

**PERFORMANCE OF ACCREDITED SOCIAL HEALTH ACTIVISTS - ASHA WORKERS, IN A RURAL BLOCK OF NORTHERN INDIA AND THE PARAMETERS AFFECTING IT.**<sup>1</sup>\*Meely Panda, <sup>2</sup>Neelam Kumar, <sup>3</sup>Dr. Brij Mohan Vashisht, <sup>4</sup>Dr. Shalini Ray and <sup>5</sup>Dr. Amrita Konar<sup>1</sup>Demonstrator, Department of Community Medicine, Jamia Hamdard Institute of Medical Science and Research, New Delhi, 110062.<sup>2,3</sup>Professor, Department of Community Medicine, Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences, Rohtak, Haryana, 124001, India.<sup>4</sup>Assistant Professor, Department of Community Medicine, KIMS, KIIT University, Bhubaneswar.<sup>5</sup>Post Graduate, Department of Community Medicine KIMS, KIIT University, Bhubaneswar.**\*Corresponding Author: Dr. Meely Panda**

Demonstrator, Department of Community Medicine, Jamia Hamdard Institute of Medical Science and Research, New Delhi, 110062.

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**ABSTRACT**

**Objective:** Objective of this study was to assess the performance of ASHAs in a rural block of district Rohtak in Haryana and to evaluate the factors affecting it. **Methods:** All the ASHAs in the entire block of CHC Chiri in district Rohtak were provided a pretested semi structured schedule for the study from October 2012 to January 2013. They were called up to a common place i.e. CHC to test their theoretical knowledge. The questions were prepared by the investigator herself after going through the booklet used for the training of ASHAs and pertaining to their roles and responsibilities. **Results:** The performance assessment of ASHAs was arranged into three categories i.e. 7% poor scorers (<50%), 32% average scorers (50-75%) and 61% good scorers (>75%). The responses of ASHAs to the surprise test regarding the basics of their roles and responsibilities were evaluated. ASHAs with higher household income fared better than lower income ( $p < 0.05$ ). All the factors except for the on-job training had statistical significance. In the performance test, 77% of good scorers complained of some or other types of difficulty while working in comparison to 100% of poor scorers ( $p > 0.05$ ), 94% among the good scorers were satisfied with their career prospects in comparison to 100% dissatisfied poor scorers ( $p < 0.05$ ). **Conclusion:** Performance of an ASHA is determined by factors such as her training status which includes the number of days trained, effectiveness and on job training. Besides, certain socio-demographic factors also contribute to improved performance in tests.

**KEYWORDS:** ASHA workers, income, questionnaire, performance, training.**INTRODUCTION**

Recognizing the importance of Health in the process of economic and social development and improving the quality of life of our citizens, the Government of India launched the National Rural Health Mission to carry out necessary architectural correction in the basic health care delivery system.<sup>[1]</sup> The Mission adopts a synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian system of medicine to facilitate health care.<sup>[2]</sup> The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programs community participation and ownership of assets, induction of management and financial

personnel into district health system, and operationalizing community health centers into functional hospitals meeting Indian Public Health Standards in each Block of the Country.<sup>[2-4]</sup>

**AIMS AND OBJECTIVES**

Assess the performance of ASHA workers in a rural block of district Rohtak in Haryana and to evaluate the factors affecting it.

**MATERIALS AND METHODS**

A list of all the ASHA workers in the entire block of CHC Chiri in district Rohtak was prepared with the help of the LHV. CHC Chiri is situated at a distance of 35 km from PGIMS, Rohtak and is the field practice area for the department of Community Medicine. A total of 110 ASHA workers were working in the block in different villages and all of them were provided a pretested semi

structured schedule for the study. It was carried out from October 2012 to January 2013. All these ASHA workers were called up one day to a common place i.e. to the CHC where they have their monthly meetings and were given sheets of paper to answer questions in order to test their theoretical knowledge. The questions were read out to them one by one by the investigator in Hindi and ASHAs were expected to provide answers within a stipulated time period for each question. The questions were prepared by the investigator herself after going through the booklet used for the training of ASHAs and pertaining to her roles and responsibilities. They were then assessed out of 100 and then further analysis was done based on their performance and their work processes. The surprise test was divided into sections where each section had few basic questions relating to the topic concerned. Then it was summed up to total it out of 100. There was no minus marking. Each question was marked 0 if unanswered, 1 if properly answered. For all those answers which had multiple options or which stood somewhere between poor and good, the examiner's subjective assessment and decision was taken as final.

