

Knowledge of Asha Workers about Maternal and Child Health Services in Kalol Taluka, Gandhinagar District, Gujarat

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Abstract:

Background: One of the key components of the National Rural Health Mission is to provide every village in the country with a trained female community health activist Accredited Social Health Activist (ASHA). Selected from the village itself and accountable to it, the ASHA will be trained to work as an interface between the community and the public health system.**Objective:** To determine the association between socio-demographic characteristics and the level of knowledge of ASHA workers about Maternal and Child Health services.**Materials and Methods:** It is a community based cross sectional study was conducted among 211 ASHA workers of Kalol Taluka, Gandhinagar, and Gujarat from November 2023 to January 2024. Sample size was calculated by formula $(4PQ/L^2)$ and all 211 ASHA workers of Kalol Taluka were selected randomly. The semi-structured self-administered questionnaire formulated based on the ASHA modules and translated into the local language (Gujarati) was used for data collection. Descriptive data was analyzed by using frequency and percentage. For the association between variables, Chi-square test was used.**Results:** About half of the respondents (50.2 %) had good knowledge about the Antenatal Care (ANC) whereas 52.1 % of them had good knowledge about Post Natal Care (PNC). About 56.8 % of the respondents were aware of the exclusive breastfeeding till six months after birth.**Conclusions:** Knowledge levels about maternal and child health services were found to be average in most of ASHA workers.**Keywords:** Accredited Social health Activist, Maternal and Child Health, National Health Mission, Knowledge.

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Introduction

The perception of 'health for all' by Alma Ata declaration insists on decreasing these differences by stressing the importance of primary health care and strengthening the capacity of basic level health workers. With similar idea, in India the National Rural Health Mission (NRHM) (now National Health Mission (NHM)) was launched with the aim of addressing problems faced by the rural population in availing healthcare facilities [1]. One of the main factors that affect adversely on the healthcare delivery system in developing countries is the shortage of trained health workforce. Secondly, no health programs can be successful without community participation and acceptance. When looked for a solution to these problems, the concept of Community Health Workers (CHW)

seems to be effective. CHWs are appointed as basic level health workers who are from the community itself and can provide necessary services like mobilization, awareness about health and many more such services according to the need. This concept of CHW is time tested for more than 50 years in several countries and it has been found effective in improving the health outcomes of people especially in the field of maternal and child health [2]. With this background, the Accredited Social Health Activist (ASHA) programme was launched as a key component of NRHM in 2005. ASHA plays the main role in bridging the gap between public health facilities and the communities by providing necessary and timely information about the health related issues and

available solutions. Ideally, ASHA should be staying in the same village where she works. A married/ widowed/ divorced woman preferably in the age group of 25 to 45 years with minimum educational qualification being 8th standard is selected as an ASHA (relaxed in areas where ASHA workers are not available in adequate numbers fulfilling this criterion) through various community groups such as self-help groups, gram sabha and nodal officers. ASHA being the first port of call to the deprived population are expected to facilitate community participation in public health programmes, especially among women and children.

ASHA has to counsel pregnant women about Antenatal Care (ANC), birth preparedness and danger signs during pregnancy. She has to provide information about the importance, duration, and frequency of breastfeeding to lactating mothers. Information about contraception and Reproductive Tract Infections / Sexually Transmitted Diseases has to be given to the eligible couple. In most of the villages where the healthcare facilities are located far from the personal residence, they have to be dependent on ASHA for basic healthcare facilities like medicines for minor ailments, assistance in Antenatal Care, Intranatal Care and Postnatal Care.

After 12 years of the launch of ASHA services, now the community acceptance and utilization of ASHA services have increased [3]. Some Studies have shown that the knowledge level of ASHA in most of the places was not complete that may lead ASHA to provide incorrect information to the community. Hence this study is conducted to assess the level of knowledge of ASHA workers about maternal health.

Materials and Methods

It is a community based cross sectional study conducted in Kalol Taluka, Gandhinagar, and Gujarat from November 2023 to January 2024. Trained ASHA workers in Kalol Taluka, who had experience of at least 2 year were the study participants. A study conducted in Mysuru Taluka in 2019 has revealed that the knowledge among ASHA workers about ANC and PNC as 86 %. That is taken as the prevalence of knowledge. To calculate sample size, $4PQ / L^2$ formula used. For 95% Confidence Interval, P (Prevalence of knowledge of other study) = 86 %, Q = (1 - p) = 14% , L (Level of precision) = 5% Sample size (n) = $4PQ / L^2 = 4 \times 0.86 \times 0.14 / 0.0025 = 192$, Adding non-response rate of 10 % = $192 + 19 = 211$. So, sample size is 211.

