

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

3.1 DESIGN OVERVIEW

This is a cross-sectional descriptive study. The study was composed of those which the level of performance is different between the two groups, hill and terai. This study was conducted at central development region of Nepal. The purpose of this study design was to investigate the level of difference of performance of AHW working in hill and terai health post. It was focused on the factors associated with the performance of hill and terai AHW groups.

The independent variables to predict the level of performance included duration of work, percentage of CMA graduation, amount of supervision received, refresher course training, study of medically related books, and listening radio broadcast related to health from IOM.

Before starting the data collection, base-line information about AHW were collected from the Director of Central Development Region Health Service which was located at Patan. Data were collected by using two instruments i.e.

direct observation check list on history taking, physical examination, blood pressure taking, and intramuscular injection and questionnaire about the curriculum and job description prescribed by Ministry of Health. All collected data were coded and made them easy to analyze. The instrument which were used was close- ended questionnaire.

3.2 JUSTIFICATION OF THE STUDY QUESTION

Regarding AIHW performance between hill and terai, it has not been studied yet. This research program was performed to study the work performance of CMA who were working in the hill and terai areas. It is thought that CMA working in hill areas are weaker in their working performance than those who are working in the terai areas. It might be due to less supervision, inadequate education, lack of information and communication among these workers. In addition, those who were working in the hill areas are newly appointed, not getting proper refresher training, and there was not any evaluation and monitoring to this group of workers have been done. It was thought that the health workers who were staying for a long time in those area did not getting opportunity to gain new knowledge to develop their skill of performance. These different contributing factors might be responsible to make differentiation in their working performance. This study was intended to evaluate the exact working performance of CMA in terai and hill area. It was anticipated that based on these findings the recommendation could be made to the

concerning authorities for the curriculum modification, refresher training program and proper evaluation and monitoring so that CMA program could be made more effective and more appropriate.

3.3 RESEARCH QUESTIONS

Primary research question:

What is the expected performance of Community Medicine Auxiliary (CMA) working in the health post at the Central Development Region of Nepal ?

Secondary research questions:

1) Is there any difference in the expected performance between Community Medicine Auxiliary working in the hill and terai health post at the Central Development Region of Nepal ?

2) What are the associated factors of expected performance of CMA working in the hill and terai health post ?

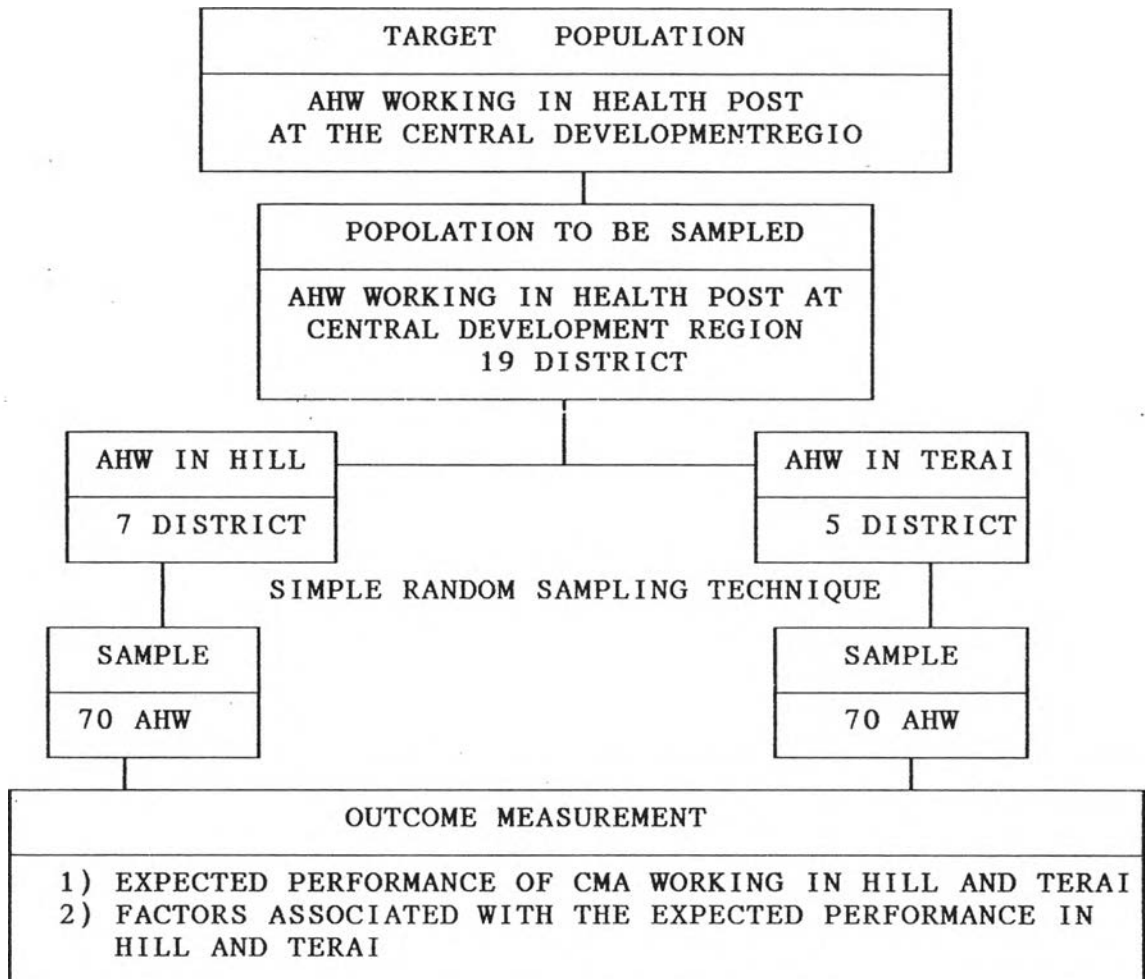
3.4 OBJECTIVES:

