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Performance Evaluation of Accredited Social Health Activist under National Rural Health Mission in Mysore District: A Cross-Sectional Study

Srinivas Nagaraj[1], Santosh Achapppa[1], Prashantha Bettapa[2], Prakash B[3]

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Author's Affiliation:
[1]Asst Prof, Dept of Community Medicine, Rajarajeswari Medical College & Hospital, Bangalore; [2]Asst Prof, Dept of Community Medicine, Mysore Medical College, Mysore; [3]Prof, Dept of Community Medicine, JSS Medical College, Mysore

Correspondence
Dr. Srinivas Nagaraj,
srinivasnraj@gamil.com

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ABSTRACT

Introduction: National Rural Health Mission (NRHM) came to address the health needs of rural population, especially the vulnerable section of the society. One of the key components of the NRHM is to provide every village in the country with a trained female community health activist or Accredited Social Health Activist (ASHA). With this background this study was conducted with objectives to assess the performance of ASHA workers and to assess the factors influencing their performance in Mysore District.

Methodology: A cross-sectional study was conducted between January 2014 to July 2014, in three taluks of Mysore District using multistage random sampling and PHC's were selected to get ASHA workers of sample size 220($n = Z^2pq/L^2$, With design effect of 2 and 10% cases as non-respondents). A pre tested and structured questionnaire was used.

Results: Among 216 ASHA workers who participated in the study, 126(58.3%) were well performing based on JSY performance and 129(59.7%) were performing better in PNC visits whereas, 143(66.2%) were underperforming based on the immunisation coverage.

Conclusions: As ASHA worker plays a key role in programme implementation at gross root level, Job performance of these workers plays a vital role in success of the program.

Key words: ASHA Worker, Performance, NRHM, Mysore

INTRODUCTION

The Government of India launched the National Rural Health Mission (NRHM) on 12th April 2005 to address the health needs of the rural population, especially the vulnerable sections of the society.[1] A core strategy was to strengthen the existing Primary Health Centres and Community Health Centres in terms of both infrastructure and human resources, with a view to achieve a number of goals to reduce infant and maternal mortality as well as the incidence of several communicable diseases.[2]

One of the key components of the mission is creating a band of female health volunteers, appropriately named "Accredited Social Health Activist" (ASHA) in each village within the identified States.[1] Since Sub centres were serving much larger population than they were expected to and Auxiliary Nurse Midwife (ANM) were heavily over worked, one of the core strategies of NRHM was to promote access to improved health care at household level through ASHA.[2] These village level community health workers would act as a 'bridge' or an interface between the rural people and health service outlets and would play a central role, in achieving national health and population policy goals. [3]

ASHAs form the backbone of the NRHM and are meant to be selected by and be accountable to the village. They need to provide preventive, promotive and curative health facilities in the rural community.[1]During the initial period of implementation of NRHM much emphasis was given on enrolment and training of ASHAs. Now there is a need to comprehensively look into the performance of ASHA in terms of her responsibilities and work. All mid-term appraisals of NRHM in India have expressed concerns about the role and performance of ASHA workers. Inspite of the performance based incentives and other benefits there is also an opinion that the ASHAs need some sort of job security. The induction training and the regular orientation trainings are required to enhance her knowledge and practical skills regarding her job responsibilities.[4]

As the performance of ASHA is crucial in achieving the aims and objective under NRHM the present study was conducted in Mysore district to evaluate the performance of ASHAs.

MATERIALS AND METHODS

A cross-sectional study was carried out at 20 Primary Health Centres in Mysore district during 2014 (April-July) among ASHA workers, trained and working under NRHM for more than one year, consenting to participate in the study were included.

Assuming the average performance of ASHA as 50%, (i.e. ASHA having the positive character).[1] The sample size was calculated by using the following formula, $\mathbf{n = Z^2pq/L^2}$, Where, Z= Standard normal variate for 95% confidence interval=1.96, p = Percentage of ASHAs having the positive character =0.5, q = (1-p) = 1-0.5 = 0.5, L = Allowable error, Considering an allowable error of 10% (i.e. 0.1), n ≈ 100. A design effect of 2 and 10% cases as non-respondents were taken. Thereby, a total sample size of 220 was calculated.

