



Knowledge and behavior on safe motherhood practice among pregnant mothers in rural area of Bangladesh

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Abstract

A detailed cross-sectional type of study conducted among the mother of reproductive age who are pregnant & having more than one children attending in Obstetric & Gynecology Out Patient Department in Mymensingh Medical College & Hospital to assess the present level of knowledge on safe motherhood practices. The sample size was 170 were selected purposively, and the study area was selected for easy access. The respondents were interviewed with the help of a pre-tested structured questionnaire. In this study, socio-economical, educational & occupational characteristics of mothers, ever received ANC, PNC were found. In this study, most of the mothers 38 percent were in age group of 21-25 years, followed by 30 percent in 26-30 years, then 24 percent were below 20 years and only small number 8 percent above 30 years, all of them mean age was 24.62 (SD \pm 4.515). The literacy rate was 42 percent. The majority of women were homemaker 92 percent, only 21.18 percent had the knowledge on ANC visit 4-5 times & rest of them no adequate knowledge of ANC visit. In this study most of the respondent about 62.35 percent had knowledge about medical care is required during pregnancy and rest 37.65 percent of them had no knowledge about medical care. This study also revealed that 51.20 percent respondent got information from health care provider, and rest of them knew from other sources. There is significant association with socio-demo-cultural factors and its variables like religion, education, age at marriage, and place for safe delivery P values are: $p < 0.025$, $p < 0.000$, $p < 0.001$, $p < 0.001$ which is < 0.05 . Worldwide emphasis is given on safe motherhood to reduce the high prevalence of maternal morbidity and mortality. A large segment of the mother was found illiterate, and the similar segment was found to have a financial hardship. Proper knowledge on safe motherhood did not reach to the mother as well as to the society to change their attitude regarding care of the pregnant women. Therefore it is evident from this study as well as other studies in our country, a good percentage of people are not fully aware of the various components of safe motherhood. So the present study findings suggestion for an integrated program to the enhancement of knowledge regarding safe motherhood.

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Introduction

Safe motherhood means ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth. Most maternal deaths are due to five major medical causes such as severe bleeding, infection, unsafe abortion complications, a hypertensive disorder of pregnancy, and obstructed labor (Okereke *et al.* 2013). In every minute of everyday somewhere in the world a mother dies as result of complications arising during pregnancy, unsafe motherhood practices, MMR in Bangladesh is being 3.2 per/1000 live birth. One of the globe, every hour 2 mothers die due to pregnancy-related complication and unsafe practices (Lowdermilk *et al.* 2008). There are so many causes related to maternal death in our country. But most of the causes are as follows: a) Eclampsia, b) Severe Bleeding, c) Infection, d) Obstructed Labor, e) Complications of Unsafe Abortions, f) Others (Violence).

There are some elements in safe motherhood such as 1. Antenatal care, 2. post natal care, 3. safe delivery including emergency obstetric care 4. prevention of unsafe abortion and management of complication of abortions 5. Family planning 6. Neonatal care. Preventing maternal death and illness is a human right. Safe motherhood requires women's rights to be guaranteed and respected. These include their rights to good quality services and information during and after pregnancy and childbirth; their right to make their own decisions about their health freely, without coercion or violence, and with full information; and the removal of any barriers that contribute to maternal mortality. Maternal deaths are caused by unequal access to employment, finances, education, basic health care, and other resources. These negative conditions set the stage for poor maternal health even before a woman becomes pregnant, and can worsen her health when pregnancy and childbearing begin (Lowdermilk *et al.* 2008). All national development plans and policies should include safe motherhood programmes. The single most critical intervention for safe motherhood is to ensure that a health worker with midwifery skills is present at every birth, and

transportation to a capable health facility is available in case of an emergency. Addressing the 3 delays is important. Three Delays for Safe motherhood: First Delay – Decision making at home, Second Delay – Transportation to Health Centers, Third Delay – Access to quality Services .other barriers in safe motherhood are such as: Limited access to good and quality health services for Ante natal, post natal and delivery care and Socio economic factor: 1.Lack of community awareness 2,Family beliefs, norms, objection 3.Distance to SDP 4.Lack of Transport 5.Cost .Family Planning and Health education to be geared up . Maternal death and disability are the leading cause of healthy life years lost for women of reproductive age in developing countries, accounting for more than 28 million disability-adjusted life years lost and at least 18% of the burden of disease in these women. Approximately 99% of the said maternal mortality and morbidities occur in developing countries. In some developing countries, if the mother dies, the risk of death for her under-5 children is doubled or tripled (Lowdermilk *et al.* 2008).