Institute's review board approval and informed consent was also taken. Pearson's chi square test was used to evaluate differences between groups for categorized variables. Normally distributed data was presented as means and standard deviation with 95% confidence intervals (CI). All tests were performed at a 5% level significance and thus the value less than 0.05 (p value < 0.05) was taken as significant association.

## OBSERVATIONS

The performance assessment based on the marks scored by the individual ASHA worker out of 100 was arranged into three categories (**Table 1**). It was found that 7% scored less than 50% and were considered as poor scorers, 32% scored between 50 – 75% marks and were considered as average scorers, whereas, the rest 61% got more than 75% of marks and were termed as good scorers.

The **table 2** shows the responses of ASHA workers to the surprise test conducted, regarding the basics of their roles and responsibilities. About 54% had proper knowledge on the minimum number of ANC checkups which needed to be done in pregnancy. 75% had an idea that pre-lacteals should not be given to the baby, whereas, 32% felt colostrum need not be given. Strangely, 32% had no idea about the age till which a baby had to be exclusively breast fed. About 64% didn't know correctly about the age when a baby is considered

fully immunized. Twenty one percent could correctly narrate the family planning methods available in the sub centres, 43% did it partially and 36% simply had no idea. DOTS, as a mode of treatment for tuberculosis was known to 46% only.

Significant association ( $p < 0.05$ ) was found between household income and test score, where ASHAs with higher household income fared better and those with lower income fared poorly in the test (**Table 3**).

Association of status of training with the scores of the ASHA workers revealed that poor scorers were not trained and did not know about on-job training (**Table 4**). On the other hand, good scorers had 6% untrained workers, with on job training known to 71% of them, 65% could understand the details and 88% found it effective for on field application. All the factors except for the on-job training had statistical significance (**Table 4**).

The radar diagram in **figure 1** depicts that poor scorers denoted by green line were 100% untrained with nil on job training and nil effectiveness and understanding as said by them. Good scorers denoted by the yellow web, on the other hand shows maximum extension towards the periphery, showing that they had better understanding, found training more effective and had been part of on job training more often. Pink web denoting the average scorers had the stretch somewhere between the two. **Figure 2** depicts the satisfaction and difficulty in the work process of ASHA workers.

On comparing the difficulty in working process among ASHA workers with the marks scored by them in the performance test, it was found that, 77% of good scorers complained of some or other types of difficulty while working, whereas, the rest 23% did not (**Table 5**). Cent percent of poor scorers found difficulties in their working processes. The association however bore no statistical significance.

On comparing the level of satisfaction among ASHA workers with the marks obtained by them in the performance test, it was found that, 94% among the good scorers i.e. those who scored >75% were satisfied with their career prospects and the rest 6% were not (**Table 6**). On the other hand, cent percent of the poor scorers (score <50%) were dis-satisfied with their career prospects. The association bore statistical significance with  $p < 0.05$ .

**Table 1: Performance of ASHA worker based on the marks scored by her**

Score of ASHA worker	Frequency	Percentage
Less than 50% (Poor scorers)	8	7.3
50 – 75% (Average scorers)	35	31.8
More than 75% (Good scorers)	67	60.9
Total	110	100