Multistage random sampling technique was used. In Mysore District out of seven taluks, three taluks were selected by simple random sampling. Complete remuneration of the number of ASHAs in the selected taluks was obtained from the district health authority (District ASHA Mentor). From strength of 275, 191 and 162 ASHA workers in Nanjanagud, K.R.Nagara and Periyapatna, 96, 67 and 57 were included respectively in the study using probability proportionate to size sampling method. Then, the complete lists of PHC's in the area were obtained from the District health and family welfare office and the PHC's were selected by simple random sampling. All ASHA workers were included from the selected PHC's until saturation was attained.

Out of 225 ASHA workers selected for study, nine of them declined to participate in the study, thereby 216 ASHA workers participated in the study. The purpose of the study was explained and written consent obtained from the participants. The data was collected regarding their Sociodemographic profile, their roles and responsibility using a self-administered pre structured, tested questionnaire in regional language (Kannada) and registers were verified for performance.

Statistical analysis: Data was entered in to Microsoft Excel sheet and analyzed using SPSS-22.0. Socio demographic characteristics and performance were assed using descriptive statistics like proportions and percentages. The factors influencing the performance of ASHA workers on their roles and responsibility were analyzed by using chi-square test. The level of significance was fixed at 0.05.

Table 1: Distribution of ASHA workers based on their socio-demographic profile (n=216)

Variables	Frequency (%)
Age group in years	
<30	81 (37.5)
31-40	115 (53.2)
41-50	20 (9.3)
Education	
Middle School	21 (9.7)
High School	167 (77.3)
Pre University	26 (12)
Degree	2 (0.9)
Occupation	
House wife	161 (74.5)
Coolie	26 (12)
Agriculture	13 (6)
Tailor	10 (4.6)
Social work	6 (2.8)
Type of family	
Nuclear	135 (62.5)
Joint	27 (12.5)
Three generation	54 (25)
Marital status	
Married	196 (90.7)
Divorced	1 (0.5)
Widow	19 (8.8)
Religion	
Hindu	210 (97.2)
Muslim	6 (2.8)
Caste	
OBC	114 (52.8)
SC	94 (43.5)
ST	8 (3.7)
Socio economic status	
Category III	1 (0.5)
Category IV	19 (8.8)
Category V	196 (90.7)

RESULTS

Among 216 ASHA workers who participated in the study 115(53.2%) were in the age group of 31 to 40, 167(77.3%) had studied up-to high school and 161(74.5%) were housewives, 135(62.5%) belonged to nuclear family, 196(90.7%) were married and a few were widows i.e. 19(8.8%).

Table 2: Distribution of ASHA workers based on their Job description (n=216)

Variables	Frequency (%)
Number of years of experience	
Two	1 (0.5)
Three	3 (1.4)
Four	3 (1.4)
Five	151 (69.9)
Six	58 (29.9)
Work location	
Same village	214 (99)
Others	2 (1)
Number of villages served	
One	175 (81)
Two	34 (15.7)
Three	6 (2.8)
Four	1 (0.5)
Population served	
<800	44 (20.4)
801-1200	122 (56.5)
1201-1800	45 (20.8)
>1800	5 (2.3)
Number of Anganwadis served	
One	90 (41.7)
Two	106 (49.1)
Three	18 (8.3)
Five	2 (0.9)

Table 3: Distribution of ASHA workers based on their job performance (n=216)

Variables	Frequency (%)
Number of houses visited per week	
< 20	81 (37.5)
21-40	78 (36.1)
>40	57 (26.4)
Number of hours of work per week	
<12	54 (25)
20-Dec	100 (46.3)
>20hrs	62 (28.7)
Number of visit to AWW per month	
Less than or equal to four	100 (46.3)
More than four	116 (53.7)
Number of visit to ANM per month	
Less than or equal to four	46 (21.3)
More than four	170 (78.7)
Number of visit to MO per month	
Less than or equal to four	123 (56.9)
More than four	93 (43.1)
Referral for delivery	
Primary health centre	58 (26.9)
24/7 Primary health centre	60 (27.8)
CHC/ Taluk hospital	90 (41.7)
District Hospital	8 (3.7)

Majorities were Hindu i.e. 210 (97.2%) and 114 (52.8%) were belonged to OBC caste. According to the modified B.G. Prasad classification, majority 196 (90.7%) belonged to class V socio economic status. (**Table 1**)