There is an inverse relationship between education of mother and maternal mortality.. Knowledge among safe motherhood practice and Utilization of medical advice and services is also likely to be higher among mothers with formal education than their counterparts with no formal education as the former is likely to read and follow medical instructions more carefully than the latter. MMR is likely to be higher in rural than in urban areas, keeping other factors constant, because the latter has the disproportionate concentration of health facilities with midwifery services including EOC services. These facilities are few and far between in rural areas.

For this safe motherhood practice is the most important to reduce the risk of unsafe mother hood practice, means creating an environment in which women is enable to choose whether she wants child or not and services requires to support her decision. Failure to provide accessible, affordable, quality services during pregnancy and childbirth is a violation of women's human rights. Almost 35% of

women in developing countries receive no ante-natal care during pregnancy (Islam *et al.* 2006). In some countries, ante-natal coverage is as low as 26%. Approximately half of all deliveries in developing countries take place without a skilled attendant, with rates in some countries as high as 85% (Lowdermilk *et al.* 2008). Distance from formal health facilities, lack of transport, hidden costs (transport, drugs, medical supplies, food and lodging), interaction with providers, and socio-cultural factors (lacking decision making power, tradition, family role, law) often limit women's access to receive care for safe motherhood (Lowdermilk *et al.* 2008).

The international "Safe motherhood initiative" launched in 1987 to improve maternal health and cut the number of maternal deaths by half by the year 2000. However, centered on high risk screening and traditional birth attendant training, the initiative proved to be futile in reducing the high level of maternal mortality in the poor developing countries. It happened because it ignored two crucial aspects of pregnancy-related complications: their frequently unpredictable and unpreventable nature, and their requirement for prompt medical interventions. The importance of a functioning health system for addressing issues related to the mother and child health is also emphasized by the Task Force on Child Health and Maternal Health of the UN Millennium project. This is to be achieved through building a functioning primary health care system from first referral facilities to the community level, and would ensure equitable access to safe delivery and essential neonatal/child health care services.

It was reported that every year globally at least 500,000 women die from pregnancy related causes and 99% of them are in developing countries and it is expected to increase to about 600,000 in 1999 if appropriate measures for women during child bearing age are not taken (Lowdermilk *et al.* 2008).

Concern about continuing High level of MMR in Feb. 1987, the World Bank, WHO, UN FUND organized a meeting of health experts from 30 countries in NYROBI. Which is known as NYROBI international

safe motherhood conference, initiative for safe motherhood, over view of safe motherhood in developing country presented together with recent programmatic level (WHO, 2001).

An interagency field manual on RH in Refugee situation was produced and distributed for field testing in countries around the world. The revised version of the field manual was made available in 1999, it supports the provision of quality RH care including care during pregnancy and child birth, is based on the technical standards set by WHO^[8]. In addition to field manual, a Minimal Initial Services Packages was developed, which incorporates the basic Reproductive Health services needed during the initial phase of an emergency situation.

It is produced and distributed for field testing in countries among the world, UNFPA assembled the material resources necessary for implementing the services into a kit, this helps in safe motherhood practice for emergency situation sub kits. Such as: Subkit 1: Clean delivery sets & blood transfusion. Subkit 2: Professional midwifery kits Subkit 3: Management of abortion complication Subkit 4: Suture materials of cervical and vaginal tears. Subkit 5: Vacuum extraction Subkit 6: Surgical and other life-saving interventions.

Subkit 7: Blood transfusion. This is used in 34 countries, experienced at a programmatic level with respect to recognize, responding to reproductive health needs and including needs of woman during pregnancy & child birth, in the event of humanitarian emergency. However it is important for the consider what happens "on the ground" or beyond the programmatic level (Pierotti 2000).

Maternal mortality is an indicator of the overall situation of women in a society, so a more comprehensive social development approach is needed. To reduce maternal mortality and improve the health and well-being of mothers the policy makers and health planners need to recognize that the objectives of safe motherhood initiative cannot be realized by existing state of services. Therefore, the

provision of EOC services, upgrading existing health facilities, building functional network, deployment and retention of adequate number of trained health professionals, reducing know-do gap among the community people, and strengthening collaboration between government, NGO and private sector health facility will be essential to bring out a sizeable decline in maternal mortality and morbidity in rural Bangladesh.