1. To determine the expected performance of CMA working in the health post at the Central Development Region of Nepal.

2. To compare the expected performance of CMA working in hill and terai health post at the Central Development Region of Nepal.

3. To identify the factors associated with the expected performance in hill and terai health post.

STUDY DESIGN



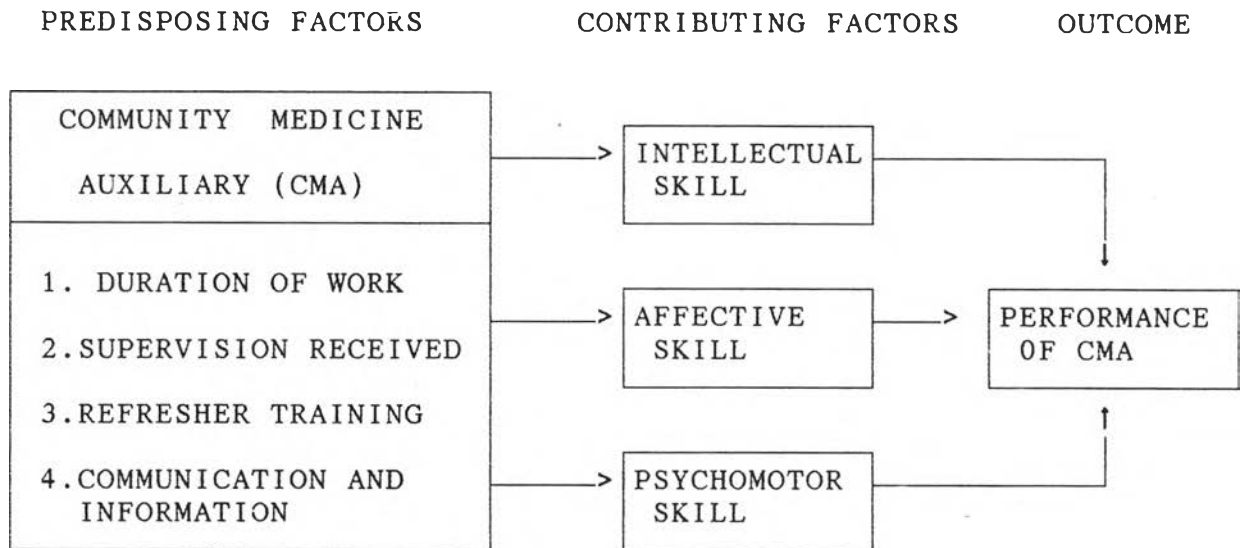
3.5 Design justification

This is a cross-sectional descriptive study because the characteristic of variables of interest in a defined

population were measured at one particular time. Direct observational checklist were used on history taking, physical examination, blood pressure and intramuscular injection. Secondly, questionnaire on job description and attitude test on present curriculum of CMA were administered. Descriptive study is described and interprets what it was. A descriptive study is the best method to provide information on the current situation of the problems asked in this study.

Checklist documentary analysis is one type of descriptive research. The study is designed to analysed the work performance of AHW working in health post between hill and terai.

3.6 CONCEPTUAL FRAME WORK



This research attempted to determine the expected performance of CMA in health post situation and examine factors related to the performance. Therefore, the performance of CMA was the place of dependent variable whereas intellect skill, affective skill and psychomotor skill were the independent variables. The conceptual framework showed that the predisposing factors might influence the outcome directly or indirectly .

