Muslim and Non-Muslim Differentials in Three Critical RCH Indicators in Muslim Densely Populated States of India.

"Whose faces are behind the numbers? What were their stories? What were their dreams? They left behind children and families. They also left behind clues as to why their lives ended early" (WHO, 1999).

The death of a woman during pregnancy and childbirth is not only a health issue but also a matter of social injustice. Pregnancy and child birth is a normal psychological process and every pregnant woman hopes to give birth safely. Sadly, this is not what is actually happening. Every minute a woman dies as a result of pregnancy or childbirth. In 2010, nearly 287,000 maternal deaths occurred worldwide, a down from 358,000 in 2008. Developing countries accounted for nearly 99% of this death and 25% global burden by India.

This study makes an attemptto explore association between maternal death and associated factors in West Bengal using the approaches of facility-based and community-based maternal death review. 110 deaths due to maternal related causes which took place during December, 2010 to June 2012in Gynecology and Obstetrics department of Calcutta Medical College & Hospital (CMC)are reviewed. Special Bulletin on Maternal Mortality of Sample Registration System is also taken as secondary data and we have conducted 15 verbal autopsyin order to understand causes of deaths. Bivariate and binary logistic regression analysis has been performed to understand the causes and circumstances of maternal deaths in West Bengal. This study is useful in exploring the causes and planning & implementation of interventions so that most of the maternal deaths in West Bengal can be averted.

An overwhelming majority of the deaths (72%) are referral cases; most of such referrals had beenfrom subdivision hospital/ rural hospital or community health centre and were in critical or irreversible condition at the time of admission.More than two-third of the women (70%) have died following delivery and most of the deceased women(approximately half) sought care after 10 hours of developing complications.Delay in seeking care was the major contributor in maternal deaths, near about one-third women died due to this factor. Delay in reaching first level health facility had a role in 25.5% of maternal deaths, while in 12% of cases, delay in receiving adequate care in facility was one of the contributing factors. As compared to Hindu, Muslims were two times more likely to have second delay which is delay in reaching the health facility. Most of the deathshave occurred at midnight and early

morning which is a matter of concern. With increasing age of the mother, chance of delay decreases.

The most common cause of maternal death is found to be hypertensive disorders of pregnancy or eclampsia and near about 29 % women had to face death for this leading killer disease and the second leading cause was haemorrhage (22.7%). The present study also highlighted when, eclampsia is the major cause of death in West Bengal, it is haemorrhage in the national level.

Now most important question is that; why do women die even afterreaching the hospital? The fact of women dying in hospitalraises important issues of delaying in refer to Calcutta Medical College and Hospital (CMC). Theseissues also pose a question about the availability, competence and skills of the medical staff as well as theirattitude towards people at the level of referral.It should be realized that why Muslims women are facing more delay in reaching the health facility? Question can be raised that why most of maternal deaths occurred at midnight and early morning and this issue compel us to think about the availability of medical staffs and doctors at referral level.

We believe that these deaths can be averted by imparting basic knowledge to responsible family members regarding pregnancy related issues; imparting stringent rule to follow the minimum age at marriage; reducing the first and second types of delays; referring to Calcutta Medical College by referral hospitals as early as possible; preventing unnecessary reference of patients from the district, subdivision or private hospitals; regulating anaemia from an earlier stage;improving access to the healthfacilities; improving quality of emergency obstetric care at the health facility (by increasing the number of OT and its table, storage of required blood and high dependency or CCU); increasing 24×7 ambulance services and, finally, byreducing hypertensive disorders of pregnancy or eclampsia; by imparting basic skill to the grass route level workers.

