

Socio-demographic status and access to safe motherhood and antenatal care among tribal women

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ABSTRACT

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is important for Hill tracts because nearly half (46 percent) of its population lives in rural areas. The objective of the study was to assess the level of safe motherhood and Antenatal Care (ANC) among tribal women. The study revealed that, out of 250 respondents, majority (55.6%) were in the age group of 24-26 years with the mean age of 26.61 ± 2.2 , almost all (95.6%) respondents were Buddhist and most (74.4%) of the families were nuclear families. Most of them (94.0%) had 3-6 members in their family and most (72.8%) of them were housewives. Maximum (41.2%) respondents earned in between 90001-17000 BDT per month with average income of 17694.40 ± 15031.76 BDT and 39.2% of them were lived Kacha house. Majority (53.2%) of the respondents got married in between the age of 19-22 years (22.68 ± 2.22) and 48.4% had first conceived in between the age of 24-27 years (23.79 ± 2.14). Most (73.6%) of them were knew that the health centres provide Antenatal Care and almost all (92.8%) received ANC but most (73%) of them did not complete four visits ANC during their pregnancy. It also revealed that, ANC service centres availed mainly (68%) from govt. Hospital and ANC services provided mostly (82.8%) from doctors. Most (77%) of the respondents claimed that the communication system to reach the service centre was well enough and almost all (91%) of the respondents took decision on their own to go to health centre to receive ANC. Almost all (97%) the respondents opined they didn't have any barrier to go to health centre to receive ANC. Most (84.4%) of the husbands of the respondents knew about the antenatal care and maximum (53.6%) knew that there is health centre in their area. Almost all (95%) of them had normal delivery and (93%) had no knowledge regarding Postnatal Care (PNC). Most (93%) of the respondents had no knowledge regarding PNC and almost all (98.8%) of the respondents had no awareness about the importance of at least 4 times of antenatal care visit. Majority (65%) of the respondents received vaccine for 5 times and almost all (92.8%) had no pregnancy complications. From this study we found that, most of the respondents received antenatal care services but not by the meant of four visits ANC. Therefore development of evidence based ANC package is required. The timing, frequency and exact content of ANC visits require further testing and harmonization.

INTRODUCTION

Antenatal care (ANC) is named as one of the four pillars initiatives of the Safe Motherhood Initiative. While many of routine antenatal care procedure have little effect on maternal mortality and morbidity, Antenatal care, which includes care during pregnancy, should begin from the early stages of pregnancy. Women can access ANC services either by visiting a health center where such services are available or from health workers

during their domiciliary visits. One of the most important components of ANC is to offer information and advice to women about pregnancy-related complications and possible curative measures for the early detection and management of complication (Bloom et al, 1999).

The World Health Organization (WHO) defines women of reproductive age at those who are aged 15-49 years. They constitute more than one-fifth of the world's population and are repeatedly

exposed to the risk of pregnancy and childbearing. According to the WHO recommendation, every pregnant woman should receive at least four ANC visits during pregnancy (WHO & UNICEF, 2003). The use of ANC in developing countries is low compared to developed countries (97%) (Raatikainen et al., 2007). In developing countries, women often encounter serious health risks during pregnancy either for themselves e.g. anemia, edema, eclampsia etc or for their children e.g. sepsis and pneumonia, birth asphyxia and injuries, tetanus, congenital anomalies, with low birth weight etc. Maternal health refers to the health of the mother during pregnancy, childbirth, and the postpartum period (Raatikainen et al., 2007).

The Bangladesh Demographic and Health Survey (BDHS) 2011 showed that 55% of women with a birth in the three years preceding the survey received ANC at least once from any provider. More than half (55%) of the women received care from a medically-trained provider, such as doctor, nurse, midwife, family welfare visitor, community skilled birth attendant, medical assistant or sub-assistant community medical officer. ANC visits are a platform for delivery based on a review of the effectiveness of different ANC models, WHO has recommended a standard model of four antenatal visits (WHO 2006). WHO guidelines on the content of ANC visits include the following components: clinical examination, blood testing to detect syphilis and severe anemia (and HIV, malaria, etc. according to the epidemiological context), gestational age estimation, uterine height, blood pressure, maternal weight and height, test for sexually transmitted infections (STI) s, urine test, request blood type and Rh, tetanus toxoid, iron/Folic acid supplementation, and recommendations for emergencies (WHO, 2006).