Materials and methods

A descriptive cross-sectional study was conducted to assess the level on safe motherhood practices in outdoor department of Mymensingh medical college & hospital, a tertiary level hospital which is established 1962, most of its patients are referred from rural area for better management & improved healthcare. The target population in this study was mothers of reproductive ages who are pregnant & having more than one child, attending in OBS and GYNAE outdoor department in Mymensingh Medical College & Hospital, Bangladesh. The hospital was purposively selected for research. Approximately 04 months from July to October 2011.. Sample size was 170. Sampling technique was used purposively who are pregnant and having more than one child. Data collection tools: An interview questionnaire is the most commonly used instrument for obtaining information by self report. It could be used to obtain different types of information on safe motherhood practices. So the data was collected from the mother of reproductive age by using structured questionnaire according to the objectives and different variables of this study through face to face interview. All interviewed questionnaire were checked for its completeness and consistency to exclude missing or inconsistent data. Data were checked, verified and summarized in master sheet to facilitate for proper analysis. The study was based on primary

data with descriptive cross-sectional design filled directly with the help of respondent. The data was sorted and analyzed by using the software SPSS. The analyzed data was presented according to the variables of the study showing percentage and relationship between variables and appropriate statistical method in tables, graph, charts and bars. Descriptive statistics was used for the interpretation of the findings. Cross tabulation and association was determined by using the chi-square test where applicable. The standard guideline was followed for report writing provided by the University for better quality of research work. Pre-test of the questionnaire were taken in the place Obstetric & Gynae outpatient department of Mymensingh Medical College Hospital. Double entry data systems were following for better quality. Data analysis was done by SPSS 11.5 version. The data were noted very carefully and systematically. Each respondent were given their own cod and inter separately with coding different variables, so as to conceal their identification.

Results

The basic characteristics of study revealed that the total of 170 samples included in this study of knowledge on safe motherhood practice. This study was descriptive cross sectional study conducted in Mymensingh medical college and hospital. The results are being planned to present in tabular form graphical form and narrative form as following:

Table 1 shows that maximum number of respondents 38.15 were in age group 21-25yrs, followed by 30% in 26-30yrs, 24.11% were below 20 yrs and small 7.64% were above 30 yrs. All of them mean age was 24.61 and SD \pm 4.515. The age range from 17 to 38 years. Among 170 respondents 84.11 percent were Muslim, 14.71 percent were Hindu & only 1.18 percent was Christian.

Table 1. Distribution of Socio-Demographic factors of the respondents.

Socio-Demographic Factors	Frequency	Percentage
Age in years		
<20 years	41	24.11%
21-25 years	65	38.25%
26-30 years	51	30%
>30 years	13	7.64%
Religion		
Islam	143	84.11%
Hindu	25	14.71%
Christian	2	1.18%
Occupation		
Housewife	156	92%
Govt. Service	9	5%
Others	5	3%
(n=170)		
Educational Level		
Illiterate	44	25.88%
Primary	79	46.47%
S.S.C	28	16.47%
H.S.C	12	7.06%
Graduation	7	4.12%
Having Children		
Two children	103	60.59%
More than two children	67	39.41%
Monthly Family Income (In Taka)		
< 5000	134	78.82%
(5000-8000)	31	18.24%
>8000	5	2.94%
(n=170)		

Majority of respondents were housewife 92 percent, only 5 percent was in service & 3 percent others. Educational status of respondents, half of them 46.47 percent had primary education, 25.88 percent were illiterate, 16.47 percent had SSC level, 7.06 percent had HSC level & only 4.12 percent had graduate level of education. In the number of child revealed that 60.59 percent had two children & 39.41 percent had more than two children out of 170 respectively. Maximum 78.82% had income less 5000 taka, 18.24% were 5000-8000 taka and only 2.94% had income more than 8000 taka. Mean of monthly family income was 2400 and SD \pm 899.704.

Table 2 shows most of the respondents 69.41% had an opinion for pregnancy and delivery check up in Govt. hospital followed by 15.88% MCWC, 11.18% TBA and remaining only a few of them said about 3.53% private chamber. By making decision for check-up in pregnancy, husband was the decision maker in family in 80.59% cases, then mother-in-law 13.53% and only 5.88% self decision maker for check-up in pregnancy. Most of the respondents, 82.35% had knowledge that the first feed of newborn was colostrums, 7.65% bottle milk, 4.70% honey and 5.30% others.

Table 2. Distribution of socio-cultural factors of the respondents.

Socio-Cultural Factors	Frequency	Percentage
Place for pregnancy and delivery check-up		
Govt. Hospital	118	69.41%
MCWC	27	15.88%
TBA	19	11.18%
Private chamber	6	3.53%
By making decision for check-up in Pregnancy		
Husband	137	80.59%
Mother-in-law	23	13.53%
Self	10	5.88%
First feed of new born		
Colostrums	140	82.35%
Bottle milk	13	7.63%
Honey	8	4.70%
Others	9	5.30%
(n=170)		

Access to health service related and information factors.

Table 3. Distribution of access to health service related and information factors of respondents.

Factors	Frequency	Percentage
Distance of health facility		
<2 km	42	24.70%
2 km	46	27.06%
>2 km	82	48.24%
Frequency of ANC visit		
4-5times	36	21.18%
Don't know	128	75.30%
Others	6	3.52%
n= 170.		