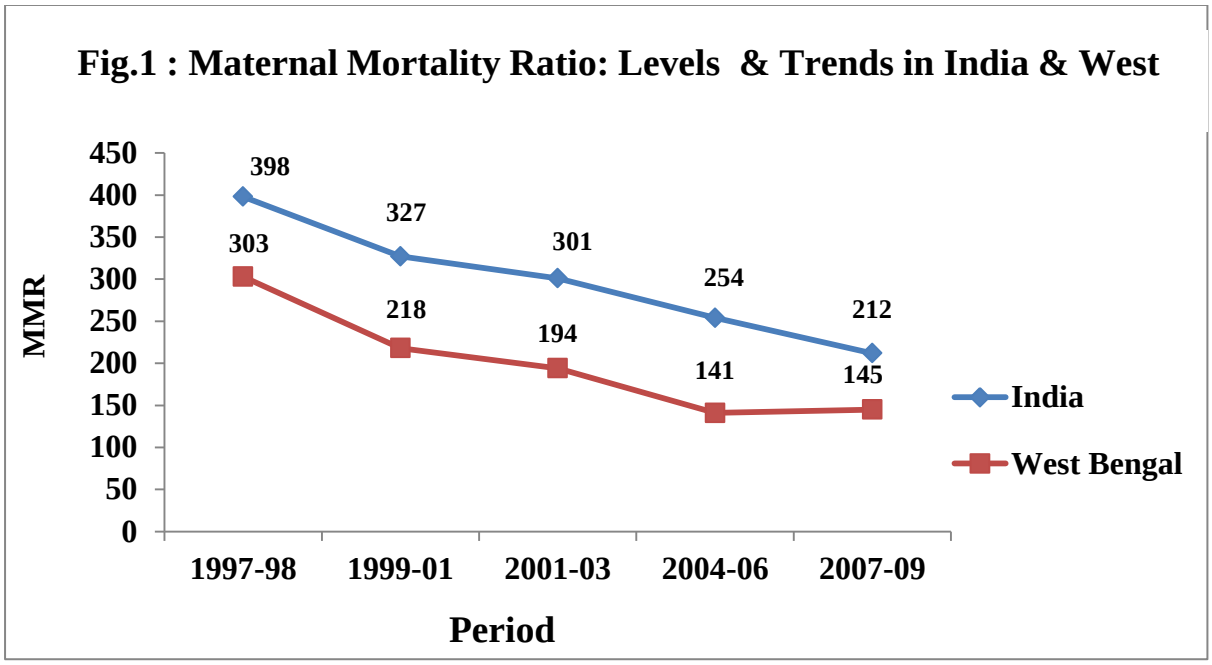

Fig. 2: Socio-demographic Characteristics of Deceased Women (n=110)

