"Obstetric Morbidity among Currently Married Women in Selected States of India: Special Reference to Madhya Pradesh and Other States

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Abstract

This study attempted to understand the level and factors associated with obstetric morbidity among currently married women in selected states in India. Considering the different level of demographic and socio-economic development, four states Madhya Pradesh, Bihar, Andhra Pradesh and Kerala have been selected for the present study. This study uses data from NFHS-3, 2005-06. The findings suggest that the level of obstetric morbidity was highest in Bihar. The most reported pregnancy related problems were excessive fatigue and swelling in leg, body or face. In the case of post-delivery complication, massive vaginal bleeding and very high fever were the most reported problems. The mean number of problems was higher among women who were from rural areas, Muslims, SC/ST, not educated, with low standard of living and working in primary sector. The results from logistic regression analysis also revealed that the socio-economic and demographic factors have significant association with obstetric morbidity. However, there existed variation in the factors associated with obstetric morbidity among women in these states.

INTRODUCTION

Maternal and child health care is one of the eight basic components of primary health care in declaration of Alma Ata. The International Conference on Population and Development (1994) also reiterated the importance of women's health and reproductive and sexual health for overall development. Pregnancy is one of the important events in woman's life, but in many times it can become dangerous for her life. Pregnancy is a risky event in India and other developing countries due to the lack of medical care and ignorance towards women's health.

Reproductive morbidity refers to the morbidity or dysfunction of the reproductive tract, or any morbidity, which is a consequence of reproductive behavior including pregnancy, abortion, childbirth or sexual behavior. Reproductive morbidity includes obstetric morbidity and it refers to ill health in relation to pregnancy and childbirth. Obstetric morbidity is one of the major causes for maternal death. Obstetric morbidity is defined as "morbidity in a woman who has been pregnant (regardless of site or duration of the

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pregnancy) resulting from any cause related to or aggravate by the pregnancy or its management but not from accidental or incidental causes". [1]

There are social and medical causes associated with pregnancy complications such as delay in decisions to seek care, delay in accessing and receiving care. Other social causes such as inequality in providing proper nutrition, education and medical treatment may affect women's health. Malnutrition, infection, early and repeated child bearing and high fertility also play an important role in poor maternal health condition in India. Lack of access to health care along with the poor quality of the delivery system and its responsiveness to women's need make them more vulnerable to maternal morbidity. Maternal morbidity and reproductive morbidity in general, is an outcome of not just biological factors but of women's poverty, powerlessness and lack of control over the resources as well. [2]

The lifetime risk of maternal death is commonly used to measure the obstetric risk in women. [3] Among the biomedical causes of maternal deaths, more than 70 percent deaths are from direct obstetric complications. At worldwide almost 536 000 women died in 2005 from pregnancy complications and majority of them are from the developing countries. More than half of the maternal deaths (270 000) occurred in the sub-Saharan Africa region alone, followed by South Asia (188 000). Thus, sub-Saharan Africa and South Asia accounted for 86 percentage of global maternal deaths. [4] Around one fifth of the births worldwide and one fourth of maternal deaths are occurring in India.[2] Maternal mortality as well as life risk of maternal death in central India is well above the national average. The risk of death associated with the complications of pregnancy, and delivery is relatively high in central India. This shows that this part of the country shares the maximum burden of reproduction related morbidity and mortality of women. This problem strongly arising not only from economic but also social, cultural factors and also inadequate and under utilization of health services. [3] Thus, there is a relation between maternal mortality and obstetric morbidity.

Obstetric morbidity has negative effect on women's life, like women feel discomfort because of physical symptoms and social isolation, negative psychological effects, being unable to support them economically, compelled to live separately from family members due to the smell, and being abandoned or divorced by their husbands. [5]

In India, every year large number of women suffers obstetric problems. However, the severity of the problem is still unknown. According to NFHS-3, at the national level, six percent women were suffering from difficulty with vision, nine percent had night blindness, 10 percentage reported convulsion, 25 percentage suffer from swelling in legs, body or face, 48 percentage had excessive fatigue and four percent had vaginal bleeding during pregnancy. With regard to postpartum complications around 12 percent women had massive vaginal bleeding and 14 percent suffered from very high fever.[6]

LITERATURE REVIEW

Many studies have been done on reproductive morbidity including obstetric, gynecological and contraceptive morbidity.

