

Assessment of Knowledge & Contributing Factors of Accredited Social Health Activist (ASHA) Workers Regarding Antenatal Care in Bhojipura Block, District Bareilly

Sumit Saxena¹, Anurag Srivastava², Sonam Maheshwari³, Anju Saxena⁴

¹ Assistant Professor, Department of Community Medicine, T. S. Misra Medical College & Hospital, Lucknow, Uttar Pradesh, India

² Professor & Head, Department of Community Medicine, Teerthanker Mahaveer Medical College & Research Centre, Moradabad, Uttar Pradesh, India

³ Assistant Professor cum Statistician, Department of Community Medicine, Government Medical College, Dehradun, Uttarakhand, India

⁴ Assistant Professor, Department of Pharmacology, T.S.Misra Medical College & Hospital, Lucknow, Uttar Pradesh, India

Correspondence: Dr. Anurag Srivastava, E mail : dranurag77@yahoo.com

Abstract:

Introduction: The Government of India launched the National Rural Health Mission (NRHM) on 12th April 2005, to provide accessible, accountable, affordable, effective and reliable primary health care, especially to the poor and vulnerable sections of the population. One of the main tenets of the mission is to identify one ASHA (Accredited Social Health Activist) per 1000 population in the rural areas with the purpose of supporting the community to access public health services. **Objectives:** Assessment of the knowledge of ASHA workers regarding Ante Natal Care (ANC) and to study the factors contributing the working of ASHA for Antenatal services. **Method:** The present cross sectional study was carried out in the rural field practice area of the department of Community Medicine, Shri Ram Murti Samarak Institute of Medical Sciences, Bhojipura (District Bareilly) during the period from May 2014 to September 2014. Total of 48 villages were included in the study. Total 64 ASHA were interviewed. **Results:** Out of 64 ASHA, 30 (46.9%) ASHA knew that 23 days training provided after selection. All 64 (100%) ASHA knew that two doses of Tetanus Toxoid (TT) immunization were given to pregnant women. 54 (84.4%) ASHA knew the correct doses of giving TT immunization to pregnant women. **Conclusion:** According to the study findings, the knowledge level of ASHA regarding Antenatal care is satisfactory but time to time monitoring and appraisal is needed to enhance the quality of services provided by ASHA to pregnant mother.

Keywords: ANC, ASHA, Knowledge

Introduction:

The Government of India launched the National Rural Health Mission (NRHM) on 12th April 2005, to provide accessible, accountable, affordable, effective and reliable primary health care, especially to the poor and vulnerable sections of the population.^[1]

One of the main tenets of the mission is to identify one ASHA (Accredited Social Health Activist) per 1000 population in the rural areas with the purpose of supporting the community to access public health services. ^[2] ASHA must be primarily a woman

resident of the village, Married/ Widowed/Divorced and preferably in the age group of 25 to 45 yrs, should be a literate woman with formal education up to eighth class.

The Ministry of Health & Family Welfare (MOHFW) has developed a 23-day basic training schedule to provide the necessary knowledge and skills to women identified as ASHA and there is also regular re-orientation trainings organized at the district levels. Separate curriculum and the modules are made available in providing training to the ASHAs.

The discourse on the ASHA's role centers around three typologies - ASHA as an activist, ASHA as a link worker or facilitator and ASHA as a community level health care provider. ASHA is expected to ensure the antenatal, natal and postnatal services to women, counseling on family planning and nutrition, safe abortion, escort or accompany the pregnant female to hospital for institutional delivery, to create awareness on institutional delivery, potential danger signs and complications during pregnancy, delivery and postpartum period and to mobilize the community toward increase utilization of the existing health services.^[3]

Ante Natal Care (ANC) is the care a woman receives throughout her pregnancy in order to ensure that both, the mother and child remain healthy. Basic components of ANC include to ensure early registration and see to it that the first check-up is conducted within 12 weeks (first three months of pregnancy), track every pregnancy for conducting at least four antenatal check-ups (including the first visit for registration), administer two doses of TT injection and provide at least 100 tablets of Iron and Folic acid.^[4]

ASHA is the first helping hand for pregnant mother. ASHAs form the backbone of the NRHM and are meant to be selected by and be accountable to the village. Since ASHA workers are grass root level workers, the success of NRHM in India depends on how well ASHAs are trained and perform. Hence, it is essential to study are they have adequate knowledge for delivering the maternal health care services to community. At the same time, it is important to address the factors affecting the working of ASHA in the community to deliver maternal health care services. With this rationale, the present study was carried out with an objective to evaluate the knowledge and factors affecting maternal health care delivery by ASHAs in Bhojipura Block district Bareilly, India.