Table 3 shows in maximum cases 48.24 % health facility was far from house more than 2 kilometer and 27.06% was 2 kilometer and 24.70% was less than 2 kilometer. Majority 75.30 % respondents did not know about the ANC visit, only 21.18% told that ANC visit must be 4-5 times and 3.52% others out of 170 respondents.

In Socio cultural factors, this study shows about 60 percent respondents thought that home was the safer place for delivery, 32 percent preferred hospital & 8 percent private clinic for safe delivery (fig-3). Regarding the risk factors of pregnancy highest 36.47 percent said prolonged labour, 17.65 percent answered previous instrumental delivery, 14.12 percent malpresentation, hypertension 10 percent, multi-gravida 9.41 percent, short stature primi 8.23

percent & only 1.18 percent contracted pelvis (fig-4). Knowledge regarding danger signs of pregnancy, above half of the respondents 51.18 percent answered hemorrhage, 22.35 percent obstructed labour, 10 percent convulsion, 7.06 percent lower abdominal pain, 5.88 percent swelling feet & 3.53 percent high fever respectively (fig-5). knowledge about postnatal complications 51.18 percent answered hemorrhage, 24.71 percent retained placenta, 10 percent prolapsed uterus, another 10 percent high fever & 4.11 percent rest inversion uterus (fig-6). About 51.20 percent of respondents got information from health care provider 33.52 percent knew from TV, 9.40 percent from News Paper & others 5.88 percent from radio(fig-7).

Table 4. Religion of the respondents with knowledge.

Religion	Knowledge		P value
	Had knowledge	Had no knowledge	
Muslim	84 (58.7%)	59 (41.3%)	0.025
Non-Muslim	22 (81.5%)	5 (18.5%)	
(n=170)			

Table 5. Education of the respondents with knowledge.

Religion	Knowledge		P value
	Had knowledge	Had no knowledge	
Illiterate	60 (48.8%)	63 (51.2%)	0.000
Literate	46 (97.9%)	1 (2.1%)	
(n=170)			

Fig. 1 showing about 62.35 percent respondents had knowledge about medical care & rest 37.65 percent of them had no any knowledge of medical care in pregnancy

knowledge about TBA required or not during delivery maximum number 70.59 percent of respondents did not know about the requirement of TBA during delivery of child only 29.41 percent had knowledge about TBA required during delivery of child.

Fig. 2 shows the distribution of respondents by

Table 6. Age at marriage of the respondents with knowledge.

Age at marriage	Knowledge		P value
	Had knowledge	Had no knowledge	
<19 years	87 (51.2%)	63 (37.1%)	0.001
>19 years	19 (11.2%)	1(.6%)	
(n=170)			

Table 7. Place for safe delivery with knowledge of respondents.

Place for safe delivery	Knowledge		P value
	Had knowledge	Had no knowledge	
Home	53 (52.5%)	48 (47.5%)	0.001
Hospital	53 (76.8%)	16 (23.2%)	
(n=170)			

Table-4 shows there is significant association between religion and knowledge of the respondents, $p < 0.02$.

Association of knowledge of respondents with socio-demographic and cultural factors.

Table 5 shows there is significant association between education and knowledge of the respondents, $p < 0.000$. Those who are literate 97.9% had knowledge and 2.1% had no knowledge. Among illiterate 48.8% had knowledge and 51.2% had no knowledge on safe motherhood.

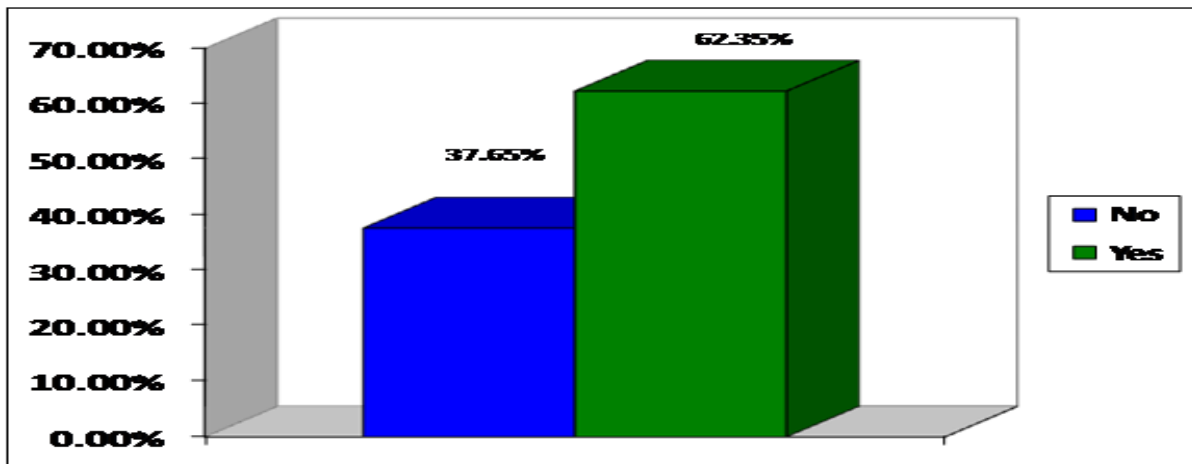


Fig. 1. Distribution of respondents by knowledge of medical care during pregnancy.