Selection of ASHA workers was done based on random sampling method. Data collection was carried out by the researcher through Self-administered Semi-structured questionnaire. The questionnaire was framed based on the training

modules for ASHA provided by NHM. The classification of knowledge was done based on the percentiles. Below the score of 25th percentile i.e., ≤ 30 was considered as poor. 31 to 35 was considered as average and ≥ 36 as good (above 75th percentile). The questionnaire was developed in English and then translated into the Gujarati language. All the Medical Officers of Primary Health Centre (PHC) in Kalol Taluka were contacted and obtained permission for data collection during their monthly meetings with ASHA workers. On prescribed dates ASHA workers of respective PHC's were administered with the questionnaire. Details about the researcher, purpose and nature of study was explained. Information about voluntary participation was given. Written consent was taken from all the participants. Descriptive data was analyzed by using frequency, percentage. For the association between variables, Chi-square test was used. P value ≤ 0.05 was considered as statistically significant.

Results

Total 211 of ASHA workers participated in the study. Out of that 61.7% of them belonged to the age group of 26 to 35 years. 47.4% participants were educated up to 8th to 10th standard. Around 52.6 % of the ASHA workers cover the population of 1001 to 2000 followed by 42.6 % served population below 1000 (Table 1). Knowledge of 50.2 % of the respondents about birth spacing and contraception was found to be average. About half of the respondents (50.2%) had good knowledge about the Antenatal Care (ANC) whereas 52.1 % of them had good knowledge about Post Natal Care (PNC). About 49 % of the respondents knew about the advice given for birth preparedness (Table 2). Knowledge about ANC: Need for early identification of pregnancy was correctly identified by 70.4% of the respondents. Minimum number of ANC visits was answered correctly as 4 by 92.4% but almost 21% of them could not answer correctly about the ANC visit schedule. About 52.1% of the respondents could identify all the laboratory investigations done during ANC visits. Number of TT injections to be given to pregnant women during first pregnancy was known to 89.9% of the respondents. Ideal weight gain during pregnancy per month was correctly known by only 32.7% of the participants.

Knowledge about PNC: There was correct knowledge about cord care among 92.4% and 86.3% of them correctly identified the scheduled days an ASHA should visit recently delivered mother. Only 24.7% of the respondents could answer correctly about the weight to be considered as Low Birth Weight (LBW) soon after birth. Advising about kangaroo mother care was known to be given to LBW baby by 90.7%. Knowledge

about Breastfeeding: Time of initiation of breastfeeding was correctly known by 92.9% of the respondents. 96.7% respondents answered that pre-lacteal feeds should not be given to baby and 95.7% of the respondents correctly responded that colostrum should be fed to baby without discarding initially. About exclusive breastfeeding, 45% of them responded water, milk formula or cow's milk can be given to baby till 6 months after delivery.

Knowledge about Immunization: The immunization to be given to the baby on first day of birth was correctly identified as BCG by 92.7% of the participants. As per the immunization schedule vaccination against measles to be given was asked. Among the participants of the study

80% of them could identify it as in 9th month of baby. Classification of participants based on knowledge score: The classification was done based on the percentiles. Below the score of 25th percentile was considered as poor that is ≤ 30 . 31 to 35 were considered as average and ≥ 36 as good (above 75th percentile). Among the ASHA workers, 34.5% and 45 % of them had good and average knowledge respectively (Figure 1).

Association of knowledge with socio-demographic characteristics: Knowledge was found to be having statistically significant association with level of education of ASHA workers, population covered by each ASHA worker and the time spent on house visits in a week with the p value < 0.05 (Table 3).

Table 1: Socio-Demographic Characteristics of the Respondents.

