



REPRODUCTIVE PERFORMANCE OF BORO-KACHARI WOMEN OF BAKSA DISTRICT, ASSAM

Dr. Hridaya Nanda Das

Assistant Professor, Cotton University

Email: nandanorthgauhati@gmail.com

Abstract

World Health Organization has defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity. Health is a very wide concept and it has a considerable impact for the survival of human. The concept, information skill and health care system have been evolved through the evolution of human civilization in various societies. However, due to many issues related to gender, caste, religion, residence, customs, culture, health priorities for men and women have been different in different societies. The health problems of the tribal population of India are different according to their socio-economic, socio-cultural and ecological setting. According to SRS (Sample Registration System, 2015-16) Assam has the highest maternal mortality rate in India with 215 maternal deaths per one lakh live births. Lack of nutrition, healthcare of the mother, sanitation and hygiene are some of the causes leading to this highest rate in the state. Present paper is focused on the reproductive performance of the Boro-Kachari women residing in Baksa district and various biological factors associated with this health issue.

Keywords: Health, Women, Tribal, menarche

Introduction

Women health and health related problems have been an area of concern worldwide due to poor health status of women in the world particularly in developing countries. Women have an inborn biological advantage over men which makes their life expectancy longer than men. However, this biological advantage is ignored by the discriminatory treatment towards girls and women. The concept of reproductive health was developed by World Health Organization (WHO), International Women’s Health groups and International Family Planning network in contrast to biomedical approach to women’s health. Within the framework of reproductive health definition given by WHO, ICPD Cairo in 1994 has defined the term reproductive health. It outlines the sexual and reproductive health is not merely about reproduction but it must include universal right, women’s empowerment and health service provision. In other words reproductive health means women can go safely through pregnancy and child birth so that fertility regulation can be achieved without any health hazards (Fathalla, 1992).

In India majority of research studies on women reproductive health are based on hospital studies and community based studies. A fair section of these researches covers issues of maternal mortality risks, its causes and trends. India continues to contribute about a quarter of all global maternal death. The important indicators of maternal health in India are age at marriage, maternal mortality, levels of fertility, spacing between births, place of delivery, access to health care services etc.

Various studies on health status of tribal women have shown that the factors which influence the health of the tribal population in general are also applicable to tribal women. Malnutrition, lack of hygiene and sanitation and non-availability of safe drinking water are some of the factors which influence their health. Illiteracy, ignorance and such superstitious belief among the tribal made them more vulnerable towards the treatment of health problems. It is also seen that there are less number of health institution and nonfunctioning of the existed institution made the situation worse for the tribal so far as reproductive health is concern.

According to SRS (Sample Registration System) 2021, Assam has the highest maternal mortality ratio in India with 215 (2016-18) maternal deaths per 1 lakh live births. Lack of nutrition, healthcare of the mother, sanitation and hygiene are a few causes leading to this highest rate in the state.

Table 1.2: Maternal Mortality Ratio of Assam from 1997-2018

Year	Maternal deaths per 1 lakh live births
1997-1998	568
1999-2001	398
2001-2003	490
2004-2006	480
2007-2009	390
2010-2012	328
2011-2013	300
2014-2016	237
2015-217	229
2016-2018	215

Source- Registrar General of India, Ministry of Home Affairs (SRS bulletin)

In Assam utilization of antenatal (ANC) and post natal care (PNC) is found to be lower than the national level. About 45% pregnant women seek treatment during pregnancy (DLHS-III, 2007-08) which is lower than the national level (55%). The report revealed that in Assam 28% women did not received any antenatal care during their pregnancy. About 16% women received post natal care which is again lower than the national average (49%). Utilization of antenatal care is highest in urban areas then the rural areas. Utilization of ANC is also high among the Hindu (79.3%) than Muslims (66.6%) and Christian (63.3%). Again utilization of ANC is lower among the schedule tribes than schedule caste and other backward classes. It is also observed that the health status of tribal woman in Assam is not satisfactory. The utilization of full ANC checkups is a matter of great concern for the state. Some of the district has a very low percent so far utilization of ANC checkups is concern. About 18.4% mother received full ANC in the state. The full ANC checkup is an important element for reducing maternal mortality and infant mortality in the state. Again institutional delivery is very low in Assam. A gap has been observed in case of institutional delivery between rural and urban areas. In urban areas the rate of institutional delivery is higher than the rural areas. The similar situation is seen in case of safe delivery. People from rural areas received more healthcare services government sources. Therefore, it is important to strengthen the health infrastructure in rural areas of the state to provide better health care service to the people.

