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# Knowledge and Functioning of Accredited Social Health Activists (ASHA)

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**Abstract**

One of the core strategies of NRHM was to promote access to improved health care at household level through ASHA. A community based research study was conducted to assess the knowledge and functioning of ASHA with respect to three selected districts of Kerala and to analyze the problems faced by them in the delivery of Primary Health Care Services at the village level. A survey approach with selective employment of qualitative method was used.A descriptive cross sectional survey design was used. To represent the entire state of Kerala one district each from Northern (Wayanad, Central (Kottayam), and Southern (Thiruvananthapuram) region of Kerala was randomly selected. The Sample consists of 405 ASHAs and 73 JPHNs and they were selected using cluster sampling technique. Data collection instruments were structured knowledge questionnaire, self administered rating scale,focus group interview guidelines, in-depth interview guidelines and opinionnaire. Quantitative analysis revealed thatalmost half (42.3%) of the ASHAs from Thiruvananthapuram belongs to the category of good knowledge level, Thiruvananthapuram (good-36.3%) has better functioning than Kottayam and Wayanad and Significant association was found between knowledge scores and educational status and level of satisfaction of ASHA workers (P>0.05). Themes derived from qualitative analysis are problems related to Maternal Child Health services, adoption of Family planning services, Communicable and Non communicable Disease monitoring, work load, Lack of transportation facilities, Inadequate payment structure, inappropriate Government health infrastructure ,lack of recognition by the Panchayat, lack of medicine kit, lack of follow up after initial training, inadequate knowledge and communication skill, lack of supervision and lack of co-operation from the families. Majority (49.3%) of the JPHNs have only average opinion regarding the functioning of ASHAs in the community. Only 16 (21.9%) had good opinion about the services rendered by the ASHAs in the community.

**Keywords:** ASHA; JPHN; Knowledge; Functioning; Primary Health Care Services

## Introduction

Health is an internationally recognized fundamental human right and an indicator of socio-economic development of a country [1]. In spite of this realization, the people living in the country have little or no access to modern medical and health care services results in high rate of morbidity and mortality from various diseases [2]. Since India's independence in 1947, various national schemes and programmes have been launched with a view to improve the health status of people living in rural areas. The National Rural Health Mission (NRHM) is the latest of its kind .To strengthen the existing PHCs and CHCs in terms of both infrastructure and human resources [3]. From 2013 onwards NRHM is renamed as National Health Mission (NHM) with National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) as its two Sub-Missions. The success of the National Rural Health Mission (2007-2012) shows the way for converting NRHM into National Health Mission (NHM) which would cover both rural and urban areas [4]. NHM has been extended to 2021 [5].

The World Health Report focuses on human resources as the key ingredient to the successful functioning of health system [6]. One of the core strategies suggested under the NRHM was the creation of Accredited Social Health Activists (ASHA) to strengthen the decentralized village and district level health planning and management .Since Junior Public Health Nurses (JPHNs) were heavily over worked, one of the core strategies of NRHM was to promote access to improved health care at household level through ASHA [7].

In Kerala the NRHM programme was launched in 2006. The brand name for NRHM in Kerala is "ArogyaKeralam" with the slogan "Healthy Kerala, Wealthy Kerala" [8]. Even though the state of Kerala has advanced as compared to the other states of India in terms of critical health indicators are concerned, the state is facing the problem of high morbidity both from re-emergence of communicable diseases and the second generation problems like the aging population and non-communicable diseases. Considering the peculiar health scenario in Kerala, the role of ASHA workers has been extended to other fields like Prevention and Control of Communicable diseases, Identification and Control of Non-communicable Disease (NCDs), Palliative care and Community based mental health Programme [9].

The shortage of skilled health workers in remote rural areas of the country remains a key challenge in achieving the goals [10]. ASHAs have been found to play a crucial role in promoting the health care services and linkage between the health care system and community. They as a national variant of CHWs are a key part of the rural health system in India. Community health workers (CHWs) form a vital link between the community and the health department in several countries [11]. Since Sub-centres were serving a much larger population than they were expected to and Auxiliary Nurse Midwives (ANMs) were heavily over worked, one of the core strategies of NRHM was to promote access to improved health care at household level through ASHA [7]. The increasing role of women in the health system was a significant aspect in the advancement of treatment standards in the country. Women staff was always on demand to render maternal and child care [12]. The NRHM attempts at renewal and reform in making use of women's agency, both as health workers and as mothers [13].

