Original Research Article

Evaluation of home based postnatal care provided by accredited social health activist worker in a rural community of Haryana: a cross-sectional study

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Received: 04 September 2019
Revised: 16 October 2019
Accepted: 17 October 2019

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ABSTRACT

Background: The post-natal period is the most critical time for the mother and the newborn. Most of the maternal deaths occur in first month of life. Based on these facts Government of India took an initiative, home based postnatal care (HBPNC), to follow up postnatal mothers and newborns for first six weeks. The present study assessed the quality of HBPNC provided by accredited social health activist (ASHA) workers and various factors associated with it.

Methods: This cross-sectional study was conducted under Community Health Center, Dubaldhan in block Beri of Haryana. A total of 60 ASHA workers were visited and all the postnatal mothers under the supervision of each ASHA worker were included in the study. In this way 264 postnatal mothers were contacted. A scoring system was used to assess the quality of HBPNC given by ASHA worker.

Results: Majority of ASHA workers were not able to record temperature and weight of the baby correctly. Regarding care of cord and danger signs in newborn only half (50%) of the mothers were counselled, whereas, only 48% mothers were counseled regarding care of eyes. Statistically significant association of quality of newborn care with education and training attended by ASHA workers was seen.

Conclusions: Our study confirmed that most of the newborn babies were not getting good quality of home based newborn care. Recent training attended by ASHA worker is highly associated with providing good quality newborn care to babies by ASHA workers.

Keywords: ASHA worker, Postnatal care, Maternal death

INTRODUCTION

Maternal deaths are the reflection of “social disadvantage” and not merely “health disadvantage”. India has made a remarkable improvement in health care but still the evil of maternal mortality percolates in our country. In 2015 India accounted for 19% (45,000 in numbers) of all global maternal deaths.1 Also, India contributed 1.2 million under-5 child deaths, a stunning 20% of the global burden.2

India was the first country in world to launch National Family Planning Programme in 1952 with the sole objective of reduction of birth rate to stabilize the population. Keeping mother and child health in priority, with time many such initiatives were taken like Family Planning Programme in 1952.
Welfare Programme, Universal Immunization Programme, Child Survival and Safe Motherhood Programme in 1992 and Reproductive and Child Health Programme in 1997. Home based postnatal care (HBPNC) is one of such initiatives, taken by Government of India in 2013, to follow up post-natal mothers and newborn for first six weeks.

According to Government of India guidelines on HBPNC, in case of institutional delivery 6 home visits i.e., on 3rd day, 7th day, 14th day, 21st day, 28th day and 42nd day are expected from accredited social health activist (ASHA) workers and in case of home delivery 7 home visits are expected i.e., in addition to 6 visits an extra visit on day 1 to be included. All peripheral health care service providers (which include the Anganwadi, the auxiliary nursing midwife and the medical officers) are responsible for providing HBPNC. However, the main vehicle to provide this is ASHA workers under National Health Mission. The key activities in HBPNC constitute birth planning and birth preparedness, care for post-natal mother and new-born through a series of home visits, counsel the couples to choose an appropriate family planning method, early identification of postpartum complications and danger signs in new-born and refer appropriately.

So, the present study was planned to assess the quality of HBPNC provided by ASHA workers and various factors associated with it.

METHODS

This descriptive study was conducted in Community Health Center Dubaldhan in block Beri, District Jhajjar, Haryana, a rural field practice area attached to Department of Community Medicine, Pt. B. D. Sharma PGIMS, Rohtak. The duration of study was 1 year (September 2014 to August 2015) and data was collected using a predesigned, pretested semi-structured questionnaire as prescribed for supervisors under HBPNC guidelines. There were 120 ASHA workers posted under CHC Dubaldhan and every alternate ASHA worker was included in the study. A total of 60 ASHA workers were contacted and all the postnatal mothers under the supervision of each ASHA worker were included in the study. So, 264 study subjects (postnatal mothers) were recruited in the study. A written informed consent was taken after explaining the purpose of the study from ASHA and then she was accompanied with investigator to contact the recruited subjects by home visit.

A written informed consent was also obtained from mothers and purpose of the study was explained. Those mothers who refused to give the consent were excluded from the study. After taking the consent, ASHA worker was asked to check postnatal mother as per her scheduled visit. The investigator himself observed her activities while she was assessing the subject and recorded the observations into the study tool.

For evaluating the quality of HBPNC, 15 activities by ASHA workers were considered. Each activity was given score 1 if done by ASHA and if not then it was given score 0. An average score was allotted to the respective ASHA worker based on evaluation of the quality of all postnatal care under her supervision. The range of score was 0-15. Those ASHA workers who got a score between 0-7 were given as poor-quality care; score between 8-11 were given as average quality care and score between 12-15 considered as good quality of home based new born care.

Collected data were entered in the MS Excel spreadsheet, coded appropriately and analysed using statistical package for social studies for Windows version 20.0.

