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Original Research Article

Health services rendered through Accredited Social Health Activists to rural Uttar Pradesh, India: community's perception

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ABSTRACT

Background: To reduce infant and maternal mortality in India, the Government of India (GOI), under its flagship program, National Rural Health Mission (NRHM), in 2005, introduced a new village based health functionary named Accredited Social Health Activist (ASHA) to act as a bridge between rural population and health care delivery system. To a large extent the actualization of the goals of NRHM depends on the functional efficacy of ASHA as a grass root health activist.
Methods: The Study was conducted in a Chiraigaon Block of District Varanasi, Uttar Pradesh., India from October 2008 to September 2009. A total of 270 beneficiaries comprising of mothers, who have delivered during the study period or within last six months since initiation of the study were enrolled and interviewed. Apart from that, 20 Multi Purpose Health Workers- Female (MPHW-F), 30 elected village Heads and five Medical officers were interviewed independently to know their opinions about work performance of ASHA.
Results: This study revealed that 80 % of beneficiaries availed Ante Natal Care (ANC) check up. A total of 97% of the beneficiaries had received 100 tablets of Iron Folic Acid (IFA), 72% of the beneficiaries were counseled for nutrition during pregnancy and the child immunization coverage was more than 80%. About 75% of multi purpose Health Worker-Female (MPHW-F), 83 % of the village heads and 80% of the Medical Officers were of the opinion that the maternal and child health (MCH) services have improved after ASHAs introduction.
Conclusions: Overall, ASHA's impact in the form of counseling on health services utilization by beneficiaries was observed to be statistically significant.

Keywords: ASHA, IMR, Institutional deliveries, MMR, Maternal and child health, NRHM, Primary health care

INTRODUCTION

India is a large country with huge variations in health indicators across states and districts of the country. In spite of the vast progress made in the field of health services, a high proportion of the population, especially in rural India, still continues to suffer and die from preventable diseases; pregnancy and child birth related complications as well as malnutrition. The cause of low state of health are many including lack of sanitation, poor nutritional status, lack of appropriate health care etc.[1] Irrespective of tremendous advances in medical sciences, maternal and child health remains a major challenge to

the global public health system, especially in developing countries. In India, considerable attention has been paid in successive health programmers to decrease maternal as well as child mortality and morbidity but still the desired goals have not been achieved. In view of the health services inequalities between rural and urban population and to improve upon the poor health indicators, the Government of India (GOI) launched the National Rural Health Mission (NRHM) in April 2005 with an aim to provide accessible, affordable, accountable, effective, efficient and reliable primary health care to the rural population.[2]

Before the launch of NRHM, the interface of health services to the rural population was through a health functionary known as Multi Purpose Health Worker – Female (MPHW-F) who was posted at a village based health unit known as Sub-Centre and she used to cater the basic health needs (particularly maternal and child health services) of the population of around 5000 people and her work area includes 5-10 villages according to the geographical variations. The MPHW-F was supposed to carry out all the work in all these villages which included provision of reproductive and child health services (RCH) services, annual survey, conduction of deliveries, conduct sessions for immunization, to attend meetings and trainings, prepare reports and compilation of data and reporting to the higher centre. All these work left her with very less time and hence she was not being able to give sufficient attention to interact with the villagers. Because of these issues, her work became a mechanical task with no time for motivational and advisory role.

Thus to overcome this limitation at grass root level, one of the core strategies proposed in NRHM was to create a new trained female community health activist, designated as Accredited Social Health Activist (ASHA) for every village with a 1,000 population. (ASHA means "hope" in Hindi language). It was suggested that ASHA would be a women (in the age group of 25-45 years) resident of that particular village with having at least elementary schooling (at least eight years of schooling) and a positive attitude for social cause. It was stated in NRHM document that ASHA would be chosen by and will be accountable to the local village level elected body known as Panchayati Raj Institution (PRI) so as to enhance community participation.

