Maternal health-care seeking behavior in North India

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Introduction

Pregnancy and labor, if not kept under constant vigil, can end in serious complications or even death at any moment. The maternal death is a tragedy and carries with it a huge burden of grief and pain for the family, especially for the young ones the mother leaves behind.

Maternal mortality is on an average 18 times higher in developed countries compared to developing countries. In addition to the number of deaths each year, over 50 million women suffer from maternal morbidity due to acute complications from pregnancy.[1] This could be related to several factors, an important one being non-utilization or under-utilization of maternal health-care services, especially among the rural poor and urban slum population due to either lack of awareness or access to health-care services. With this background, the study was done to know the practices of the community regarding maternity care during pregnancy, delivery and postnatal period.

Materials and Methods

A cross-sectional, community based study was conducted on 120 rural, 120 urban elite and 120 urban slum areas mothers, who delivered within last three months. Results: One-fourth mothers in rural area faced one or the other problem during antenatal period while in urban slum and urban elite only 15% and 9.2% mothers had some problems, this percentage being 19.4 at district level. 14.5% respondents faced some kind of complication during delivery and more problems were faced by rural (17.5%) while least common by urban elite (7.5%) but the area wise difference was not significant. The most common source of treatment was ANM/ LHV/ Nurse (47.1% in rural, 40% in urban elite and 60% in urban slum). 12.8%, mothers took treatment from doctor (Government- 7.2%; Private- 5.6%). More than 10% did not take any treatment (11.8% in rural, 20% in urban elite). Conclusion: Still the large numbers of mothers are not seeking care of their ailments, during prenatal, natal or postnatal especially rural mothers

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urban slum areas, so a total of 360 respondents were selected. Multi-stage random sampling technique was adopted, i.e., three stages were used for selection of rural mothers (block, primary health center [PHC], villages, mothers) and urban mothers (city, wards, mohallas, mothers). Out of 15 community development blocks in district Agra a block Saiyan was purposively selected, it has 3 PHCs and out of these, two PHCs – were selected randomly and then three villages were selected randomly from each PHC making a total of 6 villages. From Agra district, Agra city was selected; then out of eighty wards in Agra city, three wards were selected randomly; from each selected ward, one mohalla was selected randomly for the study. For slum area, all the three slum localities under the field practice area of Urban Health Training Center of SPM Department, S. N. Medical College, Agra were taken for the study. Thus, a total of six villages and three urban elite areas and three urban slum areas were selected, in district Agra. (Dais are local, traditional, trained or untrained aged female conducting delivery at home.)

The respondent’s women were who delivered within last three months in these selected areas. The informed consent was obtained from all the mothers taken in the study. Respondent women were questionnared using pre-tested and predesigned schedule and data, thus collected, was analyzed using appropriate statistical methods such as Chi-square test and valid inferences were drawn. In district Agra, rural population is 57%, and urban population is 43%. In urban population, urban elite (50.5%) and urban slum (49.5%) populations are almost equal. Hence, according to the distribution of population, U-R population adjusted rate was calculated for the district and depicted as district percentage.

Results

Table 1 shows the sociodemographic profile of respondents. It was found that more than half (58%) were Hindus and nearly one-third were Muslims (38.6%). Muslims were maximum in urban slums (57.5%). According to Modified B.G. Prasad Classification (2008), nearly two-third were from Class V and VI, i.e., having per capita income per month of less than Rs. 1499 and only about 20% women were in Social Class I–III while in the urban elite area, 50% were in this category. Maximum women were illiterate (36.4%). In rural area, 68.3% mothers were illiterate while in urban elite more than 20% were graduate and above. The majority of women were homemakers (94.7%) In a rural area, 68.3% of mothers were illiterate while in urban elite more than 20% were graduate and above.