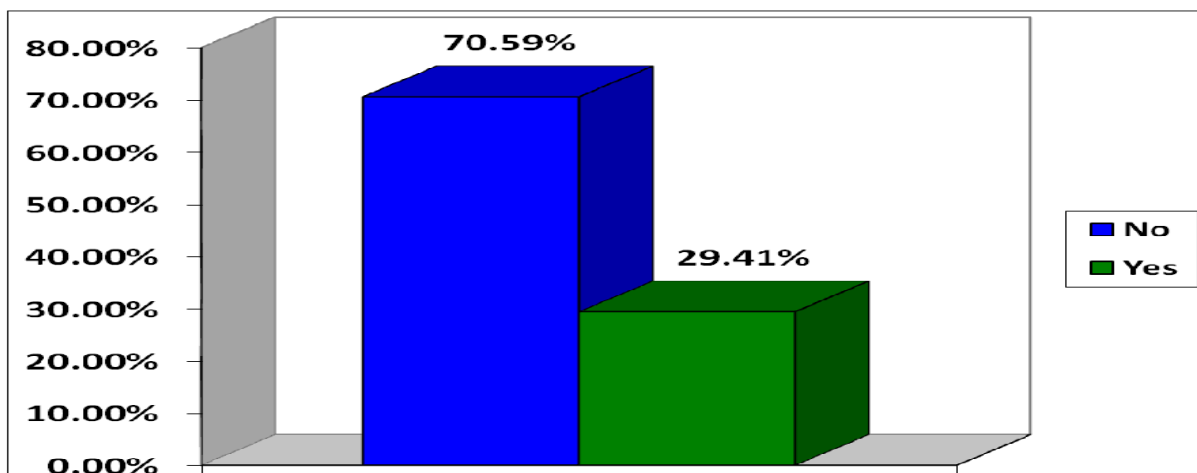


Fig. 2. Distribution of respondents by knowledge about TBA required or not during delivery.

Table-6 shows there is significant association between age at marriage and knowledge of the respondents, $p < 0.001$.

Table 7 shows there is significant association between place for safe delivery and knowledge of the respondents, $p < 0.001$.

Discussion

The present description type of cross-functional study was conducted among the mother in selected area at

Mymensingh Medical College & Hospital to assess the level of knowledge of mother on safe motherhood practices among the mothers of reproductive age who are pregnant & having more than one child attending in Obstetric & Gynecology Out Patients Department in Mymensingh Medical College Hospital & the relation of their knowledge with academic qualifications, occupations, monthly family income & with other parameters of safe motherhood. In this study a total of 170 respondents were interviewed with the help of pre-tested structured questionnaire.

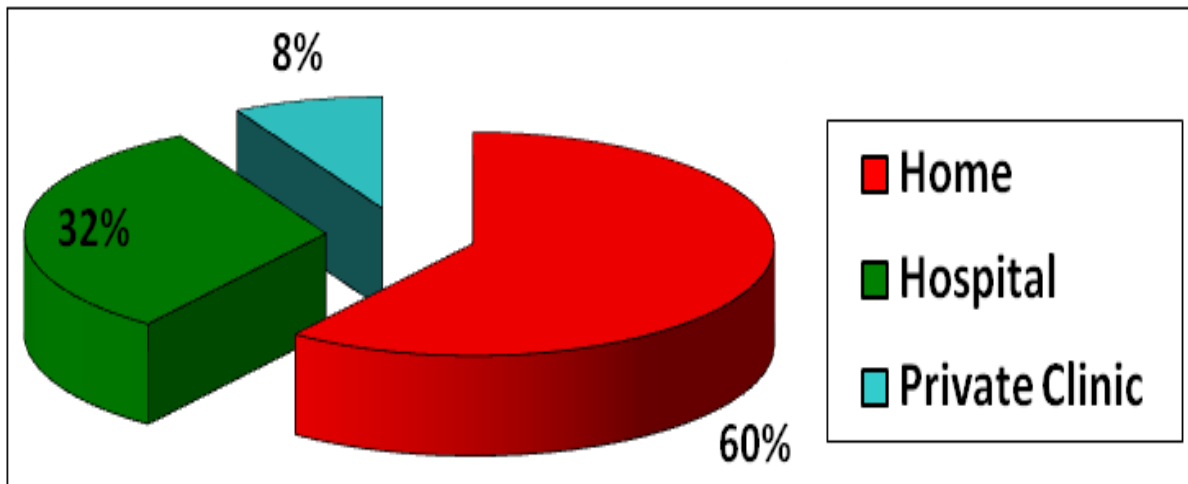


Fig. 3. Distribution of respondents by knowledge about place for safe delivery.