Objectives of the present study

1. To find out the reproductive performance of the women in the study villages.
2. To see the various biological factors associated with this performance.

Methodology

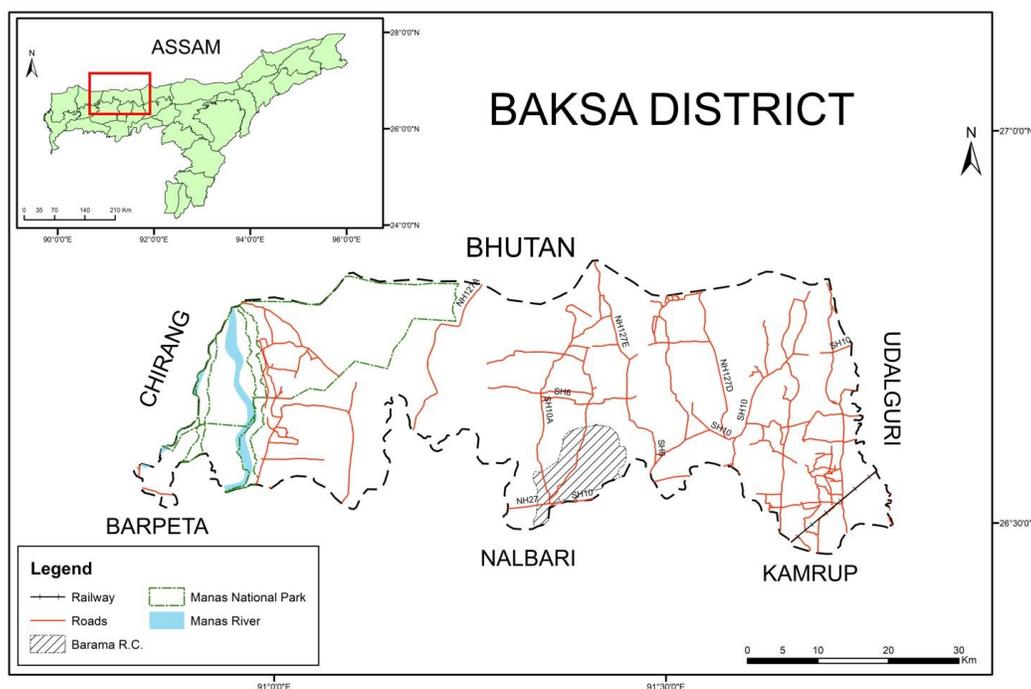
The study was conducted among the Boro-Kachari women of Barama area of Baksa district. A total of 558 married women residing in three villages of Barama area such as Kaljhar, Alagjhar and Kharua were selected for the study. The women belonging to the age group 15-49 years who have at least one child below the age of 6 years were included in the study. The reason for selecting these women was to get the accurate and recent information on their reproductive behavior and health care practices. Both quantitative and qualitative data are collected to cover the various issues related to reproductive health of women in the study area.

Area of the study

Baksa is one of the four new district of the Assam created after census, 2001. It was notified as a District in October 2003. The original word 'Baksa' is not above controversy, a good number of populations prefer to use *Bangsa* in lieu of Baksa. The popular assumption that 'Baksa' is the miss pelt form of *Bangsa* meaning a farm house and corridors it is known that Bhutanese king and subject used this area for trade and passage to the plains. The district was in fact one of the most important 'Doors' of Bhutan. According to Bodo source the name originated from a kind of rice grain which is known as "*Bagsa*". The said rice grain is one kind of broken and unlearned product which is gained after milling the rice. As the name Baksa is itself derived from various sources so there exist lots of controversy over the time. But still today no concrete evidence has been found which might determine the final source. Only popular sources and folklores are evident but no historical sources have been found.