As an honorary volunteer; ASHA receives performance-based incentives for promoting variety of primary health care services in general and Reproductive and Child Health (RCH) services in particular such as universal immunization, referral and escort services for institutional deliveries, family planning, promotion of construction of household toilets and other healthcare interventions.[2] She acts as an interface between the community and the public health system. ASHA is considered as the first port of call for any health related demands to access health services. ASHA is the health activist in the community who creates awareness on health and its social determinants. She is a promoter of good health practices and provides a minimum package of curative care as appropriate and feasible for that level and makes timely referrals.[2] Her presence ensures all time availability and free interaction among her and the villagers on health issues.[1] Thus, to a large extent, the actualization of the goal of NRHM depends on the functional efficacy of the ASHA as the grassroots health activist and her co-ordination with different stakes holder at the village level.

Since the implementation of ASHA several studies have been conducted in order to know the impact of ASHA on the delivery of primary health care in general and maternal and child health care in particular at the grassroots level. An evaluative study by Garg et al (2013) on ASHA reveals that they do provide constellation of services and play a potential role in providing primary health care but still they need to put into practice their knowledge while providing services and/or advice to negotiate health care for women and children.[3] Srivastava (2012) reported that despite the training given to ASHAs, lacunae still exists in their knowledge regarding various aspects of child health morbidity and suggested that refresher training should be conducted for newly recruited ASHA workers.[4] Shashank et al (2013) also observed that the effectiveness of ASHA worker largely depends on the training and support from both the health system and the community.[5]

Mane and Khandekar, opined that with the involvement of ASHA, the country has been making remarkable strides in the improvement of maternal health and some health indicators like maternal mortality ratio, infant mortality rate and total fertility rate have shown decline.[6] Joshi and Mathew even considered that the ASHA's role in the community is more important compared to ANMs as they belong to the community and work to address the health needs of the community on various fronts.[7] Thus in view of the introduction of a new health functionary at village level, the current study was planned to assess the health services rendered through ASHA and the perception of different stake holders about her contribution.

Objectives

- To assess the utilization pattern of the maternal and child health services by the rural community after the launch of a new health functionary ASHA.
- To assess the opinion of the different stake holders in health care delivery system about ASHA's performance.

METHODS

Study area

This study was undertaken in rural areas of District Varanasi in the state of Uttar Pradesh (India). There were

a total of eight Community Development Blocks in this district out of which the study was conducted at Chiraigaon block.

Study design

Community based, analytical, cross sectional, non-interventional study.

Study technique

Multi-stage random sampling technique.

Study size and sample

A total of 270 women of reproductive age group of 15-45 years who have delivered within the last six months from the time of initiation of this study or who delivered during the one year tenure of study were selected. These candidates have been receiving health care services from ASHA. Apart from these respondents, 20 MPHW-F, 30 Village Heads and five Medical officers were interviewed separately to know their opinion regarding work performance of ASHA.

Study period

Study was conducted from October 2008 to September 2009 (total one year).

Study tools

By applying a Multi-stage random sampling technique; the study was conducted first by selection of Block, then seven Panchayats (PRIs) out of total fourteen PRIs in that selected block and finally ASHA working in those selected PRIs. The data have been obtained from the beneficiaries as well as various stakeholders involved in health sector so as to assess the utilization pattern of health services after introduction of ASHA in community and her work performance.

In this study, all the beneficiaries have been receiving health care services from ASHAs of their respective village. Beneficiaries were interviewed face to face regarding the kind of health services they were receiving from ASHA. The responses obtained from the in depth interview were simultaneously documented in the pre-tested, open-ended Performa.

All the respondents were explained well in their vernacular language about the purpose of the study. It was clearly explained to them that confidentiality would be maintained and their identity and responses would not be disclosed/ shared to anybody and the results of the study would be utilized/ published only for academic purpose for the advancement of medical science and health care services. Written consent of the beneficiaries was obtained before starting the interview. The respondents were also given the liberty to leave the study interview in between, if they wished so, without ascertaining any reason. There was no of conflict of interest and no financial sources from any source were involved to conduct this study.

Exclusion criteria

In case there were more than one eligible respondent in a single family, then only one woman from that family has been included so as to involve more and more households.

Ethical clearance

Ethical clearance was obtained from the Institutional ethics committee (IEC) of Institute of Medical sciences, Banaras Hindu University, Varanasi (India).

