IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Determinants For Home Delivery Among Women In South West Khasi Hills, Meghalaya State: A Mixed Approach

Nandaris Marwein

Assistant Professor, Social Work in Public Health department
Martin Luther Christian University, Shillong, Meghalaya, India

Home deliveries pose a high risk to the life of both mother and baby. Despite much progress in maternal and child health services in Meghalaya, nearly half of deliveries still take place at home giving reasons such as distance, long hours of waiting, poor roads, high transport cost, etc. Underlying factors include poor socioeconomic factors and ignorance of government facilities hence, a mixed research study was done to assess factors influencing mothers choosing home birth delivery in Meghalaya. **Material and Methods:** South West Khasi Hills district of Meghalaya was chosen and from a representative random cluster of villages, 809 pregnant and lactating women were interviewed during 2018-20. There were 270 lactating women who form the basis of this paper. Approvals from the Village Councils and the MLCU Ethics committee were approved. After rapport and consent, the women were interviewed in-depth along with Focus Group Discussion and the data were computerized. **Findings:** Of the 270 mothers studied, 153(56.7%) delivered at home while the remaining 117(43.3%) delivered in institutions. Poor educational status, low socio- economic and belonging to nuclear family showed, statistically significant differences between home deliveries and institutional deliveries. **Conclusions:** Despite adequate Maternal & Child Health services, some women in South West Khasi Hills District seem to prefer home deliveries. More focused health education, sufficient health facilities and supplies, more user-friendly health staff would surely increase institutional deliveries.

Key words: *Home delivery, Institution delivery, Factors, Lactating mothers, South West Khasi Hills*

1.1 Introduction: Maternal Health

Maternal health refers to the health of women during pregnancy, childbirth and the postnatal period (WHO, 2023). A mother's well-being has a direct impact on her children's well-being and or newborns, survival is directly linked to a mother's health during pregnancy (Maternal and Child Health, n.d). Therefore, Maternal and child health (MCH) care is important because it is the health service provided to mothers (women in their child bearing age) and children. The targets for MCH are all women in their reproductive age groups, i.e., 15 - 49 years of age (Addisse, 2003). Despite of implementing policies and programmes to encourage institutional births, still there are large numbers of deliveries which occur at home attended by unskilled birth attendants.

As stated in the Health policy of the state, Maternal and Infant Mortality Rates are of great concern to the State with 197 MMR per 1,00,000 deliveries, Kerela at 43 (SRS, 2016-18) and 3.4% IMR (34 deaths per 1000 live births) as per HMIS, Apr-Sept 2020. Institutional deliveries in the State are at a very low level of 51.4 % in comparison to Kerala with a record 99.8%. These can be attributed mainly to teenage pregnancy, multiple gravida and untimely healthcare intervention (Ministry of Health and Family, 2021)

1.2 Place of childbirth delivery:

Place of delivery has major implications for decreasing maternal morbidity and mortality. India has adopted various policies to encourage institutional births, still, there are large numbers of deliveries that occur at home and inequalities in health will continue to grow and will threaten the population if policies are not implemented effectively (Swain, Singh & Priyadarshini, 2020; Devasenapathy et al., 2014, Averill &

Marriott 2013). Thus, it is imperative to understand the reasons for the high preference for home deliveries and the risk factors associated.

The Northeast region of India accommodates the country's largest proportion of scheduled tribes (ST) and ranks the lowest in social indicators (Cáceres et al,2023). According to Singh (2016) 27.5% of health facility delivery rate in Northeastern states is low especially when compare to the average India's institutional deliveries. The National Family Health Survey-5 (2019-2021) reported that in Manipur 20% of mothers delivered at home, 14% in Mizoram, 16% in Assam, 31% in Arunachal Pradesh, 42% in Meghalaya and 54% in Nagaland. The Northeastern region of India presents a complicated geographical picture that acts as one of the factors that influencing home child birth deliveries.