The district falls under the Bodoland Territorial Council (BTC) which is a territorial privilege established according to the Memorandum of Settlement, 2003. The area under the BTC jurisdiction is called Bodoland Territorial Area District (BTAD). The BTAD is consist of four contiguous districts-Kokrajhar, Baksa, Udalguri and Chirang carved out of seven existing districts- Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup, Darrang and Sonitpur. The BTAD is created under the Sixth Schedule of the Constitution of India.

Baksa district was created from parts of Barpeta, Nalbari and Kamrup districts. A very small part of Darrang district also falls within the district. Baksa district is located on the globe between 90.50 and 91.48 degree east longitude and 26.24 and 26.49 degree north latitude. The district is located in north western part of Assam with the district headquarter at Mushalpur which is 105 Km away from state capital Guwahati. The district is bounded by Bhutan in the north, Udalguri district in the east, Barpeta, Nalbari and Kamrup districts in the south and Chirang district in the west. This district covers a total area of 2457 Sq.km. In terms of total area covered this district occupies 14th rank among the districts of Assam.



Map 1: Maps of Assam showing Baksa District

The Boro-kacharis

The Boro-Kacharis of Assam is a branch of the great Bodo group of the Indo-Mongoloid family falling within the Assam-Burmese linguistic section. Their identity is not uniform as an ethnic group. Different names are used to designate them. In Bengal and in the lower ranges of the Himalayas coming with the territory of Nepal, they are known as Meches. In upper Assam they are identified as Sonowal and Thengal Kachari, while in the western Assam they are more popularly known as Boro or Boro-kachari. In the southern district of North Cachar and Cachar they are designated as Dimasa and Barmas respectively (Bordoloi et al., 1987). They are found mainly in the district of Kokrajhar, Baksa, Chirang, Darrang and kamrup. They belong to patrilineal family and speak Bodo language. The total population of Bodo tribe in Assam (2001 Census) was 1352771 of which 682710 are males and 670061 are females.

According to Endle, the origin of the Bodo-Kachari race is still very largely a matter of conjecture and inference in the absence of anything entitled to be regarded as authentic history. However, on the basis of the Mongolian affinities of the Kacharis, they would point out to Tibet and China as the original home of the race (Endle, 1975). Whatever be their habitat, it has now been established that they are the original autochthones of Assam and the later immigrants than the Aryans (Bordoloi et al, 1987).

Results and discussion

Human fertility is considered as the actual reproductive performance of women. It indicates the number of live births which are produced by a woman in her reproductive span of life. It is the major determinants of reproductive health of women in India. A number of reproductive health determinants have been studied among the women of present study such as age at menarche, age at marriage, age at first conception, age at first delivery, total number of live births reproductive wastage and complications etc. The following table shows the overall reproductive performance of the study population.

Reproductive Performance of the Boro-Kachari women

Age Intervals	No of Women	No of children (live birth)	Abortions and Miscarriages.	Still Birth	Total number of Conception	Percentage Of successful conception
18-21 years	84	85	9	0	94	90.42
22-25 years	97	111	11	0	122	90.98
25-29 years	147	271	23	1	295	91.86
30-33 years	87	216	9	0	225	96
34-37 years	82	264	21	4	289	91.34
38-41 years	50	182	10	6	198	91.91
41+ years	11	42	2	1	45	93.33
Total	558	1171	85	12	1268	92.35

Various biological factors associated with reproductive performance.

a. Age at menarche

Age at menarche is an important maturity factor for the assessment of development status of teenage female (Cameron and Nagdee, 1996). Menarche is the primary indicator of onset of sexual maturation in a female, which affect her reproductive life. Age at menarche being a physiological factor is affected by interaction between different factors such as genetic, nutrition and socio-economic status (Eveleth and Tanner, 1976).

Various studies all over the world have reported that the mean age at menarche has decreased recently. Tanner (1962) reported that the menarcheal age has started decreasing from 1830 onwards in every country.