Only five years are left to achieve the Millennium Development Goals (MDGs) 4 and 5 of reducing the under-five mortality rate by two thirds reducing the maternal mortality ratio by three-quarters. However, many countries have made very limited or no progress in achieving these goals. Maternal mortality ratios remain high in many developing countries. The most recent estimates show that 358,000 maternal deaths occurred worldwide in 2008, with 99 percent of maternal deaths occurring in developing countries

as a whole, and 87 percent in sub-Saharan Africa and South Asia (WHO, 2010). There has been encouraging achievement in reducing the global under-five mortality rate, which dropped from 89 per 1,000 in 1990 to 60 per 1,000 in 2009. Still, in 2009, 8.1 million children died before their fifth birthday. Neonatal mortality remains high and contributes to 40 percent of total under-five mortality (You, Jones, and Wardlaw 2010). The evidence shows that high maternal, neonatal and child mortality rates are associated with inadequate and poor-quality maternal health care, including antenatal care, skilled attendance at birth and postnatal care (Carroli et al., 2001; Li et al., 1996; WHO, 1999). With improved understanding of the need for women to prepare physically, mentally and even logistically for childbirth, antenatal care is recognized as a key maternal service in improving a wide range of health outcomes for women and children (Mc Donagh, 1996; Carroli et al., 2001; Chen et al., 2007). Antenatal care represents an opportunity to deliver interventions for improving maternal nutrition, providing health education, and encouraging skilled attendance at birth and use of facilities for emergency obstetric care (EMOC). All of these interventions could contribute to reducing maternal mortality and improving infant survival. With the spread of HIV in many countries of the world, antenatal care also serves as an important conduit for HIV testing and counseling and thus has potential for the prevention of HIV transmission from mother to child. The prevention and treatment of malaria among pregnant women can also significantly improve maternal health and fetal outcomes. The World Health Organization (WHO) recommends a minimum of four antenatal care visits, based on reviewing the effectiveness of different models of service delivery (Villar et al., 2001). WHO guidelines also specify the content of antenatal care visits, which should include blood pressure measurement, urine testing for bacteriuria and proteinuria, and blood testing to detect syphilis and severe anemia (WHO, 2001). Some other services, including giving tetanus immunization, providing iron and folate tablets and teaching women about danger signs of pregnancy complications, are also important to improve both maternal and newborn health. Evidence suggests that skilled attendance at birth and access to emergency obstetric care are key

factors in reducing the risk of maternal death, in both industrialized and developing countries (WHO, ICM, and FIGO 2004; Graham et al., 2001; De Brouwere, Tonglet, and Van Lerberghe 1998). WHO has defined a skilled attendant as —an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (WHO 1999). Providing skilled attendants for delivery care, along with the equipment, drugs and supplies necessary for effective prevention and management of obstetric complications, has been advocated as the most important intervention in preventing maternal deaths (WHO, 1999).

WHO guidelines on the content of ANC visits include the following components: clinical examination, blood testing to detect syphilis and severe anemia, HIV, malaria, etc. according to the epidemiological context, gestational age estimation, uterine height, blood pressure, maternal weight and height, test for sexually transmitted infections (STIs), urine test, request blood type and Rh, tetanus toxoid, iron/Folic acid supplementation, and recommendations for emergencies (WHO, 2002).

The present study was undertaken to assess the level of safe motherhood and antenatal care four visit among tribal women with the objectives of i) to find out the level of access of safe motherhood, ii) to assess the status of four visit antenatal care mother, ii) to determine relationship between level access the safe motherhood and antenatal four visit and iv) to find out socio- demographic characteristic of the respondents.

METHODOLOGY

Study area

A descriptive type of cross sectional study was conducted from January to December, 2015. The study was conducted Community MCH, EPI center, health related NGO at Rangamati. The selected community area was 10 kilometer away from the city center. Rangamati has a total area of

the district is 6116 km² of which 1292 km² is riverine and 4825 km² is under forest vegetation. it is bounded by Rangamati is located in the Chittagong Division. It is bordered by the Tripura state of India to the north, Bandarban District to the south, Mizoram State of India and China State of Myanmar to the east, and Khagrachari and Chittagong Districts. The total population is 5, 08,182 according to 2005 census of which tribal 52% and non-tribal 48%. The number of males is 2,87,060 and the females are 2,38,043 (Census 2001). Rangamati is 325 km. from Dhaka city by road on way to chittagong. It has several village, lots of mouzas and the region is entirely rural has limited inter-village trade and commerce. Most of the people are farmer and gardener.