Institutional delivery in Meghalaya has increased from 51.4% in 2015-2016 (NFHS-4) to 58.1% in 2019-2020 (NFHS-5) and in South West Khasi Hills District the focus area of the study is 41.7% (NFHS-5). However, home deliveries still occur which attended by an unskilled person such as Dai (Traditional Birth Attendant), relative, aunty friend, neighbor, etc (Ameade, Asibiti and Adikem, 2020; Meghalaya State Development Report, 2008-09). Factors influencing home delivery in Meghalaya are financial constraints, fear of out-of-pocket expenditure, staff attitude, ignorance of available schemes, unavailability of transport, bad roads, and distant hospitals were found to be important causes of this choice (Sarkar et al, 2018). Buor (2004), in his study reported that most of pregnant women cannot get access and utilise health services due to the expenditure as most of them are from low economic status hence choose Traditional Birth Attendant. He also added that not only because of expenditure it is also because of distance, long hours of waiting the doctors, poor roads, high transport cost, illiteracy, poor health facilities, poor maternal services especially antenatal care. In addition, Bredesen (2013) stated that many women did not want to go to the health centres as they feel that childbirth is a natural process and also they think that even their ancestors deliver without any help, they are well and fine. These are the most influences that hinder the Utilisation of Health Services. Ameade, Asibiti and Adikem (2020) argued that even with the presence of health facilities, women are still choosing for home delivery and were attended by TBA which might lead to complications. There are studies which explain how delivery complications & deaths occurred among mothers related to beliefs and culture. For instance, the labour complication is believed to be due to infidelity on the part of the husband or the wife and how the woman in labour as well as her husband are asked to confess if either of them had any illicit sexual act outside marriage. It is believed that if only both the parents confess their crime the child comes to this world peacefully. The concept of expected date of delivery is quite confusing to some tribal because prediction as to when the baby will be born is not possible, most of tribal believe that the baby will be born when it is time but in the health institution, health professionals will not wait that natural timing of delivery hence, perform caesareans (Subba, 2008; Das, & Dasgupta, 2015).

1.3 National Maternal Programmes:

In 2005, India launched a conditional cash transfer (CCT) program called Janani Suraksha Yojana (JSY), to reduce MMR through promotion of institutional births, there are large numbers of deliveries still occurring at home (Randive, Diwan and Costa, 2013). Government of India (GOI) program JSY and Janani Shishu Suraksha Karyakaram (JSSK) has been a major driver of this momentous increase in Institutional deliveries (Swain, Singh & Priyadarshini, 2020). There can be varied reasons proposed for these home deliveries like preference to deliver at home, facility located at far off location, lack of preparedness, decision of husband, or family members. Home deliveries pose risk to the life of both mother and baby. Hence, this study aimed to examine what factors influencing mothers choosing home birth delivery. The findings from the study will be helpful in providing facts to researchers, policy makers and health planners to reformulate effective strategies towards improvement of institutional delivery and maternal health services in the district.

2.1 OBJECTIVES:

1. To identify the differences in terms of profile between women who had home deliveries and women who delivered in health institutions
2. To assess the determinants influencing the choices of place for childbirth

3.1 RESEARCH METHODOLOGY:

Meghalaya is a tribal state situated in Northeast India with Shillong as its capital. According to Government of India census 2011, it has a population of 29,66,889 persons of which 14,91,832 are males and 14,75,057 are females. Meghalaya has a literacy rate of 74.43% (Males 75.95% and 72.89% females), 70.3% of the population practicing Christianity, and is a tribal state historically following the matrilineal system. Health indicators show that Meghalaya state has a high MMR which stands at 211 in 2015-16 and also has one of the highest Infant Mortality Rate (IMR) amongst the smaller states in the country (SRS Bulletin, 2011). From the

eleven districts, South West Khasi Hills district was purposively chosen for the study. It is a newly district which it was carved out of the West Khasi Hills District on 3 August, 2012 and the district headquarter is Mawkyrwat. Health indicators show that South West Khasi Hills district has low proportion of institutional childbirth delivery which stands at 41.7% compared to the state of 58.1% and India's data of 88.6% (NFHS-5, 2019-2020). From the eleven districts of Meghalaya, South West Khasi Hills district was purposively chosen as a typical area for this research.

The research was carried out from 2018 to 2020 among the mothers resident in representative random sample of villages in two blocks which employed both quantitative and qualitative method. In-depth interviews at household level were conducted. The data collected were checked for completeness, coded and entered into SPSS version 23 for cleaning and analysis. The sample size was calculated using a 5% level of significance of which an alpha level of 0.05 is considered significant for all analyses. A sample of 270 mothers who had given birth in the last one year prior to study period were selected from both two blocks of the district. Assuming a Birth Rate of 35 per 1000 population, and further assuming that only 20% utilize the available maternity service, with a type I error of 5%, power of 80% and a precision of 20%, a minimum sample size of 800 pregnancies (400 from each block) was decided. Of 809 women examined, 539 were pregnant at the time of interview, and 270 were lactating mothers. This paper is based on the 270 lactating mothers since the focus of the study is on home delivery.