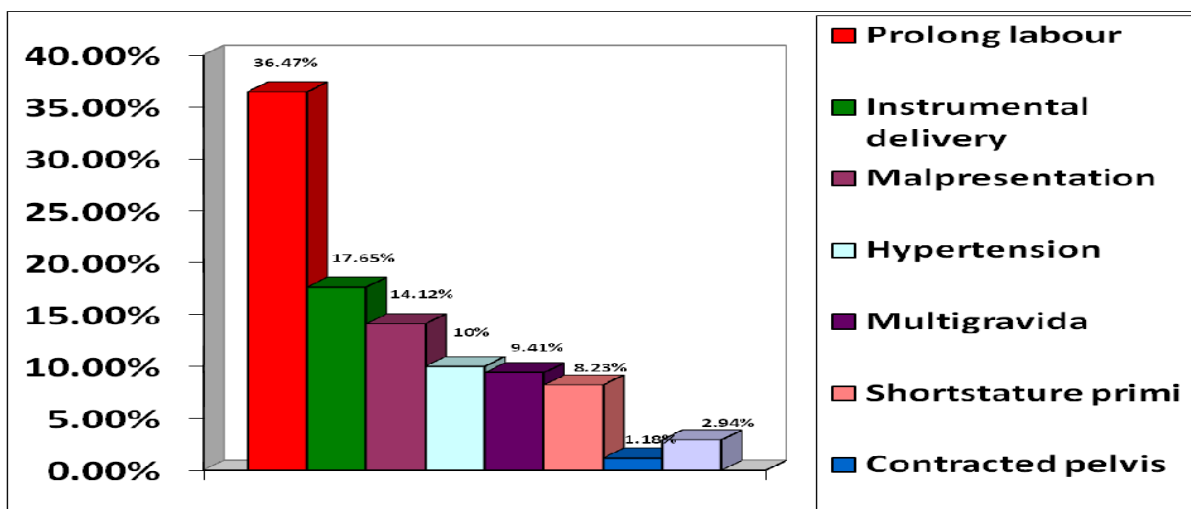


Fig. 4. Distribution of respondents by knowledge of risk factors in pregnancy.

Study shows that maximum number of respondents 38 percent were in age group of 21-25 years, followed by 30 percent in 26-30 years then 24 percent were below 20 years and only small number 8 percent were above 30 years, all of them Mean age was 24.61 and SD ±4.515.

The age range from 17 to 38 years. Among 170 respondents 84.11 percent were Muslim, 14.74 percent Hindu & only 1.18 percent Christian. Majority of respondents are housewife 92 percent, only 5 percent was Govt. service & 3 percent others. Educational level of respondents are 70 percent were illiterate, and 25.88 percent were illiterate of which 46.47 percent were at primary level, 16.47 percent had SSC level, 7.06 percent had HSC level & only 4.12 percent had graduate level education.

The present study showed that maximum 78.82 percent mothers suffered from economic hardship with monthly family income below 5000 taka. A study was conducted on safe motherhood regarding socio-economic & socio-demographic aspects of maternal mortality in South Asia countries stated that most of the girls started their life as a married women around 12-18 years of age in Bangladesh. The present study also showed that regarding trained birth attendants 70.59 percent respondents had no knowledge for the requirement of trained birth attendants during delivery of child. But 29.41 percent respondents had knowledge regarding the requirement of TBA during delivery of child. A study by Farthalla M on women's right to safe motherhood stated that 55 percent of world women get services by a trained birth attendant during delivery.