RESULTS

Socio demographic characteristics of postnatal mothers

Table 1 depicts socio demographic details of postnatal mothers. Age wise categorization shows that majority (62.12%) of study subject belonged to age group 21-25 years followed by 26.13% who were in age group 26-30 years. Mean age of postnatal mothers was 24.07±3.03 years. Nearly 50% of study subjects were of general category and 83.3% of study subjects belonged to joint family. Out of 264 postnatal mothers, more than one fourth were educated up to senior secondary level and 22.0% up to high school. Out of 264 subjects more than 85% were housewives while only 3% were in service.

| Characteristics                  | Frequency | %    |
|----------------------------------|-----------|------|
| **Age group (in years)**         |           |      |
| <20                              | 22        | 8.33 |
| 21-25                            | 164       | 62.12|
| 26-30                            | 69        | 26.13|
| ≥31                              | 9         | 3.40 |
| Mean±S.D.                        | 24.07±3.03|      |
| **Caste**                        |           |      |
| General caste                    | 133       | 50.38|
| Backward caste                   | 62        | 23.48|
| Schedule caste or tribes         | 69        | 26.14|
| **Religion**                     |           |      |
| Hindu                            | 262       | 99.2 |
| Muslim                           | 2         | 0.8  |

Continued.
Table 2: Details of delivery and its outcome (n=264).

| Characteristics          | Frequency | %  |
|--------------------------|-----------|----|
| **Type of family**       |           |    |
| Nuclear                  | 33        | 12.5|
| Joint                    | 220       | 83.3|
| 3 generation             | 11        | 4.2 |
| **Education**            |           |    |
| Illiterate               | 23        | 8.7 |
| Primary school           | 18        | 6.8 |
| Middle school            | 55        | 20.8|
| High school              | 58        | 22.0|
| Senior secondary         | 70        | 26.5|
| Graduate                 | 28        | 10.6|
| Post-graduate            | 12        | 4.5 |
| **Occupation**           |           |    |
| House wife               | 231       | 87.5|
| Labourer                 | 16        | 6.06|
| Street vendor            | 0         | 0   |
| Cultivation              | 5         | 1.9 |
| Service                  | 9         | 3.4 |
| Others                   | 3         | 1.1 |
| **Total**                | 264       | 100 |

Table 3: Timeliness of postnatal visits and logistics carried by ASHA workers.

| Logistics                        | Yes (%) | No (%) |
|----------------------------------|---------|--------|
| **Timeliness of postnatal visits** |         |        |
| All scheduled visits made? (n=264) | 122 (46.2) | 142 (53.8) |
| Visit by ASHA on day 1 (in case of home delivery) (n=03) | 1 (33.3) | 2 (66.6) |
| **Logistics carried (n=60)** |         |        |
| Weighing scale                  | 58 (96.7) | 2 (3.3) |
| Thermometer                     | 38 (63.3) | 22 (36.7) |
| Flip chart                      | 16 (26.7) | 44 (73.3) |

Details of delivery and its outcome

Table 2 shows place of delivery and pregnancy outcome. Out of 264 mothers only 3 (1.1%) mothers were delivered at home. In the present study no maternal death was reported but 3 still birth and 2 neonatal deaths were reported.

Postnatal care

According to Government of India guidelines on HBPNC, in case of institutional delivery 6 home visits i.e., on 3rd day, 7th day, 14th day, 21st day, 28th day and 42nd day are expected from ASHA workers and in case of home delivery 7 home visits are expected i.e., in addition to 6 visits an extra visit on day 1 to be included.

Timeliness of postnatal visits and logistics carried by ASHA workers

Table 3 shows that only 46% mothers reported scheduled visits made by ASHA workers and among mothers delivered at home, only 1 (33%) mother visited on day 1st after delivery. Majority (96.7%) of ASHA workers were carrying weighing scale. Approximately two third ASHA workers were carrying thermometer and nearly one forth of ASHA workers were carrying flip chart.

Postnatal care

Table 4 shows postnatal care provided to mothers by ASHA workers. Out of 264 mothers only 57% and 54% mothers were asked about heavy bleeding and foul smelling discharge respectively. Approximately 90%
mothers were counselled regarding diet and rest and more than 80% mothers were counselled regarding resumption of sexual intercourse. Regarding contraception only 69% mothers were counselled, whereas, only 75% mothers were counselled regarding danger signs.

### Table 4: HBPNC provided by ASHA workers.

| Asking mother about following                  | Frequency | %     |
|-----------------------------------------------|-----------|-------|
| Heavy bleeding                                | 152       | 57.6  |
| Severe pain in abdomen                        | 160       | 60.6  |
| Fever                                         | 169       | 64.0  |
| Convulsions or fits                           | 141       | 53.4  |
| Foul smelling discharge?                      | 144       | 54.5  |
| Passing urine or stool normally?              | 189       | 71.6  |
| Taking adequate rest and food?                | 200       | 75.7  |
| Does the mother have any breast or nipple problem? | 123       | 46.6  |
| Does the mother have any other problem?       | 86        | 32.6  |

| Counselling family about following           | Frequency | %     |
|-----------------------------------------------|-----------|-------|
| Diet                                          | 235       | 89.0  |
| Rest                                          | 233       | 88.2  |
| Hygiene                                       | 214       | 81.1  |
| Resumption of sexual intercourse              | 156       | 59.1  |
| Contraception                                 | 183       | 69.3  |
| Danger signs                                  | 198       | 75.0  |

### Quality of postnatal care

Table 5 shows quality of postnatal care provided to mothers by ASHA workers. Only 39% mothers received good quality of postnatal care, whereas, approx. 33% and 30% mothers were provided average and poor quality of postnatal care by ASHA workers.

