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Research Article

Utilization of ASHA services by the pregnant women of rural Tripura, India

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ABSTRACT

Background: India's National Rural Health Mission (NRHM) introduced Accredited Social Health Activists (ASHA) at the community level. Their vital role is to promote antenatal care and increase the utilization of the existing health services. The objectives were to find out utilization of ASHA services by the pregnant women and to study its determinants in rural area of Tripura, India.
Methods: A community based cross-sectional study was conducted during February – April 2015 using a validated interview schedule among 306 recently delivered women residing in Mohanpur block of Tripura, chosen by multistage sampling.
Results: Utilization rate of ASHA services by pregnant women was found to be 89.7%. Pregnancy registration rate was 95% and 90% of these registrations were facilitated by ASHA. Adequate antenatal check-up rate facilitated by ASHA was 76.69%. Regarding Iron and Folic Acid prophylaxis, 67.88% of the adequate recipients were facilitated by ASHA. For laboratory tests, 80.23% of the women were motivated by ASHA. About 90% of the study women have heard about Janani Suraksha Yojona (JSY) scheme from ASHA and 70% of them got the benefit through ASHA. Literacy, parity, community, economic class, home visit by ASHA and family decision maker were identified as the significant determinants of utilization of ASHA services by the pregnant women.
Conclusions: Utilization rate of the ASHA services by the pregnant women needs improvement. Apart from IEC activities, active home visits by ASHA, empowering couples to make their own fertility decisions, improvement in female literacy etc. may enhance utilization of ASHA services by this community which will intern enhance maternal health care utilization.

Keywords: ASHA, NRHM, JSY, Antenatal Care, Utilization

INTRODUCTION

In 2005, as a key component of efforts to expand access to health services in underserved areas, India's National Rural Health Mission (NRHM) introduced Accredited Social Health Activist (ASHA), a community based health worker (CHW).[1] The ASHA is a female volunteer selected by the community, deployed in her own locality after a short training on community health.[2] The ASHA program under the NRHM, based on the experiences of various Community-based Health Workers (CHW) schemes in the country, is considered to have the potential to generate community participation through its implementation.[3] To be more specific, the government of India launched the NRHM in order to provide accessible, accountable, affordable, effective and reliable primary health care to the poor and vulnerable section of the rural population.[4] ASHA is expected to provide primary medical care with her kit, control of diseases by information and education, sanitation and surveillance,

antenatal, natal and postnatal services to women, counseling on family planning, safe abortion, child immunization and Vitamin A supplementations, change in behaviour in breast feeding, birth spacing, sex discrimination, child marriage, girls education, care of the child especially newborn, household survey, collaborating with health functionaries , working with community disease control, to create awareness on health and its determinants, mobilize the community towards local health planning, and increase the utilization of the existing health services.[5] The ASHAs represent the cornerstone of NRHM's strategy to address the Millennium Development Goals (MDG) on health related indicators.[6] They being the grass root level workers, the success of NRHM in India depends up on how efficiently ASHA is able to perform.[7] Most of the maternal deaths and pregnancy related complications can be prevented by quality antenatal, natal and post-natal care. Current utilization of any antenatal care services in India is only 77% (72% in rural and 91% in urban areas).[8] But the details regarding utilization of antenatal services provided by ASHA in rural area of Tripura is limited. Hence, the present study was conducted to find out the proportion of pregnant women utilizing various antenatal services being motivated by ASHA and to study the factors determining the utilization ASHA services by women in rural area of Tripura, India.