In developing countries the mean menarcheal age varied from 16.2 years in Nepal, 15.8 years in Bangladesh, 14.3 years in India, 13.4 in Sri Lanka to 12.30 8 years in China (Pathak et al 2017). In India the mean age at menarche varied from 16.50 years to 12.43 years over the past four decades (ICMR, 1972). States like Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, Maharashtra ,Rajasthan, Haryana, Punjab shows higher age at menarche than the national average (13.7 6 years). On the other hand, many states from North Eastern, eastern and Southern parts of India have lower mean age at menarche. States like Assam, Arunachal Pradesh, Manipur, Karnataka and Tamil Nadu where mean age at menarche remained lower than the national average.

Table 2: Mean age at menarche of Boro-Kachari women

Age at Menarche	No of women	Percentage
10	41	7.34
11	110	19.81
12	162	29.03
13	120	21.50
14	88	15.8
15	35	6.3
16	2	0.35
Total	558 (Mean-12.38)	100

Menarche of the present study population is found to be 12.38 years (table 2). The mean age at menarche ranges from 10 years to 16 years. Sengupta (1996) in his study reported that females belonging to Mongoloid groups (mostly tribes) experienced menarche at later age than the Caucasoid group (caste). Das et al (1989) reported that menarche among the Deoris of Assam was 13.08 years. Different population groups of India showed that the range of age at menarche was 11.7 years to 15.9 years. The Bhutia (Chatterjee, 2001), Lepcha (Bhasin and Bhasin, 1995), Khasi women (Deb, 2011), Ao Naga (Sengupta and Purnugla, 2005) Bengali females of West Bengal (Bhagat et al, 2011) have higher age at menarche. On the other hand, the age at menarche among the Garos (Das and Saikia, 1999), Ahoms (Sengupta and Rajkhowa, 1996), Sonowal (Deka, 1976), Brahmin (Das and Das1967), Kaibarta (Das, 1996) is found to be lower.

b. Live birth and Conception

Age at first conception, delivery and total number of live births are important determinants of reproductive health status of women. These are associated with the utilization of contraceptive among the couples and their knowledge about birth control methods. Teen age pregnancy and first delivery at young age among women leads to various health problems. The age of first child bearing and age of women at the time of first birth also contributes to reproductive performance.

Table 3: Age at first conception

Age at first conception	Number of Women	Percentage (%)
16	1	0.2
17	33	5.9
18	116	20.8
19	103	18.5
20	102	18.3
21	66	11.8
22	50	8.9
23	35	6.2
24	23	4.1
25	21	3.8
26	5	1
27	3	0.5
Total	558 Mean (19.91)	100

The mean age at first conception of the Boro-Kachari women of the present study is found to be 19.91 years (table 3). The age at first conception ranges from 16 years to 27 years. Highest percentage of women (20.8%) is found getting their first conception at the age of 18 years. After 18 years the percentage of women having their first conception is reduced.

Table 4: Age at first delivery

Age at first delivery	Number of Women	Percentage (%)
17	8	1.4
18	86	15.4
19	123	22.0
20	91	16.3
21	95	17.0
22	50	8.9
23	49	8.7
24	26	4.6
25	20	3.6
26	5	1
27	5	1
Total	558 Mean (20.52)	100

Again the mean age at first delivery among the Boro-Kachari women of the present study is found to be 20.52 years (Table 4). The table shows that the Boro-Kachari women delivered their first child at a very young age. About 1.4% women delivered their first child before 18 years of age. Highest number of women 22.0% is found delivered their first child at the age of 19 years. The age at first delivery also decreases with the increase of age of the mother. Few women delivered their first child after 25 years. The mean age at first delivery was 19.4 years among the Muslims of Assam, 18.9 years among the Hindus of Assam and 18.4 years among the mongoloid population (Das et al, 1989). It was 20.27 years among the Lepchas of sikkim (Mukhopadhyay, 2001), 21.18 years among the Mundas of Assam (Gogoi, 2002), 22.90 years among the Kalitas of Assam and 21.87 years among the Deoris of Assam (Bordoloi, 2018). Differences in age at first delivery mainly attributed to biological as well as socio-economic and educational factors.

