

CHAPTER- 4
RESEARCH METHODOLOGY

Chapter 4

RESEARCH METHODOLOGY

This chapter mainly focuses on the methodological aspects adopted for systematic investigation of the research study.

4.1 Research plan

A research plan is designed to achieve the objectives of the study. This study is basically exploratory in nature. The concept and evolution of CHWs (ASHA) and their perception about their role and responsibilities has been studied by the means of secondary data. Survey is undertaken to find out ASHA's socio economic status, their actual knowledge, their skills, attitude towards work, their motivation level related to work, their training and satisfaction, supervision, interaction with community people, health personnel, and the problems they are facing. Further feedbacks regarding ASHAs have been collected from the beneficiaries to whom ASHAs provide health care services, health officials and members of gram panchayat who are involved in monitoring and supervising ASHAs activities. A detailed discussion is carried out in the following section about the methodology followed to attain the objectives of this study.

4.2 Research Area

The present study has been conducted in Sonitpur, Nagaon and Sivsagar districts of Assam. These three districts are chosen for the study considering following health parameters such as birth rate, death rate, infant mortality rate, maternal mortality rate, institutional delivery, immunization, ASHAs accompanying mother during delivery, beneficiaries of JSY, awareness about JSY, mother receiving health education, receiving postnatal and antenatal check up. As the ASHA workers are assigned responsibility to work for the above mentioned health parameters so that individuals could assess basic health care facilities.

The state of Assam has 27 administrative districts. 24 districts are considered for ranking on the basis of health parameters (with reference to health indicators, as per coverage evaluation survey report Assam 2008-2009). Due to the unavailability of all the information regarding above mentioned parameters in the four districts namely Udalguri, Dimahasao, Karbianglong and Baksa they are excluded from the study. The above mentioned report states that the health department of above excluded four districts runs under autonomous council of

Bodoland. Among the districts, Sivsagar is chosen for the study having the highest score. Among the moderate scoring district Sonitpur is considered as it ranks in the middle and among the lower scoring districts, Nagaon is chosen being the lowest.

The health indicators indicate the performance of NRHM in the districts. To find out rank, the districts were assigned scores against each indicator as 24, 23, 22..... 1 (is presented in appendices V and VI, table A 1 and A 2) Thus Sivsagar ranked high, Sonitpur ranked moderate and Nagaon ranked low with the reference to the score obtained in the health indicators.

4.3 Sampling plan

The following plan is considered to select samples for the present study. It starts with the State Office of National Rural Health Mission (NRHM), then District Office of NRHM, Block Office of NRHM and the villages where competency, motivation and performance of ASHA workers have been studied. For this study, three districts of the state of Assam are selected, namely Sonitpur, Sivasagar and Nagaon district. From each district 30% health development blocks are considered. Therefore, 10 health development blocks for this study are selected. They are Behali, Biswanathcharali and Behaguri from Sonitpur district; Gaurisagar, Kalung Gaon and Demow Health Development Block from Sivsagar district; and Jakhlabondh, Samuguri, Simonabasti and Kathiatoli Health Development Block from Nagaon district. From each block 10% villages are considered. The total numbers of villages are 144 (48 villages from Sonitpur district, 34 villages from Sivasagar district and 61 villages from Nagaon district).

