

## CHAPTER III

### RESEARCH METHODOLOGY

Research methodology is a systematic way to solve the research problem. It may be understood as a scientific way of doing research. The research design includes the description of setting, method adopted, population, the sample size and sampling technique, development of instruments and methods of data collection, the content validity, reliability of the tools and pilot study.

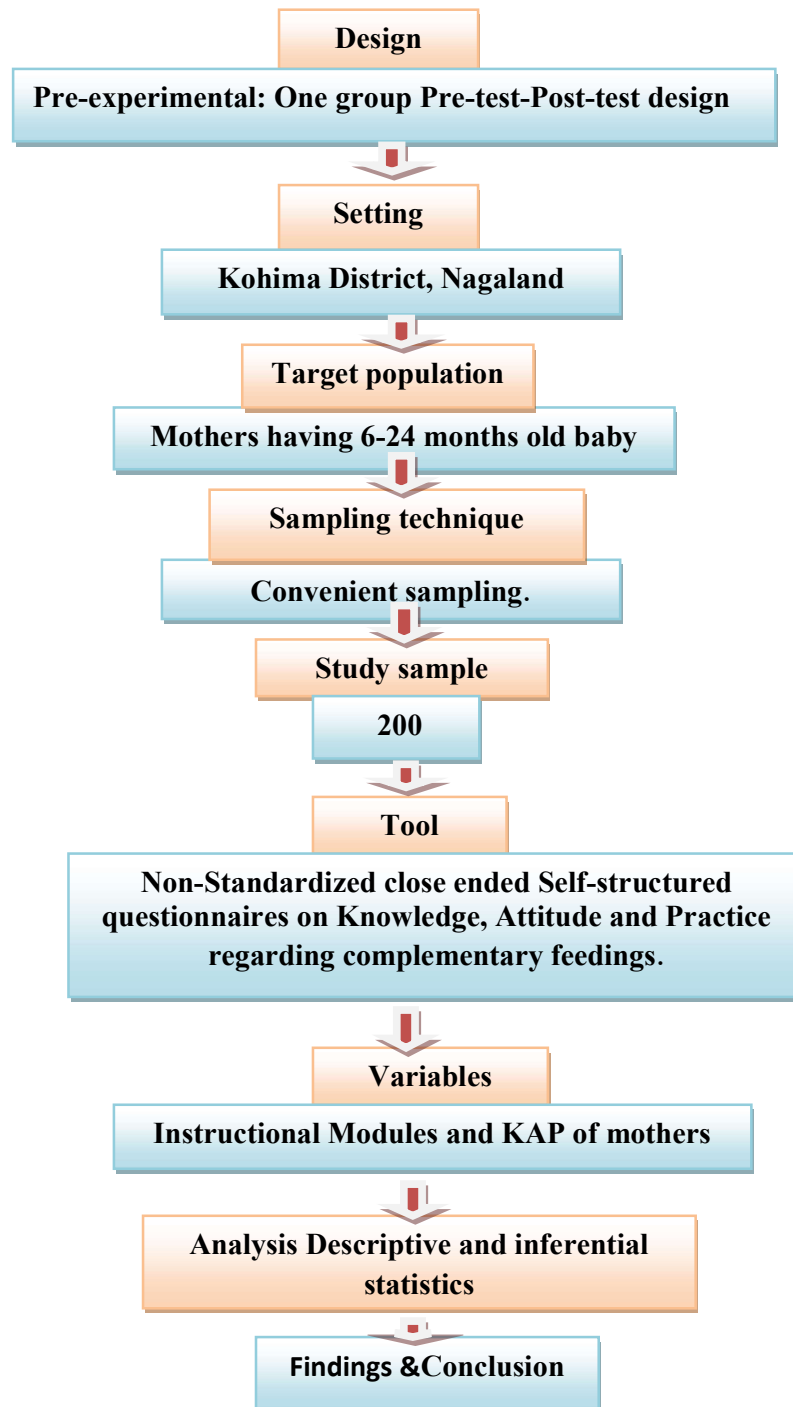
#### **Research Approach:**

In order to achieve the objectives of the study an evaluative approach was applied to find out the knowledge, attitude and practice of mothers regarding complementary feeding of 6-24 months old babies in Kohima Village of Kohima district.

#### **Research Design:**

The research design is the overall plan of the researcher for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process, **Polit F Denise; (2006)**.

The design adopted for the research study is a Pre-experimental: One group Pre-test-Post-test design. The research design is represented in figure 2.



**Fig. 2: Schematic Representation of Research plan.**

**Variables:**

Independent variables: Instructional Modules

Dependent variables: Knowledge, Attitude and Practice of mothers regarding complementary feeding.

**Setting of the Study**

Setting is the physical location and condition in which data collection takes place, **Polit and Hungler; (1999)**.

The study was conducted at Kohima Village. The investigator decided to select this village because of three main reasons. Firstly, it is one of the biggest villages in this district with a population of 15,734 (2011 census) and it is in close proximity to the state capital; secondly, most of the villages in Nagaland are remotely situated and it is difficult to go and stay for a considerable period of time for the study; thirdly, familiarity with the place and community. This study was placed before the ethical clearance committee.

**Population**

Population is a complete set of persons or objects that possess some common characteristic of interest to the researcher, **Nieswiadomy RM; (2012)**

The target population comprised of mothers having 6 - 24 months old babies who come to the immunization centre.