Study population

For the current study the populations were women who have up to two year baby. 250 respondents were taken in this study. During the period of data collection 250 mothers were interviewed from the study place. For selection of respondent the inclusion criteria were- Mothers who have not up to two year old baby, and willingness of the respondents to participate in the study.

Research instruments

A semi-structured questionnaire was developed according to the variables which were derived from the objectives of the study. The questionnaire was pre-tested and finalize after necessary modifications. Questionnaire: A semi- structured Questionnaire was developed initially in English for the collection of data from research participants. The Questionnaire was developed using the selected variables according to the specific objective. The Questionnaire was containing question related to: 1) socio-demographic characteristic of the respondent 2) level of access safe motherhood 3) status of the antenatal four visit among tribal women 4) determine relationship between level access the safe motherhood and antenatal four visit. Open and close ended Questionnaire was pre- tested among few non- sampled respondents of matching characteristics and depending on the result of the pre- test; it was revised in the lights of suggestions received.

Data collection

After getting approval of the research proposal from the honorable Faculty members of NIPSOM, formal permission was obtained from the BSMMU, Dhaka, Bangladesh for data collection. Ethical clearance for the study was taken from the institutional Ethical Review committee of NIPSOM. Consent from prepared containing detail information about the study objectives, procedure of the data collection and benefit to the participants. After developing, the questionnaire was pretested among pregnant women in different place at the village of Rangamati district by the end of September. Data was collection from 1st week of October to last week November, 2015. Collected data were checked and verified at the end of work I each day. Any inaccuracy and inconsistency was corrected in the next working day. All relevant documents including questionnaire was kept under control of the proponent investigator. This study is not involving any societal, mental or physical risk to the participants.

Data processing and analysis

Data were collected through interview. Then the Master Tabulation Sheet was prepared after proper checking, verifying and editing as per specific objective and key variables. Analysis of data was finally done with Statistical Package for Social Science (SPSS) 22.0 program of computer on the basis of difference variables. Tables were made on available data and statistical procedures were applied in analyzing the data where felt necessary.

Ethical consideration

Ethical clearance was taken initially from the Ethical Committee of NIPSOM. Informed consent was taken before the data collection. Neither any invasive nor any intervention was done. Privacy and confidentiality was maintained. The respondent were informed about the objective of the study with describing that the study is beneficial for reducing maternal complication and to improve four ANC visit status of new born.

RESULTS

Socio-demographic status of the respondents

The maximum number of respondents belong from the age group of 24-26 years with the mean age of 26.61 with the SD of 2.2. Almost 14% of the respondents were illiterate, only 10.4% of the respondents read upto primary school, 30% of the respondents have completed secondary school education, 35% of them studied upto higher secondary school, rest 10.4% have graduated. The educational status of the husbands of the respondents were such- 4.4% of them were illiterate, 6.4% of them studied upto primary school, 32% of them completed secondary school, almost 35% of them completed higher secondary school and only 10% of them have graduated. Around 4% of the respondents were Hindu, rest of them were Buddhist. Most of the families were nuclear families, only 25% of the respondents belong from joint families. The family members were 3-6 for most of the families. Most of the respondents were housewives, around 1% of them were garments worker, 16.4% of them were service holder and only 1% of them were engaged in some sort of business. Among the husbands of the respondents most of them were service holders (42.4%). Around 7.6% of them were farmers, 12% were day labours, and rest of them were employed in other works. The mean monthly family income of the respondents was around seventeen thousand with the SD of around fifteen thousand. Around 40% of the respondents lived in kacha house, around 36% of them lived in pacca house, around 22% of them lived in semi-pacca house and only 1.2% of them lived in tin shed houses.

Table 1: Distribution of socio-demographic status of the respondents

Charac teristics	Frequency	Percentage	Mean(SD)
Age of the respondents (years)			
≤ 20	2	0.8	26.61 ± 2.2
21-23	34	13.6	
24-26	139	55.6	
27-29	67	26.8	
≥ 30	8	3.2	
Total	250	100	
Educational status of the respondents			
Illiterate	35	14.0	
Primary	26	10.4	
Secondary	75	30.0	
Higher	88	35.2	