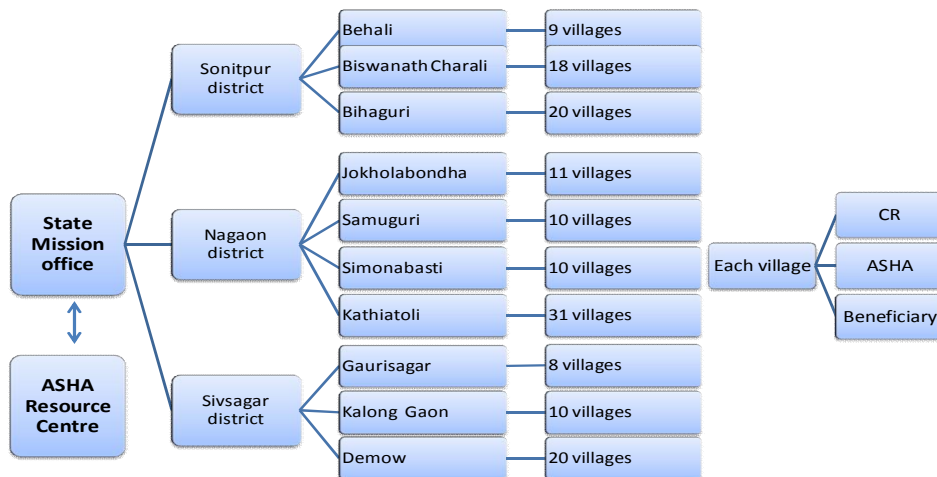


Fig. 4.1, Sampling plan of the study

4.4 Sampling procedure

This study included survey of four different groups of sample to fulfill the objectives of the study as described in chapter no.3 of the thesis. Four different sets of questionnaires have been prepared to gather information from the following groups.

- i) Health officials
- ii) Community representative
- iii) ASHA workers
- iv) Beneficiaries

Firstly information are collected from health officials at the state level, district level and at the block level to find out roles, responsibilities, functioning and performance of the ASHAs of their locality. The required information is collected through a structured schedule for the above mentioned phase.

Secondly, Socio economic background of ASHAs has been studied by using a scale developed by Pareekh and Trivedi 1964. Approaches adapted by ASHAs to facilitate health care services, ASHAs competency and their motivational level are also studied. The required information is collected by using a self administrated questionnaire.

Thirdly, effort has been given to find out the effectiveness of ASHA's work based on the feedback related to ASHAs performance provided by community representative and beneficiaries. Required information is collected through self administrated questionnaire.

4.4.1 Visit to state NRHM office and selection of districts

Information is collected from Regional Mission Directorate office about the health status of population of Assam and the impact of NRHM's programme on health status districts wise. On the basis of available information Sivsagar, Nagaon and Sonitpur districts are selected for the study considering certain health indicators. Then, 30% Health development blocks from each district are selected for this study.

4.4.2 Selection of Block

Selection of Health development blocks are made on the basis of their performances namely good performing block, medium performing block and low performing block. Performance of blocks is considered by referring to the evaluation report (2009) as published by district programme office (NRHM) of the three districts.

In Sonitpur district there are 8 health developments blocks out of which 3 health development blocks are considered namely Biswanathcharali health development block, which is referred to as low performing block; secondly Behali health development block, which referred to as medium performing block and the third block is Behaguri health development block, which is referred to as good performing block. In Nagaon district there are 11 health developments blocks. Here 4, health development blocks are considered, namely Jakhla Bondha, Samuguri, Simonabasti, and Kathiatoli health development. Here Jokhlabondha and Samuguri health development blocks are referred to as good performing blocks, Simonabasti is referred to as a medium performing and Kathiatoli is referred to as a low performing block.

There are 8 health developments blocks in Sivsagar district, from which 3 health development blocks are selected namely, Gaurisagar, Demow and Kalong Gaon health development blocks. Here Gaurisagar is referred to as a medium performing block, Kalong Gaon as a good and Demow as low performing health development block.

4.4.3 Selection of Villages

Lists of villages are collected from each health development block and 10% villages are selected from the list randomly by using random generator table (by using state treks, a random generator table). Also diverse community or population is considered. (The detail list of selected villages is given in appendix VII, table A 3)

4.4.4 Selection of household

Ten households are selected from each village on the basis of the criteria that the household should have children of age up to five years and should be visited by an ASHA.

4.4.5 Selection of ASHA

ASHA worker from each selected village is considered as sample for the survey for this study.

4.4.6 Selection of Gram Panchayat members

Gaon Burha and members of Gram Panchayat (like village councilor, Secretary of Mahali Samitee, school teacher etc) who are responsible for village health sanitation committee and monitoring of ASHAs activities are selected for the study.

4.4.7 Selection of Health officials

Persons working in the health departments and dealing with ASHAs work at state, district and block level, are considered for the study such as community mobilizer, persons working in the ASHA resource centers Guawahati, District Programme Manager, Block Programme Manager, ASHA supervisor, ANM and doctors.