A hospital based study conducted in Eritrea, shows that women suffer a lot by physically, psychologically, economically, socially and sexual life due to obstetric fistula. Findings suggest that there is a need for community mobilization and education on safe motherhood for prevention for obstetric fistula, as well as for improved information, counseling follow up and social services for women who develop obstetric fistula. [5]

Obstetric morbidity is one of the most determining and contributing factor to maternal deaths in rural Gambia. Anaemia, haemorrhage, eclampsia, obstructed labour are major contributing factors as well as substandard obstetric care was identified for the majority of deaths. Poor health management, lack of primary health care facilities and logistic difficulties within the referral process further complicate the problem. Study points out the need of proper health intervention, increasing access to emergency obstetric care and effective health management will assure in reduce maternal deaths.[7]

A study based on NFHS-2 data shows that, the states Madhya Pradesh and Bihar show the highest percentage of obstetric morbidity in the country. A large proportion of women were experiencing almost of all types of complications in these states. The extent of obstetric complications increases with women's age and birth order and decreases with increase in standard of living and education .[8]

Another study examined the association between socio-economic and demographic variables and the prevalence of contraceptive morbidity in Maharashtra. According to this study contraceptive morbidity was high among the women belonged to scheduled castes (SC), women having low standard of living, non-literate and rural women. [9]

In Jharkhand four out of every five scheduled tribes (ST) women suffering from at least one type of obstetric morbidity. Among those who suffer from all types of reproductive morbidity the percentage of obstetric morbidity was found to be high.[10]

A study revealed that women in younger age group, better-educated, urban women and women with higher standard of living have more obstetric morbidity in Orissa. This study also shows significant association between child bearing and obstetric morbidity.[11]

The study based on currently married women in south India revealed that the prevalence of obstetric morbidity is high in Kerala and Andhra Pradesh. The study further showed that the treatment seeking behaviour is low in Andhra Pradesh.[12]

In Karnataka one third of the women reported symptoms of reproductive morbidity. Lack of education and economic status were emerged as significant factors affecting the women's health.[13] Another study conducted in Karnataka, based on 3600 mothers with at least one pre-school age child, found that approximately two-fifth of the respondent reported at least one morbid condition associated with their last pregnancy. About one- fifth reported

that at least one problem during antenatal period like swelling of hands and face, fits and convulsions, hypertension, etc. Nearly, eight percent experienced a problem during delivery and little more than one –fourth of them indicated problems during post-partum period.[14] There is high percentage of perceived obstetric morbidity in the rural Karnataka .The factors such as lack of information, time, family support and resources, poor quality and adequate services, problem with access to care, transport, and traditional beliefs and practices are resulting in delays in seeking care and inappropriate use of services. High education, urban residence, high age and parity have positive effect on utilization of services. Low household income and women's attitude about services is barrier to use of health local health services.[15]

A study conducted in Delhi shows that the lack of personal hygiene and abortions are major cause for reproductive health problems. The proportion of women who sought treatment for reproductive health problems was quite low in the study area. Study suggests the need of implementation of more strategic interventions. [16]

Another study found that there is high prevalence of gynaecological diseases as well as high prevalence of anaemia and vitamin 'A' deficiency due to poor economic status. Also, there is very low levels of treatment due lack of care, but the high percentage of women are aware about their problems.[17]

In Tamil Nadu, the gynaecological morbidity is high among rural women, majority of women are suffering from one or more gynaecological morbidity. The study highlights that there is an urgent need for suitable health education and awareness about reproductive diseases between both genders. [18]

Study among the women in Mumbai slum found that women having high income are more likely to report their problems as compared to their counterparts. Similarly, workingwomen are more likely to report their problems than non-working women. The results from this study indicated that neither women's education levels nor their sanitary conditions are related to gynaecological morbidity.[19]

The study, which is based on the available literature on maternal morbidity, found that women in rural areas, less educated and from lower economic status might experience more problems than others. The study further indicated that the perception of women and her relatives regarding the obstetric morbidity, low self-esteem and the embarrassment or feelings of guilt are some social barriers to utilization of services for obstetric morbidity.[20]

NEED FOR THE STUDY

In developing countries information on obstetric morbidity is meager. Most of the studies are based on clinical settings and provide information only on biomedical causes. Moreover a large proportion of women do not go to health facilities for their problem. Thus, in most of the cases true magnitude of the problem is not reflected.