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Secondary			
Graduate & above	26	10.4	
Total	250	100	
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Educational status of the husbands			
Illiterate	11	4.4	
Primary	16	6.4	
Secondary	80	32.0	
Higher Secondary	91	36.4	
Graduate & above	52	20.8	
Total	250	100	
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Religion of the respondent			
Hindu	11	4.4	
Buddhist	239	95.6	
Total	250	100	
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Type of family			
Nuclear	186	74.4	
Joint	64	25.6	
Total	250	100	
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Family members of the household			
≤ 2.00	4	1.6	
3.00 - 6.00	235	94.0	
7.00 - 10.00	10	4.0	4.1± 1.3
≥ 11.00	1	0.4	
Total	250	100	
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Occupational status of respondents			
Housewife	187	74.8	
Garments worker	4	1.6	
Service	41	16.4	
Teacher	15	6.0	
Business	3	1.2	
Total	250	100	
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Occupational status of husbands			
Farmer	19	7.6	
Day labor	30	12.0	
Service	106	42.4	
Business	82	32.8	
Other	13	5.2	
Total	250	100	
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Monthly income of the households			
≤1000	2	0.8	
1001 - 9000	46	18.4	
9001- 17000	103	41.2	17694.40±
17001- 25000	51	20.4	15031.76
25001 - 33000	35	14.0	
≥33001	13	5.2	
Total	250	100	
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Distribution of types of dwelling			
Kacha	98	39.2	

Pucca	92	36.8
Semi-pucca	57	22.8
Tin shed	3	1.2
Total	250	100

Reproductive characteristics of the respondents

Distribution of the age at first marriage

It was found that only 0.8% have given the history of early marriage, most of the respondents (53.2%) got married between the age of 19-22 years, around 41% of them aged between the age of 23-26 years and only 4.8% of them have given the history of first marriage at the age of 27 years or more. The mean age of first marriage of the respondents was 22.68 years with the SD of 2.22 years.

Table 2: Distribution of the age at first marriage of the respondents

Age during wedding	Frequency	Percent	Mean(SD)
≤ 18.00	2	.8	22.68±2.22
19.00 - 22.00	133	53.2	
23.00 - 26.00	103	41.2	
≥27.00	12	4.8	
Total	250	100	

Distribution of the age at first conception

Around 46% of the respondents gave history of the age of their first conception at between the ages of 20-23 years, 48% respondents first conception were at the age between 24-27 years. The mean age of first conception was 23.79 years with the SD of 2.14.

Table 3: Distribution of the age at first conception

Age at first conception	Frequency	Percentage	Mean(SD)
≤ 19.00	2	0.8	23.79±2.14
20.00 - 23.00	115	46.0	
24.00 - 27.00	121	48.4	
≥ 28.00	12	4.8	
Total	250	100	

Distribution of the age at first child birth

It has been recorded that 0.8% of the respondents have given the history to have their first child birth at below the age of 20 years. Around 60% of the respondents have given birth of their first child at the age of 21-25 years, and 39% of the respondents gave birth of their first child at the age above 26 years.

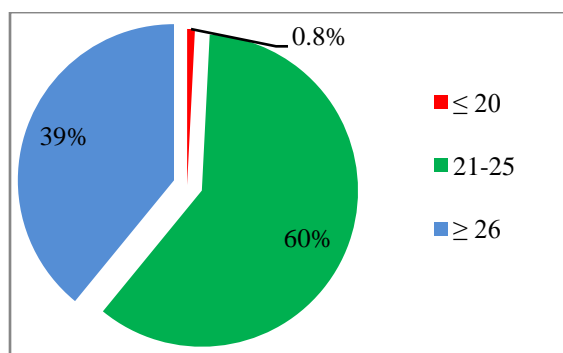


Figure 1: Distribution of the age at first child birth

Distribution of the age of the last child

Respondents who have their last child aged less than 1 month covered 16% of the whole, Almost 34% of the respondents have children aged less than 5 months. Around 14% of the respondents have children aged less than 10 months. And the rest of the respondents (35%) have their last child aged more than 11 months.

Age of the last child (months)	Frequency	Percentage
≤1.00	40	16.0
1.5- 5	87	34
6-10	35	14
≥ 11	88	35
Total	250	100

Number of conception by the respondent

Table 4: Opinion about safe motherhood services

Opinion	Yes	No	Don't Know	Total
Availability of health center in around	138 (55.2%)	112 (44.8%)	-	250(100%)
Availability of trained health worker	136 (54.4%)	71 (28.4%)	43 (17.2%)	250(100%)
Receive Antenatal Care (ANC)	232 (92.8%)	18 (7.2%)	-	250(100%)
Prior to know that health centre provide ANC	184 (73.6%)	66 (26.4%)	-	250(100%)

Around 60% of the respondents gave the history of conceiving one time only. Almost 40% of the respondents conceived twice and rest of the respondents conceived more than two times.