Table 2 shows that one-fourth mothers in rural area faced one or the other problem during antenatal period, while in an urban slum and urban elite, only 15% and 9.2% mothers had some problems, this percentage being 19.4 at the district level. The difference in the proportions of mothers in different areas was found to be statistically significant. The most common problem faced was excessive fatigue, other problems were excessive nausea, excessive vomiting, spotting, weakness, and backache.

Regarding treatment seeking behavior, it was found that in rural area, majority of mothers took treatment from Auxiliary Nurse Midwife (ANM)/Lady Health Visitor (LHV)/Nurse (56.7%) followed by government doctor at PHC (16.7%) while 10% of mothers took treatment from the private hospital. In urban slum area also, most common source of treatment was ANM/LHV/Nurse (50%), second source being private doctor followed by government doctor (22.2% and 11.1%) while in urban elite, private hospital (36.4%) was most common place of seeking treatment followed by ANM/LHV/Nurse from urban health post (27.3%). It was also observed that in all the areas and at the district level, about 10% mothers took no treatment for their problems while 6%–9% opted for the home treatment. However, this difference of source of treatment among mothers of various areas was found to be insignificant.

Table 3 reveals that 14.5% respondents faced some kind of complication during delivery, and more problems were faced by rural (17.5%) while least common by the urban elite (7.5%) but the area-wise difference was not significant. Regarding treatment seeking behavior for the natal complications, it was found that in rural area, the majority of mothers took treatment from trained/untrained dai (57.1%) while 19% of mothers took no treatment. In urban slum area also, majority (56.3%) took treatment from trained/untrained daiis followed from treatment by government doctor or took only home remedies (12.5% each). In the urban elite area, a similar percentage of mothers took treatment from dais, ANM/LHVs/Nurse and private doctors (22.2% each). Overall at district level, majority (53%)
mothers with problems took treatment from dais for any delivery complication. This difference of taking treatment in different areas was statistically insignificant.

Table 4 shows the treatment seeking behavior of the women during postnatal period for any delivery-related complication. It was observed that in the majority of cases, in all the three areas there were not any problems and the maximum complications were faced by rural women (12.5%) followed by urban slum (12.5%) and urban elite (4.2%). This difference among the three areas was statistically significant. The most common source of treatment was ANM/LHV/Nurse (47.1% in rural, 40% in urban elite, and 60% in an urban slum). 12.8% mothers took treatment from doctor (government - 7.2%; private - 5.6%).

More than 10% did not take any treatment (11.8% in rural, 20% in urban elite). However, this difference was not statistically significant.

**Discussion**

Most maternal morbidities can be prevented if women have access to basic medical care during pregnancy, childbirth, and postpartum period.

One-fifth (19.4%) of mothers had some antenatal problem and 25% of rural mothers faced any problem compared to the 9.2% and 15% of urban elite and slum mothers. The most common problem faced was excessive fatigue. Other problems

| Problems in antenatal period | Rural, n (%) | Urban elite, n (%) | Urban slum, n (%) | District (%) | \( \chi^2 \) |
|-----------------------------|-------------|-------------------|------------------|--------------|------|
| Problems faced              | 30 (25)     | 11 (9.2)          | 18 (15)          | 19.4         | \( \chi^2=11.230, df=2, P=0.0036 \) |
| No problem                  | 90 (75)     | 109 (90.8)        | 102 (85)         | 80.6         |      |
| Total                       | 120 (100)   | 120 (100)         | 120 (100)        | 100          |      |
| Treatment sought from       |             |                   |                  |              |      |
| No treatment                | 3 (10)      | 1 (9.1)           | 2 (11.1)         | 10.1         | \( \chi^2=5.057, df=8, P=0.7515 \) |
| Home treatment              | 2 (6.7)     | 1 (9.1)           | 1 (5.6)          | 6.7          |      |
| ANM/LHV                     | 17 (56.7)   | 3 (27.3)          | 9 (50)           | 52.6         |      |
| Trained/untrained dai       | 0           | 0                 | 0                | 0            |      |
| Government doctor           | 5 (16.7)    | 2 (18.2)          | 2 (11.1)         | 15.9         |      |
| Private doctor              | 3 (10)      | 4 (36.4)          | 4 (22.2)         | 14.7         |      |
| Total                       | 30 (100)    | 11 (100)          | 18 (100)         | 100          |      |