Among 216 ASHA workers who participated in the study, 151(69.9%) of them had five years of experience, 214(99%) work in the same place of their residence, 175(81%) of them serve one village. Most of the ASHA workers 122(56.5%) serve a population of 800 to 1200. and 90(41.7%) of them serve one Anganawadi centres. (**Table 2**)

Among the ASHA workers who participated in the study 81(37.5%) were visiting less than 20 houses per week. Most of them were working between 12 to 20 hours i.e. 100(46.3%)**.** ASHA workers visiting AWW, ANM, MO more than four times a month were 116(53.7%), 170(78.7%) and 93(43.1%) respectively. ASHA workers referral place of delivery were PHC 58(26.9%), 24/7 PHC 60(27.8%), CHC/Taluk hospital 90(41.7%). (**Table 3**)

Among the ASHA workers, 126(58.3%) and 129(59.7%) were well performing based on JSY performance and performance based on PNC visits respectively. Majority, 143(66.2%) were underperforming based on the immunisation coverage.

Most of the ASHA workers i.e. 169(78.2%) had conducted more than 8 VHND monthly meeting with Anganwadi worker and 93(43%) were attending less than 8 VHSC monthly meeting. (**Table 4**)

Among the variables studied ;caste, number of Anganwadi canters covered, number of houses visited per week, number of hours of work per week, population covered were found to be significantly ($p<0.05$) associated with the JSY performance of ASHA worker.(**Table 5**)

DISCUSSION

Sociodemographic profile of the ASHA workers

Among 225 ASHA workers included in the study 216 of them consented to participate. A study by Smitha et al shows that, median age of the ASHAs interviewed was 30 years[5] and in a study by NirupamBajpai et al it was observed average age was 31 years which was analogous to this findings.[6] In this study most of them 167(77.3%) had studied upto high school, similar to a study by Smitha et al[5] In contrast, a study by BhagwanWaskel et al shows that 86 (41.74%) of them had studied upto 8th standard.[7] A study by BhagwanWaskel's shows that 193(93.68%) were married[7] and Smitha et al study shows (97%) were currently married.[5] Majority were Hindu by religion 210(97.2%) which is similar to the observations of NirupamBajpai (98%)[6] and BhagwanWaskel (94.17%)[7].

Table 4: Job performance of ASHA workers based on verification of registers 1st March 2013 to 31st April 2014

Variables	Frequency (%)
Performance based on JSY	
Well performing	126 (58.3)
Under performing	90 (41.7)
Performance based on PNC visits	
Well performing	129 (59.7)
Under performing	87 (40.3)
Immunisation coverage*	
Well performing	69 (32.6)
Under performing	143 (67.4)
Conducting VHND monthly meeting with AWW	
Less than or equal to eight	47 (21.8)
More than eight	169 (78.2)
Attending VHSC monthly meeting	
Less than or equal to eight	93 (43)
More than eight	123 (56.9)

*4 missing values in immunisation coverage

Table 5: Association of factors influencing the JSY performance of ASHA workers

Variables	JSY performance		p value
	Well performing (n=126) (%)	Under performing (n=90) (%)	
Education			
Middle School	10(7.9)	11(12.2)	0.21*
High School	102(81.0)	65(72.2)	
PreUniversity	14(11.1)	12(13.3)	
Degree	0(0)	2(2.2)	
Caste			
OBC	59(46.8)	55(61.1)	**0.001***
SC	66(52.4)	28(31.1)	
ST	1(0.8)	7(7.8)	
Anganwadi Centres covered			
One	57(45.2)	33(36.7)	**0.022***
Two	62(49.2)	44(48.9)	
Three	5(4.0)	13(14.4)	
Five	2(1.6)	0(0)	
Houses visited per week			
≤20	22(17.5)	6(6.7)	**0.020**
>20	104(82.5)	84(93.3)	
Working hours per week			
≤12	70(55.6)	16(17.8)	**0.001**
>12	56(44.4)	74(82.2)	
Population			
<800	38(30.2)	6(6.7)	**0.001***
801-1200	62(49.2)	60(66.7)	
1201-1800	26(20.6)	19(21.1)	
>1800	0(0)	5(5.6)	

Note: * Fischer's exact test,
Numbers in parenthesis indicate percentages

In this study 114(52.8%) belonged to other backward caste (OBC), 94(43.5) belonged to scheduled caste (SC) and a few belonged to scheduled tribe (ST) category i.e. 8 (3.7%). Similarly, in a study by NirupamBajpai 66% belonged to OBC category and 15% belonged to SC category. Majority, belonged to class V socio economic status i.e.196 (90.7) according to modified BG Prasad classification.