The knowledge and functioning of Accredited Social Health Activists is crucial for the success of the NRHM. The actualization of the goal of NRHM depends on the functional efficacy of the ASHA as the grass root health activist. The efficiency of functioning of ASHA depends on their awareness and perception about their roles and responsibilities in

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health care provision. Therefore the present study has been planned for ascertaining how efficient the ASHAs are, in playing their defined roles effectively [14].

## Statement of the Problem

An evaluation study on the knowledge and functioning of Accredited Social Health Activists (ASHA) from the selected Districts of Kerala.

## Objectives

- To assess the knowledge of ASHA in the delivery of Primary Health Care Services as per the job description
- To identify the functioning of ASHA in the delivery of Primary Health Care Services with respect to the prescribed job description
- To analyze the problems faced by ASHAs in the delivery of Primary Health Care Services at the village level
- To find the relationship between the knowledge and functioning of ASHAs in the delivery of Primary Health Care Services
- To Compare the knowledge and functioning of ASHAs with respect to the three selected districts
- To analyze the opinion of Junior Public Health Nurses (JPHN) and ASHA Co-ordinators regarding the functioning of ASHA
- To find out the association between knowledge of ASHA and selected socio-demographic variables.
- To find out the association between functioning of ASHA and selected socio-demographic variables.

## Assumptions

- Socio demographic factors may influence the knowledge and functioning of ASHA in the delivery of primary health care services
- Periodic appraisal of ASHA by the immediate supervisors may help in enhancing the functioning of ASHA
- ASHAs from different districts may vary in the knowledge and functioning level

## Hypotheses

- **H1:**There is significant difference between the knowledge of ASHAs on primary health care services in the selected districts
- **H2:** There is significant difference in the functioning of ASHAs in the selected districts
- **H3:**There is significant correlation between the knowledge and functioning of ASHA in the delivery of Primary Health Care Services
- **H4:** There is a significant association between Knowledge scores of ASHA and selected socio-demographic variables
- **H5:** There is significant association between functioning scores of ASHA and selected socio-demographic variables

## Operational Definitions

### Primary Health Care services

In the present study, primary health care services refers to services rendered to the beneficiaries through ASHA in relation to their job description based on NRHM guidelines, covering major areas such as Maternal Health, Child health, Family planning, Communicable and Non-communicable diseases.

### Knowledge

It is the awareness of ASHA regarding the delivery of primary health care services rendered to community, based on their job description and which is measured through a structured knowledge questionnaire.

### Functioning

It is the activities carried out by the ASHA in relation to their job description in the delivery of primary health care, which is measured by a 3 point rating scale.

## Review of Literature

### The ROL was organized under the following headings

- Knowledge of ASHA workers in the delivery of primary health care services
- Functioning of ASHA workers in the delivery of primary health care services.
- Problems faced by the ASHA workers in relation to the delivery of primary health care services
- Studies related to volunteer health workers, community health workers and their contributions to primary health care services.

## Research Methodology

A survey approach with selective employment of qualitative method was found to be useful to achieve the objectives of the study. Considering the nature of the study and to accomplish the objectives, the investigator adopted a descriptive cross-sectional survey design for the study. Qualitative as well as quantitative methods were used to get a clear picture about the functioning of ASHA in relation to the delivery of primary health care services, which is known as triangulation.

## Research Setting

The randomly selected districts for the present study and the district wise population in Kerala is given below (Figure 1).

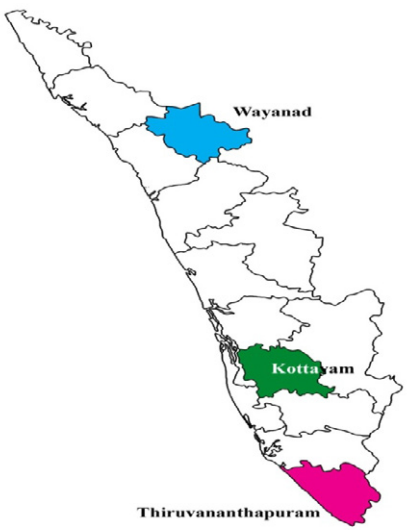


**Figure 1:** Selected districts of Kerala under study.

## Population

In this study target population is all the ASHAs appointed by the National Rural Health Mission, and JPHNs who were appointed by the Govt. of Kerala. Total number of ASHAs working in Kerala during the period of study was 26,002.

