International Journal of Community Medicine and Public Health
*Khan MH et al. Int J Community Med Public Health. 2016 Sep;3(9):2651-2654*
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20163090

**Research Article**

# Lower maternal education responsible for resistance in the improvement of delivery practices in rural area of Bareilly, Uttar Pradesh, India

**Mohd. Haroon Khan[1]*, Rashmi Katyal[2], H. S. Joshi[2], Ruby Khan[3], Abhishek Singh[1]**

[1]Department of Community Medicine, S.H.K.M., Govt. Medical College Nalhar, Mewat, Haryana, India
[2]Department of Community Medicine, Rohilkhand Medical College & Hospital Bareilly, Uttar Pradesh, India
[3]Department of Periodontology, K D Dental College Mathura, Uttar Pradesh, India

**Received:** 22 July 2016
**Revised:** 25 July 2016
**Accepted:** 19 August 2016

***Correspondence:**
Dr. Mohd. Haroon Khan,
E-mail: drharoonkhan99@yahoo.com



## ABSTRACT

**Background:** Child birth is a physiological process which can become pathological due to the adoption of unhygienic condition of delivery practices and consequently affect the health and survival of the newborn. The objective of the study was to assess the behavior of pregnant women regarding delivery practices. To assess the relation of maternal education and delivery practices. Design of the Study was a community based cross sectional study.
**Methods:** Field practice area of Rural Health Training Centre, Department of Community Medicine, RMC&H Bareilly. Participants were 110 pregnant women. Multistage random sampling method was used. Statistical analysis was SPSS version 21 used to analyse the data through implementing percentages.
**Results:** Majority of pregnant women (70.9%) delivered at home. Among total home deliveries, 12 (15.4%) deliveries were conducted by trained dais. Dais washed their hands only in 33.3% of home deliveries. Clean surface was used in 16.70 % deliveries. The cord was cut with new blade in 29.5% of deliveries. Sterile cord tie was used in 14.1% deliveries. Nothing was applied on the cord of 15.4% deliveries. Delivery practices were found to be more satisfactory among those women who were educated at least upto high school standard and this difference was found to be highly significant statistically (<0.001) in all the strata of delivery practices.
**Conclusions:** To conclude there is a low percentage of institutional deliveries and very poor delivery practices in rural area of Bareilly. Education definitely has a bearing on delivery practices thus it is need of an hour to educate the women so that they can actively participate in decision making in entire period of pregnancy and delivery.

**Keywords:** Umbilical cord, Untrained dais, Institutional deliveries

## INTRODUCTION

In India, 56% births take place at home in the debilitating environment (Neonatal Mortality Rate 34.9%).[1] A good number of neonatal deaths occur at home due to poverty, poor living conditions, unawareness and substandard way of handling the delivery cases at home. Moreover, many women in slums work outside the home, resulting in insufficient care of them during pregnancy and ignoring of the newborn.[2,3]

Despite a plethora of health institutions, over 50% births amongst the urban poor continue to occur in home settings and under the supervision of quacks. Customary

practices and lack of knowledge regarding the need for antenatal care fear of hospitals, attitude and approach of the hospital staff along with the expenses of hospitalization are deterrents to accessing hospital care. Delay in the detection of complications and availability of medical help are also accountable for increase in a number of maternal-neonatal deaths. Private practitioners are still the first choice of approach even in neonatal illness for receiving health care.[4]

According to best of our knowledge, association of educational status with current delivery practices have not been closely investigated by the community experts in rural area of Bareilly and thus information on the same is patchy and scanty.

Therefore the present study was planned to identify healthy and unhealthy delivery practices with reference to tetanus neonatorum and other diseases (neonatal sepsis) related to unhygienic condition of delivery and the principle of five cleans recommended under Child Survival Safe Motherhood (C.S.S.M.) national program.[5]

***Objectives***

To assess the behaviour of pregnant women regarding delivery practices. To assess the relation of maternal education and delivery practices.

## METHODS

The community based cross sectional study was carried out in the field practice area of the Rural Health Training Centre, Department of Community Medicine, Rohilkhand Medical College & Hospital, Bareilly, Uttar Pradesh, located at a distance of 12 kilometers from Rohilkhand Medical College.

Multistage random sampling method was used. In the first stage, two blocks were chosen from three randomly i.e. Nawabganj and Bithrichainpur from Nawabganj, Bithrichainpur and Bhojipura. In the second stage, four villages were randomly selected from each block i.e Nawabgabganj Bithrichainpur.

**Table 1: Sampling of study subject.**

| Blocks | Villages | Population (10135) | No of pregnant women (110) |
|---|---|---|---|
| Nawabganj | Dharampur | 1230 | 14 |
| | Kurmiyan | 1200 | 13 |
| | dhakia | 1245 | 14 |
| | Udaranpur | 1220 | 13 |
| Bithrichainpur | Ahladpur | 1400 | 15 |
| | kalapur | 1200 | 13 |
| | Barkhapur | 1430 | 15 |
| | Mauraniya | 1210 | 13 |

In the third stage, house to house visit was done and 110 pregnant women (55 pregnant women from each Block) who were expected to deliver during the study period were noted and their contact numbers were taken to follow them up in future for the outcome with the help of anganwadi workers in that area. During the revisit as per the scheduled delivery time, the questionnaire was filled. The Institutional Ethical Committee of Medical College gave the approval for the study. The study was completed in a period of six months i.e. from February 2013 to July 2013.

