



# **Reproductive Dimensions of Ethnicity: The Present Situation of Prominent Ethnic Communities of Sylhet District, Bangladesh**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. Author SA designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Authors MSM, MA and NP managed the analyses of the study. Author MNM managed the literature searches. All authors read and approved the final manuscript.*

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## **ABSTRACT**

This article evaluates the contraceptive seeking norms of two well-known ethnic communities of Sylhet district, Bangladesh. A total of 113 (82 Manipuri and 31 Khasia) ever-married ethnic females (15-49 aged) were randomly selected from the respective study area. The information was recorded in a pre-structured questionnaire. Cross tabulation, Chi-square test and Binary logistic regression analysis were performed for analyzing data. In Bi-variate analysis the Chi-square test revealed five factors i.e., having children or not, number of children, electronic devices, each outcome pregnancies from the very first and age at first marriage; were significantly associated with the dependent variable contraceptive use. Binary logistic regression model was employed to identify the consequence of divers' socio-demographic components on contraceptive use. Among all the important independent variables, "Number of Children" and "Age at first marriage" had

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significant effect on contraceptive use. One of the most distinguishing traits; from generation to generation ethnic groups specially the Manipuri community is highly motivated to keep their family size small whether a respondent is literate or illiterate, rich or poor or in any other aspects. Finally, this study suggested some policy recommendations but among them specifically emphasized the active roles of their representative leaders for the development of their reproductive norms along with their socio-economic conditions.

*Keywords: Contraceptive; ethnic community; Khasia; Manipuri.*

## 1. INTRODUCTION

Bangladesh is largely ethnically homogeneous, and its name derives from the Bengali ethno-linguistic group which comprises 98 per cent of the population. The Chittagong Hill Tracts, Sylhet, Mymensing and the districts of North Bengal are home to diverse ethnic communities [1]. Our country is home not only to mainstream Bengali's but also to more than forty five indigenous groups mainly residing throughout the hilly forest areas of the country [2]. The plane lands of Sylhet is enthroned with many ethnic groups i.e., Khasia, Manipuri, Garo, Patro, Bishnupriya and Tripura, although ECDO (Ethnic Community Development Organization)'s non-formal research has indicated that there are approximately 30 different indigenous communities living in Sylhet region. Among these groups, the Manipuri and the Khasia are the largest in population [3]. Manipuri community is living in the lowland regions of Sylhet division. Like most of the ethnic communities in Bangladesh the Manipuri nation is formed out of several early tribes and races [4]. These people are traditionally encouraged and strongly prefer small family whether they are literate or illiterate or even poor or rich. These characteristics highlight fundamental points of divergence from the mainstream society of Bangladesh [5]. Karim [6] investigated the indigenous care system, needs and problems of urban Manipuri older people. This study explored indigenous traditions, values and norms related to older people. Beside the Manipuri community, Bangladesh has about 90 (ninety) Khasia villages with an approximate twenty thousand of population [7]. Khasias settled in Jaintapur migrated from Assam in sixteen century. A unique feature of the Khasia people is that they follow the matrilineal system of descent and inheritance [8]. After a mother's death, ancestral property is handed down to and controlled by to the youngest daughter. Ancestral property cannot be disbursed to other siblings [9]. The status of Khasia woman is high in the society

because of her inheritance and significant liberty in choosing a partner [10]. Singha [11] explored how the Khasia retain their matrilineal culture and what factors play an important role in that. They believe that the Goddess has sent women to reproduce the clan and to preserve it. If a woman fails to fulfill her primary duties, such as reproduce and performing religious rituals, she will be considered a meaningless woman. In addition, she will be looked down by Khasia society [12]. Saikia [13] in their study established the fact that a high level of female autonomy does empower women in making decisions, especially decisions regarding reproduction and health, but it does not necessarily mean that these decisions will be anti-natalist. The higher level of female autonomy has allowed Khasia women to delay their marriage to the age of 21, but once they are married they do not want to delay the start of child bearing or to control the number of their births. Side by side divorce is not allowed at the time of pregnancy [14]. Actually, ethnic women are considered to be the protectors of the clan, ancestral wealth, home, culture, tradition, and religious rites. Since the woman is the founder of clan, she is respected by every family member and household. A careful analysis of the institutional settings of the tribes can provide explanations of the fertility differentials existing between them. As described by Freedman [15] in each society the norms about these vital matters are consistent with social institutions in which they are deeply embedded. In Bangladesh it has very limited authentic information regarding indigenous Manipuri and Khasia women issues due to a lack of available research initiatives. This research will contribute to filling the shortage of information about the demographic and reproductive norms of Manipuri and Khasia women as there is no research works still found on the selected issues. It can be noteworthy that this type of social research are always lacking with remarkable statistical analysis. This study is trying to give an effort to the analytical discussion over the motif. Hence the general