## Sample and Sample Size

**ASHA**: The sample size was calculated according to the findings of pilot study. The average performance level of ASHA was 50%, and hence the sample size was calculated by using the following formula, $n = Z^2pq/d^2$. Where, Z= Standard normal variate for 95% confidence interval=1.96, p=Percentage of ASHAs having the positive character=50%, q=(100-p)=100-50=55, L=Allowable error, considering an allowable error of 10% of p (i.e. 5), $n \approx 100$. Thus a total of 400 ASHAs were calculated as the study subjects.

## JPHN

As per NRHM, one ASHA has to look after 1000 population. So 20 to 30 ASHAs will be supervised by one JPHN in hilly or plain areas respectively. According to this, 80-135 JPHNs are needed for the supervision of 405 ASHA workers in the plain and hilly areas respectively. The sample size of JPHN in the present study is 73 which is less than the predetermined sample size. It is because all the PHCs do not fulfill the population-JPHN ratio stated in the criteria. Therefore, a total of 405 ASHAs and 73 JPHNs formed the sample for the present study. Details of the sample are given in the following table 1.

## Sampling Technique

Considering the setting of the study a cluster sampling technique was used to select the sample. Keeping in view the different geographical regions, in the first stage, the investigator randomly selected three districts from Northern, Central, and Southern regions, to represent the entire state of Kerala. Thus Wayanad from Northern, Thiruvananthapuram from southern and Kottayam from central region were selected. In the second stage, from each district, two CHCs were selected using lottery method. In third stage from the selected CHCs of each district the PHCs were selected randomly (lottery method) till the researcher obtained the required sample size of ASHAs (135/district) & JPHNs (80-135). In each of the selected PHCs, all ASHAs and JPHNs who were were present on the day of data collection were selected and the number of PHCs were decided until the pre-determined sample size (135/district) & JPHNs (80-135) was attained from each district (Figure 2).

## Selection of Sample

**Inclusion criteria:** The ASHA workers who:

* Are trained and working under NRHM for more than one year
* Are available during data collection