Focus group discussion (FGD) was conducted which aimed at exploring participants' experiences, thoughts, feelings, attitudes and ideas on determinants to choice of place of childbirth. Six FGDs were conducted involving a total of 91 participants representing mothers, older women of 45 years above and health care workers (ANM, Staff nurse, ASHA, Health educator, Lab technician). Informed verbal and written consent were obtained from all individuals participating in the discussion which was audio taped after receiving the consent transcribed verbatim and translated. The data were analysed manually using thematic content analysis.

4.1 RESULTS AND DISCUSSION

Of the 270 mothers studied, 153(56.7%) delivered at home while the remaining 117(43.3%) delivered in institutions.

The Home and Institutional deliveries are compared in the following tables:

Table 1: Age Group of women with Home delivery and Institutional

Age (in years)	**Home (%)**	**Institution (%)**
15-19 years	7 (4.6%)	2(1.7%)
20-29 years	95 (62.1%)	77(65.8)
30 years or more	51 (33.3%)	38(32.5)
Total	153 (100.0)	117 (100)

Although slightly higher percentage of women delivered at home are younger than the percentage of women delivered in health institution, the difference is not statistically significant.

Table 2 Age at first pregnancy (in years) in women delivered at home and women delivered in health institution.

Age at first pregnancy(in years)	**Home (%)**	**Institutional (%)**
15- 19 years	72 (72.1%)	48(41%)
20-29 years	81 (52.9%)	67(57.3%)
30 years or more	0 (33.3%)	2 (1.7%)
Total	153 (100.0)	117 (100)

Age at first pregnancy was lower among women delivered at home, but again the differences are not statistically significant.

Table 3: Religion of mothers in the two groups

Religion	Home (%)	Institutional (%)
Christianity	139 (90.8%)	110(94.0%)
Hindu	11 (7.2%)	7(6.0%)
Khasi Indigenous Religion	3 (2%)	0(0.0%)
Total	153 (100.0%)	117 (100.0%)

The numbers of non-Christian women are small, but there seems to be more among women who deliver at home who practicing Khasi indigenous religion than to women who deliver in health institution.

Table 4 Marital status in the Two Groups

Marital status	Home (%)	Institutional (%)
Registered	100 (65.4%)	61(52.1%)
Cohabitation	49 (32%)	55(47%)
Others (abandoned,widowed,divorce)	4 (2.6%)	1(0.9%)
Total	153 (100.0)	117 (100)

There was a higher percentage of women delivered at home had registered marriage than the percentage of women delivered in health institution but the differences are not statistically significant.

Table 5 Educational qualification in the two groups

Educational qualification	Home (%)	Institutional (%)
Primary	25 (16.3%)	8(6.8%)
Upper primary	43 (28.1%)	24(20.5%)
Secondary	45 (29.4%)	37(31.6%)
Higher secondary	6 (3.9%)	23(19.7%)
Graduate	2 (1.3%)	12(10.3%)
No formal education	32 (20.9%)	13(11.1%)
Total	153 (100.0)	117 (100)

Educational status of mothers was lower in mother who delivered at home as compared to mothers who delivered in health institution and the difference is statistically significant ($p<0.05$)

Table 6 Occupation Of mothers in the two groups

Occupation Of mothers	Home (%)	Institutional (%)
Govt employed	2 (1.3%)	3(2.6%)
Private	0 (%)	1 (0.9%)
Self employed	3 (2%)	3(2.6%)
Housewife	143 (93.5%)	100 (85.5%)
Daily labourer	3 (2%)	4(3.4%)
Teacher	1 (0.7%)	4(3.4%)
Students	1 (0.7%)	2(1.7%)
Total	153 (100.0)	117 (100)

Occupational status did not differ significantly between women who delivered at home and women who had institutional deliveries. A study done by Gebrehiwot (2013) described that there is strong association between women or husband's occupation with the choice of delivery place. occupation of the spouse was also the most significant factors for institutional delivery (Dhakal et al, 2017).

Table 7 Family Annual Income in the two groups

Family Annual Income	Home (%)	Inst. (%)
10,001-15000	13 (8.5%)	24(20.5%)
15001-20,000	6 (3.9%)	9(7.7%)
20,001-25,000	1 (0.7%)	3(2.6%)
25,001-30,000	0 (0.0%)	1 (0.9%)
30,001 and above	0 (0.0%)	1 (0.4%)
Total	153 (100.0)	117 (100)

Women who had home delivery were economically poorer compared to Women who deliver at health institution and the difference is statistically significant ($p<0.05$)

A mother agreed that institutional delivery is important but due to circumstances she had to have home delivery, she said *"when the coalmine transportation was open, I have money and I delivered my first child in the hospital but now I find difficult to manage, I will give birth at home even thoughI'm feeling fatigue all the time".* There seems to be socioeconomic reasons for preferring home deliveries.

