, majority of the time women have to opt for female sterilization (15%), but for male it is just nominal (0.8% male sterilization). Other study even exhibits the heavy burden of female sterilization falling on the women who are under 25 years of age

(Ewerling et al., 2021). In India, the lopsided nature on use of female sterilization may be associated with the patriarchal social system. In patriarchal society there is a taboo of using male method of family planning and they are misinformed about the male sterilization, as patriarchal norms view vasectomy as a threat to masculinity and sexuality (Hall et al., 2008).

The present study also highlights the fertility intention among men and their contraceptive use in a society where the son preference is prevalent. Understanding the fertility limiting intentions and adoption of sterilization shows a strong consistency between intentions and use of sterilization. This study found existence of a huge deficiency of son/daughters in northeast India, it is because among men their ideal number of having a son/daughter is more but in reality, the number of living sons/daughters is lower. Similarly, a study conducted in Nepal found that fertility intention and fertility behaviour frequently does not match (Jennings & Pierotti, 2016). The study found that currently married men/his partner desiring for more number of children is greater if they had no living son compared to no living daughter, reflecting an urge to have at least a living son than to a girl child. On the contrary, other study found that more than two-thirds of men who had at least 1 child did not want to have more children (Dahal et al., 2008). Whilst our analysis found a discrepancy between reproductive intentions and actual fertility as it was found that only 16% of men/his partner in Northeast had achieved fertility and among them more than half had deficiency of sons, the reason for inconsistency included desire for more children (33%) mainly due to son preference (Paudel & Acharya, 2018). Our study also revealed that desire for more children

impedes the use of modern contraception among currently married men/his partner, a similar study in Bangladesh found that zero son decreases the odds of using modern contraceptive (Akhter & Haque, 2014).

Socio-economic characteristics greatly influence the behaviour of using contraceptive among men. Our study found evidence of working status greatly influencing the use of modern contraceptive as working men had higher odds of using modern contraception which in conformity with other study (Chaudhary, 2016). Wealth index is found as a significant predictor for use of modern contraceptive, as men belonging to richest wealth index were more likely to use modern contraceptive which is in conformity with other studies (Aung et al., 2019; Ochako et al., 2017). Even information regarding family planning through mass/print media like newspaper, radio and television acts as a significant predictor for use of modern contraceptive, (Bishwajit et al., 2017) as men who were more exposed to information on family planning, they were more likely to use modern contraceptive.

This study also found that men who agree that contraception is women's business they were significantly more likely to use modern contraceptive methods. This finding is in dissent with a study from Pakistan who agreed that contraception is women's business were significantly less likely to use modern contraceptive methods (Ali et al., 2022). The reason for this might be due to gender norms and imparity, as well as kinship structures and other cultural contexts specific to northeast India. The findings of this study revealed that Patriarchal States use modern contraception methods more often because of existing social norm of son preferences and

autonomy over family planning.

The study draws some policy implications which need to be addressed. There is evidence that in Northeast India, the use of modern contraceptive methods is low, whereas the fertility rate is somewhat high, showing a strong inverse relationship between these two indicators. Another aspect to notice is the reproductive intentions, men desire to have more children if they have no living sons indicating son preference in the region along with a high ideal number of children implying low achieved fertility. Therefore, addressing reproductive health issues focusing on men is important to bring them into the ambit of decision-making in reproductive health. The present study indicates that the use of male methods is even lower in the region implying that the responsibility of using a contraceptive method is women's responsibility. Such inequitable gender roles and attitudes impede the engagement of men as supportive partners in reproductive health matters, especially in family planning. Further, in a patriarchal society, the notions of masculinity and the continuing family lineage put pressure on women to have a greater number of children until a son is born. These patriarchal systems put pressure on men as well to beget at least one son, which lowers their participation in family planning. Therefore, awareness through various media and active participation of frontline workers in counselling men about family planning and sexual health is necessary.

### Conclusion

Male involvement in family planning is beneficial to reproductive health. In Northeast India, there are fewer male users of modern contraception indicating that women are primarily responsible for using

contraceptives. It was evident from our study that overall, the use of modern contraception is low and more specifically the use of male method was quite low in Northeast India. In the northeast region the preference for a greater number of children was apparent, it may be because of the cultural factor. In addition, currently married men were more likely to use modern contraception if they have achieved fertility. However, it has been found that there is a huge deficit of sons and daughters in Northeast, a bit slightly higher for boy child indicating the preference for a boy child. Therefore, men need proper information about male contraceptive methods about its safety and efficacy. Thus, more awareness and involvement of men in family planning is essential, otherwise contraceptive use will always remain a burden on the women. The results of this study might help Northeast India to fulfil its commitment to boost the use of modern contraceptives and satisfy the desire for reproduction among married men, as contraceptive use should not solely depend on women, but need support from spouse.

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