objective of the study is to ascertain factors responsible for reproductive behavior of Manipuri and Khasia women of Bangladesh. The specific objectives of the study are as follows:

- 1) To investigate the factors influencing the reproductive dimensions of Manipuri and Khasia ethnic community;
- 2) To draw a snapshot on the needs and problems of Manipuri and Khasia women; and
- 3) To make some proper policy recommendations for the Manipuri and Khasia community.

## 2. MATERIALS AND METHODS

It is known that there is higher concentration of Manipuri and Khasia community in Sylhet region and most importantly Khasia people living only in Sylhet region. Keeping in mind this, among the four districts of Sylhet Division, Sylhet district was selected. In this district two upazillas namely Sylhet Sadar and Gowainghat were selected purposively on accounts of availability of a large number of respondents; easy accessibility and good communication facilities; no study of this type is conducted previously and it is also economic to conduct survey in that places. A total of 113 (82 Manipuri and 31 Khasia) respondents were randomly chosen for the present study. Formula of sample size (n) for estimating sample proportion is follows:

$$n_0 = \frac{Z_{\alpha/2}^2 pq}{d^2} = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.10)^2} = 96.04$$

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

$$n = \frac{96.04}{1 + \frac{(96.04 - 1)}{538}}$$

$$= 82 \text{ (Manipuri)}$$

$$n = \frac{96.04}{1 + \frac{(96.04 - 1)}{45}} = 31 \text{ (Khasia)}$$

$Z_{\alpha/2} = 1.96$  (95% confidence interval)

Population proportion,  $p=0.50$ ,  $q=(1-p)=0.50$

$N$ = Population size

Precision,  $d=10\%$

## 2.1 Statistical Tools and Techniques

### 2.1.1 Bi-variate analysis

Bi-variate analysis has been done for studying the relationship between two variables viz.,

dependent and independent variables. But this does not allow testing of that relationship. For this purpose, it is useful to consider various indices that measure the extent of association as well as statistical test of hypothesis that there is no association. Chi-square test of independence was performed to test the existence of interrelationship among the categories of two qualitative variables. Joint frequency distribution was analyzed with the chi-square statistic ( $\chi^2$ ) to determine whether the variables were statistically independent or if they are associated.

### 2.1.2 Binary logistic regression

Binary logistic regression estimates the probability that a characteristic is present (e.g. estimate probability of "success") given the values of explanatory variables, in this case a single categorical variable;  $\pi = Pr(Y = 1|X = x)$ .

### 2.1.3 Variables

- Let  $Y$  be a binary response variable  
 $Y_i = 1$  If the trait is present in observation (person, unit, etc.)  $i$   
 $Y_i = 0$  If the trait is not present in observation  $i$
- $X = (X_1, X_2, \dots, X_k)$  be a set of explanatory variables which can be discrete, continuous, or a combination.  $x_i$  is the observed value of the explanatory variables for observation  $i$ .