Exclusion criteria included high-risk pregnant women and pregnant women who went outside Bareilly for delivery. Local cultural values and ideas were taken into account and thoroughly respected. No breach of confidentiality was done and an informed consent from the pregnant female was taken before collecting data. Proper management or referral was given to women who were found to have any health problem.

A house to house visit was made to get the information about pregnant women till 110 pregnant women were enrolled in the study. The data were collected by using a semi-structured questionnaire which included information regarding credentials, socioeconomic status and the delivery practices. Socioeconomic status was assessed using Modified B G Prasad Classification.

The collected data was coded and entered in Statistical Package for Social Sciences (SPSS), version 21 (IBM, Chicago, USA). Interpretation of the collected data was done by using appropriate statistical methods and tests like chi-square ($\chi^2$) test. Two tailed $P<0.05$ was considered statistically significant.

## RESULTS

Out 0f total 110 study subjects, 76.4% pregnant women were in the age group of 15-25 years and 23.6% in the age group of 26-45 years. 58.2% of pregnant women were Hindu and 41.2% of them belonged to Muslim community. A huge chunk of pregnant women (60.9%) were Illiterate. 33.6% pregnant women were educated upto high school**.** Most of the pregnant women were from upper lower class III according to Modified B G Prasad Classification (Table 2).

The majority (78) of pregnant women (70.9%) delivered at home. Among total home deliveries, 12 (15.4%) deliveries were conducted by trained dais. Dais used soap and water to wash their hands only in 26 (33.3%) of home deliveries. Clean surface (clean sheet which was spread on the floor or clean part of home) was used in 13 (16.70%) deliveries. The cord was cut with a new blade in 23 (29.5%) of deliveries. Umbilical cord tied with clean and sterile (boiled) thread in 11 (14.1%) deliveries. Nothing was applied on the cord of 12 (15.4%) deliveries (Table 3).

**Table 2: Demographic profile of pregnant women.**

| Variables | N =110 | Frequency |
|---|---|---|
| **Age group** | | |
| 15-25 | 84 | 76.4 |
| 26-45 | 26 | 23.6 |
| **Religion** | | |
| Hindu | 64 | 58.2 |
| Muslim | 46 | 41.8 |
| **Education of pregnant women** | | |
| Illiterate | 67 | 60.9 |
| Up to high school | 37 | 33.6 |
| Above high school | 06 | 5.5 |
| **Occupation of women** | | |
| Housewife | 108 | 98.2 |
| Clerical/shop | 02 | 1.8 |
| **Type of family** | | |
| Nuclear | 24 | 21.8 |
| Joint | 86 | 78.2 |

An association of educational status (illiterate vs literate) with current delivery practices was examined among women who underwent home delivery. It was observed in this study that delivery practices were found to be more satisfactory among literate women who were educated at least upto high school standard and this difference was found to be highly significant statistically (<0.001) in all the strata of delivery practices (Table 4).

**Table 3: Place of delivery and delivery practices at home in current delivery.**

| Variables | | Frequency | Percentage |
|---|---|---|---|
| **Place of current Delivery** | | | |
| Place of delivery | Home | 78 | 70.9 |
| | Institution | 32 | 29.1 |
| **Delivery Practices at home in current delivery** | | | |
| Delivery conducted by* | Trained dai | 12 | 15.4 |
| | Untrained dai | 66 | 84.6 |
| Clean hands* | Yes | 26 | 33.3 |
| | No | 52 | 66.7 |
| Clean surface* | Yes | 13 | 16.7 |
| | No | 65 | 83.3 |
| Clean instruments* | Yes | 23 | 29.5 |
| | No | 55 | 70.5 |
| Sterile cord tie* | Yes | 11 | 14.1 |
| | No | 67 | 85.9 |
| No application on cord stump* | Yes | 12 | 15.4 |
| | No | 66 | 84.6 |

*Data of women who underwent home delivery

**Table 4: Association of educational status with delivery practices among women who underwent home delivery.**

| | | Illiterate(67) | Literate (43) | Level of significance |
|---|---|---|---|---|
| **Place of delivery** | Home | 63 (94.0%) | 15 (34.9%) | <0.001** |
| | Institution | 04 (6.0%) | 28 (65.1%) | |
| **Delivery conducted by*** | Trained dai | 2 (3.17%) | 10 (66.66%) | <0.001** |
| | un Trained dai | 61 (96.83%) | 05 (33.34%) | |
| **Clean hands*** | Yes | 16 (25.39%) | 12 (80.0%) | <0.001** |
| | No | 47 (74.61%) | 3 (20.0%) | |
| **Clean surface*** | Yes | 3 (4.76%) | 13 (86.66%) | <0.001** |
| | No | 60 (95.24%) | 2 (13.34%) | |
| **Clean instruments*** | Yes | 14 (22.22%) | 10 (66.66%) | 0.001** |
| | No | 49 (77.78%) | 05 (33.34%) | |
| **Sterile cord tie*** | Yes | 1 (1.5%) | 13 (86.66%) | <0.001** |
| | No | 62 (98.5%) | 2 (13.34%) | |
| **No application on cord stump*** | Yes | 1 (1.58%) | 15 (100%) | Not applicable |
| | No | 62 (98.42%) | 0 (0.0%) | |