The present study is focused on four states namely Madhya Pradesh, Bihar, Kerala and Andhra Pradesh. Madhya Pradesh and Bihar are the states, which are situated in central India and demographically less developed whereas Kerala and Andhra Pradesh are situated in the southern part of India and demographically developed. Studies have shown that the extent

of complications during pregnancy and post delivery is high in Madhya Pradesh and Bihar compared to all other major states of India.[8] The prevalence of reproductive problems including obstetric morbidity is high in Kerala and Andhra Pradesh though these south Indian states are demographically developed.[12] In this context, the present study tries to examine and compare the factors associated with obstetric morbidity in these states.

OBJECTIVES

The objectives of the present study are:

1. To study the levels of obstetric morbidity in the selected states of the India.
2. To understand the relationship of socio-economic and demographic factors with obstetric morbidity

DATA AND METHODOLOGY

The present study is based on National Family Health survey –3 (NFHS-3) data conducted in 2005- 06. The study covered 124,385 women in the age group of 15-49 years in India. The present study focused on currently married women having at least one birth during the last five years preceding the survey in four selected states of India viz; Andhra Pradesh, Kerala Madhya Pradesh and Bihar.

NFHS–3 collected information from women on specific problem they had during their pregnancies. For the most recent birth in the five year preceding the survey, the mothers were asked whether at any time during the pregnancy they experienced any of the following problems: difficulty with vision during the day light, night blindness, convulsion (not from fever), swelling of legs, body or face excessive fatigue, or vaginal bleeding. Every woman who had a birth in the five year preceding the survey was asked if she had massive vaginal bleeding or a very high fever – both symptoms of possible post partum complications –at any time during the two months after birth of her most recent child. The variables such as 'complications during the pregnancy' and 'post partum complications' were computed separately using the above-mentioned variables. Another variable 'any obstetric morbidity' was computed by clubbing the variables 'complications during the pregnancy' and 'post partum complications'.

Mean number of obstetric morbidity was calculated for all women who exposed to pregnancy and delivery. Furthermore, average number of obstetric morbidity was calculated for women having at least one obstetric problem. The mean value was classified according to socio-economic and demographic characteristics.

In order to understand the effect of socio-economic and demographic characteristics on obstetric morbidity, a logistic regression analysis was carried out. The dependent variable was categorical and dichotomous in nature with two categories; no obstetric morbidity=0 and any obstetric morbidity =1.

RESULTS

Type of obstetric morbidity

Table 1 shows the different type of obstetric problems reported by women in the selected states. It is clear from the table that excessive fatigue was the most commonly reported pregnancy related problem in all the four states followed by swelling of legs, body or face. Nearly three-fourth (71 percent) of the women in Bihar and 66 percent of the women in Kerala reported excessive fatigue during pregnancy. The corresponding figure for Madhya Pradesh and Andhra Pradesh was 53 percent and 29 percent respectively. However, women who reported swelling of legs and body were highest in Kerala (47 percent) followed by Madhya Pradesh (30 percent), Bihar (29 percent) and Andhra Pradesh (19 percent). The table further shows that women from Bihar and Madhya Pradesh experienced more pregnancy related problems except in the case of swelling of legs, body and face than Kerala and Andhra Pradesh.

In the case of post delivery problems, around 15 percent of the women from Andhra Pradesh and Madhya Pradesh reported massive vaginal bleeding and the corresponding figure for Kerala and Bihar was seven percent and 21 percent. However, nearly one –fifth of the women in Bihar and Madhya Pradesh had high fever after delivery and this proportion was relatively less in Andhra Pradesh and Kerala.