Statistical analysis

Collected data were entered in Microsoft Excel and were analyzed using software Statistical Package for Social Sciences (SPSS) version 16.0. Descriptive statistical measures such as percentage, mean were applied. Inferential statistical tests such as Z-test and Chi-square test were applied to identify important relationships between variables and determine the level of significance. A p-value of <0.05 was considered statistically significant.

RESULTS

Table 1 indicates that majority of the respondents (68.1%) were in the younger age group of 15-25 years. More than half (54.8%) of the interviewed beneficiaries were illiterate (Literate here indicates those respondents who can read and write). When the respondents were asked about the various health services availed by them with the help of ASHA, it was observed that about three-fourth of beneficiaries (72.2%) were counseled for availability of various health services in government sector.

In the present study, about 72% of the beneficiaries were counseled for nutrition and majority (97%) had received 100 tablets of Iron and Folic Acid (IFA) distributed by ASHA. Similarly, majority (97%) of respondents received Immunization for Injection Tetanus Toxoid (TT) during pregnancy.

As far as the awareness created by ASHA on institutional deliveries (Jananai Suraksha Yojna-JSY) is concerned, 64.8 % of respondents were informed by ASHA. JSY is a maternal benefit scheme launched by Government of India (GOI) in 2005 to promote institutional deliveries so as to reduce maternal and infant morbidity and mortality. In this scheme there is a provision of cash incentive of Rs 1400 to the mother (per delivery) and Rs 600 to the ASHA (per delivery) for motivating the mother for institutional delivery. (Rs is Indian national currency and

one US $ is approx. Rs 65). About 62.2% institutional deliveries were found to be due to the awareness crated by ASHA (Table 1).

The study also revealed that majorities (73%) of beneficiaries were attending Village Health and Nutrition day (VHND) organized in village by health functionaries and PRI members. The VHND are organized every month in every village to discuss the issues related to nutrition and health issues with villagers with particular focus on maternal and child health (Table 1).

When inquired about the method of family planning, it was observed that majority (89 .6%) of the beneficiaries were well-informed about sterilization methods (Tubectomy and vasectomy) more than other methods of contraception.

Table 1: General characteristics of beneficiaries receiving services from ASHA (n=270).

Characteristics		Number of beneficiaries	Percentage
Age	15-25 years	184	68.1
	26-35 years	78	28.9
	36-45 years	8	3.0
Education	Literate	122	45.2
	Illiterate	148	54.8
Occupation	Housewives	210	77.7
	Laborer	54	20.0
	Teachers	6	2.3
Services provided through ASHA			
Counseling of beneficiaries regarding availability of various health services by ASHA		195	72.2
Ante natal care (ANC) services availed		216	80.0
Iron Folic Acid tablets (IFA) tablets received		262	97.0
Tetanus Toxoid (TT) Immunization received		262	97.0
Medical Care received for minor ailments		86	31.9
Immunization of children due to motivation of ASHA		255	94.4
Attended Village Health and Nutrition Day (VHND)		197	73.0
Awareness created by ASHA regarding institutional delivery (Janani Suraksha Yojana i.e. JSY)		175	64.8
Delivery conducted at Health facility (Institutional delivery) as motivated by ASHA		168	62.2
Knowledge about family planning method			
Knowledge about Sterilization		242	90
Knowledge about Oral Contraceptive Pills (OCP)		222	82
Knowledge about Copper-T		119	44

Table 2: Relation between knowledge of Janani Suraksha Yojna (JSY) and place of delivery (n=270).

Variable		Place of delivery	
		Delivery conducted at home	Institutional delivery
Awareness crated by ASHA about JSY	Yes (175)	7 (4.0 %)	168 (96.0%)
	No (95)	10 (10.52%)	85 (89.4 %)
		$\chi 2 = 4.4$*	

Figures in parentheses indicates the percentage (*=Significant (P<0.05).

In the current study, more than half i.e. 175 (64.8%) of beneficiaries were given information and knowledge about JSY by ASHA and out of these 175, majority (168 women) opted for institutional delivery (Table 2). Most of them were not acquainted with the correct name of this scheme but there was a common knowledge prevalent among them that they will be getting a cash of Rs 1400 for every delivery conducted at a hospital.