### 2.1.4 Model

$$\pi_i = Pr(Y_i = 1|X_i = x_i)$$

$$= \exp(\beta_0 + \beta_1 x_i) / 1 + \exp(\beta_0 + \beta_1 x_i)$$

or,

$$\text{logit}(\pi_i) = \log(\pi_i / 1 - \pi_i)$$

$$= \beta_0 + \beta_1 x_i$$

$$= \beta_0 + \beta_1 x_{i1} + \dots + \beta_k x_{ik}$$

The binary logistic regression was fitted for contraceptive use which was the dependent variable of the study. Scores assigned as 1 and 0 if the response is "Yes" and "No" respectively and the odds ratio of using contraceptive was calculated for different independent variables using SPSS (Statistical Package for Social Science) Windows version 20. Besides SPSS other well-known packages viz., Microsoft Word and Microsoft Excel were also used. SPSS (Statistical Package for Social Science) Windows version 20 and other well-known packages viz., Microsoft Word and Microsoft Excel were used.

### 3. RESULTS AND DISCUSSION

#### 3.1 Differentials of Demographic and Reproductive Factor of Ethnic Community

Results of Chi-square tests between the selected important independent variables and contraceptive use are shown in Table 1.

The result of the Bi-variate analysis revealed that having children or not, number of children, electronic devices, each outcome pregnancies from the very first and age at first marriage were significantly associated with contraceptive use. Bi-variate analysis examines the individual relationships of the variables with the dependent one that give only the preliminary idea about the importance of each variable itself. To examine the relative importance of all the independent variables, Binary logistic regression has been used. Among the five significant variables which were considered in logistic regression analysis,

"number of children" and "age at first marriage" had significant effect on the contraceptive use. Respondents having no children were 0.270 times significantly less likely to experience contraceptive use than the respondents having more than two children (Table 2). The respondents having one child were 0.601 times significantly less likely to experience contraceptive use than the respondents having more than two children and lastly the respondents having two children were 0.878 times significantly less likely to experience contraceptive use than the respondents having more than two children (Table 2). The respondents who married at less than 25 years old were 0.901 times significantly less likely to experience contraceptive use than the respondents who got married at 36 through highest age. Women married between 25- less 36 years old 0.567 times significantly less likely to experience contraceptive use than the respondents who got married at 36 through highest.

**Table 1. Differentials of demographic and reproductive factor for ethnic community**

Associated factors	Contraceptive use		Total	Chi-square value	p-value
	No	Yes			
Residence of the respondents					
Rural	18 (40.0)	27 (60.0)	45	0.996	0.318
Urban	21 (30.9)	47 (69.1)	68		
Respondent age					
15-less than 36	26 (38.2)	42 (61.8)	68	1.047	0.306
36 through highest	13 (28.9)	32 (71.1)	45		
Respondent education					
Literate	35 (34.3)	67 (65.7)	102	0.018	0.892
Illiterate	04 (36.4)	07 (63.6)	11		
Education of husband					
Literate	35 (33.7)	69 (66.3)	104	0.427	0.514
Illiterate	04 (44.4)	05 (55.6)	09		
Age of husband					
20-40	24 (38.7)	38 (61.3)	62	1.070	0.301
Else	15 (29.4)	36 (70.6)	51		
Family type					
Nuclear	15 (37.5)	25 (62.5)	40	0.244	0.621
Joint/Extended	24 (32.9)	49 (67.1)	73		
Health facilities					
Yes	25 (32.1)	53 (67.9)	78	0.675	0.411
No	53 (40.0)	21 (60.0)	35		

Associated factors	Contraceptive use		Total	Fisher's exact value	Exact Sig. level
	No	Yes			
<b>Have you any child?</b>					
Yes	32 (31.1)	71 (68.9)	103	8.001	0.031
No	07 (70.0)	03 (30.0)	10		
<b>No. of children</b>					
No children	07 (70.0)	03 (30.0)	10	17.752	0.000
One children	16 (43.2)	21 (56.8)	37		
Two children	09 (24.3)	28 (75.7)	37		
More than two children	07 (24.1)	22 (75.9)	29		
<b>Electronic devices</b>					
Mobile Phone	07 (41.2)	10 (58.8)	17	12.086	0.011
TV, Mobile	09 (34.6)	17 (65.4)	26		
Fridge, Mobile	01 (100)	0 (0.0)	01		
TV, Fridge, Mobile	17 (47.2)	19 (52.8)	36		
TV, Fridge, Mobile, Laptop	05 (15.2)	28 (84.8)	33		
<b>Outcome pregnancy from the very first</b>					
Live Birth	26 (27.7)	68 (72.3)	94	8.010	0.032
Still Birth	01 (33.3)	04 (66.7)	06		
Spontaneous Abortion	02 (100)	0 (0.0)	01		
Induced Abortion	02 (100)	0 (0.0)	02		
Live and Still birth	02 (100)	0 (0.0)	02		
<b>Age at first marriage</b>					
Less than 25	22 (27.8)	57 (72.2)	79	4.653	0.001
25-less 36	16 (48.5)	17 (51.5)	33		
36 through highest	01 (100)	0 (0.0)	01		