Table 8 Types of family in the two groups

Types of family	Home (%)	Institutional (%)
Nuclear family	118 (77.1%)	77(65.8)
Joint family	35 (22.9%)	40(34.2%)
Total	153 (100.0%)	117 (100.0%)

More women who had home deliveries belong to nuclear families compared to women who delivered in health institutions and the difference is statistically significant($p<0.05$)

This finding was consistent with other studies which also found that mothers from the nuclear family were more likely to prefer a home as a place of childbirth delivery as compared to the mothers belonged to joint family (Gorain et al., 2017; Agrawal & Tiwari, 2020)

Table 9 Tribe of mothers in the two groups

Tribe	Home (%)	Institutional (%)
Khasi	107 (69.9%)	103(88.0%)
Garo	34 (22.2%)	6(5.1%)
Hajong	10 (6.5%)	6(5.1%)
Others (Assamese,Bengalee)	2 (1.3%)	2(1.7%)
Total	153 (100.0)	117 (100.0)

The difference of women who had home deliveries and women who delivered in health institution are statistically significant ($p<0.05$). The percentage of Garo women who deliver at home is higher than those who deliver at institution.

Table 10 Occupation & Education of GaroTribe who delivered at Home & Health institution

Occupation & Education of GaroTribe who delivered at Home & Health institution				
	Home birth delivery	**Frequency (%)**	**Institutional birth delivery**	**Frequency (%)**
Occupation	House Wife	33 (97.1%)	House Wife	6 (100%)
	Daily Labourer	1 (2.9%)	Daily Labourer	0 (0.0%)
	Total	34 (100.0)	**Total**	6 (100.0)
Education	**Home birth delivery**	**Frequency (%)**	**Institutional birth delivery**	**Frequency (%)**
	Up to primary	15 (44.1%)	Up to primary	2 (33.3%)
	Up to secondry	18 (52.9%)	Up to secondry	2 (33.3%)
	Beyond secondary	1 (2.9%)	Beyond secondary	2 (33.3%)
	Total	34 (100.0)	**Total**	6 (100.0)

The difference women who had home deliveries and women who delivered in health institutions are statistically significant ($p<0.05$) with more Garo among women with home deliveries.

Table 11: Actual Number of pregnancy of mothers in the two groups

Actual Number of pregnancy	Home (%)	Institutional (%)
One pregnancy	33 (21.5%)	37(31.6%)
Two pregnancies	30 (19.6%)	24(20.5%)
Three pregnancies	21 (13.7%)	16(13.7%)
Four pregnancies	18 (11.8%)	10(8.5%)
Five pregnancies	17 (11.1%)	10(8.5%)
Six or more pregnancies	34(22,3%)	20(17.2%)
TOTAL	153	117

The differences are not statistically significant

Table 12: Parity of mothers in the two groups

Parity of mothers	Home (%)	Institutional (%)
One child	33 (21.6%)	39(33.3%)
2-5 children	89 (58.2%)	60(51.3%)
6-9 Children	24 (15.7%)	14(12.0%)
10 children above	7 (4.6%)	4(3.4%)
Total	153 (100.0%)	117 (100.0%)

Again the differences by Parity are not statistically significant

REASONS PREGNANT AND LACTATING WOMEN CHOOSE HOME DELIVERY FOR CHILDBIRTH DELIVERY (N=153). HOME DELIVERY IS STILL A PREFERRED PRACTICE AMONG WOMEN. THE REASONS THAT PREVENT WOMEN FROM DELIVERY IN A HEALTH FACILITY IS SHOWN IN TABLE 13.

Table 13 Reasons women choose home delivery for childbirth delivery

Reasons for choosing home delivery for Childbirth (n=153)	No.	%
Bad road condition, Steep slope area	18	11.8
Not comfortable delivery in institution	29	19.0
No health complications	8	5.2
Available of Traditional Birth Attendants	30	19.6
Scared of C-section	9	5.9
Dislike the behaviour of health workers	2	1.3
Lack of delivery facility in health centres	19	12.4
Lack of transport	38	24.8

No money for transport	0	0.0
Total	153	100

The common reasons given by women for choosing home deliveries as they felt it is notnecessary for institutional deliveries since they do not have complications and also they are feeling uncomfortable to deliver at the heath facility (21.3%; 19%) as few doctors are males. In addition, there are also lack of privacy and unfamiliarity with some health workers in the labour room. There are women who are also scared of caesarean section and therefore preferred home deliveries. Furthermore, the availability of traditional birth attendants and ASHA in their community makes women to deliver their baby at home.

4.2 Findings from the qualitative study corroborate how these factors played an important role in determining where women chose for childbirth.

