

## **Chapter III**

### **Methodology**

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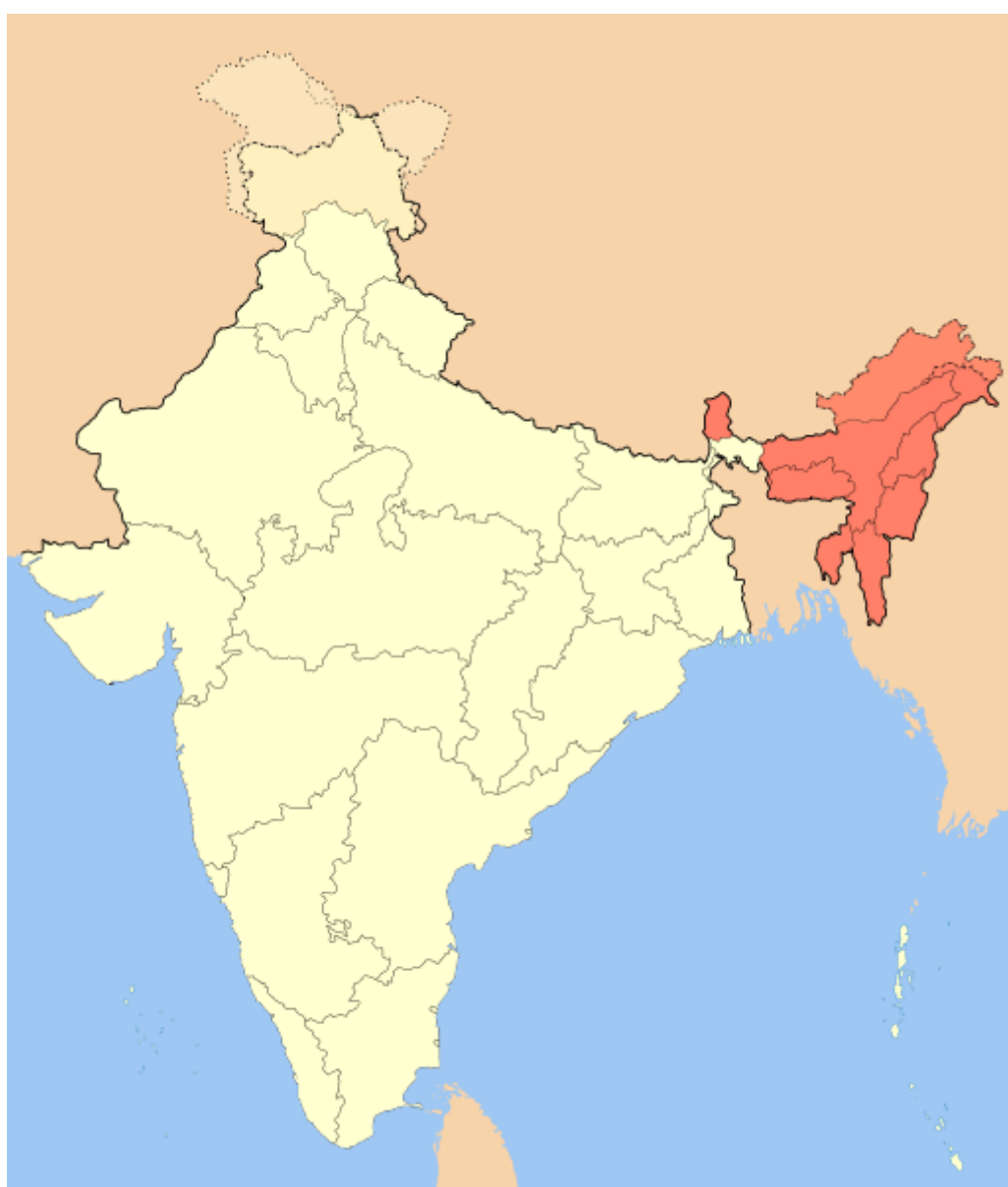
Methodology is a plan and procedure for carrying out the research. It refers to research techniques and strategies for obtaining valid information. It is an approach to understanding phenomenon and is a process of empirical investigation (Ram Ahuja. 2011. P. 41). The present study focuses on the nature of doctor-patient relationship in Government Hospitals of Manipur. It aims to explore elements comprising doctor-patient relationship and how to maintain it.