It was interesting to observe that out of 95 respondents who were not informed of JSY by ASHA, still 85 respondents delivered at Health facilities. This could be attributed to the fact that few of them were referred to health centers because of complicated pregnancy and few of them were later got information about JSY from other sources other than ASHA like MPHW-F, neighbors, media advertisements about JSY etc.

Table 3 depicts that out of 270, majority 195 (72.2%) of the beneficiaries had been counseled by ASHA. It was observed that those beneficiaries who were counseled by ASHA were availing services more than those who were not counseled.

When beneficiaries were questioned about ASHA's visits to households, majority 191 (70.7%) of them responded for 'frequent visits' of ASHA, 70 (25.9%) replied as 'When they were called', and only 09 (3.3%) responded 'occasional visit' It was observed that the awareness regarding services provided by ASHA and its proper utilization was affected by the frequency of visits of ASHA to the beneficiaries' households. 'Occasional visits' of ASHA are found to be less effective (Table 4).

Table 3: Impact of ASHAs role in service utilization by beneficiaries (n=270).

Services provided by ASHA		Attended VHND		IFA		OCP		ANC		Medical care	
		No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Counseled by ASHA	Yes (n=195)	42	153	28	167	32	163	37	158	130	65
		(21.5)	(78.5)	(14.4)	(85.6)	(14.4)	(83.6)	(19)	(81)	(66.7)	33.3
	No (n=75)	31	44	16	59	16	59	17	58	54	21
		(41.3)	(58.7)	(21.3)	(78.7)	(21.3)	(78.7)	(22.7)	(77.3)	(72)	(28)
Test of significance		$\chi2$ **= 10.7		$\chi2$ = 1.93		$\chi2$ = 0.89		$\chi2$ = 0.46		$\chi2$ = 0.71	

Figures in parentheses indicates the percentage **= Highly significant (P<0.01).

Table 4: Services utilization by beneficiaries in respect to the frequency of household visit by ASHA (n=270).

Variables		Visit to Home			Test of significance
		Frequently (n=191)	Occasionally (n=09)	When called (n=70)	
Attended VHND	Yes	145 (75.92)	5 (55.56)	47 (67.14)	$\chi2$= 2.88 df=1
	No	46 (24.08)	4 (44.44)	23 (32.86)	
Immunization of children as motivated by ASHA	Yes	182 (95.29)	7 (77.78)	66 (94.29)	‡Fisher's exact test P= 0.38
	No	9 (4.71)	2 (22.22)	4 (5.71)	
Medical care for minor ailments	Yes	58 (30.37)	2 (22.22)	26 (37.14)	$\chi2$= 0.66 df=1
	No	133 (69.63)	7 (77.78)	44 (62.86)	
	Home	8 (4.19)	3 (33.33)	6 (8.57)	
TT immunization	Yes	185 (96.86)	7 (77.78)	70 (100.00)	‡Fisher's exact test; P= 1
	No	6 (3.14)	2 (22.22)	0 (0.00)	
Awareness created for JSY	Yes	129 (67.54)	1 (11.11)	45 (64.29)	$\chi2$= 2.01 df=1
	No	62 (32.46)	8 (88.89)	25 (35.71)	
Iron Folic acid received	Yes	191 (100.00)	5 (55.56)	66 (94.29)	‡Fisher's exact test P=0.001* * *
	No	0 (0.00)	4 (44.44)	4 (5.71)	
Counseling of Beneficiaries	Yes	145 (75.92)	7 (77.78)	43 (61.43)	$\chi2$ * = 4.5 df=1
	No	46 (24.08)	2 (22.22)	27 (38.57)	
ANC	Yes	160 (83.77)	2 (22.22)	54 (77.14)	$\chi2$* *= 5.8 df=1
	No	31 (16.23)	7 (77.78)	16 (22.86)	

χ^2 value is calculated after merging column 2nd and 3rd for statistical analysis, ‡ = Fisher's exact test is applied between frequent visitor and other (occasional and when called) (*=Significant (P<0.05), ** = Highly significant (P<0.01),***=Very highly significant (P<0.001).