The main reasons for choosing home delivery brought about in this article are lacking of health infrastructure & transport facility, Availability of traditional birth attendants, Behaviour of health workers and uncomfortable to deliver at health facility.

A mother responded

"lack of vehicles (only one bus) compels me to give birth at home, it doesn't matter if having complication or not…no option…but at least a traditional birth attendant was available…I feel safe" (FGD/Mother/Bl. 1/30 yrs/August, 2020).

Another mother said

"my uncle is a birth attendant...there were times when health workers consulted him how to do if health problems...hence I choose home delivery" (FGD/Mother/Bl. 1/32 yrs/August, 2020).

"myself I'm comfortable at home… a traditional birth attendant will massage which I feel less pain and also she offer me a choice for birth position…will bathe me and baby" (FGD/Mother/Bl. 1/38yrs/August, 2020).

Another mother added "No doubt that institutional delivery is more safe but for me no option I had to deliver at home because no delivery services at a health centre"

A nurse shared *"one mother lost her life when coming to our health centre to deliver her baby…doctors and nurses could not help her from baby's hand prolapsed due to unavailability of equipments" (FGD/Nurse/Bl. 2/29 yrs/August, 2020).* Another health worker pointed out *"some mothers prefer home deliveries due to unavailable of delivery facility in a health centre" (FGD/AWW -1/ Bl.2/42 years/August, 2020).*

A 28 year old mother said *"…some health workers are rude, if just a small mistake they would shout at me" (FGD/Mother/Bl. 1/28 yrs/August, 2020).*

Some women prefer institutional delivery only when there are complications. "One participant said *"Yes, if I bleed I will definitely go to the hospital but I don't have complication, I had normal delivery so why institutional delivery"* (FGD/Mother/Bl. 1/32yrs/August, 2020)

Another mother described *"Health centre is far, terrain is harsh, the best option is delivery at home… I feel we mothers are really protected by God's grace that we are ok till today"* (FGD/Mother/Bl. 2/29yrs/August, 2020).

On this similar response a mother said *"I delivered my baby at home and retained placenta occurred, but TBA helped me by massaging and giving me some herbs to drink, then I'm fine"*.

One participant expressed *"I feel that the government should provide training to ASHA & TBA so that mothers in our area will feel secure even health facility not accessible" (FGD/AWW-1/August, 2020).*

Culture plays a very important role where psychological comfort is commonly addressed by women. One mother said *"I delivered my baby at home and retained placenta occurred, but TBA helped me by massaging and giving me some herbs to drink, then I'm fine" (FGD/Lactating/SC-1/August, 2020).* In a supporting note, a mother said *"Yes home delivery is good especially if a mother does not have health problems, the thing is that at home we can see everyone, we can take bath with warm water, I can get healthy food and a traditional birth attendant 'nongpynkhakhun' also is available" (FGD/Lactating/PHC4/August, 2020).*

4.3 DISCUSSION

In a study done in North India (Sahoo et al., 2015) the authors suggest that individual countries have to formulate interventions which will target marginalized or vulnerable populations with reference to caste, religion and wealth. A significant improvement in reaching the 3rd SDGs can be achieved if the targets (3.1,3.2,3.7) are focused on, i.e., Maternal mortality, Neonatal and child mortality, Sexual and Reproductive health. These remarks apply well to the Meghalaya women in South West Khasi Hills as seen from the results. In most developing countries such as Indonesia (Titaley et al., 2010), the use of

traditional birth attendants and home delivery were preferable for some community members despite the availability of the village midwife in the village. It has been expressed in the current study which is similar with other findings that lacking of skilled birth attendant leads to home child birth delivery. As noted by the World Health Organisation and United Nations report, antenatal care service alone is not a guarantee of maternal health and institutional deliveries; it is rather an entry point whereby skilled birth attendants can be promoted (United Nations 2014; World Health Organization, 1997).

Culturally, majority of rural and tribal women felt comfortable within their family circle where other studies addressed the similar findings as in the current study. Studies have found out that mothers opted for home childbirth delivery because there is privacy, comfort and freedom in terms of birth position, massaging, bathing or clean up after the birth, choices of food, warm surrounded by family, celebrate rituals of first child for their heir in which all these practices not allowed at the hospitals. Similarly, among tribals in Gujrat, mothers opted home delivery as they had psychological comfort in the presence of family, friends and neighbours (Atukunda et al., 2020; Sarkar et al.,2018; Sharma et al., 2013).