**Table 2: Responses of ASHA workers to the questions asked**

Variable	Response	Frequency	Percentage
Minimum number of ANC visits	<4	51	46.4
	≥4	59	53.6
Is Pre-lacteal feed needed	Yes	28	25.0
	No	83	75.0
Should colostrums be given	Yes	75	67.9
	No	35	32.1
Up to what age is a baby exclusively breast fed	6 months	75	67.9
	Any other	35	32.1
Up to what minimum age is a child considered fully immunized	1 year	39	35.7
	Any other	71	64.3
Enumerate the spacing methods	Don't know	40	35.7
	Fair	13	42.9
	Good	23	21.4
What is given as treatment for tuberculosis	DOTS	51	46.4
	Don't know	59	53.6

**Table 3: Association of socio-demographic variables with marks scored by ASHAs**

Variable		Marks obtained by ASHA workers				Significance
		<50% (Poor)	50 – 75 % (Average)	>75% (Good)	Total	
Age (years)	<25	4(50)	0(0)	4(6)	8(7)	$\chi^2 = 5.89$ df = 4 p=0.15
	25 – 35	4(50)	35(100)	52(77)	90(82)	
	>35	0(0)	0(0)	12(18)	12(11)	
	Total	8(100)	35(100)	67(100)	110(100)	
Education	Below matric	0(0)	27(78)	23(35)	50(46)	$\chi^2 = 7.5$ df = 4 p=0.05
	Matric	8(100)	8(22)	23(35)	39(36)	
	Above matric	0(0)	0(0)	21(30)	21(18)	
	Total	8(100)	35(100)	67(100)	110(100)	
Caste	Jat	8(100)	15(43)	23(35)	47(43)	$\chi^2 = 2.84$ df = 6 p=0.96
	General	0(0)	8(23)	12(18)	20(18)	
	Schedule	0(0)	8(23)	19(29)	28(25)	
	Backward	0(0)	4(11)	12(18)	15(14)	
	Total	8(100)	35(100)	67(100)	110(100)	
Family Income	<Rs.5000/m	8(100)	31(89)	23(35)	63(57)	$\chi^2 = 7.96$ df = 2 p= .006*
	>Rs.5000/m	0(0)	4(11)	44(65)	47(43)	
	Total	8(100)	35(100)	67(100)	110(100)	

\*p<0.05 significant, df = degree of freedom,  $\chi^2$ = Chi square, value in parenthesis is percentage.

**Table 4: Association of training details of ASHA workers with their performance in the test**

Variables		Marks obtained				Significance
		Poor	Average	Good	Total	
Training	Not trained	8(100)	23(67)	4(6)	35(32)	$\chi^2 = 14.088$ df = 4 p = 0.001*
	Incomplete	0(0)	12(33)	55(82)	67(61)	
	Complete	0(0)	0(0)	8(12)	8(7)	
	Total	8(100)	35(100)	67(100)	110(100)	
On job Training	Don't know	8(100)	4(11)	4(6)	16(14)	$\chi^2 = 9.14$ df = 8 p = 0.25
	MPHW(F)	0(0)	15(43)	27(41)	42(38)	
	LHV	0(0)	8(23)	8(12)	16(14)	
	MO	0(0)	0(0)	12(18)	12(11)	
	No one	0(0)	8(23)	16(24)	24(22)	

	Total	8(100)	35(100)	67(100)	110(100)	
Understood	Not trained	8(100)	23(67)	4(6)	35(32)	$\chi^2 = 18.98$ df = 6 p = 0.000*
	Yes	0(0)	0(0)	44(65)	44(39)	
	No	0(0)	0(0)	4(6)	4(4)	
	Somewhat	0(0)	12(33)	15(23)	27(25)	
	Total	8(100)	35(100)	67(100)	110(100)	
Effective	Not trained	8(100)	23(67)	4(6)	35(32)	$\chi^2 = 16.44$ df = 6 p = 0.001*
	Good	0(0)	0(0)	32(47)	32(29)	
	Fair	0(0)	12(33)	27(41)	39(36)	
	Poor	0(0)	0(0)	4(6)	4(4)	
	Total	8(100)	35(100)	67(100)	110(100)	

\*p< 0.05 significant, df = degree of freedom,  $\chi^2$ = Chi square, value in parenthesis is percentage.