Percentages in parenthesis. ANM: Auxiliary Nurse Midwife; LHV: Lady Health Visitor

| Problems†                   | Rural (n=120) (%) | Urban elite (n=120) (%) | Urban slum (n=120) (%) | District (%) | \( \chi^2 \) |
|-----------------------------|------------------|-------------------------|------------------------|--------------|------|
| No problem                  | 99 (82.5)        | 111 (92.5)              | 104 (86.7)             | 85.5         |      |
| Problems faced              | 21 (17.5)        | 9 (7.5)                 | 16 (13.3)              | 14.5         |      |
| Treatment sought from*     |                   |                         |                        |              |      |
| No treatment                | 4 (19)           | 1 (11.1)                | 1 (6.3)                | 15.6         |      |
| Home treatment              | 2 (9.5)          | 1 (11.1)                | 2 (12.5)               | 10.4         |      |
| Trained/untrained dai       | 12 (57.1)        | 2 (22.2)                | 9 (56.3)               | 53.0         |      |
| ANM/LHV/nurse               | 1 (4.8)          | 2 (22.2)                | 1 (6.3)                | 7.0          |      |
| Government doctor           | 1 (4.8)          | 1 (11.1)                | 2 (12.5)               | 7.0          |      |
| Private doctor              | 1 (4.8)          | 2 (22.2)                | 1 (6.3)                | 7.0          |      |
| Total                       | 21 (100)         | 9 (100)                 | 16 (100)               | 100          |      |

Percentages in parenthesis. \( \chi^2=5.433, df=2, P=0.0661; \chi^2=8.430, df=10, P=0.5869 \). ANM: Auxiliary Nurse Midwife; LHV: Lady Health Visitor

| Problems†                   | Rural (n=120) (%) | Urban elite (n=120) (%) | Urban slum (n=120) (%) | District (%) | \( \chi^2 \) |
|-----------------------------|------------------|-------------------------|------------------------|--------------|------|
| No problem                  | 103 (85.8)       | 115 (95.8)              | 105 (87.5)             | 88.3         |      |
| Problems faced              | 17 (14.2)        | 5 (4.2)                 | 15 (12.5)              | 11.7         |      |
| Treatment sought from*     |                   |                         |                        |              |      |
| No treatment                | 2 (11.8)         | 1 (20)                  | 1 (6.7)                | 11.2         |      |
| Home treatment              | 5 (29.4)         | 4 (26.7)                | 26.5                   |              |      |
| ANM/LHV/nurse               | 8 (47.1)         | 9 (60)                  | 49.5                   |              |      |
| Trained/untrained dai       | 0                | 0                       | 0                      |              |      |
| Government doctor           | 1 (5.9)          | 1 (20)                  | 1 (6.7)                | 7.2          |      |
| Private doctor              | 1 (5.9)          | 1 (20)                  | -                      | 5.6          |      |
| Total                       | 17 (100)         | 5 (100)                 | 15 (100)               | 100          |      |

Percentages in parenthesis. \( \chi^2=7.471, df=2, P=0.0239; \chi^2=6.282, df=8, P=0.6157 \). ANM: Auxiliary Nurse Midwife; LHV: Lady Health Visitor
reported were weakness, backache, dragging sensation, leakage, and injury. Singh and Arora in a study in the rural area of Chandigarh reported that majority (57.5%) of the women did not report any problem during pregnancy.\(^{(0)}\) Some reported pain in abdomen (10.9%) and 6.8% reported bleeding.\(^{(1)}\) Al-Nahedh found about 90.5% of these mothers consulted a physician on the illnesses and there as a 12.4% severe morbidity rate.\(^{(2)}\)

In this study, more mothers visited government facility than private denoting better availability of services at government centers over time. Bhasin et al.\(^{(3)}\) and Gupta et al.\(^{(4)}\) also reported similar problems during pregnancy. They consulted private practitioners (in 32% cases) for seeking treatment of illness arising during pregnancy even though there was a government PHC in the village. This is more than our study due to services at government facilities were given for less time in their study area.