Objectives :

- Assessment of the knowledge of ASHA workers regarding antenatal care.

- To study the factors contributing the working of ASHA for Antenatal services.

Method :

The present cross sectional study was carried out in the rural field practice area of the department of Community Medicine, Shri Ram Murti Samarak Institute of Medical Sciences, Bhojipura (District Bareilly) during May 2014 to Sept 2014. The geographical area covered by this block is spread over 311.88 sq.km consisting 100 villages and 24 Sub-centres. Bhojipura block has a population of 1,91,181 (population of Town area: 20784, Rural population: 1,70,397) according to census 2011. The study was examined and cleared by ethical committee of the Institution.

Figure 1: Map of the selected Villages

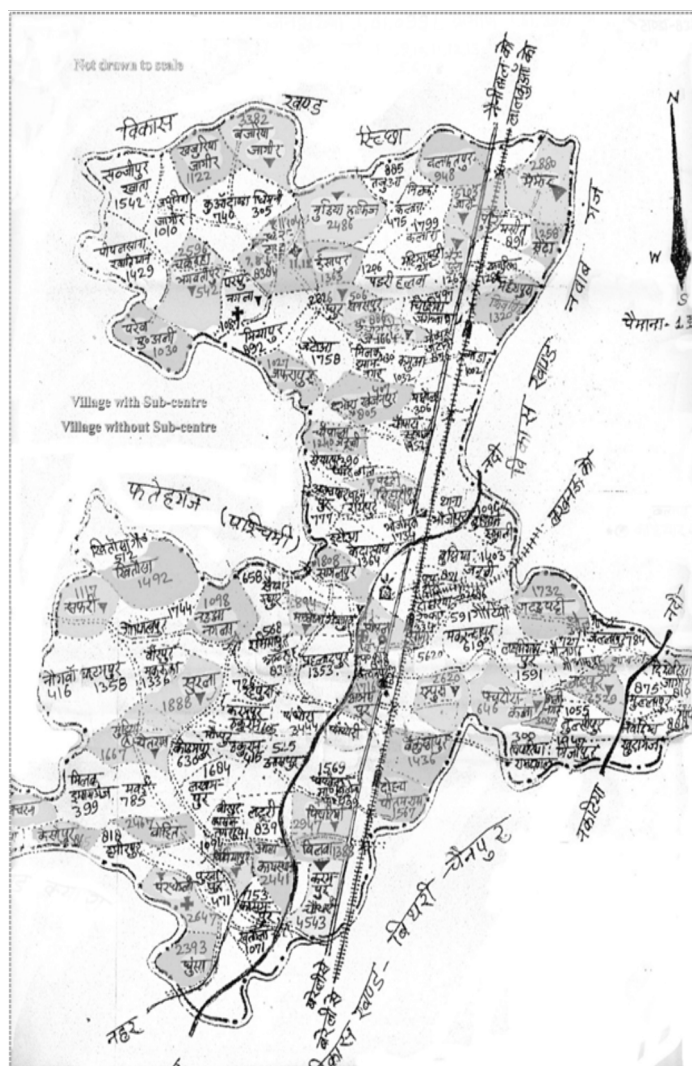


Table 1 :Distribution of ASHA according to their biosocial characteristics (n=64)

Bio-social characteristics	Number (%)
Age (years)	
21-30	24(37.5)
31-40	27(42.2)
41-50	11(17.2)
50+	2(3.1)
Religion	
Hindu	56(87.5)
Muslim	8(12.5)
Caste	
General	10(15.6)
Other Backward Class (OBC)	36(56.3)
Scheduled Caste (SC)	18(28.1)
Marital status	
Married	57(89.1)
Widow	7(10.9)
Education	
Primary	10(15.6)
Middle	45(70.3)
High School	5(7.8)
Intermediate	4(6.3)
Type of Family	
Nuclear	22(34.4)
Joint	42(65.6)
Socio economic status (modified B.G Prasad Classification)*	
Class II (upper middle)	33(51.6)
Class III (middle)	28(43.7)
Class IV (upper lower)	3(4.7)

* All India Consumer Price Index (AICPI)=1120 (April 2014)

Sampling Technique for selection of villages:

Out of 100 villages, all twenty-four villages having sub centre were selected randomly for the study. Sub centre is the most peripheral unit for providing Reproductive and Child Health (RCH) services. Thus all Sub centre were taken for the study. List of villages, situated at the distance of 3-5 km of their respective sub-centre, was obtained from block health office and 24 villages selected randomly for the study. Thus total of 48 villages were included in the study. (Figure I)

Sample size for ASHA:

All ASHA who were posted by Government of Uttar Pradesh, of the selected 48 villages of Bhojipura Block, were included in the study. Thus total 64 ASHA were interviewed.