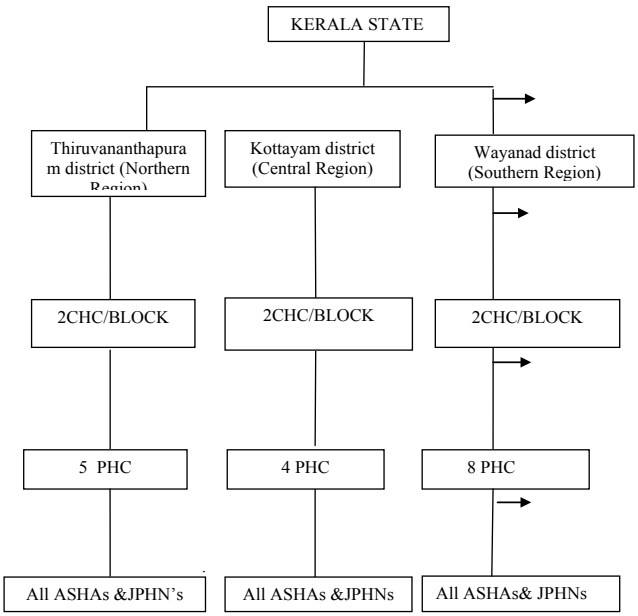


**Figure 2:** Schematic Representation of the Sampling Design.

| DISTRICT | CHC | PHC | No of ASHAs | No of JPHN |
|---|---|---|---|---|
| Kottayam | 1. Athirampuzha | 1. Athirampuzha | 65 | 08 |
| | | 1. Marangattupally | 24 | 05 |
| | 2. Koodalloor | 1. Koodalloor | 29 | 06 |
| | | 2. Aymanam | 23 | 06 |
| TOTAL | | | 141 | 26 |
| Wayanad | 1.Porumthannoor | 1. Porumthannoor | 28 | 05 |
| | | 2. Adavaka | 19 | 06 |
| | | 3. Vellamunda | 23 | 07 |
| | | 4. Kurukkanmoola | 24 | 03 |
| | 2.Thariyodu | 1 Thariyodu | 08 | 02 |
| | | 2. Thoppukunnu | 06 | 02 |
| | | 3. Kottathara | 12 | 03 |
| | | 4. Vengappally | 09 | 02 |
| TOTAL | | | 129 | 26 |
| Thiruvananthapuram | 1.Poothura | 1.Vattiyoorkavu | 29 | 05 |
| | | 2.Chettivilakom | 24 | 03 |
| | 2.Puthanthoppe | 1.Puthanthoppe | 33 | 05 |
| | | 2.Puthukurichi | 24 | 04 |
| | | 3.Veli | 25 | 06 |
| TOTAL | | | 135 | 21 |
| GRAND TOTAL | | | 405 | 73 |

**Table 1:** District wise distribution of Sample in Kottayam, Wayanad and Thiruvananthapuram Districts.

* Consented to participate

**Exclusion criteria:** The ASHA workers who:

* Are not willing to participate
* Have not undergone any initial training
* Were denied training

### Data Collection Instruments

The investigator reviewed research and non research literature related to NRHM and job responsibilities of ASHA prescribed by Government of India. Based on the objectives of the study, the following data collection instruments were developed.

### Structured Knowledge questionnaire

The knowledge questionnaire is prepared **t**o assess the knowledge of ASHA workers regarding the prescribed job responsibilities related to the delivery of primary health care services. It consists of two sections

**Section A: Socio-demographic data of ASHA:** It includes age, religion, type of family, marital status, monthly income, residence, education, income, years of experience, satisfaction as ASHA, working hours per day or week, membership in self-help groups and population coverage.

**Section B: Knowledge Questions:** After survey of related literature and consultation with experts a questionnaire comprising of 43 multiple choice items was developed to assess the ASHAs knowledge regarding prescribed job responsibilities in relation to the delivery of primary health care services

Each ASHA was graded as 'good, average and poor' according to the responses she gave.

Good: Score >33(>75$^{th}$ percentile)

Average: Score 27-33(<25$^{th}$-75$^{th}$ percentile)

Poor: Score <27(<25$^{th}$ percentile)

### Self administered Rating scale

Considering the wide range of functions performed by ASHAs, it was difficult for the researcher to make an objective assessment of the performance of ASHAs. After discussing with the experts, a self administered rating scalewas prepared to measure the functioning of ASHA workers in relation to the delivery of primary health care services in the community.

Based on the obtained score Functioning level was categorized into poor, average and good as follows

Poor :< 114 (<25$^{th}$ percentile)

Average: 114-125 (25$^{th}$ to 75$^{th}$ percentile)

Good: >125 (>75$^{th}$ percentile)

### Opinionnaire to JPHN

It is a five point rating scale**,** comprising 15 statements to identify the opinion of JPHNs regarding the functioning of ASHAs in relation to the delivery of primary health care services in the community as per their job description.

### Focus group Interview Guide

In order to generate qualitative information for the present study, the investigator developed focus group discussion guide to conduct the discussions with ASHAs and JPHNs .Both FDG guide consists of 8 questions each.

The purpose of focus group discussion with ASHAs were to elicit information about the problems faced by the ASHA workers in the delivery of primary health care services. Six FGDs were conducted with ASHAs and each section consisted of 8-12 members. The FGD with Junior Public Health Nurses was to elicit information about the functioning of ASHAs in the community. Six FGDs were conducted with JPHNs and for each session 6 to 8 members were present. FDG guidelines consists of 10 questions.

### In-depth interview guidelines

In depth interviews were conducted with ASHA co-ordinators of the selected Community health centers of three districts. It was audio recorded after getting the consent of the respondent. The recorded interviews were transcribed, analyzed and organized for the emerging themes. Later on; the emerged themes were organized into different groups.

