# CHAPER III

## RESEARCH METHODOLOGY

### 3.1 Study Design

This study was designed as a descriptive retrospective study.

### 3.2 The Study Area

This study was conducted at the Jigme Dorji Wangckuck National Referral Hospital, Thimphu, Bhutan.

### 3.3 Sample Frame

Patient records consisting of 3,020 subjects referred for care to India during July1999-June 2004.

Policy guidelines on outside care referrals of the Ministry of Health, Bhutan.

Annual financial records available at the Jigme Dorji Wangchuck National Referral Hospital, Thimphu.

## 3.5 Sampling Methods

All available free health care data for five fiscal years June 1999 to July 2004 were included in the study.

## 3.6 Research Instrument

The researcher used a checklist to collect descriptive data for the five fiscal years and had several discussions with the team of medical experts working at the Jigme Dorji Wangchuck National Referral Hospital, Thimphu to define broadly treatment outcomes and set an overall outcome standard for referrals to India.

## 3.7 Data Collection Procedures

The researcher requested the Director of the Department of Medical Services and obtained permission to carry out the evaluation of free referred health care expenditure, trend, outcomes and outcome effectiveness.

Medical doctors were assigned to determine free referred health care outcomes, for which approval was obtained from the Director of the Jigme Dorji Wangchuck National Referral Hospital during the data collection period.

Arrangement of data collection support staff was requested to the Superintendent of the Jigme Dorji Wangchuck National Referral Hospital.

## 3.8 Data Analysis

Content analysis was done using medical records, Referral Guidelines and the Royal Government of Bhutan Policy Document.

Descriptive statistical analysis using frequencies, proportion, aggregate, proportions and means, with SPSS employed.

## 3.9 Descriptive Statistics:

**Table 3.1:    Measurements and variables**

| No | Variables | Scale | Measurements |
|---|---|---|---|
| A Patients | | | |
| 1 | Gender | Nominal | Aggregate |
| 2 | Age | Ordinal | Maximum, minimum, mean |
| 3 | Residence | Nominal | Aggregate |
| 4 | Occupation | Nominal | Aggregate % mean |
| B Referrals | | | |
| 5 | Number of referrals | Ordinal | Aggregate |
| 6 | Type of referrals | Nominal | Aggregate, %, mean |
| 7 | Referral centers | Nominal | Aggregate, %, mean |
| C Expenditure | | | |
| 8 | Medical Expenditure | Ordinal | Aggregate, %, mean |
| 9 | Administrative expenditure | Ordinal | Aggregate, %, mean |
| 10 | Travel expenditure | Ordinal | Aggregate, %, mean |
| 11 | Total Expenditure | Ordinal | Aggregate, %, mean |
| 12 | Past Trend | Ordinal | Aggregate, %, mean |
| 13 | Treatment Outcome | Nominal | Aggregate, %, mean |
| 14 | Treatment Effectiveness | Nominal | Aggregate, %, mean |

## 3.10 Ethical Consideration

The information from this study was utilized for the study purpose and confidentiality of medical records was maintained during the time of collection of data.