### **Research Approach**

Considering the different types of data and wide ranges of variables, the study employed mixed method approach, a combination of quantitative and qualitative techniques based on primary and secondary data. Quantitative methods are designed to study variables that can be measured in number (Popenoe, 2000,. P.35) whereas Qualitative methods are characterized as those that aim to explore meaning that produce non-numerical data. However, these data-collection techniques can also produce quantitative data by counting the different themes that emerge in interviews or focus groups (Ram Ahuja, 2011.p.13,46). The Primary sources of data are freshly collected or made; they are original in nature and never made and used before, so they are up to date and acquired by researcher on a day-to-day basis. It is generated by the ongoing research processes. This data is also obtained from the outcome of questionnaires, interviews, observations and field

surveys. Secondary Sources of the data already exist and have been frequently used. They are for example, historical records, official diaries, reports from official enquires, personal and official diaries, books, journals, newspaper reports, memoirs, films etc. Sociologists used a lot of secondary data for reference (Chakravorty Bhubon Mohan. 2009. P. 394).

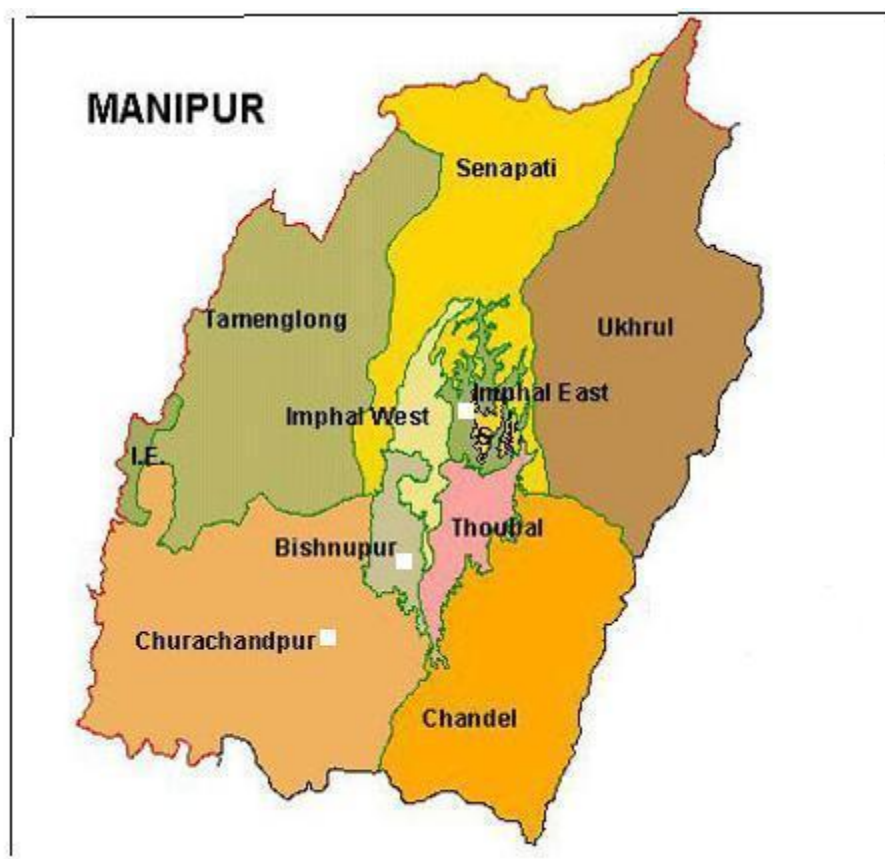
### **Study Area**



Darken area: North Eastern India



The North Eastern India: States with Capitals



Districts in Manipur. White squares, from top: JNIMS, Bishnupur District Hospital and Churachandpur District Hospital