**Table 5: Relation of marks scored with difficulty in working process of ASHA workers**

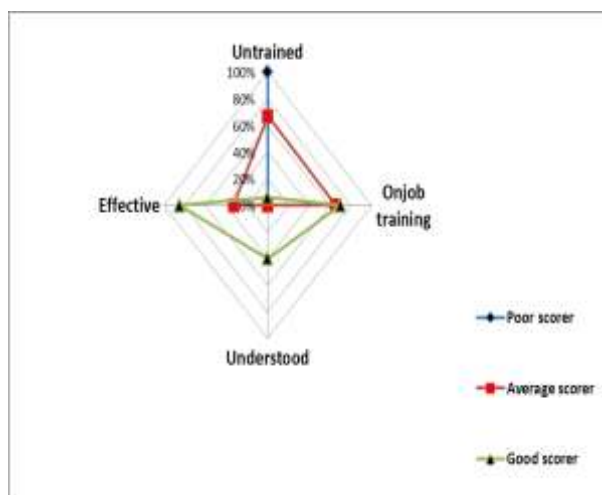
Variable		Marks scored				Significance
		Poor	Average	Good	Total	
Do you find difficulty while working	Yes	8	23	52	83	$\chi^2 = 1.02$ df = 2 p= 0.61
		100.0%	66.7%	76.5%	75.0%	
	No	0	12	15	27	
		0.0%	33.3%	23.5%	25.0%	
	Total	8	35	67	110	
		100.0%	100.0%	100.0%	100.0%	

\*p< 0.05 significant, df = degree of freedom,  $\chi^2$ = Chi square, value in parenthesis is percentage.

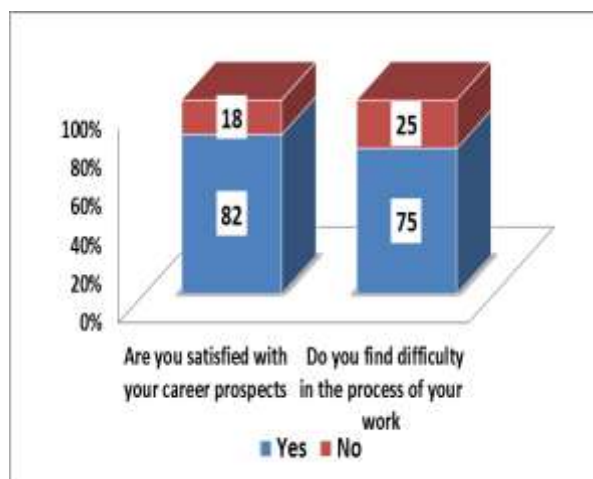
**Table 6: Relation of marks scored with satisfaction among ASHA workers**

Variable		Marks scored				Significance
		Poor	Average	Good	Total	
Are you satisfied with your career prospects as an ASHA	Yes	0	27	63	90	$\chi^2 = 7.93$ df = 2 p = 0.01
		0.0%	77.8%	94.1%	82.1%	
	No	8	8	4	20	
		100.0%	22.2%	5.9%	17.9%	
	Total	8	35	67	110	
		100.0%	100.0%	100.0%	100.0%	

\*p< 0.05 significant, df = degree of freedom,  $\chi^2$ = Chi square, value in parenthesis is percentage.



**Figure 1: Association of training with the mark score of ASHA workers**



**Figure 2: Satisfaction and difficulty in the work process of ASHA**

## DISCUSSION

A surprise test was conducted having questions related to the basics of all their roles and responsibilities. They were then marked out of 100 and categorized for purpose of finding out associations with different variables. Few

of the questions and their responses have been discussed. About 54% had proper knowledge on the minimum number of ANC checkups which needed to be done in pregnancy. While, 25% had an idea that pre-lacteals should be given to the baby, 32% felt colostrums need not be given. Strangely, 32% had no idea about the age till which a baby had to be exclusively breast fed. Just 36% knew correctly about the age when a baby is considered fully immunized. Twenty one percent could correctly narrate the family planning methods available at the sub centre and 43% could narrate it partially. DOTS as a treatment for tuberculosis were known to 46% only.