Physical distance, lack of delivery facility in health institutions, transport & financial limitations were the major constraints that prevented community members from accessing and using trained attendants and institutional deliveries. Generally, geographic terrains and the effect of distance on the frequent use of services increases when it is combined with lack of transportation particularly in developing countries which is similar with the current study (Ali, Dero and Ali, 2018; Biswas & Roy, 2012). In Meghalaya, the state government introduced a Meghalaya Maternal Benefit scheme since 2005 such as Janani Suraksha Yojana (JSK), Janani Shishu Suraksha Karyakram (JSSK), Pradhan Mantri Matru Vandana Yojana (PMMVY) , Meghalaya Maternal Benefit Scheme (MMBS) and launching a safe motherhood transit homes to increase institutional delivery and prevent infant and maternal deaths. Sadly, this has not translated into a reduction of MMR without addressing factors influencing the choice of home birth deliveries (Randive, Diwan & Costa, 2013; Gupta et al., 2012; Patel, Marbaniang, Srivastava, Kumar & Chauhan, 2021). Gebrehiwot (2013) suggested that efforts should be made in creating awareness and sensitization on possible complications that might occur during childbirth at home. Qualitative studies conducted by Shifraw, Bertane, Gulema, Kendall, and Austin (2016) and by Sarkar, Kharmujai, Lynrah & Suokhrie (2018) have similar findings with the current study where home deliveries were mostly attended by unskilled birth attendants such as TBA, ASHA, mother, aunty. Efforts should be made to create awareness and sensitization on possible complications that might occur during childbirth at home (Gebrehiwot, 2013).

In order to allay the fear of cesarean deliveries, women need correct information of why need to have their baby through caesarean section. If health providers are not focusing on women's need for psychosocial and emotional support due to fear of caesarean deliveries, they will not be able to shape their manner of utilizing the available maternity care services (Ayamolowo, 2020; Sarker et al., 2016; Dako-gyeke et al., 2013). Efforts need to focus on enhancing the positive friendly environment, behavior of healthcare providers, effective use of skilled birth attendants and importance given to women's interest so as to increase institutional births. (Swain, Singh & Priyadarshini, 2020; Ou, Yasmin, Ussatayeva, Lee & Dalal, 2020). It is required to assess and document the effectiveness of the incentives initiated by the government so that there will be an increasing of institution deliveries and demand for safer maternal health services (Marwein & Rao, 2020; Fapohunda & Orobaton, 2013).

Conclusions: Despite adequate Maternal & Child Health services, some women in South West Khasi Hills District seem to prefer home deliveries. Most of such women have poor education and belong to nuclear families. More focused health education and more user-friendly health staff would surely increase institutional deliveries. Due to low utilisation of institutional delivery, maternal mortality remains a major challenge in Meghalaya. Government needs to implement State health policy and deliberate intervention programs effectively in helping mothers link to finance costs associated with health care so that there will be an increasing of demand for safer maternal health services (Fapohunda & Orobaton, 2013). Efforts need to focus on enhance the positive friendly environment, behavior of healthcare providers, effective use of skilled birth attendants and importance given to woman's interest so as to increase institutional births, create sensitization on possible complication might occur during child birth at home and trainings for frontline or community health workers on basic child birth delivery (Swain, Singh & Priyadarshini, 2020; Ou, Yasmin, Ussatayeva, Lee & Dalal, 2020; Gebrehiwot, 2013).

4.4 Recommendations:

1. Sensitisation & Counseling to mothers during ANC visits about institutional deliveries, the risks of complication that might occur during childbirth at home even when feel healthy.
2. Strengthened the utilization of Transit homes under the Chief Minister's Safe Motherhood Scheme (CM-SMS), Meghalaya to ensure institutional delivery and to prevent maternal deaths
3. Enhance more user-friendly health staff environment
4. Community can be part of Health discussion and planning strategies at block level, districts and at state level
5. Since nearly 20% of mothers delivered at home due to trusting on TBAs/elderly. Therefore, conducting Trainings will strengthen referrals.

5.1 Ethical Consideration:

The research was conducted in compliance with the ethical guidelines of the University issued by the University Research Ethics Committee on the approval of the research proposal The Director of Health Services (Medical Institutions), Shillong approved and forwarded the permission letter to the District Medical & Health Officer, South West Khasi Hills district for necessary clearances and cooperation from the health centre staff.

References

Addisse, M. (2003).*Maternal and Child health care*. USAIDS. Retrieved from https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/ln_maternal_care_final.pdf

Agrawal, N., & Tiwari, A. (2020). Determinants of home delivery among mothers in urban and rural Vadodara district, Gujarat, India. Official Publication of Indian Association of Preventive & Social Medicine. Indian Journal of Community Medicine, 45(2), 159-163.