4.5 Sample size

The sample for the study included ASHA workers, beneficiaries/ members of households to whom ASHA workers provided health care services, health officials and members of gram panchayat. For the selection of ASHA workers, a list of ASHAs who are working in the selected villages is collected from the health development block, and one ASHA from each selected village is considered. Thus 144 villages are considered for the study and the sample for the study consisted of 48 numbers of ASHAs from Sonitpur district, 61 numbers from Nagaon district and 35 numbers of ASHAs from Sivsagar district.

Therefore, a total of 144 numbers of ASHAs are included in the study. A list of household/ beneficiary is also collected from health development block, and on random basis (by using stat trek's random number generator table) 10 households from each village are considered to whom selected ASHA workers visited and facilitated health care services. These households should have at least a child of 5 years of age. Thus 560 numbers of beneficiaries/ households from Sonitpur district, 1,240 numbers from Nagaon district and 800 numbers of beneficiaries/ households from Sivsagar district. Total 2,800 numbers of households are finalized for this study.

For the purpose of this research study, 70 numbers of health officials who are involved in ASHAs' programme at the state level, district level, and block level are included. Health officials from ASHA Resource Centre are contacted for getting some structured information/ data. Data is also collected from members of Gram Panchayat who are responsible for Village Health Sanitation Committee and follow up of ASHAs activities. The total numbers of Gram Pachayat members are 240. (The district wise number of respondents is shown in table 4.1)

Table 4.1, Breakup of samples in details

Sl.no.	Category of respondents	Number of respondents		
		Sonitpur	Nagaon	Sivsagar
1.	Beneficiaries/ household	560	1240	800
2.	ASHA workers	48	61	35
3.	Community representative	80	100	60
4.	Health officials, a) at block level,			
	i) block programme manager	3	4	3
	ii) Assistant community mobilizer	3	4	3
	iii) ASHA supervisor	6	7	6
	iv) ANM	3	4	3
	v) Doctors	3	4	3
	b) at the district level			
	i) District programme manager	1	1	1
ii) community mobilizer	1	1	1	
5.	At the state level information was collected from Director of ASHA Resource center, State community mobilizer, HR Manager, Human Resource Development Programme Coordinator and Training Facilitator of NRHM. Here the numbers of respondents were 5.			

Therefore total number of respondents considered for this study is 3,254

4.6 Procedure of data collection

4.6.1 Secondary data

Secondary sources have been used for understanding the research subjects and its practice, the concept, evolution, need, competency level and motivational level of Community health workers. Information are also collected about the formation of ASHAs, their roles and responsibilities, performance related data, different schemes that ASHA have to handle, incentives related to their work and about NRHM etc. The information related to the above mentioned aspects are collected from official records, past studies, published papers, different articles, reports on success and failure of community health schemes, websites, brochures, news letter etc. Organization and institutions are visited for this purpose such as Omeo Kumar Das institute of Rural Development, Population Statistical department under Gauhati University, library of Gauhati University, library of Assam Agricultural University, library of Institute of Rural Management Anand, ASHA Resource Centre, and Regional Office of mother NGO Guwahati, Department of Health and Family Welfare in all the studied districts.

4.6.2 Primary data

This study basically utilizes primary data to find out effectiveness of ASHA workers in facilitating health care services. Interview and survey method are used to collect the information from ASHA workers, beneficiaries, members of gram panchayat and health officials from different levels of the organization who deal with the activities of ASHA workers. Knowledge test has been conducted to find ASHAs existing knowledge on different aspects of health issues, and Systematic Observation Method has also been used to find out the skills of ASHA workers.

4.7 Methods of data collection

Interview method, knowledge test and systematic observation have been used to collect information from ASHA workers and health officials. Questionnaires have been administered to the beneficiaries and members of gram panchayat to get information from them. Meetings, health day, vaccination camp and group discussions participated by ASHA

workers with beneficiary and health officials have been observed for each ASHA worker in 144 villages.