Job description of ASHA workers

In the current study 69.9% ASHA workers had an experience of five years similar to a study by NirupamBajpai et al and 214 (99%) work in the same place of their residence similar to NirupamBajpai's study[6] and a study conducted in Uttar Pradesh (92%).[8]

In this study, 122(56.5%) serve a population of 800 to 1200 whereas, in another study, it was observed that the average population served by ASHA worker was 1165 and majority 126 (58.3%) serve more than one Anganwadi canter. Many of the ASHAs are catering to a population of more than the stipulated norm of 1,000 due to increase in population, vacant posts, etc. which results in severe workload on ASHA worker.

Job performance

In this study majority were visiting more than 20 houses per week, where as a study at Orissa shows that almost all ASHAs (98.8%) visited all households in the village. Another study showed that, the number of households visited per week was 21, weekly average of hours worked was 28 hours.[6,9]

Majority ASHA workers visiting AWW, ANM and Medical Officer periodically as per Guidelines.[1]In Uttar Pradesh Co-ordination with other bodies showthat 84% has reported that they are helping ANM/AWW in different health and nutritionrelated programmes.[8]

In the current study, we assessed the performance of ASHA workers based on her duty and responsibilities. Based on her assistance in institutional delivery (Karnataka CBR 18.8 SRS 2012) we categorised and we found that 126(58.3%) were performing well whereas, 90(41.7%) were performing poorly.In a study conducted in 2008 by United Nations Population Fund (UNFPA) it was revealed that 44.05% of the women were accompanied by ASHA at the time of delivery.[10]The analysis of the quantum of work being done by the ASHA under the JSY scheme showed that out of total institutional deliveries, around three fourth (70%) were motivated and facilitated by the ASHAs.[11]

ASHA workers performance based on six postnatal house visits indicated that 129(59.7%) were performing well and 87(40.3%) were performing poorly. A study by Sharma P et al showed that only 32.60% of the women were facilitated by ASHA for PNC visits and the proportion was slightly higher 34.10% in rural areas. Only in 33.78% women, more than three PNC visits were facilitated by ASHA followed by 29.73% women in whom two PNC visits were facilitated by ASHA.[12]

In this study data was collected by verification of registers maintained by ASHA workers. The poor

performance of around 40% of ASHA workers based on JSY and PNC visits may be due to the fact that only those cases for whom incentives were given were entered in the registers.

In this study 67.3% were under performing and 32.6% were performing well based on accompanying for immunization till first dose of measles. A study showed that out of 83% new-born's that were administered BCG vaccination, 59 % were facilitated by the ASHAs in getting the immunization.[11]

In our study all ASHA workers were actively participating in VHSC and VHND meetings. A study in Uttar Pradesh shows that 51% ASHA is working with VHSC committee. 84% has reported that they are helping ANM/AWW in different health and nutritionrelated programmes.[8]

Current study shows caste, number of Anganwadi centres covered, number of houses visited per week, numbers of hours of work per week, population covered were found to be significantly associated with the JSY performance of ASHA worker.

CONCLUSION

To a large extent, the actualisation of the goals of NRHM depends on the functional efficacy of the ASHA as a grass root health activist. An active participation of ASHA was observed in this study. ASHA workers were actively involved in JSY, Immunization, VHSC, VHND were observed. Caste, number of Anganwadi canters covered, number of houses visited per week, number of hours of work per week and population covered were found to be significantly associated with the performance of ASHA worker.

RECOMMENDATIONS

Assessment of the population catered to by each ASHA should be made at gross root level so as to limit the population covered to enhance their performance. Provide more opportunities to ASHA, in order to motivate their engagement and continued performance. A process of community level monitoring, regular problem solving, and skill upgradation should be developed.

Limitations

Authenticity of the information is based on the response of the study subjects and information from their registers. Prior contamination of data cannot be assessed due to spill over of information from neighbour study participants.

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