**Sample and Sampling technique**

Sample is the process of selecting a portion of population to represent the entire Population, **Polit & Hungler; (1999)**

The Sample size of 200 mothers having 6 - 24 months old babies were selected so that the respondents could be representative.

Out of the total population of 15,734, females of all ages are 7,916. Among them, there are 401 mothers of the age group of 18 to 45 years having 6 - 24 months

old babies. Out of them the investigator selected 200 respondents according to the Population size table by **R.V. Krejcie & D. W. Morgan;(1970)**

Non-probability Convenient sampling technique was used for this study because of their availability and easy access.

### **Criteria for Sample selection**

#### **Inclusion criteria-**

The study includes mothers who are:

1. Residing in the Kohima village.
2. Mothers having 6 – 24 months old baby.
3. Mothers who are willing to participate in the study.

#### **Development of the tools:**

The tools developed are the Self-Structured tools.

1. Questionnaire on Knowledge of Mothers regarding Complementary Feeding
2. Practice of mother regarding Complementary Feeding
3. Attitude scale of mother regarding Complementary Feeding

The following steps were carried out to develop the tool:

1. The related literature review was undertaken.
2. Subject experts were consulted.
3. The personal experience of investigator was incorporated.

#### **Description of the Tools:**

Self- structured tool was prepared to assess the Knowledge, Attitude and Practice of mothers regarding complementary feeding of baby's. The tools used to collect the data were divided into 2 sections.

**Section – I:** It deals with the socio-Demographic Variables which selected variables i.e. baby’s age, mother’s age, education, occupation, family income, family type, number of children and source of information.

**Section – II:** A blueprint was developed to prepare the content of the tool and based on blueprint items Questionnaires of knowledge, attitude and practice were developed on the areas of complementary feeding.

The questions were further divided into 3 parts.

**Part I:** Knowledge about complementary feeding which consisted of 10 multiple choice questions. Each correct answer was given a score of 1 and wrong answers a score of ‘0’. A total possible score was 10.

**Part II:** 20 positive statements were constructed on complementary feeding to measure the attitude of mothers’. A five point Likert scale was prepared with the responses namely strongly agree, agree, not sure, disagree and strongly disagree giving the maximum score of 5 and minimum score of 1.

Strongly agree (5) Agree (4) not sure (3) Disagree (4) and Stronglydisagree (1).

**Part III:** Practice of complementary feeding which included 15 multiple choice questions. Each correct answer was given a score of 1 and wrong answers a score of ‘0’. A total possible score was 15.

#### **Content Validity:**

Content validity of the tool was established by 5 experts from the field of Paediatrics, Gynaecology and Obstetrics and Medicine. Initially the tool developed consisted of 12 demographic variables, where experts accepted 9 items. Minor suggestions regarding rearranging of questions were given by the experts which was accepted. The final tool consisted of:

1. Demographic variables – 9 items
2. Knowledge – 10 items
3. Attitude – 20 items
4. Practice – 15 items

**Reliability:**

To ensure the reliability of the tool, the tool was administered to 20 mothers' in the month of June 2014. The reliability was computed using split-half technique.

From reliability of the half test, the correlation of the whole test was computed using **Spearman Brown Prophecy Formula**.

$$r^1 = 2r / 1 + r$$

$r$  = the correlation coefficient computed in the split halves

$r^1$  = the estimated reliability of the entire test.

For computing coefficient correlation the formula used was:

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{n \sum XY - (\sum X)^2 - (\sum Y)^2}}$$

Coefficient correlation was found ( $r = 0.92$ ) which indicated the high degree of reliability of the tool.

**Pilot Study:**

According to **Burns and Grove, (2007)** Pilot study is a smaller version of a proposed study conducted to develop and refine the methodology, such as the treatment, instruments or data collection process to be used in the larger study.

A formal permission was obtained from the concerned authority. The trial study was done on 40 samples i.e. mother having 6-24 months old babies after taking informed consent from the participants. The trial was carried in the month of January 2014 in Kohima village by convenient sampling technique.

**Data Collection:**

Data collection is the precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions, or hypotheses of a study **Burns and Grove;(2007)**.

Formal permission was sought from the Chairman, KohimVillage Council, before conducting the study. The data collection started in the year 2014. The target populations are the mothers having 6 - 24 months old babies.

The mothers having 6-24 months old babies were contacted from the Immunization Center and invited to the village Community Hall on a specified date and time. The Mothers were given a brief explanation regarding the research study and consent was taken from the respondents. A self- structured open ended Questionnaire was distributed to the mothers and allotted 15 minutes to answer the questionnaire. Thereafter, a teaching on Complementary feeding was given through Instructional Modules for 45 minutes. The participants were requested to come to the same venue for post test after 4 weeks of intervention.

#### **Plan for Data Analysis:**

The analysis of the data will be based on objectives and hypotheses of the study by using descriptive and inferential statistics. The statistical methods applied for analysis were:

1. The frequencies and percentage for the analysis of demographic variable
2. Computation of Mean, Median and Standard Deviation.
3. Chi-Square was done to assess the knowledge level of mothers.

#### **Summary:**

This chapter explains the research methodology adopted for the study which highlights the research approach, research design, schematic design, setting of the study, population, sampling technique, data collection technique, development and description of tool, content validity, reliability of the tool, pilot study, data collection procedure and the plan for data analysis.