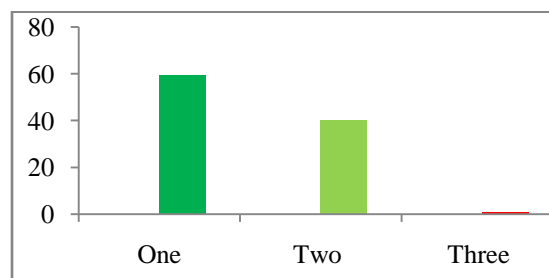


Figure 2: Number of Conception

Number of living children of the respondent

Around 60% of the respondents have only one child and rest of them have 2 children.

Number of Children	Frequency	Percentage
One	149	59.6
Two	101	40.4
Total	250	100

Safe motherhood and ANC four visit

Opinion regarding safe motherhood services by the respondents

Respondents were asked about the availability of safe motherhood services around them. They responded as followed. Around 55% of the respondents mentioned the availability of safe motherhood services. Almost 54% of them did avail the service of trained health worker. Only 24% of them received ANC. Near 74% of them knew that the health centres provide ANC (Table 4).

Distribution of respondents distance is home to health care center

About 68% of the respondents have health center within 3 kilometres from their residence, 28.4% of them have health center within 3.1-6 kilometres, and 3.6% of them have it within more than 6 kilometres.

Distance Range (km)	Frequency	Percentage	Mean(SD)
≥ 3	170	68	2.7±1.98
3.1- 6	71	28.4	
≤ 6.1	9	3.6	
Total	250	100	

Receiving four visits of ANC

Around 73% of the respondents gave history of no antenatal visit during their pregnancy and only about 26% of them received four antenatal visit. These visits they availed, 68% from govt. hospital, 3.2% from private hospital, 4.4% from community clinic, 14.8% from mother and child welfare center, 4.4% from satellite clinic. Almost 82% of the respondents who received ANC, received it from Doctors, 6% of them received it from trained nurse, 6% of them received it from medical officers. Around 77% of the respondents claimed that the communication system to reach the service centre was well enough. Almost 91% of the respondents took decision on their own to go to health center to receive ANC. Around 3.6 % of them went to health center with the permission of their husband. Near about 36% of the respondents said that they didn't receive the ANC due to communication system problem and rest of them didn't receive due to lack of information. Almost 97% of the respondents said they didn't have any barrier to go to health center to receive ANC.

ANC services receiving		
Receiving four visits of ANC		
Status of visit	Frequency	Percentage
No visit	184	73.6
Completed four visits	6	26.4
Total	250	100
Types of service centres for ANC		
Government Hospital	170	68.0
Private Hospital	8	3.2
Community Clinic	11	4.4

Mother and child welfare center	37	14.8
Satellite Clinic	11	4.4
Don't Know	13	5.2
Total	250	100
Distribution of types of ANC Providers		
Doctor	207	82.8
Trained Nurse	15	6.0
Medical Officer	15	6.0
Don't take service	13	5.2
Total	250	100
Status of communication system to go to service centre		
Good	193	77.2
Bad	57	22.8
Total	250	100
Decision making role to go to health center		
Own	228	91.2
Husband	9	3.6
Not Applicable/ without any one decision	13	5.2
Total	250	100
Reasons not to receive ANC by the respondents		
Communication problem	6	36.4
Lack of information about service center	7	63.6
Total	13	100
Barrier to receive ANC by the respondents		
Yes	6	2.5
No	231	97.5
Total	237	100

Knowledge regarding maternity services by the respondents

Almost 84% of the husbands of the respondents knew about the antenatal care, around 46.5% knew about the fact of safe motherhood. Around 47% of the respondent claimed that there is health center in their area. And 45.6% of the respondents gave history of presence of health worker in the health center.

Knowledge about maternity services	Yes	No	Don't Know	Total
Awareness of husband about ANC	211 (84.4%)	39 (15.6%)	-	250(100%)
To know about safe motherhood	116 (46.4%)	134 (53.6%)	-	250(100%)

Available health center in the area	118 (47.2%)	134 (53.6%)	13 (5.2%)	250(100%)
Availability of health worker in health centre	114 (45.6%)	123 (49.2%)	13 (5.2%)	250(100%)

Distribution of place of delivery

Around 26% of the respondents have had home delivery, 32% of them had hospital delivery, and 41.6% of them had delivery in Mother and child welfare center. Almost 95% of the respondents had normal delivery. Around 33% of the respondents were assisted by doctor during delivery, 20% of them were assisted by trained nurse, around 27% of them were assisted by family and welfare inspectors and 18% of them were assisted by midwives.