Table 5: Number of women and total conception

Age Intervals	Number of Women	Total conception	Mean total conception
18-21 years	84	94	1.1
22-25 years	97	122	1.25
25-29 years	147	295	2.0
30-33 years	87	225	2.58
34-37 years	82	289	3.52
38-41 years	50	198	3.96
41+ years	11	45	4.09
Total	558	1268	2.27

It is seen from the present study that the highest number of mean conception (4.09) is seen among the women in the age group of 41+ years followed by the age group of 38-41 years (3.96) and 34-37 years (3.52). It is seen in the present study that the number of conception and number of live births are high among the women whose present age is above 30 years. It is less among the young married women but it might increase as they increase their family size (table 5).

c. Mean live birth

In the present study the average number of children of the women is found to be 2.09 (Table 6). The highest number of children (3.81) is found among the women whose age is above 40 years. The lowest means live birth (1.01) is found in the age group of 18-21 years indicating early marriage and only child bearing. It is also seen in the present study that mean live birth increased with the increase age of the mother. The elder mothers have the highest number of live births. As the reproductive age of mother increases, the number of children ever born also increases.

DLHS-3 (2007-2008) found mean number of children ever born to married women between 15- 49 years is to be 2.6 in Assam. Among non-literate couples the mean number of children found to be 3.4 and 1.7 for women with at least 10 years of education. The completed fertility measured in terms of average children ever born to ever women between 15- 49 years is 3.8. It varies from 3.2 children in Karimganj district to 2.1 children in Kamrup district.

DLHS-3 (2007-2008) also reported that 78.7% women in Assam reported having two child and do not want any more child for their family. Das et al (1989) reported that the means number of children among Hindus (Brahmin, Kalita and Kaibarta) and among mongoloid population (Ahom, Mishing, Moran, Deori and Chutia) population of Assam was 4.4 and 4.6 which is higher than the present study. Seal et al (2010) found that among Mishing population of Assam who married below 18 years of age showed high incidence of pregnancy and live births. Some other population of North East India such as Khamti, Munda, Sonowal, Hmars, Nocte, Ao Naga have higher number of live births than the present study population. The low average number of children of the present study population is because of their lack awareness of family planning methods and poor socio economic status.

NFHS-4 reported total fertility rate in Assam was 2.2 children per women. Fertility decreased by 1.1 children in the 13 years between NFHS-1 and NFHS-2 and has declined further by 0.2 children in the 10 years between NFHS-3 and NFHS-4. In urban areas fertility rate was 1.5 children per women and 2.3 children for women in rural areas. There are large differential in fertility by residence, religion, caste, tribe and schooling.

The fertility rate was 2.9 among women who had no schooling and 1.7 among women who had 12 or more years of schooling. Again Muslim women had higher fertility 2.9 than the Hindus 1.8.

There is a relationship between age at marriage of women and number of surviving children. In a study conducted among the Boro-Kacharis of Goalpara district of Assam found that most of the women 32% have two surviving children and only 16% of women have 3 or more surviving children (Gogoi, 2018). The highest number of children is found among those couples whose age at marriage was very low. The study established that the number of children is inversely proportionate to the age at marriage of the women. The Mysore study also found that female marrying between 14 and 17 years gave birth to 5.9 children compare to 4.7 children by the females marrying between 18- 21 years.

Table 6: Mean live birth

Age Interval	Number of Women	Number of Children	Mean live birth
18-21 years	84	85	1.01
22-25 years	97	111	1.14
25-29 years	147	271	1.84
30-33 years	87	216	2.48
34-37 years	82	264	3.21
38-41 years	50	182	3.64
41+ years	11	42	3.81
Total	558	1171	2.09