Ali, S. A., Dero, A. A., & Ali, S. A. (2018). Factors affecting the utilization of antenatal care among pregnant women: a literature review. *Journal Preg Neonatal Med*, *2* (2): 41-45.

Ameade, E. P. K., Asibiti, W., Adikem, C. K. (2020). Why Expectant Mothers Deliver At Home Rather Than A Hospital - A Cross-Sectional Study In Tamale, Ghana. *British Journal of Medical & Health Sciences (BJMHS), 7* (2), 268-278.

Ayamolowo, L. B., Odetola, T. D., & Ayamolowo, S. J. (2020). Determinants of choice of birth place among women in rural communities of southwestern Nigeria. *International Journal of Africa Nursing Sciences, 13*, 100244.

Averill, C., & Marriott, A. (2013). *Universal Health Coverage: Why Health Insurance Schemes are Leaving the Poor Behind*. Oxfam GB for Oxfam International, Oxford

Atukunda, E. C., Mugyenyi, G. R., Obua, C., Musiimenta, A., Agaba, E., Najjuma, J. N., ... & Matthews, L. T. (2020). Women's choice to deliver at home: understanding the psychosocial and cultural factors influencing birthing choices for unskilled home delivery among women in Southwestern Uganda. *Journal of pregnancy*, (1), 6596394.

Biswas, A., & Roy, S. (2012). Problems of three high focus Northeastern states after five years of decentralised planning in India. *BMC Proceedings, 6* (1),10. Retrieved from https://doi.org/10.1186/1753-6561-6-S1-P10

Bredesen, J. A. (2013). Women's Use of Healthcare Services and Their Perspective on Healthcare Utilization during Pregnancy and Childbirth in a Small Village in Northern India. *American Internal Journal of Contemporary Research, 3*(6), 1-9.

Buor, D. (2004). *Accessibility and utilisation of health services in Ghana*. (Doctoral dissertation by NIVEL , Maastricht university, Netherlands). Retrieved from

https://www.nivel.nl/sites/default/files/bestanden/Accessibility-and-utilisation-of-health- services-in-Ghana-2004.pdf

Dako-Gyeke, P., Aikins, M., Aryeetey, R., Mccough, L., & Adongo, P. B. (2013). The Influence of Socio-cultural Interpretations of pregnancy threats on health-seeking behavior among pregnant women in urban Accra, Ghana. *BMC pregnancy and childbirth*, *13*(1), 211.

Das, A., & Dasgupta. J. (2015). *Maternal Health in Tribal Communities: A Qualitative Enquiry into Local Practices and Interactions with the Health System in Rayagada District, Odisha*. SAHAYOG, National Alliance for Maternal Health and Human Rights (NAMHHR). Retrived from http://feministlawarchives.pldindia.org/wp-content/uploads/Maternal-Health-in-TribalCommunities-by-NAMHHR.pdf

Devasenapathy, N., George, M. S., Jerath, S. G., Singh, A., Negandhi, H., Alagh, G., ... & Zodpey, S. (2014). Why women choose to give birth at home: a situational analysis from urban slums of Delhi. *BMJ open*, *4*(5), e004401

Expert Committee on Tribal Health. (2018). *Tribal health in India: bridging the gap and a roadmap for the future*. Available at: http://nhm.gov.in/nhm_components/tribal_report/Executive_Summary.pdf

Fapohunda, B.M., & Orobaton, N.G. (2013). When Women Deliver with No One Present in Nigeria: Who, What, Where and So What? *PLoS ONE 8*(7): e69569. doi:10.1371/journal.pone.0069569

Gebrehiwot, H. (2014). Factors Affecting Choice of Place for childbirth among Women's in Ahferom Woreda, Tigray, 2013. *Scholars Journal of Applied Medical Sciences (SJAMS)*, *2*(2D), 830-839.

Gupta, S. K., Pal, D. K., Tiwari, R., Garg, R., Shrivastava, A. K., Sarawagi, R., ... & Lahariya, C. (2012). Impact of Janani Suraksha Yojana on Institutional Delivery Rate and Maternal Morbidity and Mortality: An Observational Study in India. *Journal of health, population, and nutrition*, *30*(4), 464-471.

Gorain, A., Barik, A., Chowdhury, A., Rai, R.K. (2017). Preference in place of delivery among rural Indian women. *PLoS ONE 12*(12), 1-11. doi.org/10.1371/journal.pone.0190117

Health and Family Welfare, Government of Meghalaya. (2021), *The Meghalaya Health Policy*. Retrieved from https://meghealth.gov.in/docs/Meghalaya%20Health%20Policy%202021.pdf

Marwein, N., & Rao, P.S.S. (2020). Barriers and Facilitators for Utilisation of Antenatal Care Services in Meghalaya state, India. *Journal of Humanities and Social Science (IOSR-JHSS), 25* (12), 8-14, series 11, e-ISSN:2279-0837, p-ISSN:2279-0845.