Inclusion Criteria for ASHA:

1. All ASHA working under the selected villages of block Bhojipura.
2. Living within premises of allotted village.
3. ASHA who were willing to participate and ready to give consent.

Table 2: Training of ASHA and maintenance of record (n=64)

Training and maintenance of record	Number (%)
Duration of training provided to ASHA after selection	
<23 days	11(17.2)
23 days	30(46.9)
>23 days	23(35.9)
Duration of actual training received by ASHA	
<23 days	16(25.0)
23 days	35(54.7)
>23 days	6(9.3)
Not received training	7(11.0)
Maintenance of Antenatal record by ASHA	
Yes	54(84.4)
No	10(15.6)

Table 3: Knowledge of ASHA regarding Antenatal Care (n=64)

Antenatal Care	Number (%)
Minimum ANC visits recommended	
Two visits	2(3.1)
Three visits	61(95.3)
Don't know	1(1.6)
Time period of early registration of pregnancy	
First trimester	11(17.2)
Second trimester	33(51.6)
Third trimester	3(4.7)
As early as possible	16(25.0)
Don't know	1(1.6)
Doses of TT immunization	
Two doses	64(100%)
Interval between two TT doses	
Two doses at one month interval	54(84.4)
Two doses at three month interval	9(14.1)
Don't know	1(1.6)
Number of IFA tablets that should be given to a pregnant women	
100	63(98.4)
Don't know	1(1.6)

Data Collection: Data were obtained with the help of pretested and semi structured questionnaire. Primary data were collected by face-to-face interviews from Accredited Social Health Activists of the respective villages. Visits were made to all selected 48 villages with the help of Medico Social

Worker (MSW). ASHA were interviewed at their houses only.

Data analysis: The information collected was critically analyzed and tabulated using SPSS- 20 version software. Appropriate statistical tests of significance (Logistic regression) were applied to

Table 4: Logistic regression on factors affecting knowledge of ASHA regarding time period for early registration

Biosocial Variables	Frequency	Beta (β)	p value	Exp(β)	95% Confidence Interval for Exp(β)	
					Lower	Upper
Age(years)						
21-30*	24					
31-40	27	0.365	0.571	1.441	0.407	5.102
>40	13	0.317	0.691	1.373	0.288	6.544
Religion						
Muslim*	8					
Hindu	56	1.920	0.017	6.818	1.410	32.966
Caste						
General*	10					
OBC	36	-0.565	0.516	0.568	0.103	3.123
SC	18	0.223	0.826	1.250	0.172	9.093
Marital Status						
Widow	7					
Married*	57	1.609	0.052	5.000	0.983	25.437
Education						
Primary*	10					
Middle	45	0.981	0.188	1.667	0.619	11.493
High -school & above	9	0.288	0.764	2.333	0.204	8.708
Type of Family						
Joint*	42					
Nuclear	22	1.043	0.139	2.839	0.713	11.311
Socioeconomic Status						
Upper Middle*	33					
Middle	31	0.594	0.315	1.812	0.568	5.778

test and validate the findings of the study.

Result:

Predominantly 27 (42.2%) ASHA belonged to age group of 31-40 years, 56 (87.5%) were Hindu by religion, 36 (56.3%) belonged to OBC caste, 57 (89.1%) were married, 45 (70.3%) were educated up to middle class, 42 (65.6%) lived in a joint family and 33 (51.6%) ASHA from social class II (Upper middle). (Table 1)

Out of 64 ASHA, 30 (46.9%) ASHA knew that 23 days training is provided after selection. But when

ASHA were asked about how many days they received training after selection, 35 (54.7%) received training for 23 days and only 7 (11.0%) ASHA did not receive training. Maintenance of records by ASHA were found to be very high. Out of 64 ASHA, 54 (84.4%) maintained the Antenatal record. (Table 2)

When ASHA were asked about the services provided to pregnant women, 61 (95.3%) ASHA responded that minimum three ANC visits were recommended to pregnant women. Out of 64 ASHA, 33 (51.6%) said that the time period for early registration was second trimester. All 64 (100%)