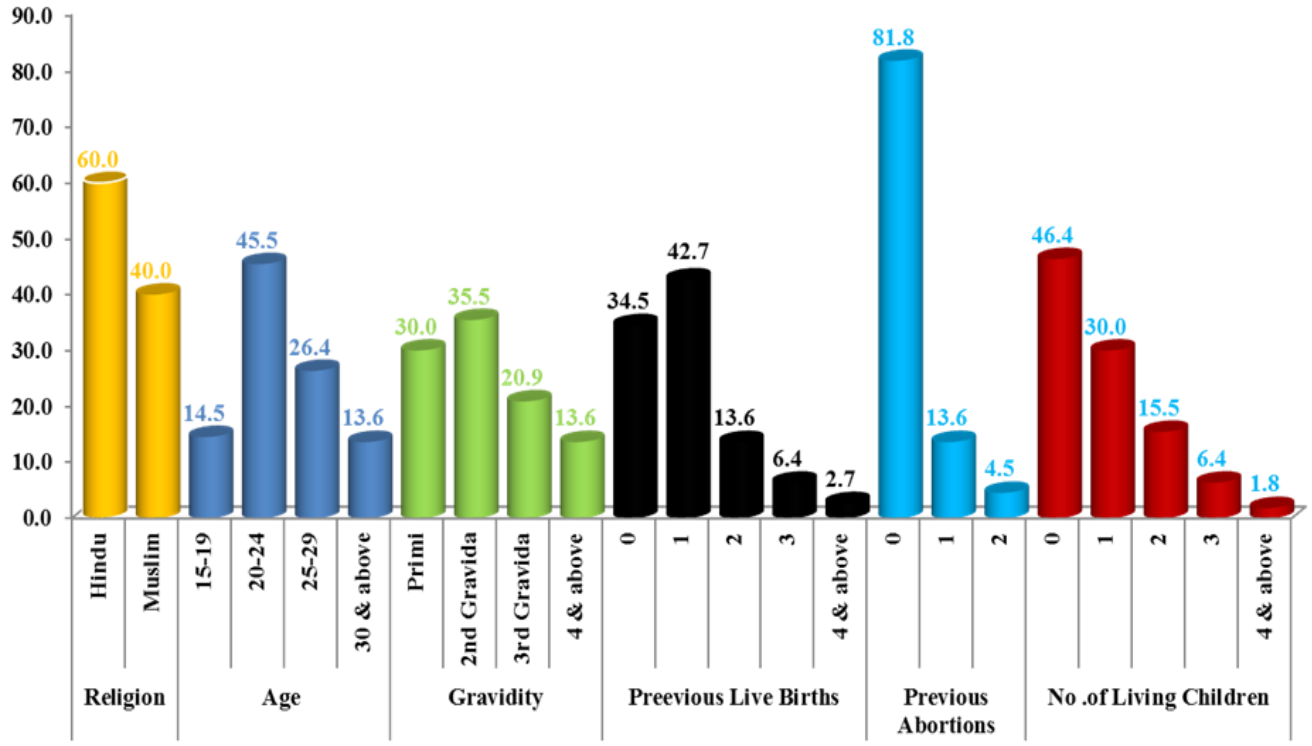

Fig. 3: Per cent distribution of Women on the basis of duration of complication to admission (n=65).

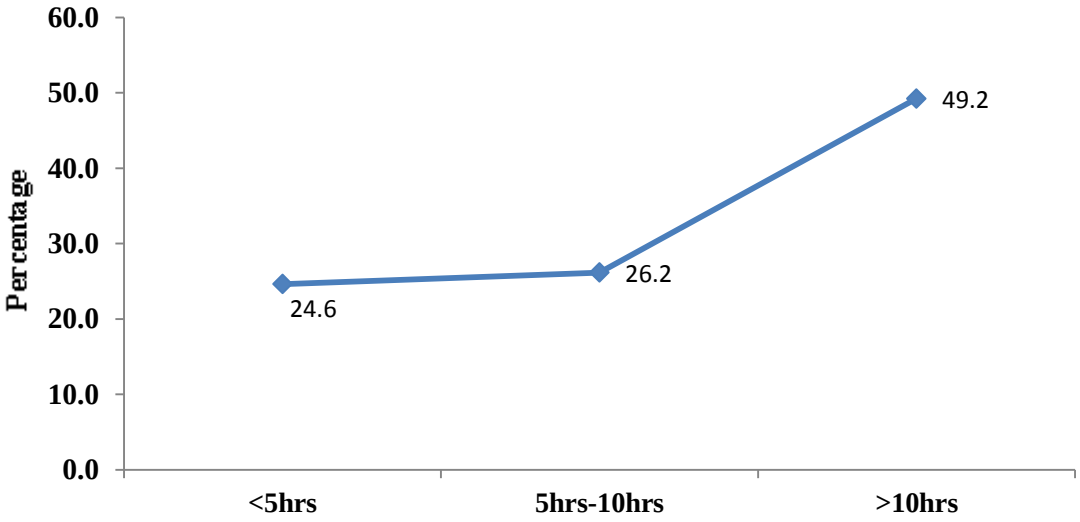

Fig. 4: Percent distribution of deceased women according to timing of Death (n=110)