\*p-values are based on Chi-square test. Within brackets add to row percentages

**Table 2. Determinants of contraceptive use for ethnic community**

Multiple Logistic Regression Analysis					
Independent variables	Co-efficient (β)	p-value	Odds ratio	CI of Odds ratio	
				Lower CI	Upper CI
<b>Number of children</b>					
More than two children <sup>®</sup>	---	---	---	---	---
No children	-3.751	0.001***	0.270	0.023	1.879
One children	-2.135	0.020**	0.601	0.071	2.026
Two children	4.080	0.031**	0.878	0.255	9.024
<b>Age at first marriage</b>					
36 through highest <sup>®</sup>	---	---	---	---	---
Less than 25	5.665	0.008***	0.901	0.124	5.403
25-less 36	-0.231	0.010**	0.567	0.067	4.789
<b>Have you any child?</b>					
No <sup>®</sup>	---	---	---	---	---
Yes	0.135	0.918	0.656	0.088	1.156
<b>Electronic Devices</b>					
TV, Fridge, Mobile, Laptop <sup>®</sup>	---	---	---	---	---

<b>Multiple Logistic Regression Analysis</b>					
<b>Independent variables</b>	<b>Co-efficient (<math>\beta</math>)</b>	<b>p-value</b>	<b>Odds ratio</b>	<b>CI of Odds ratio</b>	
				<b>Lower CI</b>	<b>Upper CI</b>
Mobile	-0.899	0.346	0.407	0.063	2.642
TV, Mobile	-0.411	0.723	0.663	0.068	3.441
Fridge, Mobile	-0.036	0.111	0.131	0.027	0.631
TV, Fridge, Mobile	-0.961	0.678	0.616	0.567	1.161
<b>Outcome pregnancy from the very first</b>					
Live and Still birth <sup>®</sup>	---	---	---	---	---
Live Birth	-0.505	0.178	0.143	0.956	5.005
Still Birth	-0.711	0.990	0.878	0.037	1.999
Spontaneous Abortion	-0.524	0.322	0.505	0.755	3.860
Induced Abortion	-0.123	0.686	0.441	0.988	4.160

Note: <sup>®</sup> denotes reference category; \*  $p < 0.10$ , \*\*  $p < 0.05$  and \*\*\*  $p < 0.01$  are the levels of significance

**Test of Model fit:****Hosmer and Lameshow Test**

<b>Chi-square</b>	<b>df</b>	<b>Sig.</b>
8.184	8	0.416

The value of this statistic is 8.184 and the p-value (given by SPSS) is 0.416 which is greater than 0.05, so we do not reject the null hypothesis that there is no difference between the observed and predicted values, i.e., the model appears to fit the data reasonably well.

**Model Summary**

<b>-2 Log likelihood</b>	<b>Cox &amp; Snell R Square</b>	<b>Nagelkerke R Square</b>
508.352	0.301	0.680

SPSS gives the values for two statistics in the "Model Summary" table. The Cox & Snell  $R^2$  is 0.301 and Nagelkerke  $R^2$  is 0.680. The interpretation is that the model explains about 68% of the variation in the data.

**Classification Table**

The overall percentage of correct predictions is 71.8% by this model. Generally, the higher the overall percentage of correct predictions the better the model.