Places	Frequency	Percentage
Home	66	26.4
Hospital	80	32.0
Mother and child welfare center	104	41.6
Total	250	100
Type of delivery of the respondents		
Normal	237	94.8
Operational	13	5.2
Total	250	100
Types of health worker present during delivery		
Doctor	84	33.6
Trained Nurse	50	20.0
Family Welfare Inspector	69	27.6
Midwife	47	18.8
Total	250	100

Information regarding postnatal care

Only 7% of the respondents know about post natal care. Around 355 of the respondents never visited to the health center after pregnancy. Around 1.2% of the respondents visited only up to 4 times. Around 48% of them visited 5-10 times and around 15% of them visited 11 times or more.

Knowledge regarding PNC	Frequency	Percentage
Yes	14	7.0
No	186	93.0
Total	250	100
No. of Days went to health center after pregnancy		

Never	88	35.2
≤ 4	3	1.2
5-10	122	48.8
≥ 11	39	15.6
Total	250	100

Knowledge about the importance of 4 times visit of ANC

Only 1.2% of the respondents are aware of the importance of at least 4 times of antenatal care visit.

Knowledge to go to health center four times	Frequency	Percentage
Yes	3	1.2
No	247	98.8
Total	250	100

Frequency of receiving vaccine during pregnancy by the respondents

Almost 20% of them received vaccine for 2 times, 11.2% of them received vaccine for 3 times, 2.4% of them received vaccine for 4 times, around 65% of them received vaccine for 5 times.

Frequency of receiving vaccine during pregnancy	Frequency	Percentage
2.00	52	20.8
3.00	28	11.2
4.00	6	2.4
5.00	164	65.6
Total	250	100

Respondents faced complicated pregnancy

It has been recorded that 7.2% of the respondents face some sort of pregnancy complications. Among those complications 22.2% was blurring of vision, 33.3% was lower abdominal pain, 22.2% of them were convulsion, around 16% was heavy bleeding, and 5.6% was swollen face.

Pregnancy complications faced	Frequency	Percentage
Yes	18	7.2

No	232	92.8
Total	250	100
Types of complications faced during pregnancy		
Blurring of vision	4	22.2
Lower abdomen pain	6	33.3
Convulsion	4	22.2
Excessive bleeding	3	16.7
Swelling face	1	5.6
Total	18	100

DISCUSSION

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is important for Hill tracts because nearly half (46 percent) of its population lives in rural areas. The objective of the study was to assess the level of safe motherhood and antenatal care four visit among tribal women.

Socio-demographic status of the respondents

In the current study it reveals that, out of 250 respondents, maximum (55.6%) were in the age group of 24-26 years with the mean age of 26.61 with the SD of 2.2 and maximum (35%) of them and their husbands (36.4%) were studied up to higher secondary school respectively. Almost All (95.6%) the respondents were Buddhist and most (74.4%) of the families were nuclear families. In this study it was also revealed that, out of 250 respondents, most of them (94.0%) had 3-6 members in their family and most (72.8%) of them were housewives. Among the husbands of the respondents most (42.4%) of them were service holders. These findings were quite similar with the findings of Shahjahan et al. (2012) conducted a study to assess factors associated with use of antenatal care services in a rural area of Bangladesh in 2012 where the mean age of the respondents was 24 (SD±4.4) years. Most (95.6%) of the respondents were house-wives, followed by service holders, and who engaged in farming, and small business. About eighty-two percent of the post natal mothers were Muslims (Shahjahan et al., 2012). In this study maximum (41.2%) of the respondents earned in between 90001-17000 BDT per month with the mean± SD 17694.40±

15031.76 and maximum (39.2%) of them were lived Kacha house.

Reproductive characteristics of the respondents

In this study we also found that, majority (53.2%) of the respondents got married in between at their age of 19-22 years (Mean±SD=22.68±2.22) and maximum (48.4%) had first conceived in between the age of 24-27 years of their age (Mean±SD=23.79±2.14). It also revealed that, majority (60%) of them given the history to have their first child birth in between at the age of 21-25 years and maximum (35%) of them had their last child aged more than 11 months. Among 250 respondents, majority (60%) of the respondents gave the history of conceiving one time and had only one child which was not similar with the findings of Shahjahan et al. (2012) maximum (51.1%) had 2-3 child as total living children.

