Reprint **ISSN 1997-2571 (Web Version)**

Journal of Innovation & Development Strategy (JIDS)

(J. Innov. Dev. Strategy)

Volume: 5 **Issue: 3** **December 2011**

J. Innov. Dev. Strategy 5(3):19-23(December 2011)

MONITORING OF SAFE MOTHERHOOD AND SOCIODEMOGRAPHIC STATUS OF KUSHTIA DISTRICT, BANGLADESH

M.A. ZAHID, M.S. HOSSAIN, M.I.K. JAHID, M.N.K. AZAM AND N. NAHAR

GGF
Nature is Power

An International Scientific Research Publisher
Green Global Foundation©
Publication and Bibliography Division
100 Leeward Glenway
Apartment # 1601
M3c2z1, Toronto, Canada
E-mails: publication@ggfagro.com, editor@ggfagro.com
http://ggfagro.com/ejournals/current issues

ISSN-1997-2571 (Online)
J. Innov. Dev. Strategy 5(3):19-23 (December 2011)

MONITORING OF SAFE MOTHERHOOD AND SOCIODEMOGRAPHIC STATUS OF KUSHTIA DISTRICT, BANGLADESH

*M.A. ZAHID[1], M.S. HOSSAIN[2], M.I.K. JAHID[3], M.N.K. AZAM[4] AND N. NAHAR[5]

[1]Department of Nutrition and Food Technology, Jessore Science and Technology University, Jessore-7408, Bangladesh; [2]Department of Applied Nutrition and Food Technology, Islamic University, Kushtia-7003, Bangladesh; [3]Department of Microbiology, Jessore Science and Technology University, Jessore-7408, Bangladesh; [4]Biotechnology and Genetic Engineering Department, University of Development Alternative, Dhanmondi, Dhaka-1205, Bangladesh; [5]Department of Environmental Science and Health Management, Jessore Science and Technology University, Jessore- 7408, Bangladesh.

* Corresponding author & address: Md. Ashrafuzzaman Zahid, E-mail: zahid_24jstu @yahoo.com
Accepted for publication on 19 November 2011

ABSTRACT

Zahid MA, Hossain MS, Jahid MIK, Azam MNK, Nahar N (2011) Monitoring of safe motherhood and sociodemographic status of Kushtia district, Bangladesh. *J. Innov. Dev. Strategy* 5(3), 19-23.

Safe motherhood means ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth. In developing countries, however, the reality of safe motherhood is often grim. The study was conducted on 410 women of whom 235 were pregnant, 130 were lactating mother and 45 were delivery women from January to October 2009 of Kushtia District in Bangladesh. The data were collected by questionnaire method and socioeconomical and health related issues were examined. Anemic condition was determined on the basis of haemoglobin level and diagnostic results of respondent were considered as the results. The study revealed that only 31.46% of the respondents have awareness about safe motherhood. The study also demonstrated that 13.90% of them completing full doses of vaccination, 71.06% pregnant women monitored regular medical check up, 65.12% of the respondents took additional vitamin and mineral containing medicine, 47.65% of had normal requirements of food. It was found that the severely anemic, moderately anemic, mildly anemic and non anemic were 9.27%, 54.88%, 24.15% and 11.71% respectively. It was also found that about 73.89% and 42.17% were safe in urban and rural areas, respectively. Urinary Tract Infections (UTI), vomiting and high blood pressure (BP) were found in most of the pregnant women. The present study indicated that both socio-economic status and availability of medicine and health care facilities in safe motherhood are critical for saving lives of woman.