METHODS

Tripura, a small North-Eastern hilly state of India has got 45 rural administrative blocks spread over eight districts. This community based cross-sectional study was conducted during February to April 2015, among 306 recently delivered women (RDW) residing in 10 villages of Mohanpur block of West Tripura district, chosen by multistage sampling. Minimum sample size requirement for this study at 5% level of significance and 5% absolute error was determined to be 315, considering the utilization rate of antenatal care (Public sector) as 73.6% in rural area of Tripura.[9] At the first stage of sampling, out of 45 enlisted blocks in Tripura, Mohanpur block was chosen by Simple Random Sampling (SRS) and from the list of 30 villages under Mohanpur block, 10 (30%) villages were chosen by SRS. A village wise list of RDW along with their address was prepared by door to door survey with the help of Medical Social Workers (MSW) from Community Medicine Department of Agartala Government Medical College and the panchayet secretaries of concerned villages. Finally 315 RDW were selected from this list by SRS ensuring Probability Proportionate to Size (PPS) representation in the sample. Active or passive consultation with ASHA before or during availing any of the antenatal care services or receiving the service from ASHA was considered as utilization of ASHA services. Women up to their 45th day of confinement were considered as recently delivered women (RDW). Illiterate women were those who did not have formal schooling. Primary educated were those who had schooling of any level between standard I to VIII. Secondary educated were those who had schooling up to any level between standard VIII to XII. Graduate & above were those who studied up to any level in a college or university. Economic classes (APL / BPL) were defined as per latest Govt. of India guidelines. Registration of pregnancy within 12 weeks of gestation was considered early registration. Less than two antenatal checkups were considered inadequate. Consumption of less than 100 Iron & Folic Acid tablets (IFA) during antenatal period was considered inadequate IFA consumption. The selected RDW were paid home visits and verbal informed consent for participation in this study was sought. Out of 315 women, 2 refused to participate in this study, 4 were considered physically unfit to make any valid statement and 3 were out of station during the study period and were excluded. Thus final sample size was reduced to 306. Each of the study women was interviewed confidentially taking equal time in a face to face manner using a pretested and validated interview schedule in presence of a female MSW from the Community Medicine Department of Agartala Government Medical College. Data regarding socio-demographic parameters, utilization of various antenatal services available from ASHA as per National Health Mission norm and also the reasons for not availing them were obtained as per the structured schedule. Content validity and face validity of the interview schedule was evaluated by piloting it up on 30 RDW from the study area. Three Public Health Specialists also evaluated clarity and representativeness of the interview schedule regarding utilization of ASHA services by RDW. Factor analysis also demonstrated adequacy of construct validity of the schedule. Data were recorded in the interview schedule itself on the spot and later on entered and analyzed in computer using SPSS – 15.10 Confidentiality was maintained at all the steps. Descriptive statistics, Chi-square test, t-test, logistic regression analysis etc. were used for presenting data and p-value less than 0.05 was considered statistically significant.

RESULTS

The response rate was 97.14 %. Out of 306 women in the survey, 94.44% (289) have heard about the ASHA scheme but only 77% of the study women could recollect the name of ASHA of their locality. Among the women who have heard about ASHA, 89.7% took her help for antenatal care (ANC), Out of 306 study women, 95% (291) got their pregnancy registered during antenatal period and 90% (262) of these registrations were facilitated by ASHA. Out of those registered, 70% (204) had early registrations. It was found that 87% (266) of the RDW had adequate number of ANC visits. Among the RDW facilitated by ASHA, 76.69% (204) had three or more ANC visits. Overall 6.3% RDW did not have any ANC visits. Only 3.2% of the RDW who despite having history of contact with ASHA did not have ANC visit as compared to 12.4% RDW who had no contact with ASHA and no ANC. Total coverage of two doses of TT injections among the registered was 91%. Among the

RDW who were facilitated by ASHA, 3.2 % didn't receive any Tetanus toxoid (TT) injection compared to 11 % who had no contact with ASHA. Only 63% of the RDW received minimum 100 IFA tablets and 14.2 % of these recipients gave history of consuming all 100 IFA tablets. Regarding IFA tablets, 67.88% of the adequate recipients were facilitated by ASHA and 76.69% of the inadequate recipients recollected that they were counseled by ASHA at least once to have IFA tablets. Regarding laboratory investigations, 28% of the RDW underwent all minimum required laboratory tests and those who got tested, 80.23% of them were motivated by ASHA. Those who had partial or no tests done, 60% of them said that they were advised by the ASHA to get tested. Overall institutional delivery rate was found to be 84.21% and it was 96.23% among the RDW motivated by ASHA. About 79% (242) of the study women have heard about JSY (Janani Suraksha Yojona) scheme and 90% (218) of these women heard about the scheme from ASHA of their locality. Study revealed that only 70% of the RDW could avail the JSY benefit and all of them were facilitated by ASHA.

Table 1: Socio-demographic profile of the study women.

Variables	Subgroups	Number	Percentage
Age	< 25 years	192	62.75
	25 to <35 years	106	34.64
	≥35 years	08	2.61
Occupation	Housewife	269	87.91
	Working outside	37	12.09
Literacy	No formal education	13	4.23
	Primary educated	142	46.41
	Secondary educated	130	42.50
	Graduate & above	21	6.86
Parity	Primipara	168	54.90
	Multipara	138	45.10
Community	General Caste	55	17.97
	Scheduled Caste	102	33.33
	Scheduled Tribe	95	31.05
	Other Backward Community	54	17.65
Religion	Hindu	293	95.75
	Muslim	08	2.62
	Christian	05	1.63
Economic class	BPL	95	31.05
	APL	211	68.95
Type of family	Nuclear	171	55.88
	Joint	135	44.12

Table 2: Registration, ANC, TT immunization, IFA prophylaxis and laboratory tests during pregnancy by motivation of ASHA.