Table 5 indicates that all MPHW-F's agreed that the ASHAs help them in their work and in the immunization activities. 75% opine that compliance for IFA in the community, especially among pregnant ladies, has improved dramatically after ASHAs introduction. 60% of the MPHW-F emphasized that the ASHAs maintained records. However, only 25% of them were confident that the ASHAs knew about the indications and side-effects of the drugs they were carrying. Similarly when the opinion was sought regarding the work performance of ASHA, it was observed that there was less co-ordination between them and ASHA.

ASHA operates in a village set-up; so naturally her activities must have been observed by the local village level elected leaders. More so, since the Village Head is involved in the selection of the ASHAs, it becomes quite pertinent to record their views regarding ASHA's work performance.

Table 6 depicts that a total of 30 village heads were interviewed to know their opinion about the activity under taken by ASHA in the community. Majority (83%) of the village heads had observed positive changes in the health and sanitation aspects of the community after the ASHAs have been introduced. 63% of the respondents reported that ASHAs were attending meeting conducted by them under Village health and Sanitation Committee (VHSC). Only 33.3% of the village heads endorsed the affectivity of ASHAs in motivation of the community for construction of sanitary latrine.

Table 5: Opinion of MPHW-F on performance of ASHA (n =20).

ASHA's performance on different issues	Positive opinion of MPHW- F (Percentage)
Does she help in immunization?	20 (100)
Does ASHA maintain her Record?	12 (60)
Does she know indication and side effect of medicines provided to her?	5 (25)
Has compliance improved for IFA tablet after ASHA?	15 (75)
Has the presence of ASHA helped in your work?	20 (100)

Similarly in the present study, all the five Medical officers (MOs) working in study block were interviewed for their views and interaction with ASHA regarding her work performance. All the MOs were regularly conducting one meeting at the end of month with all the ASHAs of the block regarding their work performance and problems in service delivery. Majority (80%) of the medical officer expressed their satisfaction with the role of ASHA in motivating institutional delivery at the PHC and appreciated the positive changes in aspect of health in the community after the ASHAs have come into action.

Table 6: Opinion of village heads (n =30) on performance of ASHA.

ASHA's performance on different issues	Positive view of village heads (n=30) (%)
Do you feel improvement after ASHA?	25 (83.33)
Are you satisfied with performance of ASHA?	22 (73.3)
Does she visit households?	28 (93.33)
Are ASHAs attending the meeting conducted under the aegis of Village Health and Sanitation Committee (VHSC)?	19 (63.4)
Does she motivate sanitary latrine construction in village?	10 (33.3)

DISCUSSION

In a study by Malani et al about 65% of beneficiaries had been motivated for ANC by ASHA [8]. It is similar to the findings observed under this study where about 72.2% were motivated for ANC by ASHA. An interesting observation was noted in the present study that the number of women who actually availed ANC services was higher than (80%) than those who were counseled by ASHA (72.2 %) and this could be attributed either to the prior knowledge of the respondents or knowledge acquired through other sources like newspaper, neighbors and other health functionaries/hospitals.

Pal DK et al reported that about 81% of the beneficiaries were counseled for nutrition and 82% had received 100 tablets of iron folic acid (IFA) distributed by ASHA.[9] In the present study, these services were 72% and 97 % of the beneficiaries respectively. Similarly, Shivali S reported about 88.8% IFA utilization by beneficiaries.[10]

According to the District Level Household Survey-3 (DLHS) data for the rural Uttar Pradesh, about 62% of respondents received Immunization for Injection Tetanus Toxoid (T.T.) during pregnancy.[11] Jain et al also observed that 65% of ANC cases received TT dose through ASHA.[12] But in the present study, this figure was reported to be 97%. This observation is higher in the present study than the observed figures in DLHS-3. This 'achievement' cannot be solely attributed to the ASHA's efforts as other health functionaries like MPHW-F, health sector functionaries and Information, Education & Communication (IEC) activities taken under NRHM etc could also have contributed. Findings similar to this study were also published by D.K. Pal et al in which 89% of beneficiaries were reported to be immunized by injection TT.[9]

In a study in urban slums of Delhi, Vikram reported a total of 71% institutional deliveries and about 26% of respondents were informed about JSY through ASHA.[13] Mohapatra et al observed that about 78% of beneficiaries had knowledge of JSY generated by ASHA.[14] But here in this study the ASHA disseminated information about JSY to about 64.8% of respondents. This difference of source of information could be attributable to the continuous presence of ASHA in the rural community as she is a permanent resident of the village.