### Association between quality of HBPNC and socio-demographic determinants of postnatal mothers

Table 6 shows a statistically significant association was seen between quality of postnatal care provided and caste of mothers, education of mothers and family type of mothers. Among those mothers who were educated up to high school and senior secondary level, only 34% and 33% got good quality of postnatal care respectively. Those mothers who belonged to joint family and nuclear family around 30% got poor quality postnatal care. The association between quality of HBPNC given by ASHA workers with their age was statistically nonsignificant with p value being 0.176. It was seen that among those mothers who were in age group more than 31 years good quality postnatal care was provided to only 55% mothers and among those mothers who were in age group less than 21 years, half of mothers got poor quality of postnatal care.

### Table 5: Quality of HBPNC provided by ASHA workers.

| Scores | Quality of postnatal care provided to mothers | Frequency | %     |
|--------|---------------------------------------------|-----------|-------|
| 0-7    | Poor                                        | 89        | 33.7  |
| 8-11   | Average                                     | 71        | 26.9  |
| 12-15  | Good                                        | 104       | 39.4  |

### Table 6: Association of quality of HBPNC with socio-demographic variables.

| Characteristics | Poor N (%) | Average N (%) | Good N (%) | Total N (%) | P value |
|-----------------|------------|---------------|------------|-------------|---------|
| Age (in years)  |            |               |            |             |         |
| <21             | 11 (50)    | 6 (27.3)      | 5 (22.7)   | 22 (100)    | 0.176   |
| 21-25           | 53 (32.3)  | 44 (26.8)     | 67 (40.8)  | 164 (100)   |         |
| 26-30           | 19 (27.5)  | 21 (30.4)     | 29 (42.0)  | 69 (100)    |         |
| ≥31             | 0 (0)      | 4 (44.4)      | 5 (55.6)   | 9 (100)     |         |
| Caste           |            |               |            |             | 0.011   |
| General         | 50 (38.2)  | 33 (25.2)     | 50 (38.2)  | 131 (100)   |         |
| Backward caste  | 23 (37.2)  | 18 (29.0)     | 21 (33.8)  | 62 (100)    |         |
| Schedule caste or tribes | 10 (14.5) | 24 (34.8)     | 35 (50.7)  | 69 (100)    |         |

Continued.
DISCUSSION

In the present study, mean age of postnatal mothers was 24.07±3.03 years. Regarding postnatal care provided to mothers by ASHA workers it was seen that only 57% mothers were asked about heavy bleeding, whereas, 60.6% and 64% mothers were asked about severe pain abdomen and fever respectively. Approx. 54% mothers were asked for convulsions and foul smelling discharge. Only 46% mothers were asked about breast/nipple problems and only 36% mothers were asked for any other problem by ASHA workers. Approx. 90% mothers were counselled regarding diet and rest and more than 80% mothers were counselled regarding hygiene. Bhaisare et al reported that advice on personal hygiene was given to 31% of mothers. Comparably mother's postnatal care utilization decreases with increase in mother’s age. It was seen that quality of postnatal care among mothers who were illiterate or educated up to primary level was good in more than 60% mothers, whereas, among mothers who were educated up to secondary level or above, nearly half of the mothers were getting good quality postnatal care.

The study by Khanal reported that there was increase in postnatal care utilization with increase in mother’s education. Singh also observed that inverse association was found between educational status of mothers with services provided by ASHA workers which means that illiterate mothers were more likely to avail ASHA services for postnatal care. Dhakal et al in Nepal also observed that as education of women increases so did the likelihood of having postnatal health care. Women with secondary school education had more chance of receiving postnatal care than illiterate women.

The present study also depicts that a significant association exists between education of mothers and postnatal care given to mothers and babies. It was seen that quality of postnatal care among mothers who were illiterate or educated up to primary level was good in more than 60% mothers, whereas, among mothers who were educated up to secondary level or above, nearly half of the mothers were getting good quality postnatal care.

CONCLUSION

It can be concluded from the present study that the postnatal visits made by the ASHA workers were adequate in number. It is imperative to note here that the quality of these visits was very poor. Many of postnatal mothers were not asked even about bleeding per vagina or foul smelling discharge. We need to focus on quality postnatal care rather than just covering all postnatal mothers without following the protocol of HBPNC.
ACKNOWLEDGMENTS

We acknowledge the cooperation provided by the Health department of Haryana, the active participation of the ASHA workers and the beneficiaries.

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

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Cite this article as: Grover K, Khanna P, Chayal V, Verma R, Kapoor R, Kumar T, et al. Evaluation of home based postnatal care provided by accredited social health activist worker in a rural community of Haryana: a cross-sectional study. Int J Community Med Public Health 2019;6:5123-8.