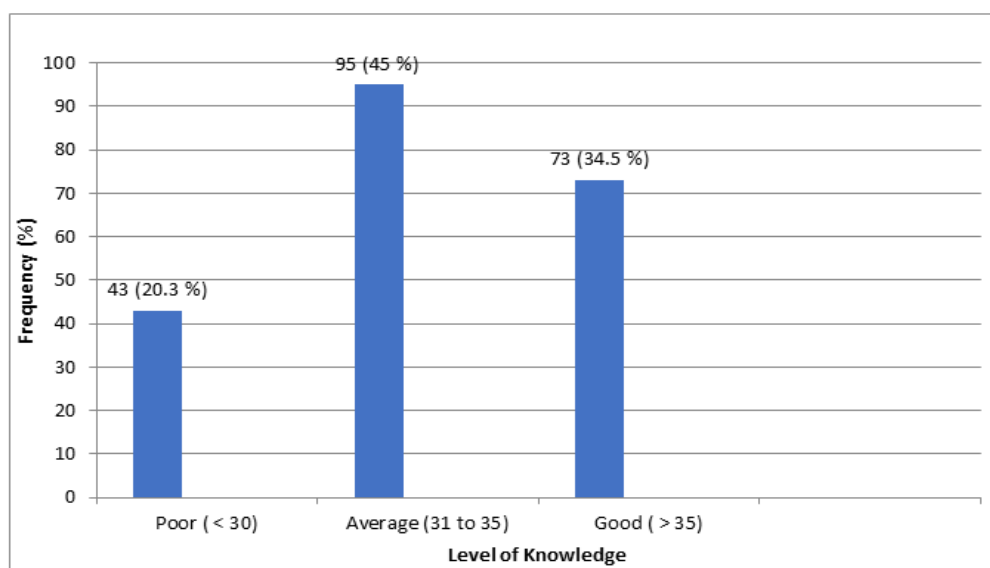
Characteristics (n = 211)	Frequency	Percentage (%)
Age (in years)		
≤ 25	2	0.9
26 to 35	130	61.7
36 to 45	70	33.2
≥ 46	9	4.0
Education		
Primary	14	6.3
Secondary	100	47.4
Higher secondary	93	44
Graduate	4	1.8
Place of Residence		
In the headquarter	180	85.3
Out of the headquarter	31	14.7
Allotted population		
≤ 1000	90	42.6
1001 to 2000	111	52.6
2001 to 3000	7	3.1
3001 to 4000	2	0.9
≥ 4001	1	0.4
Years of experiences		
1 to 2	110	52.1
3 to 4	34	16.1
5 to 6	66	31.2
≥ 7	1	0.4

Table 2: Knowledge of the Respondents about Maternal and Child Health

Characteristics (n = 211)	Poor n (%)	Average n (%)	Good n (%)
Pregnancy testing kit	1 (0.4)	110 (52.1)	100 (45.0)
Antenatal care	3 (1.3)	102 (48.3)	106 (50.2)
Danger signs during pregnancy	29 (13.0)	90 (42.7)	92 (43.6)
Birth preparedness	2 (0.9)	105 (49.7)	104 (49.2)
Post natal care	3 (1.3)	98 (46.4)	110 (52.1)
Breastfeeding	2 (0.9)	89 (42.1)	120 (56.8)
Birth spacing and contraception	1 (0.4)	106 (50.2)	104 (49.2)
Immunization	2 (0.9)	80 (37.9)	129 (61.1)

Table 3: Association of Knowledge with Socio - Demographic Factors.

Variables	Poor (< 30) (%)	Average (30 to 35) (%)	Good (> 35) (%)	P value (< 0.05)
Education				
Primary	4 (8.8)	8 (7.9)	9 (11.8)	0.027
Secondary	34 (79)	69 (72.6)	39 (53.4)	
Higher secondary	3 (6.6)	17 (17.8)	23 (31.5)	
Graduate	2 (4.4)	1 (0.9)	2 (2.6)	
Allotted population				
≤ 1000	19 (44.1)	41 (43.1)	17 (23.2)	0.011
1001 to 2000	12 (27.9)	36 (37.8)	38 (52)	
2001 to 3000	6 (13.9)	15 (15.7)	15 (20.5)	
3001 to 4000	5 (11.1)	1 (0.9)	2 (2.6)	
≥ 4001	1 (2.2)	2 (1.9)	1 (1.3)	
Time spent in household visits in a week (in hours)				
≤ 15	9 (20)	8 (7.9)	2 (2.6)	0.005
16 to 30	31 (72)	86 (90.5)	68 (93.1)	
31 to 45	3 (6.6)	1 (0.9)	3 (3.9)	

**Figure 1: Classification of Participants Based on Knowledge Score**

Discussion

In the present study it was found that 61.7% respondents were aged 26 to 35 years. Similar findings were obtained in a study conducted by Desai et al. In which around 71% of the ASHA workers were aged between 26 to 35 years [4]. ASHA workers are involved in mobilizing the community, the age group is an important factor since it requires physical strength. Hence the ideal age group recommended by NHM is 25 to 45 years. This study found that more than 96% of the ASHA workers belonged to this age group.