There were many contributing factors of expected performance, but in this case intellectual skill, affective skill and psychomotor skill were considered as contributing factors. The duration of work, supervision received, refresher training and communication and information might be interrelated and it was anticipated that those who have been worked for a long period of time, and have received supervision regularly, have got refresher training would

likely to have better performance than those who did not have those predisposing factors.

3.7 OPERATIONAL DEFINITION

1) **Community Medicine Auxiliary (CMA)** are those health personnel who provide the health services including preventive, promotive and curative service in the grassroots level from the health post Job description as defined by the Ministry of Health.

2) **Health post:** It was an institution for providing comprehensive (i.e. preventive, promotive and curative) health care services to the people living in a defined geographical area. It seeks to achieve its purpose by grouping under one roof or co-ordinate in some other manners all the health work of that area. Ninety six percent of Nepal's population live in rural areas. Health care services to those population were delivered through the health posts. The simple cases were treated at the health post, and complicated cases are referred to district hospitals.

The health posts were run by Health Assistants or a senior Auxiliary Health Worker. The Health post in-charge had to supervise two auxiliary health worker and Two Assistant Nurse Midwives and 4-6 village health workers. One health post will cover 5000 to 20,000 population.

3) **Performance:** The percentage of actual performance equal or above 60.0 % of the total performance item refer to operate efficiently.

4) **Hill:** The geographical area where its level is approximately 1000'- 16000' above sea level. Hill area cover 42.0 % of the country. Forty-seven percent of total population stayed in the area.

5) **Terai :** The geographic area where its level is 200' - 1000' above sea level. Teria area cover 23.0 % of the country. Forty-five percent of total population stayed in the area.

6) **Standard job description :** The standard job description of CMA was defined by the Ministry of Health.

7) **Refresher training course:** It was a short term in a job training course for one or more days. It was a planned communication process which try to change attitude, skills and/ or knowledge in accordance with specified objectives relating to desired pattern of behavior.

8) **Supervision:** is the process to evaluate the outcome, to guide the way of practice, to motivate and give consultation to the staffs about their responsibilities.

9) **Cognitive domain (intellectual skill):**The intellectual skill included those objectives that emphasized

intellectual outcomes such as knowledge, understanding, and thinking skills.

10) **Affective domain (communication skill):** The affective domain includes those objectives that emphasize feeling and emotion such as attitudes, value, interests, appreciation, and methods of adjustment.

11) **Psychomotor domain (practical skill):** The psychomotor domain involved those objectives that emphasized motor skills such as giving Intramuscular injection, measuring blood pressure.

3.8) LIMITATION AND OBSTACLE:

1. This study was generalized to Central Development Region Health post under the function of government aid in Nepal.

2. We supposed to hire 14 persons, but only twelve research assistants were hired because of budget constraint. So the investigator himself had to carry out most of the task.

3. Health post could not be randomized because of time and budget constraint.

3.9) POPULATION AND SAMPLE

The subjects for this study was the Community

Medicine Auxiliary who work in the health posts of the hill and terai areas of Central Development Region of Nepal.

Approximately, 2021 CMA were working under the Ministry of Health. There were 25 ilaka health posts and 3 static health posts in the terai region (Janakpur; Bagmati and Narayani zone) and 63 ilaka health post and 17 static health posts in hill region of Janakpur, Bagmati and Narayani zone in the Central Development region of Nepal. The sanctioned post of CMA in ilaka health post is two and one is in static health post. Recently, the Ministry of Health had changed the staffing pattern in health post by having only one AHW instead of two AHWs.

3.10) SAMPLE

All the ilaka and static health post was included in our study. All the ilaka and static health post were numbered. The total number of 140 AHW were taken from the health posts of Central Development Region.

3.10.1 Inclusion criteria:

CMA were those who completed CMA curriculum or (AHW curriculum) prescribed by Institute of Medicine.

3.10.2 Exclusion criteria:-

Promoted AHW were not included, such as compounders; and malaria health workers because these people were promoted as AHW after giving only three month training.

3.11 SAMPLE SIZE DETERMINATION

Because this is the descriptive study, the following formula was used.

$$N = Z^2_{\alpha} \cdot PQ / \Delta^2$$

Where N = Total sample size

Z_{α} = The standard normal deviate corresponding to the tail probability of α

$$= 1.96 \text{ (for } \alpha = 0.05 \text{)}$$

P = The expected competency of CMA who working in the health post at the Central Development Region of Nepal

$$= 90\%$$

$$Q = 1 - P$$

$$= 1 - (0.90)$$

$$= 0.10$$

Δ^2 = Acceptable error of deviation from average competency, which is set as 5%

$$N = (1.96)^2 (0.90 (0.10)) / (0.05)^2$$

$$= 138$$