Maternal and Child Health. (n.d). Retrieved from https://dhsprogram.com/pubs/pdf/FR138/09Chapter09.pdf

National Family Health Survey-5, 2019–21. (2022). International Institute for Population Sciences (IIPS) and ICF. Mumbai, India: Volume 1, IIPS, 1-715. https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf

National Family Health Survey (NFHS-4), 2015–16. (2017). International Institute for Population Sciences (IIPS), Mumbai, India, 791-846.

National Family Health Survey (NFHS-5), 2019–20. (2021). International Institute for Population Sciences (IIPS), Mumbai, India, 791-846.

Ou, C.Y., Yasmin, M., Ussatayeva, G., Lee, M.S., Dalal, K. (2021). Maternal Delivery at Home: Issues in India. *Advance in Therapy, 38*, 386–398. https://doi.org/10.1007/s12325-020-01551-3

Patel, R., Marbaniang, S.P., Srivastava, S., Kumar,P., Chauhan, S. (2021). Why Women Choose to Deliver at Home in India: a Study of Prevalence, Factors, and Socio-Economic Inequality. *BMC Public Health, 21*:1785. doi.org/10.1186/s12889-021-11779-5

Randive, B., Diwan, V., & De Costa, A. (2013). India's conditional Cash transfer programme (the JSY) to promote Institutional birth: Is there an association between Institutional birth proportion and Maternal mortality?. *PloS one, 8*(6), e67452.

Sahoo, J., Singh, S. V., Gupta, V. K., Garg, S., & Kishore, J. (2015). Do socio-demographic factors still predict the choice of place of delivery: A cross-sectional study in rural North India. *Journal of epidemiology and global health, 5*(4), 27-34.

Sarkar, A., Kharmujai, O.M., Lynrah, W., Suokhrie, N.U. (2018). Factors Influencing the Place of Delivery in Rural Meghalaya, India: A Qualitative Study. *Journal of Family Med Prim Care 7*:98-103.

Sharma, B., Giri, G., Christensson, K., Kv, R., & Johansson, E. (2013). The transition of childbirth practices among tribal women in Gujarat, India-a grounded theory approach. *BMC International Health and Human Rights, 13*, 1-15.

Shifraw, T., Berhane, Y., Gulema, H., Kendall, T., & Austin, A. (2016). A qualitative study on factors that influence women's choice of delivery in health facilities in Addis Ababa, Ethiopia. *BMC Pregnancy and Childbirth, 16*(1), 1-6.

Swain, P. K., Singh, P., & Priyadarshini, S. (2020). Determinants of home deliveries-Findings from India DLHS 4 analysis. *Journal of Family Medicine and Primary Care, 9*(9), 4723.

SRS Bulletin Sample Registration System: Vital Statistics Division (2011). Registrar General, Volume 47 No.2. Retrieved from SRS_Bulletin_2011_Vol_47_No_2

Singh, A. (2016).*Supply-side barriers to maternal health care utilization at health sub-centers in India*. Peer Journal 4:e2675; DOI 10.7717/peerj.2675.

Subba, T. B. (2008). *Matriliny, Reproductive Health, and Reproductive Rights: An Essay on the Khasis of Meghalaya, Northeast India*. URI: http://dspace.cus.ac.in/jspui/handle/1/4018. Retrieved from http://dspace.cus.ac.in/jspui/bitstream/1/4018/1/Matriliny.pdf both the parents confess their crime the child comes to this world peacefully (Subba, 2008).

Titaley, C. R., Hunter, C. L., Dibley, M. J., & Heywood, P. (2010). Why do some women still prefer traditional birth attendants and home delivery? A Qualitative study on delivery care services in West Java Province, Indonesia. *BMC pregnancy and childbirth, 10*(1), 1-14.

United Nations (2014). *Midwives can prevent two thirds of deaths among women and newborns*. Retrieved fromhttps://news.un.org/en/story/2014/06/469852.

World Health Organisation. (1997). *Maternal and Newborn health safe motherhood: Strengthening Midwifery within safe motherhood.* Retrieved from file:///D:/PhD%20Proposal/Articles%20from%2014.9.2017/MATERNAL%20HEALTH/ WHO,1997,%206.5.pdf

World Health Organisation. (2023). *Maternal Health: An overview*. Retrieved from https://www.who.int/health-topics/maternal-health#tab=tab_1