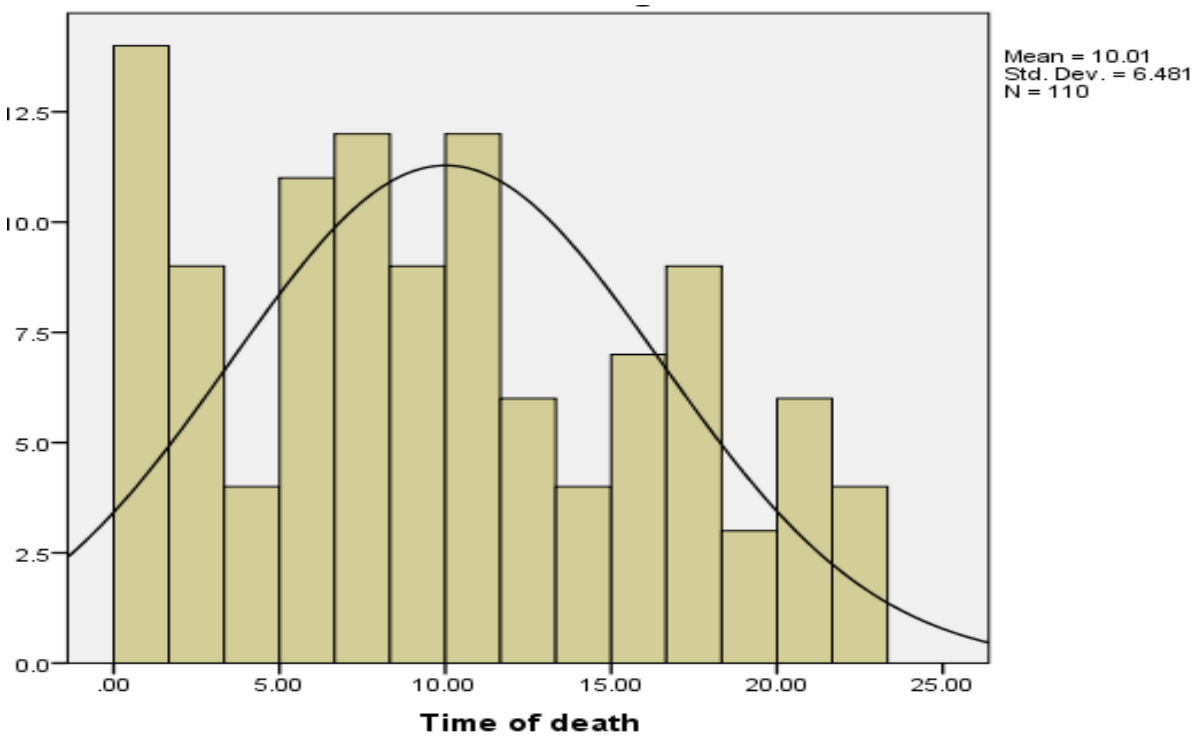

Table 1: Per Cent Distribution of Causes of Maternal Deaths in India by Four Different Sources					
Causes	**Year**				
Direct Causes	1980[#]	1998*	2003*	2005**	2006[##]
Eclampsia	10.5	8.3	5.0	12.0	11.9
Haemorrhage	14.0	29.6	38.0	25.0	25.6
Infections/ Sepsis	14.0	16.1	11.0	15.0	13.0
Unsafe abortions	11.4	8.9	8.0	13.0	8.0
Obstructed Labour & Rupture Uterus	-	9.5	5.0	8.0	6.2
Other Direct Causes[1]	19.0	-	-	8.0	5
Indirect Causes[2]	19.0	19.0	34.0	-	35.3

Source: [#]FOGSI Study in 43 hospitals; [*] SRS, ORG India; [**]Kausar; [##]Arora

[1]Other direct causes: Ectopic pregnancy, embolism, anaesthesia related.

[2]Indirect Causes: Malaria, anaemia, jaundice, heart diseases etc.

Table 2: Per Cent Distribution of Causes of Maternal Deaths in West Bengal by Four Different Sources				
Causes	**Year**			
Direct Causes	1970[#]	2005[^]	2011[*]	Present Study
Eclampsia	42.3	50.6	21.2	29.1
Haemorrhage	14.7	9.7	15.1	22.7
Infections/ Sepsis	0.9	18.2	-	10.9
Unsafe abortions	8.7	-	9.1	6.4
Obstructed Labour & Rupture Uterus	21.0	-	6.1	2.7
Other Direct Causes[1]	2.0	-	36.4	8.2
Indirect Causes[2]	10.2	21.6	12.1	16.4

Source: [#]Gun Study in Burdwan District Hospital; [^]Pal et al. Study in Burdwan District Hospital; [*]Shrivastava et al, study in R. G. Kar Medical College & Hospital.

[1]Other direct causes: Ectopic pregnancy, embolism, anaesthesia related.

[2]Indirect Causes: Malaria, Anaemia, heart diseases etc.

Table 3: Result of Logistic Regression showing Coefficient of being Unstable at the time of Admission	
Background characteristics	Exp(β)
Age (c)	0.92
Religion	
Hindu (R)	
Muslim	0.578
Gravidity (c)[#]	1.058
Referral Status	
yes (R)	
No	.160***
Any Delay	
No (R)	
Yes	2.617*
Pseudo r square	0.256

C= Continuous Variable; R= Reference Category; *p<0.1, ***p<0.01

[#] No of Pregnancy;

Dependent Variable- 0=Stable

1=Unstable

Table 4: Result of Logistic Regression showing Coefficient of experiencing Any Delay, First Delay and Second Delay			
Background characteristics	**Any Delay**	**First Delay**	**Second Delay**
	Exp(β)	Exp(β)	Exp(β)
Age (c)	0.911*	0.865**	1.070
Religion			
Hindu (R)			
Muslim	.688	1.259	2.638*
Gravidity (c)[#]	1.241	1.253	.712
Referral Status			
yes (R)			
No	.678	.470	1.061
Pseudo r square	0.056	0.102	0.067

C= Continuous Variable; R= Reference Category; *p<0.1, **p<0.05.

[#] No of Pregnancy

Dependent Variable- 0=No Delay

1=Delay

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