4.8 Tools for data collection

Different sets of structured questionnaire were developed and tested by pilot survey of 60 samples (i.e. 10 respondents from health officials, 10 from community representative, 20 ASHA workers and 20 numbers of beneficiaries). Accordingly necessary modification is made in the questionnaires and in the structured interview schedules. Pilot test also included incorporation of additional variables that are likely to result in effectiveness of ASHA's work. To measure socio-economic status of ASHA workers and beneficiaries, a scale developed by Pareekh and Trevidi (1964) is referred with slight modification. The variables under this scale have been found more suitable for this study in the rural situation as compared to the variables of other SES scale because this scale was specially developed to study SES of rural people in India. Knowledge test of ASHA workers have been conducted and their knowledge is measured with the help of three point likert scale. Information about the attitude of ASHAs towards their work and their motivation is collected through structured interview schedule. The collected information is measured in five point scales.

Further a systematic observation method is used with the help of structured schedule to find out ASHA workers skills in facilitating health care services. Information from the beneficiaries and community representatives are collected by using self administrated questionnaire. The questionnaires used for this study as survey instrument are given in annexure 1, 2, 3 and 4.

4.9 Period of data collection

Data was collected for the study from January 2011 to December 2012.

4.10 Analysis technique

SPSS software of version 16.0 has used for data entry and for the entire analysis. The collected data has been processed and coded in order to make these usable in the SPSS software. Various descriptive statistical tools such as frequency, percentage and mean are used. Parametric test (t-test and One-way ANOVA) has been used to find out relationship between the variables. Further the degree of relationship is determined by using post-hoc analysis. Split half method has been used to find out a comparative analysis among the three

districts. Reliability analysis (using Cronbachs' Alpha) is used to calculate the reliability coefficient of each variable.

4.11. Analysis of data

The collected data has been coded, tabulated and analyzed in accordance with the following objectives of the study.

4.11.1 To achieve the first objective, (i.e. intervention and approaches adopted by ASHAs for community mobilization) frequency distribution method is used.

4.11.2 Under the second objective competency and motivational level of ASHAs has been calculated. For this research study competency is defined as the appropriate knowledge, skills and attitude that the health workers need to possess to perform according to pre defined standard in order to achieve organizational goal. Different scales are used to measure knowledge, skill and attitude of ASHAs. These are discussed below-

i) Knowledge Test of ASHA workers

To measure knowledge of ASHAs, a knowledge test is administered against a checklist that is prepared based on training module for ASHA and institution's (health department) feedback that ASHAs must have adequate knowledge of the components given below. Responses are given score in a 3 point continuum scale: know thoroughly, know somewhat, and least known and they are marked as 3, 2, and 1 respectively. Where know thoroughly indicates high level of knowledge, know somewhat indicates medium level of knowledge and least known indicates low level of knowledge. (3 point continuum scale was used to measure knowledge level of respondent by Salome 1984, P. Usha Rani and A. Lakmidevi 2004 p, 187 and M. Bora and M. Dutta Das 2004).

ASHA workers' knowledge is measured in the following five aspects of health related issues

- Maternal health
- Children health
- Knowledge about their community
- Sanitation and hygiene
- Food and nutrition

Every correct answer is awarded a score of 3 ; every incomplete response is awarded a score of 2 and for wrong or no answer a score of 1 is awarded. Twenty statements are structured under the above mentioned areas. Thus a total of 60 marks are given for the knowledge test. To interpret the level of knowledge of ASHA workers the scores are distributed as follows-

Maximum score that can be obtained in knowledge test = 60 (with an average mean score of 3)

High level knowledge = if respondent obtained > 40 marks (With average mean score > 2.4),

Medium level of knowledge = if respondent obtained 40 to 20 marks (Average mean score = 1.5 to 2.4),

Low level of knowledge = if respondent obtained < 20 marks. (With an average mean score <1.5).

ii) **Skill test of ASHAs:** Following skills of ASHA workers are studied which are needed by them to perform their task effectively and enhance their work competency.

- Communication skill
- Interpersonal skill
- Organizational skill
- Advocacy skill
- Coordination skill
- Teaching skill

To find out the skills of ASHA workers a systematic observation is undertaken by the researcher which is done with the help of a structured schedule. A “4 point likert scale” is use to measure their skills such as “to large extent”, “to some extent”, “to little extent” and “not at all” and they are given score 4, 3, 2, and 1 respectively. Here, to large extent indicate complete mastery in skills, to some extent indicate some skill, to little extent indicates very little skill and not at all means no skill.