Key words: *health care, lives, motherhoods, nutrition, pregnant, woman*

INTRODUCTION

Safe motherhood means ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth (Safe Motherhood 2006). Every year, 200 million women become pregnant worldwide. Although most pregnancies of healthy mothers end with the birth of a live baby, on many occasions childbirth is a time of pain, fear, suffering, and even death. It is estimated that annually 529,000 women die globally from complications of pregnancy and childbirth (about one woman in every minute). At present, about 12,000 women die each year from maternal causes and the MMR (Measles, Mumps, and Rubella Vaccine) is unacceptably high compared to other developing countries (NIPORT 2003). Death due to obstructed labor varies from 6.5 to 17% which comprises complications of malpresentation, cephalopelvic disproportion, inability to expel fetus, retained placenta (Fauveau 1988). In Bangladesh more than 90% of the deliveries take place at home by traditional birth attendants (75.6%) and relatives (10.8%). Besides a functioning and responsive health system, poverty, lack of education and low status of women are the basis of high maternal mortality and morbidity in the country. Women are lacking power to make choices about their health and lives, with negative consequences for maternal health. Even when women recognized life-threatening complications, they did not utilize a facility because of "too much cost" (NIPORT 1994). In Bangladesh, this may be due to the prevailing patriarchal norms which discourage women to be treated by male providers in a scenario where available healthcare providers are predominantly males (Schuler *et al*. 2002). In rural Bangladesh, women also require taking permission from husbands or in-laws, and also find someone to accompany them, before seeking out care from qualified providers (Levin *et al.* 2001; Streatfield *et al*. 2003). Sixty to eighty percent of maternal deaths are due to obstetric hemorrhage, obstructed labor, obstetric sepsis, hypertensive disorders of pregnancy, and complications of unsafe abortion. Research on mortality among women of reproductive age has confirmed the importance of maternal mortality in developing countries (Fauveau 1989). Studies have investigated the causes and timing of maternal deaths (Pradhan 2002, Dafallah and Bushra, 2003, Li XF *et al.* 1996) as well as the barriers to timely and appropriate care that increase the likelihood of a woman dying after she develops an obstetric complication (Chiwuzie *et al.* 1995; Le Bacq and Rietsema, 1997; Castro *et al.* 2000). In addition to medical and hospital factors, community-based or socio-cultural factors such as attitudes and practices also influence maternal mortality (Stekelenburg *et al*. 2004; Kyomuhendo 2003; Griffiths and Stephenson, 2001; Okolocha *et al*. 1998). Policy changes, appropriate allocation of resources, and community mobilization also play important roles in preventing maternal deaths (Koblinsky *et al.* 1999). Health sector reforms in China, which emphasize cost recovery, have had a direct negative impact on maternal health care (Bogg *et al*. 2002). A spreadsheet developed by the World Health Organization and the World Bank helps program planners and massagers analyze and understand the costs associated with various maternal health services and interventions (Lissner and Weissman, 1998). Professional obstetrical and midwifery associations have the responsibility and

ability to reduce maternal mortality in their own countries and abroad (Chamberlain *et al.* 2003). Making better use of private-sector providers, especially nurses and midwives, in low- and middle-income countries could contribute to safe motherhood goals (Brugha and Pritze-Aliassime, 2003; Tsu VD. 2004; Tsu VD. 2003; Tsu and Free, 2002).

Therefore, the present study was conducted to find out the real senerio of safe motherhood in Bangladesh.

MATERIALS AND METHODS

Sample size calculation

The sample size for the survey was determined using formula for the cross-sectional descriptive study. The total populations of Kushtia District areas were 17, 37,360 and 95% confidence level and 4.8 confidence interval, the sample size was 410. The respondents were randomly selected from residential areas and health care centers both government and non-government in Kushtia District in which 235 were pregnant, 130 was lactating mother and 45 were delivery patients.

Data collection

Local surveyors are required for a training workshop and for the duration of the field work (data collection). Midwives, nurses and other health workers can make effective surveyors. The surveyors are divided into teams of four, one being designated as team Leader. A separate team assumes responsibility for the field work in each District. A team of data entry personnel is then required to enter the data collected into computers, using the specified data entry routines. The data was collected during January to November 2009.

Study Design

It was a cross-sectional study among pregnant women, lactating mother and delivery patients. Subjects were selected randomly. Outcome measures include socioeconomic status, information about pregnancy and some clinical information about the respondents.

Questionnaire

For determination of nutritional status of pregnant women, among several types of study design a cross sectional study was conducted in two steps. First, collection of weight as a baseline data, on the basis of this, we have determined status of weight gain for identification of nutritional status. In second step, the respondents were interviewed directly for the information like age, number of family members, child of respondent, both of respondents and her husbands' educational qualification, monthly family income, work status, family status, hygienic condition, name of used contraceptives, amounts of daily food intake, about vaccination, awareness about common disorder during pregnancy, proficiency any food taboos etc. Appropriate questions were prepared to ask the mothers to drive information on the subject from which were to be obtained by questioning.

Physical Examination

The physical examination, as defined by Jelliffe (1966), examines those changes, believed to be related to inadequate nutrition, that can be seen or felt in superficial epithelial tissue, especially the skin, eyes, hair, and buccal mucosa, or in organs near the surface of the body (e.g. parotid and thyroid glands).