Variables	Sub-groups	Motivated by ASHA		Significance
		Yes	No	
		Number (%)	Number (%)	
Pregnancy registration	Early	184 (90.20)	20 (9.80)	$\chi^2 = 0.042$ p = 0.838
	Late & never	92 (90.20)	10 (9.80)	
Antenatal check-up	Adequate	204 (68.00)	62 (32.00)	$\chi^2 = 5.723$ p = 0.016
	Inadequate & nil	23 (57.50)	17 (42.50)	
TT immunization	Fully immunized	256 (96.97)	8 (3.03)	$\chi^2 = 5.003$ p = 0.025
	Not fully immunized	37 (88.00)	5 (12.00)	
Receiving IFA tablets	Adequate	131 (67.88)	62 (32.12)	$\chi^2 = 39.45$ p = 0.000
	Inadequate & nil	79 (76.69)	34 (23.31)	
Lab investigations	All undergone	69 (80.23)	17 (19.77)	$\chi^2 = 10.350$ p = 0.001
	Partial & nil	132 (60.00)	88 (40.00)	

Table 1 shows that majority of the study women were aged <25 years (62.75%), housewives (87.91%), primary educated (46.41%), belonged to Scheduled caste community (33.33%), Hindu by religion (95.75%) and were living above the poverty line (68.95%).

Table 2 shows that proportion of women facilitated by ASHA had significantly more (p<0.05) IFA prophylaxis, adequate ANC, full TT immunization and laboratory tests during pregnancy.

Table 3 shows that logistic regression analysis has identified literacy, parity, community, economic class, home visit by ASHA and family decision maker as significant (p< 0.05) determinants of utilization of ASHA services by the study women, while the rest did not attain the level of statistical significance.

Table 3: Binary logistic regression analysis of the utilization of ASHA services.

Continuous variables		Odds ratio (95% C. I.)	*p* – value
Age of women		1.031 (0.973 – 1.101)	0.156
Per-capita monthly income (Rs.)		1.134 (1.037 – 1.240)	0.012
Categorical variables		**Odds ratio (95% C. I.)**	***p* - value**
Occupation	Housewife	1.598 (0.674 – 4.282)	0.251
	Working outside	1	
Literacy	Secondary & above	2.473 (1.376 – 4.055)	0.003
	Illiterate & primary	1	
Parity	Multipara	4.988 (3.285 – 7.634)	0.000
	Primipara	1	
Religion	Others	3.619 (0.697 – 7.378)	0.084
	Hindu	1	
Community	SC & ST	4.589 (2.470 – 7.258)	0.000
	General & OBC	1	
Economic class	BPL	2.379 (2.390 – 7.268)	0.028
	APL	1	
Type of family	Nuclear	3.431 (2.345 – 6.261)	0.064
	Joint	1	
Family decision maker	Husband and or wife	4.486 (2.469 – 7.257)	0.033
	Family elders only	1	
Home visit by ASHA	Visited	3.472 (1.535 – 4.671)	0.012
	Not visited	1	

DISCUSSION

Socioeconomic condition and literacy are important determinants of health of a community. The female literacy level in this study is found to be better than the 2011 census for Tripura.[11] This is in contrast to other similar studies where maximum were illiterate.[12,13] This may be due to improvement in literacy rate in Tripura over the time. In the present study about 87% of the women had adequate antenatal checkup which is much higher than NFHS-3 (2005-06),[8] Singh et al,[13] Ranjan Das et al.[14] and Sunder Lal et al.[15] This may be attributed to the higher literacy as well as better working of ASHA in this region. In this study out of total pregnancy registrations 70% were early; whereas Ranjan Das et al.[14] found it to be only 57.2% and Sunder Lal et al.[15] found to be 95%. These variations suggest regional variations in the motivational level of ASHA. Coverage of TT second dose or booster among the RDW motivated by ASHA was more than 90% which was at par with the findings of Ranjan Das et al.[14] and Sunder Lal et al.[15] The proportion of RDW who received minimum100 Iron & Folic acid (IFA) tablets in the present study is similar with Padda et al.[16] Consumption of IFA tablets was found to be higher than the findings of Ranjan Das et al.[14] and Sunder Lal et al.[15] Institutional delivery rate was found to be 84.21% in this study and it was similar to the finding of Padda et al.[16] but much higher than the findings of Ranjan Das et al.[14] and Sunder Lal et al.[15] These differences were due to the fact that these studies were conducted much earlier before the introduction of NRHM and ASHA scheme. In this study utilization of ASHA services for ANC was 89.7% which was only 69.7% as per Amit Shukla et al.[17] Lower economic status was associated with higher utilization of ASHA services after controlling for other

variables and it was significant. Previous studies also pointed towards economic factor as a predictor.[18,19]

CONCLUSION

Prior studies and reports concluded that delivery of maternal and child health services in India have improved after inception of ASHA workers in the community. But this study detects that all the expectant mothers are not utilizing the services of ASHA though it is freely available. Hence apart from IEC activities, active home visits by ASHA, empowering couples to make their own fertility decisions, improvement of female literacy etc. may enhance utilization of ASHA services by this community in order to improve maternal and child health.

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