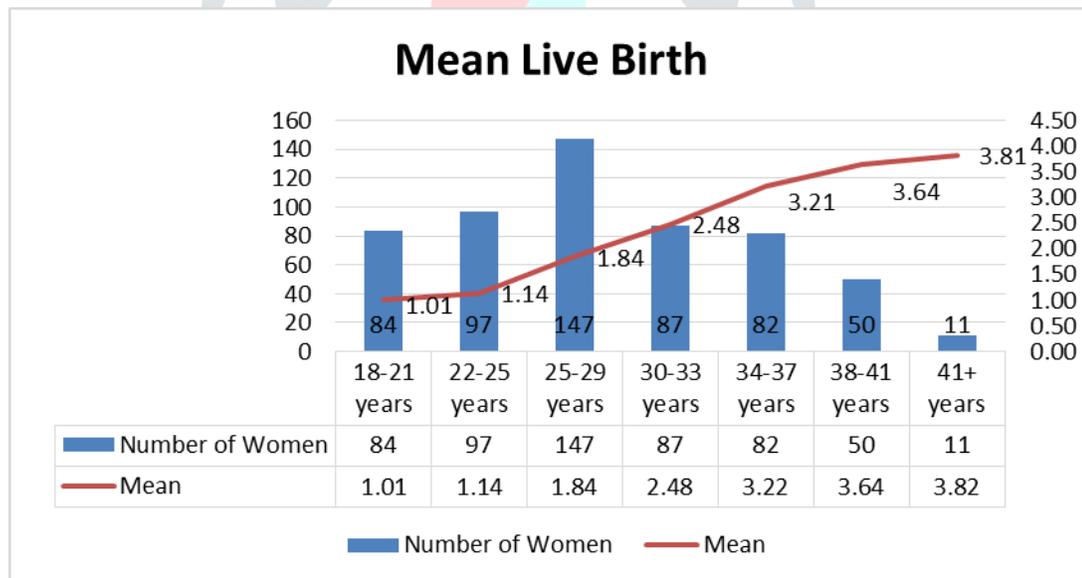


Fig 1: Mean live birth

In the present study, women in the age group of above 41 years have the most number of children 3.81. Average number of live birth in the age group of 18- 21 years is 1.01 indicating that there is early marriage and early child bearing. The number of children ever had born per women increases with increasing age of women (table 6)

Conclusion

Health problems and their treatments need special attention in the context of the tribal populating of India because of the fact that most of them are economically and educationally backward and live in an area

where modern health facilities are not available and even if available are not accessed because of some socio-economic problems and lack of information and awareness.

The reproductive performance of the women in the study area is very much affected by the biological factors. The biological factors influenced fertility behavior directly. The change in one or more of these variable changes the reproductive performance and health status of the women unless another variable offset the effect. A good proportion of women have got married at an early age which results in early pregnancy and early child birth. So the increase of in the age of marriage of the women would provide better and healthy reproductive health.

Bibliography

1. Bhagat, M & A Ghosh. (2011). Obesity measures, metabolic profiles, blood pressure and intake of dietary fatty acids in rural women of Asian Indian origin: Santiniketan women study. *Journal of Cardiovascular Disease Research*, 2(1), 61-67.
2. Bhasin, V., & Bhasin, M. K. (1996). Sikkim Himalayas: Ecology and Resource Development. *Journal of Human Ecology*, 7(4), 265-299.
3. Bordoloi, Trinayani. (2018). Reproductive health and Anthropometric Indicators: A critical study in the context of North East India. Nation Press, New Delhi.
4. Bordoloi, B. N. GC Sharma Thakur & MC Saikia. (1987). Tribes of Assam (Part1).Guwahati: Tribal Research Institute.
5. Cairo Conference. (1994). International Conference on population and Development (ICPD), United Nations.
6. Cameron, N., & Nagdee, I. (1996). Menarcheal age in two generations of South African Indians. *Annals of Human Biology*, 23(2), 113-119.
7. Census of India. (2011). Assam population sex ratio in Assam literacy rate, datahttp://www.census2011.co.in/census/state/assam/html.
8. Census of India. (2011). Assam district census Handbook, Baksa, village and town wise primary census abstract (PCA), series-19, Part-B, Directorate of Census Operation, Assam.
9. Census of India. (2011). District census Handbook, Baksa, village and town Dictionary series-19, Part-XII-A, Directorate of Census Operation, Assam.
10. Chatterjee, S. (2001). Age at Menarche and Menopause in a Bhutia population of Darjeeling in Tribes of Eastern Himalayas, Sengupta S, Mittal Publication, New Delhi.
11. Das, B.M., P.B Das & R Das. (1989). Biosocial profile of the five mongoloid population of Assam. UGC sponsored research report. Department of Anthropology, Gauhati University.
12. Das, F. A., & Saikia, J. R. (1999). Some Aspects of Fertility of the Garo Women of Pochimbosti Garo Village in Sibsagar District, Assam. *Journal of Human Ecology*, 10(4), 273-277.
13. Das, P. B., & Das, B. M. (1967). Age at menarche of Kalita girls in Assam. *Man in India*, 47(2), 113-117.
14. Das, B. (1996). Body build and menarcheal age in rural Assamese women in Sengupta S (Eds) Peoples of North East India: Anthropological Perspectives. Gyan Publishing House, New Delhi: 81-90.
15. Deka, R. (1976). Menarcheal age among the Kachari women of upper Assam. *Bulletin of Anthropology*, Department of Anthropology, D U, 5, 1-6.
16. DLHS-2 India. (2002-2004). Reproductive and child health district level household survey. From institute for population sciences (Deemed University), Mumbai, Ministry of Health and Family Welfare, New Delhi.