Health Day, Vaccination Day, Village Health and Sanitation Day, group discussion and meetings organized by ASHA workers is attended to observe ASHAs performance, and on the basis of researcher`s observation they are awarded scores for their skills during performing those activities.

24 statements are structured under above mentioned six skills in order to observe ASHA skills. Thus a total 96 marks are given by the researcher on the basis of observation. To interpret the quality of skills the scores are distributed as follows-

Maximum scores for skills = 96, (with average mean score 4)

Mastery in skill= if respondent scored in between 72-96 marks, (with average mean score > 3.5)

Some skill = if respondent scored in between 48-71marks, (with average mean score 2.5 to 3.5)

Little skill = if respondent scored in between 24 - 47 marks, (with average mean score 1.5 to <2.5)

No skill = if respondent scored less than 24 marks, (with average mean score < 1.5)

iii) Attitude of ASHA workers

Attitude refers to the way they think or feel about their work. Attitude is a tendency to respond positively or negatively towards a certain idea, object, person or situation. Attitude influences individual's choice of action, and responses to challenges, incentives and rewards. So it is important to study attitude because positive attitude is very crucial to bring effective outcomes on ASHAs work. To study attitude of ASHA workers structured attitude scale was used.

Attitude test of ASHAs: To interpret the quality of attitude, 11 statements are framed in the schedule and is given a score of 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree. The scores are distributed as follows. (Similar scale was followed by USHA S. 2012).

Maximum score for attitude test = 55

Positive attitude = if respondent scored >33 marks (with average mean score >3.5)

Neutral = if respondent scored in-between 23- 33 marks (with average mean score 2.5-3.5)

Negative attitude = if respondent scored <22 marks (with average mean score <2.5)

iv) Motivation

Motivation is the willingness to exert high levels of effort toward organizational goal (Stephen P. Robbins). ASHA worker's willingness to come to work regularly, work

diligently and carry out the necessary tasks, retaining their role and urge to perform their responsibilities effectively is a key component in improving people's health status and reducing their mortality and mobility rate. A self administered questionnaire was used to collect data regarding motivation. Data analysis was done with the help of frequency distribution method, and measure of central tendency, and standard deviation. Responses on satisfaction level of intrinsic and extrinsic reward were measured on four point Likert rating scale.

4.11.3 To achieve the third objective of the study, a comparative analysis have been carried out amongst the three districts with reference to competency and motivational level of ASHA, the interventions and activities carried out by ASHA, and the outcomes. The responses collected from health officials, beneficiaries and community representative are calculated by using frequency, percentage and measure of central tendency.

Further, a comparative analysis of the competency of ASHAs, their work motivation, satisfaction and training imparted to ASHAs among the three districts were done by using split half method.

References:

Chawla, Deepak and Neena, Sondhi. *Research Methodology*. 1st ed. Noida: Vikas Publishing House Private Ltd. 2011. Print.

Kothari, C.R. *Research Methodology- Methods and Techniques*, 2nd ed. New Delhi: New age international Pvt. Ltd p, 2000. Print.

Marketing research. 4th ed. New Delhi: Tata Mc Graw Hill Publishing company Limited. 2010. 4-74, 87-215, 235. Print.

Bora, M. and Dutta Das, M. "Information needs of farm women of Assam related to cultivation of Vegetable crops." Department of Extension and communication Management, Assam Agricultural University. Jorhat, Assam. 2004. 24-25. Print.

Nargundar, R. *Marketing Research- Text and Cases*. 3rd ed. New Delhi: Tata Mc Graw Hill Education Pvt. Ltd. 2010: Print.

Pareekh U. and Trivedi G. *Manual on Socio- economic status (rural)*. Manasayan: Delhi. 1964. Print.

Usha Rani, P. and Laxmi, Devi. *A. Integrated Child Development Services. "A study of job performance of Supervisor"*. Discovery publishing house. 483/24, Ansari road: New Delhi. 2004. 52-187. Print.

Usha, S. "Knowledge regarding activities of ASHA (Accredited Social Health Activist) and attitude towards utilization of ASHA among Anganwadi workers." Department of Community Health, Rajiv Gandhi University of Health Science. Bengaluru, Karnataka. 2012. 25-30. Print.