The level of obstetric morbidity among currently married women in the selected states is presented in Table 2. Table reveals that women from Kerala and Bihar show the highest percentage of pregnancy problems (79 percent) followed by Madhya Pradesh (62 percent) and Andhra Pradesh (39 percent). More than one-third of the women from Bihar and one-fourth of the women from Madhya Pradesh reported any of the post delivery complications. Post delivery complications were comparatively low among women in Kerala. It may be due to the higher percentage of institutional deliveries and the high percentage of maternal health care utilization in Kerala. With regard to any obstetric morbidity, women in Bihar (83 percent) reported high incidence of obstetric morbidity followed by women in Kerala (80 percent), Madhya Pradesh (66 percent) and Andhra Pradesh (46 percent).

Mean number of obstetric morbidity

Table 3 gives the mean number obstetric morbidity according to socio-economic characteristics. The number of obstetric problems varied from a minimum of zero to a maximum of eight problems in Bihar and Madhya Pradesh while it varied from zero to seven in Andhra Pradesh and zero to five in Kerala. The mean number of problems was found to be highest in Bihar and lowest in Andhra Pradesh.

With regard to the variation in mean values by socio-economic characteristics, it was found that in Madhya Pradesh, the mean value varies significantly according to the variables such as age, caste, place of residence, standard of living, work status and toilet facility while in the case of Bihar the variation was not significant for any of the variables. However, in Andhra Pradesh the variation was significant for age and in Kerala the variation was significant for religion.

In Andhra Pradesh, Madhya Pradesh and Bihar, the mean number of problems was higher among women in the younger age group whereas in the case of Kerala, the average was highest among women in the age group 35 years or more. The variation in mean value by children ever born was not similar in these states. For instance, while the mean value was highest for women with one child in Kerala, it was highest for women with three children in Andhra Pradesh and Madhya Pradesh. The average number of problems was highest among Muslims in Andhra Pradesh and Kerala while in the case of Madhya Pradesh and Bihar the value was highest among Christians and others. The mean value was found to be highest among other backward castes (OBC) in Andhra Pradesh and Kerala. But, the value was highest among those who belong to other caste category in Bihar and SC/ST women in Madhya Pradesh.

In the case of educational status, the mean number of problems was highest among women with no education in Kerala. However, the mean was found to be high among relatively better-educated women in other states. The average number of problems was highest among rural women in all the states. The mean value was highest among women with low standard of living in all the states except Madhya Pradesh. There was variation in mean value by work status in these states. The mean was highest among women who were working in primary sector in Madhya Pradesh and Bihar while in the case of Kerala, it was highest for those who were not working and in Andhra Pradesh it was highest for those who were working in professional and service sector. The average number of obstetric problems was highest among women who did not have any toilet facility at home in all the states. However, in the case of Andhra Pradesh there was no variation in mean value according to toilet facility.

Mean number obstetric problems by socio-economic characteristics was calculated for women who reported at least one morbidity. Table 4 presents the mean number of problems among currently married women who reported at least one morbidity according to socio-economic characteristics. It is evident from the table that in Andhra Pradesh the mean value varies significantly by educational status and work status. The mean value varies significantly by age, children ever born, educational status, place of residence and toilet facilities in the case of Kerala. In Madhya Pradesh, the variation in mean was significant for the variables caste, educational status, place of residence, standard of living, work status and toilet facilities. The average value varied significantly by religion, caste, educational status, standard of living and toilet facility in Bihar.