Safe motherhood and ANC four visit

In this study we also found that, maximum of the respondents opined positively about availability of health center in around (55.2%), availability of trained health worker (54.4%), received Antenatal Care (ANC) (92.8%) and most (73.6%) of them were knew that the health centres provide ANC these findings were not similar with the findings of Shahjahan M where 62.5% of the mothers received ANC ser-vices from health centers which was lower than the current study (Shahjahan et al., 2012). Majority (68%) of the respondents had health center within 3 kilometres from their residence and most (73%) of them gave history of no antenatal four visits during their pregnancy which was quite similar with the finding of Shahjahan et al., where 55% of the mothers had at least one or two visits, and 45% had the recommended four and above ANC visits (Shahjahan et al., 2012) and the BDHS conducted in 2011 showed that about 55 percent of the mothers received at least one ANC during their entire period of pregnancy (NIPORT, 2011). These findings were not similar with the findings of the study conducted by Ali AAA et al to assess use of Antenatal care services in Kassala eastern Sudan in 2010 where Out of 900 women who responded were investigated for antenatal care coverage in Kassala, 811(90%) women had at least

one visit. However, only 11% of the investigated women had \geq four antenatal visits, while 10.0% had not attended at all (Ali et al., 2010). It also revealed that, ANC service centres availed majorly (68%) from govt. Hospital followed by private hospital, community clinic, mother and child welfare center and from satellite clinic which was also not similar with the findings of Shahjahan et al. (2012) where the source of ANC services was Field health workers (34.2%) followed by government hospital (28.0%) (Shahjahan et al., 2012). These ANC services provided mostly (82.8%) from doctors. Most (77%) of the respondents claimed that the communication system to reach the service centre was well enough and almost all (91%) of the respondents took decision on their own to go to health center to receive ANC. Almost all (97%) the respondents opined they didn't have any barrier to go to health center to receive ANC. Most (84.4%) of the husbands of the respondents knew about the antenatal care and maximum (53.6%) of them knew about the fact of safe motherhood. Maximum (53.6%) knew that there is health center in their area and gave history of presence of health worker in the health center (45.6%). Maximum (41.6%) of the respondents had delivery in Mother and child welfare center, almost all (95%) of them had normal delivery and maximum (33%) of them were assisted by doctor during delivery. Furthermore, almost 92% births are delivered at home, often in unsafe and unhygienic conditions. Traditional birth attendants (TBAs, locally called dais) assist 64% births. Again there are significant rural urban differences, as professionally trained personnel attend 33% of births in urban areas, compared to only 8% in rural areas (NIPORT et al., 2001)

From this current study, we also found that, almost all (93%) had no knowledge regarding PNC and maximum (48.8%) of them were visited health center after pregnancy 5-10 times. Almost all (98.8%) of the respondents had no awareness about the importance of at least 4 times of antenatal care visit. Majority (65%) of the respondents received vaccine for 5 times but in case of 1999 survey of NIPORT with 81% of mothers who gave births during 1995-1999 given this vaccination (NIPORT et al., 2000) and few (7.2%) of the respondents faced some sort of

pregnancy complications, among them maximum (33.3%) had lower abdominal pain followed by blurring of vision, convulsion, excessive bleeding and swelling of face.

Most studies on antenatal care and skilled birth attendance have been conducted in only one or a few countries, rather than more widely (Chen et al., 2007; Magoma et al., 2010; Mpembeni et al., 2007; Syed et al., 2008; Bhutta et al., 2011). However, one study of levels and trends of antenatal care conducted in the early 2000s based on household survey data in 49 countries showed that around 68 percent of women in developing countries had at least one antenatal care visit and that the use of antenatal care had increased by 20% in the developing world over the 1990 to 2000 decade (AbouZahr and Wardlaw, 2003). Another comparative study using DHS data in six countries examined trends in delivery care with a health professional and found that the proportion of deliveries with a health professional had increased between 1990 and 2000 in all six countries (Bell et al., 2003). A global analysis of maternal mortality trends also presented information on trends in skilled birth attendance and caesarean section delivery, based on data from the WHO/UNICEF databases and the DHS (AbouZahr and Wardlaw 2001). This study found modest improvement in use of skilled birth attendants, with an average annual increase of 1.7 percent in 53 countries examined in the decade 1989 to 1999. The authors also found that caesarean delivery rates tended to be stable over the 1990s, with higher rates in countries of the Americas than in Africa and Asia. Compared to antenatal care and skilled attendance at birth, postnatal care has been largely neglected in safe motherhood programs. Postnatal care, especially within the first 48 hours after birth, is critical to the management of postpartum hemorrhage, an important cause of maternal deaths in developing countries. In developing countries, more than 60 percent of maternal deaths occur in the six weeks post-delivery and 80 percent of postpartum deaths are caused by obstetric factors occurring in the first week postpartum (Li et al., 1996). Postnatal care is also key to neonatal survival, through the prevention of neonatal sepsis and asphyxia/hypothermia, as well by promoting healthy behaviors such as exclusive breastfeeding