### Content validity of the tool

To ensure content validity, the tool was given to experts from different fields which include, 4 from community health nursing, 3 from community medicine, 2 from medical surgical nursing, one from obstetrics and gynaecology and one statistician. Based on their valuable suggestions the research tools attained its final form.

### Reliability of the tool

Internal consistency reliability was assessed by using, Cronbach's alpha, and in this case, the reliability of knowledge questionnaire was 0.66 which is a good value of alpha. The reliability of the rating scale was 0.85 and it was 0.78 for the opinionnaire. The reliability coefficient was found to be adequate for the research tools. The tools were translated into Malayalam and retranslated to English with the help of language experts.

## Pilot Study

After getting permission from the State Mission Director, Thiruvananthapuram and from the medical officer of Upputhara CHC which belongs to Idukki district, a pilot study was conducted with 30 ASHAs in the Upputhara CHC. No modifications were made in the tools used for the study.

## Ethical Clearance

Permission was obtained from the following persons/agencies

* Kerala State NRHM Director, Thiruvananthapuram
* DPM of Kottayam, Wayanad and Thiruvananthapuram districts
* ASHA Co-ordinators of each CHC
* Medical Officer incharge of each PHC
* Participants and others, wherever necessary.

## Data Analysis

The statistical analysis was done using SPSS version 16.Frequency and percentages were computed for descriptive data. A Shapiro-Wilk's test (P<0.05), a visual inspection of their histograms, and not normally distributed Q-Q plots showed that the scores are not

normally distributed for both knowledge and functioning , with a skewness of -0.720(SE=0.121) and a kurtosis of 1.517(SE=0.242) for the knowledge data and a skewness of -1.116(SE=0.121) and a kurtosis of 1.74 (SE=0.242) for the functioning data. Since the data were found to be not normally distributed, non parametric tests were used for hypothesis testing.

## Results

Analysis and interpretation of the quantitative and qualitative data were done separately.On analyzing the overall knowledge level of ASHAs, it was found that majority (56.8%), of the ASHAs have only "average knowledge". District wise knowledge level of ASHAs revealed that almost half (42.3%) of the ASHAs from Thiruvananthapuram belongs to the category of good knowledge level. The area wise knowledge scores of ASHAs revealed that they have more than average knowledge (>50%) in almost all the areas except knowledge in the area of non-communicable diseases and maternal health, for which it is less than 50% in all the districts. In Kottayam and Wayanad districts, 54.6%& 55.8% of ASHAs respectively belong to poor knowledge category in relation to non-communicable diseases.

With regard to level of functioning, almost half of the ASHA belong to the category of "average functioning" (45.9%). District wise functioning level of ASHAs shows that Thiruvananthapuram (36.3%) has better functioning than Kottayam and Wayanad. The functioning of ASHAs in specific content areas shows that most of them belong to good functioning category (>90%) but for maternal health care only very few samples belong to good functioning level. ASHAs in Thiruvananthapuram have significantly better knowledge and functioning than Kottayam and Wayanad (P<.001).

There is no correlation between knowledge and functioning of ASHAs (P>0.05).Significant association was found between knowledge scores and educational status and level of satisfaction of ASHA workers. (P>0.05) Majority (49.3%) of the JPHNs have only average opinion regarding the functioning of ASHAs in the community. Only 16(21.9%) had good opinion about the services rendered by the ASHA in the community.

## Themes Derived From Qualitative Analysis

The main themes derived from focus group discussion and in-depth interview are problems related to maternal child health services, adoption of family planning services, communicable and non-communicable disease monitoring, work load, lack of transportation facilities, inadequate payment structure, inappropriate Government health infrastructure, lack of recognition by the Panchayat, lack of medicine kit, lack of follow up after initial training, inadequate knowledge and communication skill, lack of supervision and lack of co-operation from the families.

## Recommendations

Based on the findings of the study, researcher proposes certain recommendations to the State NRHM director and to the Government of Kerala. As we found in the study, the ASHAs got only average knowledge and functioning in relation to the provision of primary health care services in the community, ASHAs need regular training especially in the area of maternal health and non-communicable diseases.

## Conclusion

The impact of NRHM and the ASHA is only as strong as the individual ASHAs who are chosen to advocate for use of health facilities and provide knowledge on healthy behaviors and dispense basic health products to their community.

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