Among women who reported at least one obstetric problem, the mean number of problem was relatively higher in Madhya Pradesh (2.41) and Bihar (2.31) as compared to Andhra Pradesh (1.78) and Kerala (1.77). The average number of problems was found to be highest among women in the higher age group in all the states except in Madhya Pradesh where the mean value was found to be highest among women aged 25 years or less. The mean was highest among women with more than three children in all the states except in the case of Andhra Pradesh. In Andhra Pradesh and Kerala, the average was highest among Muslim women while in the case of Madhya Pradesh and Bihar the value was highest among women in other category. Overall, women belong to SC/ST castes have more mean number of problems. Women with no education and primary education were having more mean

number obstetric problems than secondary and higher education. In respect to residence, the average number of problems was more among rural women as compared to urban women in all the states. In the case of standard of living, the mean value increases with decrease in the standard of living. Women working in primary sector have more mean number of problems followed by not working women and women who were working in professional /service sector. The average number of problems was higher among women with no toilet facility at home in all the states except in the case of Andhra Pradesh.

Results from logistic regression

A multiple logistic regression analysis was performed in order to examine the effect of socio-economic and demographic factors on obstetric morbidity. The dependent variable is dichotomous, that is 'no obstetric morbidity' =0, 'any obstetric morbidity' =1. The independent variables selected were age of the women, children ever born, religion, caste, education of women, work status, place of residence, standard of living, and sanitation facilities.

The results from the logistic regression analysis are given in Table 5. It is evident from the table that in Andhra Pradesh, only the variable 'age of mother' is significantly related with obstetric morbidity. That is, compared to women in the age group 15-24 years, women aged 25-34 years are less likely to have any type of obstetric morbidity. In Kerala, only the religion of women was found to have significant association with obstetric morbidity. Compared to Hindu women, obstetric morbidity was 46 percent less among women with other religious category.

In the case of Madhya Pradesh, the variables such as age of women, religion, level of education, standard of living and work status have significant effect on obstetric morbidity. Compared to women in the age group 15-24, women in the older ages were more likely to have any obstetric morbidity. With regard to religion, Muslim women were more likely to have obstetric problem as compared to Hindus. Women with secondary and higher education have more likely to have obstetric problem in comparison to women with no education. This may be due to higher reporting among women with high education. The likelihood of having obstetric morbidity was higher among women with medium standard of living as compared to women with low standard of living. Workingwomen were more likely to have obstetric problem as compared to non-working women. In case of Bihar, only the variable children ever born showed significant effect on obstetric morbidity. The odds of having obstetric morbidity was less among women with four or more than four children in comparison of women with three or less than three children.

CONCLUSIONS

The primary objective of the present study was to examine the levels of obstetric morbidity in the selected states of India. The socio-economic and demographic factors associated with obstetric morbidity were also analyzed.

The results revealed that the most reported pregnancy related problems were excessive fatigue and swelling in leg, body or face. In the case of post-delivery complication, massive vaginal bleeding was the most reported problems among women in Andhra Pradesh

and Kerala while in the case of Bihar and Madhya Pradesh the most reported problems were very high fever. The proportion of women with any kind of pregnancy complication was lowest in Andhra Pradesh and the proportion of women with any kind of post-delivery complication was lowest in Kerala. The percentage with any obstetric morbidity was highest among women in Bihar and lowest in Andhra Pradesh. Although Kerala is demographically developed, a significant number of women were suffering from pregnancy related problems. However, the proportion who reported post-delivery complication was lowest in Kerala. This may be because of the high level of institutional delivery in Kerala.

The mean number of obstetric problems varied according to socio-economic characteristics of women. The mean number of problems was higher among women in rural areas and with low standard of living in all the states. There were state-wise differentials in the variation of mean number of obstetric morbidity by socio-economic and demographic characteristics of women. The results from logistic regression analysis also revealed that the socio-economic and demographic factors have significant association with obstetric morbidity. However, there existed variation in the factors associated with obstetric morbidity among women in the states of Andhra Pradesh, Kerala, Madhya Pradesh and Bihar.