14.5% of respondents faced some complication during delivery, and more problems were faced by rural mothers (17.5%). The most common problem faced was excessive bleeding for which they take advice from local, trained/untrained dais. Gupta et al. from UP reported that majority (73%) of 212 cases were attended by persons like dai (45%) or family members/neighbors, etc., (28%), which is affirmative to our findings.\(^{(5)}\) Panda and Vashisht in rural block of Haryana, India 36.16% of study subjects were attended either by trained birth assistant and untrained staff, 49.5% were attended by government health care staff and rest 14.3% by others.\(^{(6)}\)

The majority of cases in all the three areas mothers had no health no problem after delivery (88.3%), while 11.7% had it. Severe vaginal bleeding was most common problem seen in mothers. The most common source of treatment was ANM/LHV/Nurse (47.1% rural 40% in urban elite and 60% in an urban slum). Singh and Arora from rural areas of Chandigarh reported that complications in the postnatal period were in 18.5% cases.\(^{(7)}\) NFHS-III reported for India that women delivering in health facilities especially in private (73%) had PNC from a doctor.\(^{(8)}\) Massive vaginal bleeding for 12% of births and very high fever in 14% were reported.\(^{(9)}\) Both complications were more common among rural than urban mothers. The findings were quite near to result of our study.

Muthir and Utoo found in Jos, Nigeria that the most common postpartum maternal morbidity was primary postpartum hemorrhage (35.4%). This was followed by hypertensive disorders (24.8%) and genital tract sepsis (16.7%).\(^{(10)}\) There was a statistically significant relationship between accoucher and postpartum maternal morbidity in their study.\(^{(11)}\)

RCH-II found that 31% women had complication during the post-delivery period. The main reported postdelivery complication is lower abdominal pain, high fever, and severe headache and about half of the women sought treatment for any complications. Forty-eight percent of rural women and 61% of urban sought treatment for any postdelivery complication.

Effective safe motherhood interventions need to be implemented at all levels of a country’s health system. Research shows, that in many settings, improving services that already exist, by investing in upgrading the skills and competence of health-care providers and enhancing referral systems, can have a significant impact. The most successful health-care programs especially maternal services can be enacted as part of a coordinated effort and with commitment at both the community and government levels.

In this study, we found that urban elite mothers visited health facilities more for their morbidities as they were more literate or presence of better primary health-care facilities in the urban elite areas.

Paradoxically, we find that problems were more in mothers who had antenatal checkups or had institutional deliveries; this is attributed because the mothers who had faced any complication took consultation from same health facility while those who did not had any checkup or had home delivery, did not notice any problem which further leads to major complication or death.

The present study findings suggest that awareness and accessibility of health-care equipped with modern maternity facilities has a significant influence on the health-seeking behavior of women. Since it may not be possible to establish a health facility staffed with a doctor or a nurse in every slum area of Agra, there is a need to increase IEC activities in the community about benefits of using modern maternity care at nearby health centers for better pregnancy outcome.

**Conclusion**

We conclude that if the women go to health facility during pregnancy for health check-up or opt the same for delivery; it would not lead to complications or if complications arise, it will be dealt timely and effectively. But still, the large numbers of mothers are not seeking care of their ailments, during prenatal, natal or postnatal especially rural mothers. The problem of not taking treatment can be overcome by female education and female education will further enhance female empowerment as well as enhance the economic status of women so that they can take independent decisions when availing of safe motherhood services.

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**Conflicts of interest**

There are no conflicts of interest.

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