Study by **Shasank et al**<sup>[5]</sup> showed that more than 80% of ASHAs were doing  $\geq 3$  antenatal visits for the pregnant. This needs to be differentiated from our study finding where only 54% had proper knowledge on the minimum number of ANC checkups which needed to be done. Number of visits they provide might be more but proper knowledge about what should be the answer was known to only 54%. Moreover, recent changed guidelines denote a minimum of 4 antenatal check-ups to be done in pregnancy. About 44% in their study had knowledge about immunisation and its side-effects. **Darshan et al**<sup>[6]</sup> reported similar finding with 37% of workers having good knowledge on immunization and 44% of ASHAs who had improper knowledge on family planning methods. **Bajpai et al**<sup>[7]</sup> in their study reported similar findings with 56% conducting  $\geq 3$  visits, 95% educated their beneficiaries on optimal breast feeding and 88% created awareness about immunization of infant.

The performance, based on the marks scored by the ASHA workers out of 100 was arranged into three categories. Less than 50%, 50 – 75% and more than 75% categories were tagged as poor, average and good scorers respectively for all comparison purposes. Out of 110 ASHA workers 7% scored less than 50%, 32% of them scored between 50 – 75% marks and the rest 61% scored more than 75% of marks in the test.

Study by **Doke et al**<sup>[8]</sup> in Maharashtra found near similar results with average marks of ASHA being 62.67% which had a non significant statistical association with the training. **Bajpai et al**<sup>[7]</sup> in his working paper series had prepared a score card with 70% as the cut off for pass. He had assumed that, without negative marking, 50% could be scored by chance. So for in Rajasthan, it was found that, 23% failed, 47% were satisfactory and the rest 30% were good. In our study however, there were more number of questions to assess the knowledge and categorize them and less number of ASHAs as the sample. So taking into consideration, these two factors, it was decided to categorize them into a more convenient gradation where  $<50\%$  would denote poor scorer, 50 – 75% as average and  $>75\%$  as good scorers.

Our study showed significant association ( $p < 0.05$ ) of household income with scores, where ASHAs with

higher household income fared better and those with lower income fared poorly in the exam.

Association of training details with performance score of ASHA workers found that from among those who were poor scorers; all of them (100%) were untrained, whereas, the good scorer category had about 94% of them either complete or incompletely trained with just 6% untrained. The association was found to be significant statistically ( $p < 0.05$ ). Those workers who had been provided some sort of on job training were found to score better than those who did not receive any such training. However, the relation was statistically non significant. Understanding of the training details showed that from among the good scorers, approximately 65% understood it properly, whereas, poor scorers did not understand it at all. Next considering how far the training was effective for them, it was again found that those who scored high, found it good or fairly effective (88%) and the rest were either untrained or found it poorly effective. Most (67%) of the average scorers were untrained and the rest (33%) found the training just fairly effective. Both the relations (understanding and effectiveness) were found to bear significance statistically ( $p < 0.05$ ). All these factors substantiate the fact that, days of training, its effectiveness and explicability have a definite bearing on the level of knowledge of workers.

Working paper series of **Bajpai et al**<sup>[7]</sup> showed that score and explicit of training details were co-related, although they bore a non statistical significance. But they felt knowledge of the ASHAs on the nature of the activities and job responsibility was the pre requisite for effective service delivery. **Bajpai et al**<sup>[7]</sup> in his study recommended devising strategies wherein the ASHAs develop expertise in other significant areas of her activity spectrum such as helping develop village health plans and registration of vital events with the ANM/AWW. It was imperative to assess the relationship between knowledge score and quality of training, on-going mentoring and use of an aptitude test during the selection process to draw accurate conclusions about the selection criteria and ASHAs' knowledge. **Nandan et al**<sup>[9]</sup> also quoted that, ASHAs were quite satisfied with their training processes but wanted more of on job training in order to decrease their knowledge gaps.