and care of babies with low birth weight. Research on postnatal care, however, is limited in developing countries. One study using data from 30 DHS surveys conducted between 1999 and 2004 found that seven of ten mothers delivering outside a health institution did not receive any postnatal care. However, this study was not able to find enough information on postnatal care among women delivering at a health facility; and the assumption that all women who delivered at a health facility would have received postnatal care may not be true in many cases (Fort et al., 2006). Examining the use of maternal health services in developing countries can inform programs about where to focus interventions that can reduce maternal and newborn mortality and improve their health outcomes. For this purpose, our study provides up-to date information on levels and trends in use of antenatal care, skilled birth attendance and postnatal care for mothers over the past two decades in 38 developing countries. The percent of women ages 15 to 49 with a live birth within a given time period who attended antenatal care (ANC) four or more times during their most recent pregnancy. Whether at a facility or community-based, optimally the ANC should be provided by skilled personnel including doctors, midwives, or nurses with midwifery skills. The number of live births is used as proxy for the numbers of women who need ANC care. Based on a review of the effectiveness of different ANC models, WHO has recommended a standard model of four antenatal visits (WHO, 2002).

CONCLUSION

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is important for Hill tracts because nearly half (46 percent) of its population lives in rural areas. The objective of the study was to assess the level of safe motherhood and antenatal care four visit among tribal women. In the current study it reveals that, out of 250 respondents, more than half of them were in the age group of 24-26 years with the mean age of 26.61 with the SD of 2.2, almost all the respondents were Buddhist and more than two third of the families were nuclear families. Almost all had 3-6 members in their family and more than two third of them were housewives. Maximum of

the respondents earned in between 90001-17000 BDT per month with the mean± SD 17694.40± 15031.76. In this study we also found that, more than half of the respondents got married in between at their age of 19-22 years (Mean±SD=22.68±2.22) and nearly half of them had first conceived in between the age of 24-27 years of their age (Mean±SD=23.79±2.14). More than two third of them were knew that the health centres provide ANC and almost all of them received Antenatal Care but gave history of no four visits ANC during their pregnancy. It also revealed that, more than two third ANC service centres availed from govt. Hospital followed by private hospital, community clinic, mother and child welfare center and from satellite clinic. More than three fourth ANC services provided from doctors. Approximate three fourth of the respondents claimed that the communication system to reach the service centre was well enough and almost all of the respondents took decision on their own to go to health centre to receive ANC. All the respondents opined they didn't have any barrier to go to health centre to receive ANC. More than three fourth of the husbands of the respondents knew about the antenatal care and more than half knew that there is health centre in their area. Nearly all of the respondents had no knowledge regarding PNC and had no awareness about the importance of at least 4 times of antenatal care visit. More than half of the respondents received vaccine for 5 times and almost all had no pregnancy complications. From this study we found that, most of the respondents received antenatal care services but not by the meant of four visits ANC. Develop an evidence based ANC package. The timing, frequency and exact content of ANC visits require further testing and harmonization.

RECOMMENDATIONS

Antenatal care for mothers and fetus should be focused with special care as this period is most vulnerable for both. So, following measures are recommended on the basis of study findings:

Develop an evidence based ANC package. The timing, frequency and exact content of ANC visits require further testing and harmonization.

Increase the acceptance of antenatal check up according to the schedule i. e. Four visit of antenatal care.

Strong national policy on safe motherhood and curriculum for training health care providers has been developed. The country must now make sure that these efforts are translated into high quality, accessible services and programs at the local level. The ratings suggest that women, overall, have reasonable access to some types of services.

Increase access to reproductive health, sexual health, and family planning services, especially in rural areas.

Provide prompt postpartum care, counseling, and access to family planning. Improve post abortion care and strengthen health promotion activities. Further research could be undertaken in large number of sample size.

Awareness campaigns of 4 visits ANC should be promoted using media such as pamphlets in local language, the radio and television. These can also be included in the training and upgrading programmes of Traditional Birth Attendance.

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