**Classification table**

Observed		Predicted		Percentage correct
		Contraceptive use		
		No	Yes	
Contraceptive use	No	19	18	51.4
	Yes	11	55	83.3
Overall percentage				71.8

**4. NEEDS AND PROBLEMS OF THESE TWO ETHNIC COMMUNITIES**

Manipuri people were in better situation than the Khasia community in every dimension of socio-

economic, demographic-reproductive prospects. Most of our Manipuri respondents were from the urban side, for what these urban living people negligibly facing any problems i.e. 78.4 percent of Manipuri respondents expressed that they did

not face any problems in their current living. In our study only 17 percent rural Manipuri's were considered and these were actually facing with some problems as like lack of hospitals, long distant schools-colleges, load shedding etc. Especially the health facilities i.e. lack of hospitals or clinics suffered them a lot! Women on delivery period or any emergency have to go to the urban areas to take the medical facilities caused with lots of pains. Manipuri women involved in agribusiness i.e. handloom business facing with financial support and the seasonality problems. Seasonality problems means the selling of their hand-made staff is on peak at winter season, after that period the women business holders have to suffer with extreme shortage of customers. Ahmmmed [16] found out, Khasias are the most vulnerable group of population in Bangladesh. Although they have great contribution in natural resource management of the country, the Khasias always have been discriminated, tortured and threatened both by the government initiatives and mainstream people. In the great liberation war many of the Khasias took part directly. But after independence any of the governments have taken any initiative which could develop the quality of life of this disadvantaged people, rather different policies and program routed out them from their ancestral land. Till now they have to pass every moment with insecurity, fear of discrimination and exploitation. They never equally treated in any development activities. Within their own country they are living as refugees with low status and opportunities. Like other indigenous groups in Bangladesh, they are in continuous struggle to establish their rights. In the Khasia community there also exist some other problems like education is very low among Khasia community where education of children rarely progresses past primary level as about 35 percent women had never been to school! There are no secondary schools located nearby. Language also creates a problem as many lessons are conducted in Bangla and not the mother language. Employment problems are prevalent throughout indigenous communities. These problems are a product of the isolation of their communities and an unwillingness to integrate into mainstream society. They are mainly involved with agricultural activities especially betel leaf cultivation, lack of diversification of employment was seen clearly. The communities lack official documents which certify ownership of their land and therefore have no legal support for their land. On the other hand remote locations of village means that medical

facilities are far and very difficult to access. There are generally no people with formal medical training in the villages. Surprisingly, even a primary health care center was not available here; neither the government nor any NGOs are taking any initiatives to set up any hospitals or medical centers. Khasia women have to cross the river and then go to nearest poor servicing medical centers or travel to 68 kilometers to come Sylhet town for having their reproductive health services or other basic medical treatments! The respondents of this community told us that Mantri (local leader of Khasia community) did not actually take any fruitful initiatives to overcome the problems peoples faced.

## 5. CONCLUSION

This study disserted the findings of reproductive norms and demographic dimensions which easily revealed an overall snapshot on the women of Manipuri and Khasia communities. Factors responsible for the pattern or norms of reproductive aspects were identified and two predictor variables "number of children" and "age at first marriage" of each respondent found out the most significant factors regarding contraceptive use as these ethnic communities are highly motivated to keep their family small. The respondents who have no children or one were significantly less likely to experience contraceptive use than the respondents having more than two children because respondents having no children or one children; are interested to take more children i.e., unwilling to use contraceptives. This study also attempted to highlight the needs and problems of these two ethnic groups along with some relevant recommendations.

## 6. RECOMMENDATION

On the basis of the findings of the present study, some specific recommendations may be made for the proper improvement of these communities.

- 1) Necessity of education can be disseminated widely especially to the rural ethnic women.
- 2) Number of educational institutions can be increased near to their residences.
- 3) Government as well as NGOs can provide proper reproductive health care facilities especially the rate of contraceptive use may be on prime concern.

- 4) Government/NGOs can give proper credit facilities and special care to the Manipuri women engaged in unique Handloom business.
- 5) The transportation system as well as the infrastructure of the rural areas can be developed.
- 6) The Government can take an initiative to encourage the local leaders of these areas to be more sincere and responsible towards the problems of their local people.
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Civil society men, journalists, researchers, teachers, development activists etc should come forward to make the policy makers and government understand about the adverse situation of the ethnic people.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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