Clinical and bio-chemical measurements

Clinical and biochemical data of the responded were collected from diagnostic centre or hospital where they were taking the health care facility. If unavailable the data, we have collected the samples and tested at hospital.

RESULTS

Socio-demographic characteristics of responded

After surveying on 410 women in Kushtia District of Bangladesh, 235 (57%) respondents were pregnant, 130 (32%) respondents were lactating mothers and 45 respondents were delivery patients (Table 1). In total respondents, 27.31% were under 20 years, 40.73% were 21-25 years, 23.41% were 26-30 years and 8.53% were over 30 years of age. Among the total respondents, the monthly income of 29.75% were less than Tk. 5000, 43.90% were Tk. 5000-10000, 18.29% were Tk. 10000-15000 and 8.04% were over Tk. 15000. In total respondents, 28.78% family expensed for food less than Tk. 3000 per month, 41.46% family expensed for food Tk. 3000-5000 per month, 17.07% family expensed for food Tk. 5000-7000 per month, 7.80% family expensed for food over Tk. 7000 per month and 4.88% family were not answered. A total of 18.29% were primary level, 42.43% were secondary, 23.17% were higher secondary 13.66% were graduated and 2.44% were illiterate. Above table indicates the distribution of husbands of respondents according to their education level. 19.76% were primary level, 35.61% were secondary, 25.12% were higher secondary, 18.29% were graduated and 1.22 % was illiterate husbands of that respondents. Table 1 indicated that the distribution of respondents according to their occupation. About 77.56% respondents were house wives 18.05% were service holder, and 4.39% were day labor. Table 1 indicated the distribution of respondents according to their work status. 10.24% respondents did sedentary work, 72.68% did moderate work, and 17.07% respondents did heavy work.

Health status of the responded

Table 2 indicates the distribution of respondents according to their hygienic condition. About 52.68% respondents had good hygienic condition, 25.37% had very good hygienic condition and 21.95% respondents were bad hygienic condition. About 68.54% respondents suffer from urinary tract infectious disease, while 31.46 percent were absent.

Table 1. Different socio-demographic characteristics of the responded for safe motherhood

Parameters	Type of responded	Living Area (%)	Age group (no)	Monthly family income (%)	Monthly expenditure for food (%)	Responded Education level	Husband education level	Occupation of responded (%)	Work load of responded (%)
1	Pregnant (235)	Urban (43.9)	< 20(112)	<5000 (29.75)	<3000 (28.78)	Illiterate (2.44)	Illiterate (1.22)	Day Labor (4.39)	Sedentary (10.24)
2	Lactating (130)	Rural (56.09)	21-25(167)	5000-10000 (43.9)	3000-5000 (41.46)	Primary (18.29)	Primary (19.76)	Service Holde (18.05)	Moderate (72.68)
3	Delivery (45)		26-30 (96)	10000-15000 (18.29)	5000-7000 (17.07)	Secondary (42.43)	Secondary (35.61)	House Wife (77.56)	Heavy (17.07)
4			> 30 (35)	>15000 (8.04)	>7000 (7.8)	Higher secondary (23.17)	Higher Secondary (25.12)		
					Not responded (4.88)	Graduate (13.66)	Graduate (18.29)		

Table 2. Health status of the responded of Kushtia District, Bangladesh

P.m	Hygienic Level (%)	Urinary Tract Infect. Disease (%)	Anemic Condition (%)	Type of Blood Pressure (%)	Routine medical check up (%)	Vaccination (%)	Balanced diet (%)	Awareness about Safe Motherhood (%)	Motherhood in Urban area	Motherhood in Rural area	Physical appearance of Organ abnormality
1	Bad (21.95)	Present (68.54)	Severe (9.27)	<Normal (43.9)	Pregnant women (71.06)	Complete (13.90)	Normal (47.56)	Yes (30.46)	Safe (73.89)	Safe (42.17)	Hair (43.90)
2	Good (52.68)	Absent (31.46)	Moderate (54.88)	Normal (35.85)	Lactating women (70.77)	Under-vaccination (59.51)	Higher (30.24)	No (61.54)	Unsafe (26.11)	Unsafe (57.83)	Eye (32.44)
3	Very Good (25.37)		Mild (24.15)	>Normal (20.24)	Delivery patient (28.89)	None (26.59)	Lower (22.19)	Not responded (2)			Face (38.05)
4			Non-Anemic (11.71)								Teeth (40.73)
											Skin (36.09)