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TABLE 1
Percentage distribution of Currently Married Women by type of problems reported

Obstetric Complications	States			
	Andhra Pradesh	Kerala	Madhya Pradesh	Bihar
Pregnancy related problems				
Difficulty with daylight vision	3.3	2.3	10.4	9.4
Night blindness	1.8	1.4	12.7	16.3
Convulsions not from fever	4.9	3.8	15.0	20.7
Leg, body or face swelling	18.8	46.9	29.5	29.4
Excessive fatigue	28.8	65.5	52.6	71.2
Vaginal bleeding	3.3	8.3	6.8	20.6
Post delivery problems				
Massive vaginal bleeding	14.8	6.9	14.2	20.6
Very high fever	6.4	6.2	16.7	20.9
Total	**1702**	**818**	**2226**	**1645**

TABLE 2
Level of Obstetric Morbidity by States

States	Any pregnancy complication		Any post delivery complication		Any obstetric complication	
	Percent	Number	Percent	Number	Percent	Number
Andhra Pradesh	38.5	656	17.9	305	46.0	783
Kerala	78.5	642	12.1	99	79.8	653
Madhya Pradesh	61.9	1379	24.6	547	65.6	1460
Bihar	78.7	1295	30.5	501	83.1	1366

TABLE 3

Mean number of Obstetric Morbidity among all currently Married Women according to Socio-Economic Characteristics

Characteristics	Andhra Pradesh			Kerala			Madhya Pradesh			Bihar		
	Mean	N	Sig.	Mean	N	Sig.	Mean	N	Sig.	Mean	N	Sig.
Age												
<25	0.87	909	0.048	1.49	208	0.272	1.68	857	0.061	1.90	691	0.789
25-35	0.74	714		1.37	532		1.53	1127		1.95	760	
> 35	0.86	83		1.51	78		1.47	242		1.89	195	
Children ever born												
1	0.84	484	0.371	1.51	322	0.131	1.60	481	0.165	1.86	365	0.498
2	0.79	763		1.32	330		1.45	547		2.02	336	
3	0.90	284		1.41	117		1.68	404		1.89	274	
More than 3	0.74	175		1.41	49		1.61	794		1.92	672	
Religion												
Hindu	0.81	1456	0.782	1.41	389	0.021	1.58	2043	0.946	1.90	1340	0.133
Muslim	0.86	172		1.50	321		1.54	156		2.01	306	
Christian & other	0.76	78		1.19	108		1.58	27		4.50	1	
Caste												
SC/ST	0.79	443	0.350	1.31	92	0.527	1.65	928	0.001	1.93	339	0.808
OBC	0.85	886		1.45	262		1.62	909		1.90	983	
Others	0.76	378		1.41	464		1.31	388		1.96	324	
Educational status												
No Education	0.81	719	0.982	1.62	13	0.381	1.57	1227	0.538	1.93	1128	0.259
Primary	0.82	306		1.60	42		1.66	396		2.05	166	
Secondary & Higher	0.82	681		1.40	763		1.54	603		1.83	353	
Residence												
Urban	0.81	562	0.832	1.37	263	0.377	1.39	536	0.002	1.90	197	0.844
Rural	0.82	1144		1.44	555		1.64	1690		1.92	1450	
Standard of living												
Low	0.85	602	0.483	1.53	161	0.255	1.61	1049	0.065	1.95	946	0.383
Medium	0.82	608		1.40	137		1.63	660		1.91	475	
High	0.77	496		1.38	520		1.43	517		1.80	225	
Work status												
Not working	0.81	957	0.278	1.44	670	0.316	1.44	1051	0.000	1.91	1074	0.701
Working in Primary Sector	0.86	643		1.38	45		1.71	1097		1.95	523	
Professional & Service Sector	0.68	106		1.27	102		1.59	79		1.77	49	
Toilet facility												
No facility at home	0.81	938	0.917	1.66	29	0.178	1.64	1565	0.010	1.93	1142	0.439
facility at home	0.81	584		1.39	685		1.42	458		1.86	289	
Total	**0.82**	**1702**		**1.41**	**818**		**1.58**	**2226**		**1.92**	**1645**	

TABLE 4

Mean number of Obstetric Morbidity among Currently Married Women with at least one Morbidity according to Socio-Economic Characteristics