Table 5: Logistic regression on factors affecting knowledge of ASHA regarding interval between two TT doses

Biosocial Variables	Frequency	Beta (β)	p value	Exp(β)	95% Confidence Interval for Exp(β)	
					Lower	Upper
Age(years)						
>40*	13					
21-30	24	0.848	0.265	2.381	0.519	10.932
31-40	27	0.859	0.279	2.492	0.511	10.284
Religion						
Muslim*	8					
Hindu	56	0.293	0.795	1.340	0.147	12.260
Caste						
SC*	18					
General	10	0.636	0.666	1.889	0.105	33.891
OBC	36	1.580	0.152	4.857	0.558	42.304
Marital Status						
Married*	57					
Widow	7	0.631	0.486	1.880	0.318	11.106
Education						
Primary*	10					
Middle	45	0.118	0.919	1.125	0.117	10.841
High-school	9	1.974	0.114	7.200	0.622	83.342
Type of Family						
Nuclear*	22					
Joint	42	0.856	0.308	2.353	0.454	12.19
Socioeconomic Status						
Middle*	31					
Upper Middle	33	0.405	0.563	1.500	0.380	5.921

ASHA knew that two doses of TT immunization has to be given to pregnant women. 54 (84.4%) ASHA knew the correct doses of giving TT immunization to pregnant women. Regarding IFA tablets, 63 (98.4%) ASHA had correct knowledge that at least 100 IFA should be given to a pregnant women. (Table 3)

Out of 64 ASHA, 16(25.0%) ASHA replied that as early as possible women should register for pregnancy. Applying the logistic regression on factors affecting knowledge of ASHA regarding time period of registration, age group 31-40 years, Hindu religion, SC category, Married ASHA, High-school educated ASHA, nuclear family, ASHA belonging to

Class III (middle) socioeconomic status were the prime factors associated with knowledge regarding time period for early registration. (Table 4)

Among 64 ASHA, 54(84.4%) ASHA knew the correct interval between two TT doses. Applying the logistic regression on factors affecting knowledge of ASHA regarding interval between two TT doses, age group 31-40 years, Hindu religion, OBC category, widow ASHA, High-school educated ASHA, joint family, class II (upper middle) ASHA, were more likely to have knowledge regarding interval between two doses of TT. (Table 5)

Discussion :

Bio-Social Characteristics of ASHA: Majority i.e. 27 (42.2%) of ASHA were from age group 31-40 years. Although in the selection criteria of ASHA (according to Training Module of ASHA Workers-NRHM 2005-2012), the minimum age of selection is 25 years but in our study, the ASHA in age group of 21-30 years were 24 (37.5%). Our study findings are similar to the findings of Singh et al^[5] where most of the ASHA 61 (45.2%) were in the age group of 30-35 years and only 11 (8.1%) ASHA were in the age group of 25-30 years. But contrary to this in the study done by Shashank K.J.^[6] where majority 71 (53.8%) ASHA were in the age group of 26 to 30 years.

In the present study out of 64 ASHA, 57 (89.1%) ASHA were married, 45 (70.3%) completed education up to middle class, 56 (87.5%) were Hindu by religion, 36 (56.3%) belonged to OBC by caste, 42 (65.6%) were from joint family. The above findings is similar to the findings of Garg et al^[7] where out of 105 ASHA, 93 (88.57%) were married, 101 (96.19%) ASHA worker completed 8th standard of the schooling and 89 (84.76%) of ASHA worker were Hindus. Whereas Umrao Singh Rao^[8] also found in their study that majority (80%) of ASHAs were 8th class pass. This can be explained by the fact that selection criteria are 8th Class and at some places it has been reduced to 5th Class. Similar finding were also noted by Sarawati Swain et al^[9] in Cuttack and study conducted by SIHFW Lucknow.^[10] Whereas study done by Kansal et al^[11] who found that out of 135 ASHA, 59 (43.7%) were from OBC caste and 42 (31.1%) were educated up to eighth standard.

In the present study, 33 (51.6%) ASHA belonged to class II (upper middle) socioeconomic status according to modified B.G Prasad classification. On the contrary study done by Singh et al^[5] where out of 135 ASHA, most of the ASHA, 93 (68.9%) belong to class IV (upper lower) socioeconomic status according to modified B.G Prasad Classification. On the other hand study done by Swapan Mazumdar^[12] in Bihar showed that 58% of the ASHA had poor economic background and rests were from middle

and higher economic background also. In the study conducted by Darshan et al^[13] at Surendranagar, Gujarat found that 94.62% ASHA belonged to socio-economical class IV and only 5.38% belonged to class III.