*Data of women who underwent home delivery, <0.001**

## DISCUSSION

In the present study institutional deliveries were higher when compared to DLHS-3 Bareilly data (20.2%). In a study on delivery practices in west UP only 3.1% deliveries washing of floor was done, in 43% deliveries the cord cutting instrument was not sterilized. [6] Blade was the commonest (90.8%) cord cutting instrument. The difference in result may be due large sample size. Another community based survey was conducted in urban slum of Delhi, which revealed that unsterile threads were used in 71.7% of home deliveries.[7] Nothing was applied to the cord in 63% of home deliveries. Findings were higher from the present study due only 82 mothers

of newborn were interviewed in other study. Similar study from Birbhum district of West Bengal, India, reported that 68.6% home deliveries were conducted on floor without any clean covering sheet.[8]

Though a clean instrument was used to cut the cord in 86.78% of home deliveries, a clean cord tie was used in only 24.89% cases. In a cross-sectional, retrospective study to determine home based neonatal care practices in Makwanpur district, Nepal.[9]

It was seen that only half of attendants had washed their hands. A razor blade was used to cut the umbilical cord in 56% of births, although in only 33% of cases, the blade could be reliably described as clean. In almost 73% of cases the umbilical stump was left naked. The use of oil on this stump was most common (18%).

## CONCLUSION

It was concluded that there was a low percentage of institutional deliveries and very poor delivery practices in rural area of Bareilly. Education definitely has a bearing on delivery practices thus it is need of an hour to educate the women so that they can actively participate in decision making in entire period of pregnancy and delivery, The findings from the present study are an eye opener to healthcare system aiming to achieve 100% institutional deliveries thus healthy delivery practices. In fact we are miles away from our targets.

This is need of an hour to educate the women so that they can actively participate in decision making in entire period of pregnancy and delivery. We need to boost the awareness about the benefits of deliveries performed and attended by skilled health personnel and supported by obstetric and neonatal crisis care.

Regular educational sessions should be conducted by the health care professionals involving as many as elderly females; mother-in-laws, dais and reproductive age group women as possible and efforts should be made to address the harmful socio-cultural beliefs and practices prevalent in the community.

## ACKNOWLEDGMENTS

Authors would like to express my profound gratitude to all the participants for their co-operation and for their immense faith they reposed in me.

*Funding: No funding sources*
*Conflict of interest: None declared*
*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. National Fact Sheet, INDIA (Provisional Data). National Family Health Survey (NFHS-3), 2005-2006: Delhi. 2006:1-3.
2. Bhargava SK, Singh KK, Saxena BN. ICMR task force national collaborative study on identification of high risk families, mothers and outcome of their offspring with particular reference to the problem of maternal nutrition, low birth weight, perinatal and infant morbidity and mortality in rural and urban slum communities. Summary, Conclusions and Recommendation. Indian Pediatrics. 1991;28:1473-80.
3. Kumar V, Mohanty S, Kumar A. Effect of community-based behaviour change management on neonatal mortality in Shivgarh, Uttar Pradesh, India: A Cluster-Randomised Controlled Trial. The Lancet. 2008;372:1151-62.
4. Agarwal S, Srivastava K, Sethi V. Maternal and newborn care practices among the urban poor in Indore, India: gaps, reasons and possible program options. Urban health resource centre (New Delhi), 2007:32.
5. Modules on C.S.S.M. Training Programme, Ministry of Health and Family Welfare, New Delhi. 1992.
6. Nandan D, Mishra SK. Delivery practices in west Uttar Pradesh. Indian J Public Health. 1996;40(1):20-2.
7. Rahi M, Taneja D, Misra A. Newborn care practices in an urban slum of Delhi. Indian Journal of Medical Sciences. 2006;60(12):506-10.
8. Dasgupta S, Das P, Mandal NK. A study on intranatal care practices in a district of West Bengal. Ind J Public Health. 2006;50(1):15-8.
9. Osrin D, Tumbahangphe KM, Shrestha D. Cross sectional, community based study of care of newborn infants in Nepal. BMJ. 2002;325.

**Cite this article as:** Khan MH, Katyal R, Joshi HS, Khan R, Singh A. Lower maternal education responsible for resistance in the improvement of delivery practices in rural area of Bareilly, Uttar Pradesh, India. Int J Community Med Public Health 2016;3:2651-4.