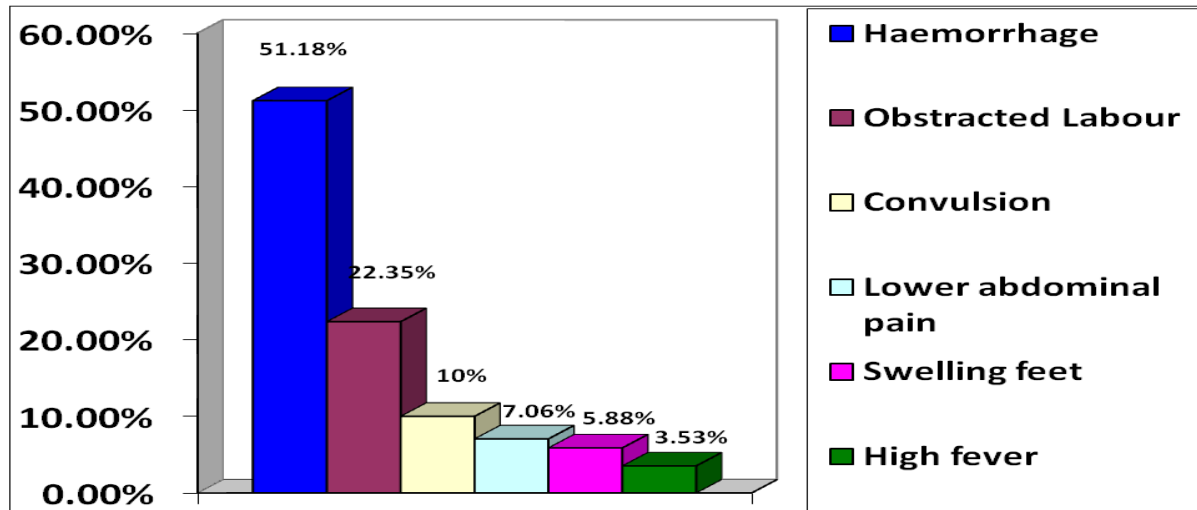


Fig. 5. Distribution of respondents by knowledge about danger signs in pregnancy.

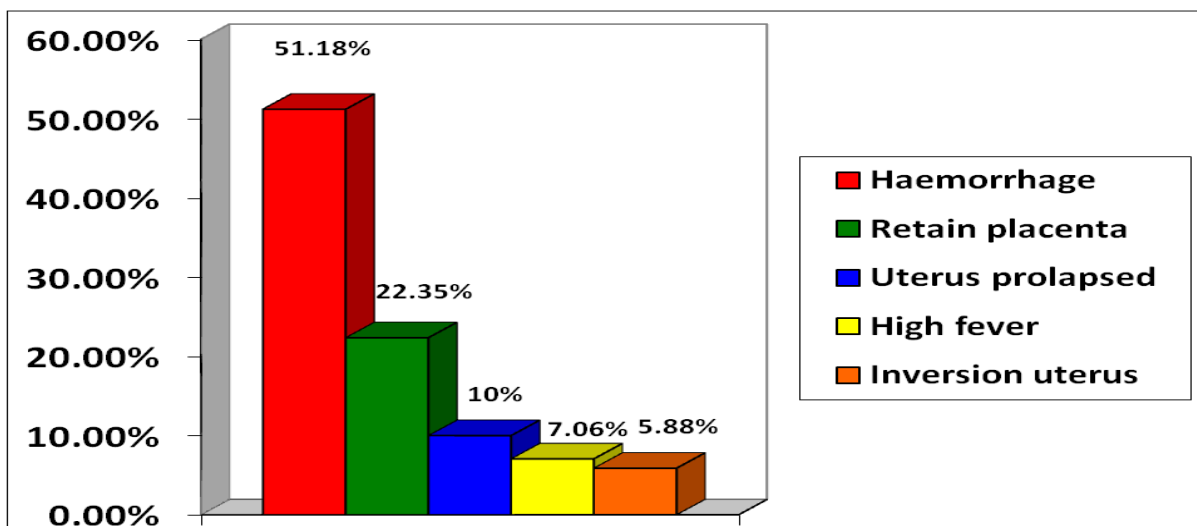


Fig. 6. Distribution of respondents by knowledge about post natal complications.

The present study revealed 59.41 percent respondent thought that home delivery was the safer place for delivery. 32.35 percent preferred hospital delivery & only 8.24 percent choose private clinic for safe delivery. Most of the respondents 69.41 percent had an opinion for pregnancy & delivery check up in Government hospital followed by 3.53 percent said about private chamber, 15.88 percent MCWC & 11.18 percent TBA. In my study respondents had knowledge about pregnancy related health problem, e.g. 36.47 percent prolonged labour, 17.65 percent instrumental delivery, 14.12 percent mal presentation, 10 percent hypertension, 9.41 percent multi-gravida. The knowledge of mother about danger sign in pregnancy like-hemorrhage 51.18 percent, 22.35 percent knew obstructed labour, 10 percent convulsion, 7.06

percent lower abdomen pain & rest of them knew high fever.

Present study showed that literate respondents had good knowledge about medical care is required during pregnancy than that of illiterate counter parts. Considering the knowledge on safe motherhood and safe delivery, majority of the respondents (98.6%) mentioned that every pregnant mother should receive antenatal care, and 97.6% said that pregnancy is a period of risk among rural married women in Nother Bangladesh (Yasmin *et al.* 2009).

Therefore significant associations are observed between education of respondents and knowledge of medical care during pregnancy.