Training & Maintenance of Antenatal record by ASHA: In the present study out of 64 ASHA, 35 (54.7%) received training after selection for 23 days and 7 (10.9%) ASHA did not receive any training.

On the contrary, Garg et al^[7] in their study revealed that out of 105 ASHA workers, 102 (97.14%) ASHA workers completed training before working as ASHA. ASHA envisage a total period of 23 days training in five episodes. It is said that ASHA training is continuous and that she develops the necessary skills & expertise through continuous on the job training.^[14]

In the present study, out of 64 ASHA, 54 (84.4%) maintained the Antenatal record.

Similar findings were reported by Charu Kohli^[15] where 51 (92.7%) ASHAs reported that they used to maintain antenatal register.

Knowledge of ASHA regarding services provided to pregnant women : The finding of the present study was similar with that of Waskel et al^[16] where 136 (66.02%) ASHA had average knowledge for ANC. On the other hand, study done by SIFPSA^[17] reported that 460 (100%) ASHA had knowledge regarding ANC registration, care during pregnancy and institutional delivery. Similar to this Shashank KJ, Mahabaleswar and Mahantappa Angadi^[18] reported that all 132 ASHA workers were aware that Tetanus injection is to be given for all antenatal mothers and 105 (79.5%) ASHA knew that minimum of 4 ANC visits should be made by every pregnant mother.

Whereas in Charu Kohli^[15] study, 41 (74.5%) ASHA reported that minimum number of antenatal visits are 4 while 4(7.3%) said minimum visits to be 6. Awareness of their role in distribution and intake of tablet iron and folic acid was known to 47 (85.5%) ASHAs. 87% of ASHAs knew that iron tablets have to be taken for minimum 100 days during pregnancy.

This is higher than reported by study conducted by Lodhiya et al^[19] in Gujarat in which only 47% health workers were aware of iron and folic acid tablets schedule in pregnancy.

Almost all ASHA workers were aware about their roles and responsibilities regarding maternal and child health services. Similar results were shown by a study conducted by Gosavi et al.^[20] in Wardha where all ASHAs knew about their role in TT immunization and antenatal services. About 3/4th ASHAs were aware that minimum numbers of antenatal visits were 4 as compared to that stated by a study carried out by Rashmi et al.^[21] where 81% community health workers were aware of recommended minimum number of ANC visits.

On the contrary, study done by Shashank K.J.^[6] who reported that out of 132 ASHA, 53 (40.2%) ASHA said that they do four ANC visits and another 53 (40.2%) of ASHA did three ANC visits and only 6 (4.5%) ASHA do two visits for every registered ANC cases with them.

Conclusion :

According to the study findings the knowledge level of ASHA regarding antenatal care is satisfactory but time to time monitoring and appraisal is needed to enhance the quality of services provided by ASHA to pregnant mother. Biosocial factors like age, religion, caste, education, type of family and socio-economic status were the prime factors which affect the knowledge of ASHA regarding antenatal care. So monitoring should be made as an integral part of ASHA working in the field to ensure that knowledge is converted into practices as well. Trainings during job of ASHAs should be done in process to develop necessary knowledge and skills with recent updates. The Block level meetings should be utilized for the feedback, enhancing knowledge & solving the problem faced by the ASHAs.

Declaration :

Funding: Nil

Conflict of Interest: Nil

Reference :

