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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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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 new born 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

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.[3] 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.

Table 1: Socio demographic profile of postnatal mothers (n=264).

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 years	
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.

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

		Frequency	%
Place of delivery	Institutional	261	98.9
	Home	3	1.1
Pregnancy outcome	Still birth	3	1.1
	Neonatal death	2	0.8
	Baby alive	259	98.1
	Maternal death	0	0
	Mother alive	264	100

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

	Logistics	Yes	No
		N (%)	N (%)
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.

	Frequency	%
Asking mother about following		
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		
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

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	Average	Good	Total	P value
		N (%)	N (%)	N (%)	N (%)	
Age (in years)	<21	11 (50)	6 (27.3)	5 (22.7)	22 (100)	0.176 χ^2 =8.959
	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	General	50 (38.2)	33 (25.2)	50 (38.2)	131 (100)	0.011 χ^2 =16.55
	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.

Characteristics		Poor	Average	Good	Total	P value
		N (%)	N (%)	N (%)	N (%)	
Education	Illiterate	5 (21.7)	6 (26.1)	12 (52.2)	23 (100)	0.000 χ^2 =35.50
	Primary school	3 (16.7)	7 (38.9)	8 (44.4)	18 (100)	
	Middle school	15 (27.3)	11 (37.9)	29 (52.7)	55 (100)	
	High school	12 (20.7)	26 (44.8)	20 (34.5)	58 (100)	
	Senior secondary	35 (50)	12 (17.1)	23 (32.9)	70 (100)	
	Graduate	5 (17.9)	10 (35.7)	13 (46.4)	28 (100)	
	Post-graduate	8 (66.7)	3 (25)	1 (8.3)	12 (100)	
Type of family	Nuclear	10 (30.3)	9 (27.3)	14 (42.4)	33	0.316 χ^2 =4.728
	Joint	68 (30.9)	66 (30)	86 (39.1)	220	
	3-generation	5 (45.5)	0 (0)	6 (54.5)	11	
Total		83 (31.4)	75 (28.4)	106 (40.2)	264 (100)	

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.[4] Comparable to the present study a report by Varghese et al mentioned that in Orissa 92% mothers were counselled for rest by ASHA workers during postnatal visits.[5] Chimtembo reported that midwives counselled all postnatal women about personal hygiene and nutrition practices.[6]

The present study shows that 69% mothers were counselled regarding contraception, whereas, 75% mothers were counselled regarding danger signs. Study by Fathima et al reported that 21% mothers were counselled on contraceptive-use.[7] Bhaisare et al also observed that only 16% women were given information about complications of pregnancy for the mother and only 19% mothers were advised about contraception.[8] Varghese et al also reported that 66% and 95% mothers were counselled for family planning in Rajasthan and Orissa respectively.[5]

Khanal conducted similar study among Nepalese mothers and reported that postnatal care utilization decreases with increasing age proportions of mothers.[8] Singh also conducted similar study in rural Lucknow and observed, contrary to present study, that inverse association was found between age of mothers and postnatal services provided by ASHA workers.[9] Young mothers (age group 25-29 years) were more likely to avail ASHA services for postnatal care. Similar results were found by Nandjila in Namibia where it was reported that age is a factor associated with utilization of postnatal care services.[10] Utilization was poor among mothers below age 20 which was statistically significant (p value 0.01).

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.

The study by Khanal reported that there was increase in postnatal care utilization with increase in mother's education.[8] 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.[9] Dhakal et al in Nepal also observed that as education of women increases so did the likelihood of having postnatal health care.[11] Women with secondary school education had more chance of receiving postnatal care than illiterate women.

The present study reported that only one fourth ASHA workers were using flip chart during their home visits for postnatal care, whereas, study by Sinha et al in Mewat district of Haryana reported that none of the ASHAs used the pictorial flip chart to increase the mother's understanding.[12]

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.

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