### Conclusions and recommendations

Thus it can be concluded that performance of an ASHA worker is determined by factors such as her training status which includes the number of days trained, effectiveness and on job training. Besides, certain socio-demographic factors also contribute to improved performance in tests. Thus,

- Under the cascade model of training to the ASHA, trainings should provide complete knowledge and skills to the trainees within the stipulated time.
- Quality of training should be enhanced where the trainer of trainers should first update and upgrade himself with appropriate knowledge.



- Separate time for each ASHA worker should be allotted where she can clarify the blocks in her mind if any.
- Refresher trainings should be planned regularly. This would decrease the knowledge gaps between the learning and the doing process.
- A process of community level monitoring, regular problem solving and skill up-gradation should be developed as early as possible.
- ASHA's mentoring and re-training for updating skills apart from recruitment and routine training would upgrade the quality of services and facilitate further increase in the utilization of existing health facilities and services.
- Training materials should be simple and well depictable. This would allow the ASHA workers to self refer to any material in case the need be.
- Mode of teaching and language should be more convenient in order to ease out the entire session for these health workers.
- Practicability of the drug kit should be increased by conferring them more knowledge about the kit constituents repeatedly based on the when, how, what, where and why principle.

## REFERENCES

1. MoHFW. Reading material for ASHA: book 1. In: GoI, ed. Ministry of Health and Family Welfare. 2005. Available at: [http://www.mohfw.nic.in/NRHM/Documents/Module1\\_ASHA.pdf](http://www.mohfw.nic.in/NRHM/Documents/Module1_ASHA.pdf).
2. Assessing the Need for Periodic Training of ASHA under National Rural Health Mission, Population Foundation of India, Uttar Pradesh, 2010; Available at: <http://populationfoundation.in/projects/assessing-need-periodic-training-asha-under-national-rural-health-mission>.
3. National Health Mission. About ASHA: GoI, Ministry of Health and Family Welfare. <http://nrhm.gov.in/communitisation/asha/about-asha.html>.
4. NHSRC: Handbook for ASHA Facilitators. 2012. Available from: [http://nhsrccindia.org/pdf\\_files/resources\\_thematic/Community\\_Participation/NHSRC\\_Contribution/Handbook\\_for\\_ASHA\\_Facilitators.pdf](http://nhsrccindia.org/pdf_files/resources_thematic/Community_Participation/NHSRC_Contribution/Handbook_for_ASHA_Facilitators.pdf). Accessed December 1, 2012.
5. Shashank KJ, Angadi MM, Masali KA, Wajantri P, Bhat S, Jose AP. A study to evaluate working profile of accredited social health activist (ASHA) and to assess their knowledge about infant health care. *Int J Curr Resear Rev.*, 2013; 5: 97-103.
6. Darshan KM, Mitali GP, Girija K, Shyamal KP, Sunita SN. A cross sectional study of the knowledge, attitude and practice of ASHA workers regarding child health (under five years of age) in Surendranagar district, 2011; *health l in e* ISSN 2229-337X: Volume 2 Issue 2.
7. Bajpai N, Dholakia RH. Improving the Performance of Accredited Social Health Activists in India: Working Paper No. 1. Mumbai, India: Columbia Global Centers, Columbia University; 2011. Available at: [http://globalcenters.columbia.edu/mumbai/files/globalcenters\\_mumbai/Improving\\_the\\_Performance\\_of\\_ASHAs\\_in\\_India\\_CGCSA\\_Working\\_Paper\\_1.pdf](http://globalcenters.columbia.edu/mumbai/files/globalcenters_mumbai/Improving_the_Performance_of_ASHAs_in_India_CGCSA_Working_Paper_1.pdf).
8. Doke PP, Kulkarni AP. Community Based Monitoring under National Rural Health Mission (NRHM) at Village Level in the state of Maharashtra, India. *IJTDH*, 2013; 3: 355-64.
9. Nandan D. "National Rural Health Mission – "Rhetoric or Reality". *Indian J Public Health*, 2005; 49: 168-70.