17. DLHS- 3 (2007-08). District level household survey. Fact sheet, Assam. Ministry of Health and Family Welfare, Govt. of India. IIPS, Mumbai
18. Endle, Rev S. (1975). The kacharis, p-3.
19. Eveleth, P. B., Tanner, J. M., Eveleth, P. B., Tanner, J. M., & Chang, W. H. (1976). Worldwide variation in human growth (Vol. 8). CUP Archive.
20. Fathalla, M. F. (1987). The challenge still stands/by Mahmoud F. Fathalla. In The challenge still stands/by Mahmoud F. Fathalla.
21. Fathalla, M. F. (1992). Reproductive health in the world: two decades of progress and the challenge ahead. Reproductive health a key to a brighter future. Special Programme of Research, Development and Research Training in Human Reproduction, 1991, 1990-1991.
22. Gogoi, A.P. (2001). Effects of some socio-cultural factors on fertility among the Mundas of Assam- A preliminary appraisal in Barua I, S Sengupta and D D Das (eds), Ethnic Groups, Cultural continuities and social change in North East India. Mittal Publication, New Delhi, 325-331.
23. Gogoi, Manoj. (2018). Role of age at marriage in determining fertility size. An Anthropological study in Assam. Journal of Emerging Technologies and Innovative Research, 5(5), 968-976.
24. Indian Council of Medical Research. Division of Publication, Information, & Indian Council of Medical Research. (1972). Growth and physical development of Indian infants.
25. Mukhopadhyay, B. (2001). Demographic characteristics and rural-urban residence among the Lepcha of Sikkim. Tribes of the Eastern Himalayas, 33-46.
26. National Family Health Survey (NFHS-2). India, Mumbai. IIPS (198-99).
27. Pathak, P. Kumar., N. Tripathy & S.V Subramaniam. (2017). Secular trend in menarcheal age in India: Evidence from the Human Development Survey. PLOSone 9(11):e111027. DOI:10.1371/journal.pone.0111027.
28. SRS (2004-06). Maternal mortality rate. <http://jks.govt.in.srs/bulletin/srs02.pdf>.
29. Sample Registration System (SRS). (2008). SRS Bulletin. Office of the Registrar General, India, 43(1).
30. Sample Registration System (SRS). (2020). Special Bulletin on maternal mortality in India. Office of the Registrar General, India.
31. Seal, B., R. Das., R Patir & S. Sengupta. (2010). Factors affecting the reproductive performance among the Mishing women of Assam. Bulletin of Department of Anthropology, Dibrugarh University, 38, 73-80.
32. Sengupta, S., & Kalita, M. (1996). Selection intensity among the Sonowals of Assam. Peoples of North East India. New Delhi: Gyan Publishing House, 73-80. Sengupta,
33. Sengupta, S & Purnugala. (2005). Some aspects of reproductive performance of the Ao Nagas of Nagaland. Bulletin of Department of Anthropology, Dibrugarh University, 33, 69-76.
34. Sengupta, S., & Rajkhowa, M. (1996). Menarche and menopause among the Ahom women of Dibrugarh, Assam. Journal of Human Ecology, 7(3), 211-213.
35. Tanner, J.M. (1962). Growth at adolescence. 2nd edition, Oxford, Alden Press.