About 9.27% respondents were severe anemic, 54.88% were moderate anemic, 24.15% were mild anemic and only 11.71% were non-anemic (Table 2). Table 2 shows the distribution of respondents by blood pressure. About 43.90% of respondents have less than normal blood pressure, 35.85% had normal pressure, 20.24% blood pressure is above normal. For pregnant women, about 71.06% took regular medical checkup and 28.94% did not. For lactating women, 70.77% took regular medical checkup and 29.23% did not take checkup. For delivery patient, 28.89% took regular medical checkup and 71.11% did not take. From Table 2, we find that, 13.90% were complete their vaccination, 59.51% were under-vaccination and 26.59% were not taken vaccination. It was found that 47.56% took normal amount of foods, 30.24% took greater than normal amount of foods, and 22.19% took less than normal amount of foods due to food taboos, unpleasant feelings nausea which is harmful for both pregnant women and lactating mother. 31.46% had awareness about safe motherhood and 68.54% had no awareness about safe motherhood due to their illiteracy and poverty which are especially comes form lower class family. About 56.09% of respondents live in rural area and 43.90% live in urban area status. Table 2 showed that 73.89% of respondents were safe and 26.11% were unsafe in the urban areas. We found that the hair was normal in 56.09% woman but 43.90% had abnormal hair. About 67.56% of normal, 32.44% of abnormal by eye. About 61.95% of normal and 38.05% of abnormal by face. About 59.27% of normal and 40.73% of abnormal by teeth. About 63.90% of normal and 36.09% of abnormal by skin. The overall results were 61.75% normal and 38.24% abnormal by physical appearance.

DISCUSSION

Safe motherhood is a critical part of saving lives in community. This approach seeks to ensure that women receive appropriate attention throughout their pregnancy and childbirth, providing pre- and postnatal care

including care of the baby and breastfeeding support and delivery care with referral for women with obstetric complications. It was shown that the effect of husbands' knowledge of obstetric complications on their wives' use of trained care facilities, which may have occurred due to interaction with the other variables. The results, therefore suggest that both socio-economic status, availability of medicine and health care facilities and role of husbands' in safe motherhood are critical for saving lives of woman.

Anemic condition was estimated on the basis of hemoglobin level of the pregnant and delivery women. This study found that 11.71% were non-anemic; it means that their conditions were good which ensured that their motherhood condition is safe. 24.15% were mild, 54.88% were moderately anemic, that means they may reach severe conditions if they avoid iron containing food or external iron containing supplementation and 9.27% were severe. We found that 13.90% completed their vaccination; it is good for both of mother and their embryo child. It is possible for the government policies through Technology Transfer (TT) and Expanded program on Immunization (EPI) programs. 59.51% were under-vaccination and 26.59% were incomplete vaccination. For this, infant may affect various complications.

It was found that 73.41% had no food taboos/ misconception/ superstition and 26.59% had food taboos/ misconception/ superstition so they may suffer anemia and other nutritional deficiency disorder. 47.65% were taking normal amount of foods, 30.24% were taking greater than normal amount of foods which is fulfilling the requirements both mothers and the babies and 22.19% were taking less than normal amount of foods due to food taboos, unpleasant feelings, nausea which is harmful for both pregnant women and lactating mother.

The present study may have both selection and information bias. Since our survey was carried out in immunization clinics and hospital, selection bias cannot be ruled out. We might miss to interview those mothers who delivered at home. Mainly this study was taken from the middle and lower-middle class families which do not indicate the all classes of inhabitants of the Kushtia District, Bangladesh. Extent study is needed for better accuracy.

CONCLUSION

Firstly, the study shows that the use of community volunteers in promoting access to obstetric care is feasible and can be effective. Secondly, community level interventions to promote access to obstetric care must be built around functioning health care facilities. Use of community volunteers to follow-up pregnant women can substantially improve utilization of skilled attendant at delivery. For community volunteers approach to be successful, strategies have to target individual women and use other influential people such as men and female gate-keepers and religious leaders. Thirdly, linking community volunteers with health providers is also critical in making a program successful. Finally, through proper training and close follow up, Thana Health Complex (THC) can become an important pillar in the referral system by referring women with risk factors to higher level of care.

REFERENCES

Bogg L, Wang K, Diwan V (2002) Chinese maternal health in adjustment: claim for e. *Reproductive Health Matters* 10(20), 95–107.

Brugha R, Pritze-Aliassime P (2003) Promoting safe motherhood through the private sector in low- and middle-income countries. *Bulletin of the World Health Organization.* 81(8), 616–623.