It has been observed in the current study that majority 253 (93.7%) of deliveries were reported to be institutional deliveries irrespective of the source of knowledge about cash incentive under JSY. But when further probed, only 62.2% institutional deliveries were found to be due to the awareness created by ASHA. Similar results were observed by Roy S.[15] But in Rajasthan this was reported to be 69.7% by Uttekar et al.[16]

According to the report of District Level Household Survey (DLHS) of Uttar Pradesh (2007-08), about two-

third (63.6 %) of respondents were beneficiary under JSY but the observation in the current study (2008-09) indicates that a majority of 253 (93.7%) of the total respondents had their deliveries at a health facility i.e. institutional delivery.[11] This difference could be attributed to the time period when these studies were conducted because awareness regarding JSY was found to be increased in later year due to increased visibility and acceptance of ASHA in villages.17

In his research, Pursty (2014) reported that knowledge about IUD is lower than other method of family planning 18. Same observation was made under current study where sterilization was most known method of contraceptive to respondents. As explained earlier, ASHA receives performance based incentives only as a monetary reward for their work. So it is important to mention here that ASHAs receives Rs.150 per case of sterilization, as an incentive, for motivation. Higher awareness about sterilization among beneficiaries could be attributed to this phenomenon as ASHA might be more interested in motivating clients for sterilization method than other methods of contraception.

Counseling had a great impact on the attendance at Village Health and Nutrition day (VHNDs) by the selected beneficiaries viz., out of the total 195 counseled beneficiaries, 153 (78.5%) had attended VHND which was found to be statistically highly significant ($p<0.001$). Same observations were also made by Khan et al.[19]

A study conducted by Swain et al (2008) concluded that 98% of ASHA visit to the households but their effect on their service Utilization was not discussed in their study.[20] Shavali et al reported that only 30% of beneficiaries acknowledged that ASHA visited only once.[10] Here in the current study, about 76% of the frequently visited beneficiaries were attending VHNDs, while 67.5% were aware of JSY. Wherever ASHA visited occasionally; then JSY awareness came out to be only 11.1%.

In the present study, almost all MPHW-F's were in agreement that the ASHAs help them in their work and in the immunization activities. Similar findings were also observed by Haider S et al.[21] In our study, majority (83%) of the village heads had observed positive changes in the health and sanitation aspects of the community after the ASHAs have been introduced. But other studies by Haider et al and Bhatt observed that there was low coordination between village leaders and ASHA.[21,22]

CONCLUSION

Significant changes in awareness level of the rural beneficiaries regarding health care services were observed in the study. The number of institutional deliveries was high and the introduction of ASHA has helped the rural beneficiaries in getting continuous information about ANC, immunization, VHND which later transformed into utilization of health services and active participation in VHND.

Also, as per the inputs obtained from the various health functionaries, beneficiaries and the village heads, it can be concluded that the ASHA's work is mostly being appreciated by the community in general. This can be well-interpreted as a reflection of the acceptability and trust which she has managed to generate among the people by her work.

There is more need to stress upon the frequent home visits by ASHA as this will result in more awareness of the families about health issues and continuously persuade the families to obtain the available health services through ASHA. There is a need to further train the ASHA so that she could include almost every topic while interacting with every beneficiary including spacing methods for contraception and motivation for construction of latrines. There is a requirement of integration of other stake holders with ASHA's work. The common health and social indicators should be attached to the performance of PRIs so that they could give more attention to the work of ASHA and help her like arrangement of vehicle etc for promoting institutional deliveries. The incentive to ASHA for various activities should be increased accordingly as it is very much less to attract ASHA.

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