In this study, 44% of the study participants were educated up to High school, and 6.3% were educated up to 7th standard. These findings are similar to the study conducted by Nagaraj et al. Where 77.3% were educated up to high school and 9.7% up to middle school [5]. About 96% of the ASHA workers covered the population up to 2000 and the 4% of them covered the population of

more than 2000. Similar results were found in the study conducted by Bhandari et al. That is 73.75% of them were covering the population of 1000 to 1500, and 5% of them were covering the population of more than 1500 [6]. Even though the maximum population to be covered by each ASHA is 1000, due to lack of availability of human resources they have been allotted more than the ideal number of populations. In the present study it is found that only 50.2% of the respondents have good knowledge about ANC. A study conducted by Kori et al. Found that 12.5% and 14.7% of the respondents had very good and good knowledge about ANC respectively [7]. The minimum number of ANC visits was correctly identified as four by 92% of the respondents, but the recommended schedules of these visits were known only by 60%. The number of TT injections to be given in the first pregnancy and number of IFA tablets to be taken was also known correctly by 89.6% and 75% respectively. But only 22.3% of

the respondents could identify all the three listed side effects of IFA tablets. Similarly, the study conducted by Shashank et al. Found that 79.5% of the respondents answered that there should be minimum four compulsory ANC visits and 90% and 100% of the ASHA workers agree that Iron and calcium tablets should be provided to pregnant women and TT injection has to be given respectively[8]. All the four danger signs during pregnancy enlisted in the questionnaire were identified by only 44.1% of the participants. A study conducted by Kohli et al. Found that 85.5% of the ASHA workers participated in the study said that pregnant women with vaginal bleeding should be referred [9]. Only 49% of the ASHAs could identify all the four enlisted elements of birth preparedness. According to the study conducted by Grover et al., more than 80% of the ASHAs reported that they counsel for all the elements of birth preparedness [10]. Counseling about the birth preparedness and helping pregnant women to decide about all those elements is a major responsibility of ASHA but knowledge about the same was not found to be satisfactory in this study. Knowledge about breastfeeding was very good except for the exclusive breastfeeding. 58.1% responded there should be exclusive breastfeeding till six months after birth. In a study conducted by Saxena et al. They found that only 23% of them knew about exclusive breastfeeding until six months after delivery [11]. Only about 24% of the respondents could identify the weight of LBW baby as less than 2.5 kgs, About Kangaroo Mother Care 90% of the ASHA workers knew that it is advised for LBW babies. A study conducted by Bansal et al. Found that the knowledge of ASHA workers about encouraging Kangaroo mother Care was 68%[12]. In this study knowledge about immunization was found to be good among 61.2% of the study participants. According to the study conducted by Kori et al. In 2015 more than 60% of the respondents had good knowledge about the immunization [7].

Good knowledge about the immunization schedule is important for ASHA workers to guide the community to get timely immunization services. The minimum spacing between two children was correctly answered as three years by 90% of the respondents, and 99.5% could correctly identify the spacing method among other permanent contraceptive methods. The study conducted by Ratnam et al. Found that 100% of the ASHA workers knew the permanent and spacing methods of contraception provided by the government [13]. The knowledge about the types of contraceptive methods is important to be known by ASHA workers since it helps them to counsel the couple based on whether the family size is complete or not.

Conclusion

The level of knowledge was average among almost half of the participants. Community mobilization is an important responsibility of ASHA workers especially for ANC visits of pregnant women. Being trained regularly and about one-third of them having field experience of more than 4 years, few ASHAs were not still recommending pre-lacteal feeds and most of them are aware of the concept of exclusive breastfeeding till six months after birth. The knowledge about identification of the danger signs in pregnancy and birth preparedness plan were good.

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