Castro R, Campero L, Hernández B, Langer A (2000) A study on maternal mortality in Mexico through a qualitative approach. *Journal of Women's Health & Gender-Based Medicine* 9(6), 679–690.

Chamberlain J, McDonagh R, Lalonde A, Arulkumaran S (2003) The role of professional associations in reducing maternal mortality worldwide. *International Journal of Gynecology and Obstetrics*; 83, 94–102.

Chiwuzie J, Okolocha C, Okojie O, Ande A, Onoguwe B (1995) Socio-cultural aspects of haemorrhage in pregnancy; *World Health Forum*: 16, 405–408.

Dafallah SE, Bushra (2003) Maternal mortality in a teaching hospital in Sudan. *Saudi Medical Journal* 24(4), 369–372.

Fauveau V (1988) Women, children and health, Dhaka: International Centre for Diarrhoeal Disease Research (ICDDR, B), Bangladesh.

Fauveau V (1989) Epidemiology and cause of deaths among women in rural Bangladesh. *International Journal of Epidemiology* 18(1), 139–145.

Griffiths P, Stephenson R (2001) Understanding user's perspectives of barriers to maternal health care use in Maharashtra, India. *Journal of Biosocial Science* 33, 339–359.

Jelliffe DB (1966) The assessment of the nutritional status of the community. *World Health Organization Monograph*, 53.Geneva: World Health Organization.
Koblinsky MA, Campbell O, Heichelheim J (1999) Organizing delivery care: what works for safe motherhood? Bulletin of the World Health Orgnization; 77(5), 399-406.

Kyomuhendo GB (2003) Low use of rural maternity services in Uganda: impact of women's status, traditional beliefs and limited resources. *Reproductive Health Matters* 11(21), 16–26.

Le Bacq F, Rietsema A (1997) High maternal mortality levels and additional risk from *Journal of Epidemiology* 26(2), 357–363.

Levin A, Rahman MA, Quyyum Z, Routh S, Khuda B (2001) The demand for child curative care in two rural thanas of Bangladesh: effect of income and women's employment. *Int J Health Plann Management* 16, 179-194.

Li XF, Fortney JA, Kotelchuck M, Glover LH (1996) The postpartum period: The key to maternal mortality. *Int J Gynecol Obstet*; 54, 1–10.

Lissner C, Weissman E (1998) How much does safe motherhood cost? *World Health* 51(1), 10–11.

Mitra and Associates, Macro International (2003) NIPORT (National Institute of Population Research and Training); *Bangladesh Demographic and Health Survey 2007.* Dhaka, Bangladesh and Calverton, Maryland, USA.

Mitra and Associates, ORC Macro (1994) NIPORT (National Institute of Population Research and Training), Bangladesh Demographic and Health Survey 1993-1994.

Okolocha C, Chiwuzie J, Braimoh S, Unuigbe J, Olumeko P (1998) Socio-cultural factors in maternal morbidity and mortality: a study of a semi-urban community in southern Nigeria. *Journal of Epidemiology and Community Health* 52, 293–297.

Pradhan EK (2002) Risk of death following pregnancy in rural Nepal. *Bulletin of the World Health Organization* 80(11), 887–891.

Safe Motherhood (2006) http://www.safemotherhood.org Accessed.

Schuler SR, Bates LM, Islam K (2002) Pays for reproductive health service in Bangladesh: intersections between cost, quality and culture. Health Policy Plann 17, 273-280.

Stekelenburg J, Kyanamina S, Mukelabai M, Wolffers I, Van Roosmalen J (2004) Waiting too long: low use of maternal health services in Kalabo, Zambia. *Tropical Medicine and International Health.* 9(3), 390–398.

Streatfield PK, Mercer A, Siddique AB, Khan ZUA, Ashraf A (2003) Health and Population Sector Program 1998-2003, Bangladesh. Status of performance indicators 2002. ICDDR, B: Dhaka.

Tsu V and Free M (2002) Using technology to reduce maternal mortality in low-resource settings: challenges and opportunities. *Journal of the American Medical Womens Association* 57(3), 149–153.

Tsu VD (2003) New and underutilized technologies to reduce maternal mortality: papers from a Bellagio Workshop, July 8-11, 2003. *International Journal of Gynecology and Obstetrics.* 85(Suppl.1), S1–S93.

Tsu VD (2004) New and underutilized technologies to reduce maternal mortality. *Lancet.* 363(9402), 75–76.