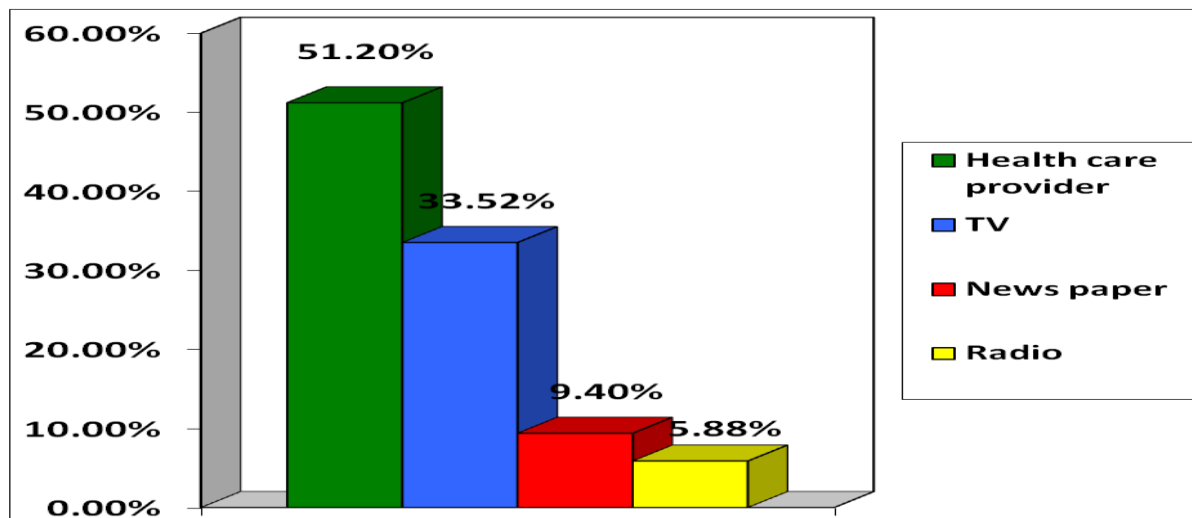


Fig. 7. Distribution of respondents by knowledge about source of information.

The nationwide safe motherhood programmed recommends that mothers received a postnatal complication. In present study only 21.18 percent told ANC visit, must be 4-5 times & most of the respondent did gave correct answer about timing of ANC visit. In my study it was revealed that 62.35 percent mothers had knowledge about medical care & 51.20 percent mothers had got information from health care provider & rest of them from TV, Newspaper, Radio & other sources. Therefore, a significant association is observed between knowledge of respondents and place for safe delivery, $p < 0.001$ which is less than $p < 0.05$.

Conclusion

Worldwide emphasis is given on safe motherhood to reduce high prevalence of maternal mortality and morbidity. Under the umbrella of safe motherhood steps were taken globally to overcome this constrains regarding up liftment maternal health. In Bangladesh most of the peoples live in rural area and they are not economically solvent and educated. Many approaches are taken by the government of Bangladesh to ensure family planning , ante-natal care, clean and safe delivery and essential obstetric care under the guidance of primary health care . But significant results are not achieved due to lack of proper knowledge on the safe motherhood practice among the rural peoples. This cross sectional study was conducted among the mother of reproductive age group who are pregnant and having more than one

children for focusing some socio-economic characteristics related to knowledge on safe motherhood. A large segment of mother were found illiterate and similar segment was found to be financial hardship. Proper knowledge on safe motherhood did not reach to the mother as well as to the society to change their attitude regarding care of the pregnant women (Yasmin *et al.* 2009). Therefore, it is evident from this study as well as other studies in our country, a good percentage of people are not fully aware about the various component of safe motherhood i.e, ante-natal and post natal care , family planning , safe delivery and about life threatening obstetric problems. So the present study findings suggest for an integrated program to enhancement of knowledge regarding safe motherhood.

Recommendations

From the date analysis reviewing the findings of the result of present study, it is important of formulate the following recommendations:

Nationwide survey should be made to get information regarding the present knowledge of safe motherhood.

Proper & effective counseling service & health education regarding the safe motherhood practices must be reaching to each and every women through health worker at grass root level of the community.

Public awareness should be raised on the importance of health care of maternal and neonatal particularly recognizing life threatening complication and emergency readiness.

Informal education community education for women, their families, and decision makers includes safe motherhood is required.

Promote research on knowledge on safe motherhood practices to contribute to improved planning, higher quality and more cost effective intervention.

Ensure that a functioning system of communication links with health worker who are working in communities, health center and hospitals so that women with pregnancy complication can receive prompt and appropriate medical care and advice.

Community participation, inter-sectoral co-operation, strong political commitment can improve the legal, social, and economic status of women.

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