Characteristics	Andhra Pradesh			Kerala			Madhya Pradesh			Bihar		
	Mean	N	Sig.	Mean	N	Sig.	Mean	N	Sig.	Mean	N	Sig.
Age												
<25	1.81	440	0.351	1.81	171	0.050	2.48	580	0.178	2.27	578	0.565
25-35	1.72	306		1.73	423		2.34	735		2.34	632	
> 35	1.92	37		2.00	59		2.45	145		2.35	157	
Children ever born												
1	1.79	227	0.809	1.82	268	0.025	2.39	321	0.125	2.16	313	0.112
2	1.79	336		1.66	262		2.27	350		2.33	291	
3	1.79	143		1.85	89		2.45	276		2.34	221	
More than 3	1.67	77		2.03	34		2.49	512		2.38	541	
Religion												
Hindu	1.78	667	0.609	1.75	312	0.543	2.42	1336	0.434	2.28	1115	0.044
Muslim	1.86	80		1.81	266		2.24	107		2.45	250	
Christian & other	1.67	36		1.71	75		2.49	17		4.50	1	
Castes												
SC/ST	1.81	193	0.122	1.83	66	0.824	2.51	611	0.000	2.42	272	0.051
OBC	1.82	415		1.76	216		2.45	601		2.25	832	
Others	1.64	175		1.77	371		2.05	249		2.42	263	
Education Status												
No Education	1.88	311	0.065	2.63	8	0.002	2.47	781	0.023	2.34	928	0.063
Primary	1.68	150		2.03	33		2.47	265		2.42	140	
Secondary & Higher	1.73	323		1.75	612		2.25	414		2.17	298	
Place of Residence												
Urban	1.77	257	0.815	1.69	213	0.091	2.18	342	0.001	2.30	163	0.861
Rural	1.79	526		1.81	441		2.48	1119		2.31	1204	
SLI												
Low	1.85	277	0.385	1.89	131	0.198	2.57	659	0.000	2.38	776	0.063
Medium	1.74	289		1.78	108		2.34	461		2.25	403	
High	1.76	217		1.74	414		2.18	341		2.17	188	
Work Status												
Not working	1.74	445	0.029	1.78	541	0.390	2.24	674	0.000	2.30	892	0.902
Working in Primary Sector	1.89	292		1.88	33		2.58	728		2.33	436	
Professional & Service Sector	1.54	47		1.67	78		2.18	58		2.33	38	
Toilet facility												
No facility at home	1.78	426	0.708	2.18	22	0.017	2.48	1036	0.001	2.35	939	0.108
facility at home	1.81	263		1.76	544		2.16	301		2.20	244	
Total	**1.78**	**783**		**1.77**	**653**		**2.41**	**1460**		**2.31**	**1366**	

TABLE 5

Odds ratios of the likelihood of Obstetric Morbidity among Currently Married Momen by States

Characteristics	Andhra Pradesh	Kerala	Madhya Pradesh	Bihar
	Exp (B)	Exp (B)	Exp (B)	Exp (B)
Age of women				
15 - 24 ®				
25- 34	0.816*	0.874	0.798*	1.176
>= 35	1.023	0.813	0.642**	1.132
Child ever born				
1-3 ®				
4 & above	0.928	0.611	1.201	0.728*
Religion				
Hindu ®				
Muslim	1.096	0.993	1.753**	1.099
Others	1.120	0.535 **	1.269	
Caste				
SC/ST ®				
OBC	1.073	1.747	0.966	1.288
Others	1.029	1.567	0.814	0.926
Education of women				
No education ®				
Primary	1.217	2.133	1.178	0.894
Secondary & Higher	1.220	1.872	1.718***	1.005
Work status				
Not working ®				
Working	1.064	0.840	1.226*	1.175
Residence				
Urban ®				
Rural	1.134	0.870	1.052	1.121
Standard of living				
Low ®				
Medium	1.123	1.014	1.300**	1.251
High	0.958	0.977	1.107	1.048
Sanitation				
No Facility at home ®				
Facility at home	1.008	0.871	0.825	1.199
Constant	0.665	2.253	1.493	3.362

Note: Dependent variable: Obstetric Morbidity (0= No Morbidity / 1= Any Morbidity)

*** Significant at 1% level of Significance

** Significant at 5 % level of Significance

* Significant at 10 % level of Significance

® Reference category