1. Kishore J. National Health Programs of India: National Policies and Legislations Related to Health. New Delhi: Century Publications; 2014
2. Nirupam Bajpai, Ravindra H. Dholakia. Improving The Performance Of Accredited Social Health Activists In India: Working Papers Series Columbia Global Centers | South Asia, Columbia University. Working Paper No. 1, May 2011.
3. Government of India. National Rural Health Mission (2005-2012) Mission Document. New Delhi: Ministry of Health and Family Welfare; 2005. Available from: <http://www.nrhm.gov.in/images/pdf/about-nrhm/-framework-implementation/nrhm-framework-latest.pdf>. [Last accessed on 2014 Oct 26].
4. Maternal Health Division, Department of Family Welfare, Ministry of Health & Family Welfare, Government of India: April 2010, Guidelines for Antenatal Care and Skilled Attendance at Birth by ANMs/LHVs/SN available at: http://www.nhp.gov.in/sites/default/files/anm_guidelines.pdf downloaded on 20th Dec 2014.
5. Singh A, Saxena SC, Srivastava VK, Martolia DS, Varma P, Sharma RP, et al. A Study of behavioural attitude of ASHAs in primary health centres of a community development block of Kanpur nagar. Indian Journal of Community Health 2009 July-2010 June; 22(1): 71-4.
6. Shashank KJ, Angadi MM, Masali KA, Wajantri P, Bhat S, Jose AP. Study to evaluate working profile of Accredited Social Health Activist (ASHA) and to assess their knowledge about infant health care. International Journal of Current Research and Review 2013 June; 05(12): 97-103.
7. Garg PK, Bhardwaj A, Singh A, Ahluwalia SK. An evaluation of ASHA worker's awareness and practice of their responsibilities in rural Haryana. National Journal of Community Medicine 2013; 4(1); 76-80.
8. Umrao Singh Rao. Role of ASHA in Promoting Safe Delivery In Rajasthan. Population Research Centre, Mohan Lal Sukhadia University, Udaipur, 2007-2008.
9. Sarawati Swain, Pushpanjali Swain, K. S. Nair, NeeraDhar, Sanjay Gupta, Prof. DeokiNandan. A Rapid Appraisal of Functioning of ASHA Under NRHM In Orrisa. Health and population: perspectives and issues [incorporating nihae bulletin (estd. 1968) and the journal of population research (estd. 1974)] 2008;31(2):73-9.
10. Neera Jain, N K Srivastava, Prof. Deoki Nandan. Assessment of The Functioning of ASHAs UnderNRHM In Uttar Pradesh. Lucknow, U.P. State Institute of Health& Family Welfare, 2007-2008. Health and population: perspectives and issues [incorporating nihae bulletin (estd. 1968) and the journal of population research (estd. 1974)] 2008;31(2):132-40.
11. Kansal S, Kumar S, Kumar A. Is educational level of ASHA matters for their effective functioning? A cross- sectional study in Eastern Uttar Pradesh. Indian Journal of Community Health 2012 Jan-March; 24(1): 41-4.
12. Swapan Mazumdar. NRHM in Bihar: A Social Audit. Page no 28-30. available at: <http://www.chsj.org/uploads/1/0/2/1/10215849/takingstock.pdf>. Accessed on may 9th 2015.

13. Darshan K. Mahyavanshi, Mitali G. Patil, Girija Kartha, Shyamal K. Purani, Sunita S. Nagar. A Cross Sectional Study of the Knowledge, Attitude and Practice of ASHA Workers Regarding Child Health (Under Five Years Of Age) In Surendranagar District. *Health Line* 2011;2(2):50-3.
14. Training of ASHA. Available at: <http://www.mohfw.nic.in/NRHM/asha.htm>. Accessed on November 28th, 2012.
15. Charu Kohli, Jugal Kishore, Shantanu Sharma, Harsavsardhan Nayak. Knowledge and practice of Accredited Social Health Activists for maternal healthcare delivery in Delhi. *Journal of Family Medicine and Primary Care* July 2015: Volume 4: Issue 3 359-363.
16. Waskel B, Dixit S, Singodia R, Pal DK, Toppo M, Tiwari SC, et al. Evaluation of ASHA Programme in selected block of Raisen district of Madhya Pradesh under the National Rural Health Mission. *Journal of Evolution of Medical and Dental Sciences* 2014 Jan 20; 3(03): 689-94.
17. Evaluation of ASHA Scheme under NRHM in Uttar Pradesh. Lucknow: SIFPSA; 2013 Sept. 161p
18. Shashank KJ, Mahabaleshwar Mahantappa Angadi. A study to evaluate the knowledge of ASHA workers on antenatal and postnatal care in Bijapur district. *International Journal of Research in Medical Sciences* 2015 Sep;3(9):2299-2302.
19. Lodhiya KK, Pithadiya PR, Damor RD, Unadkat SV, Yadav SB. A study on knowledge and skills of female health workers regarding maternal care under RCH programme. *Natl J Community Med* 2012;3:35-9.
20. Gosavi SV, Raut AV, Deshmukh PR, Mehendale AM, Garg BS. ASHAs' awareness and perceptions about their roles and responsibilities: A study from rural Wardha. *J Mahatma Gandhi Inst Med Sci* 2011;16:1-8.
21. Rashmi A, Udaya Kiran R, Udaya Kiran N. Knowledge regarding RCH services among health workers, pregnant mothers and adolescents in rural field practice area. *Nitte Univ J Health Sci* 2013;3:46-50.