Manipur is a state in the extreme north eastern part of India having a total population of 27, 21,756 (2011 census) with an area of 22,327 sq.km. and Imphal being the state capital. The state is divided into 9 districts. And it can be distinguished as a centrally situated valley area and surrounding hill terrains. Though the central valley area comprises only 9% of the total area, 60% of the total population inhabit in the four valley districts. And each district including the five hill districts has a major public hospital. In the Imphal West, there is RIMS (Regional Institute of Medical Sciences) hospital, a central medical college hospital, Imphal East has JNIMS (Jawaharlal Nehru Institute of Medical Sciences) hospital, a state

medical college hospital and the rest of the districts are availed with a district hospital in the district headquarters.

**Table No.3.1: The area and distance of the district hospitals from Imphal, the capital of Manipur**

No	District	Hill/Valley	Area in sq. km	Population 2011 Census	Distance from Imphal, 0 km
1	RIMS Medical College and Hospital, Imphal West	Valley	519	514,683	03
2	JNIMS, Medical College Hospital, Imphal East	Valley	709	452,661	03
3	District Hospital, Bishnupur	Valley	496	240,363	27
4	District Hospital, Thoubal	Valley	514	420,517	24
5	District Hospital, Churachndpur	Hill	4,570	271,274	63
6	District Hospital, Tamenglong	Hill	4,391	140,143	50
7	District Hospital, Chandel	Hill	3,313	144,028	64
8	District Hospital, Ukhru	Hill	4,544	183,115	81
9	District Hospital, Senapati	Hill	3,271	354,972	62

(Annual Report, 2011-12. Health Department, Government of Manipur)

Manipur has two tertiary Health Care Centres (two medical colleges-RIMS and JNIMS with their attached hospitals), seven (7) district hospitals and many other health centres. Total number of health institutions including dispensaries is estimated to be 563 with bed strength of 3422. On top of this, a total of 26 private hospitals and nursing homes are registered to Health Department under Manipur Nursing Home and Clinic Registration Act 1992 (till June, 2011) with strength of 807 beds and 172 doctors. Among the private hospitals, Shija Hospitals and Research Centre is rendering tertiary health care having 175 bed capacities and 23 doctors.

Global statistics of doctors stands to 91, 71,877 which is approximately 1 doctor per 714 heads. India has 6, 60,801 physicians which is around 1 doctor per

1667 population. The doctor population ratio in Manipur (Public +Private) is 1 doctor per 1660 population having bed ratio of 1bed: 1000 population. Total number of doctors is estimated to 1, 518 sharing 319 (160 specialists) by the RIMS, 152 doctors (79 specialists) by JNIMS, 875 by State Health and Family Welfare Department and 172 by private hospitals (WHO, World Health Statistics, 2011; Health Department, Government of Manipur, Report. 2011-12).

Table 3.2 The number of health institutions in the state along with bed strength

Sl.No	Category of Institutions	Number	Sanctioned Bed Strength	Actual Bed in position	General; Hospital Bed
<b>AA</b>	Under State Health Department				
1	State General Hospital	1	500	376	376
2	State TB Hospital	1	100	100	0
3	State Leprosy Hospital	1	30	6	0
4	District Hospitals	7	450	295	295
5	Sub-district Hospitals	1	50	50	50
6	CHC	16	480	344	344
	Sub-total Secondary		1610		1065
7	PHC	85	432	370	0
8	PHSC	421	0	0	0
9	Allopathic Dispensary	20	0	0	0
10	AYUSH Dispensary	10	0	0	0
	Total: A	563	2042	1541	1065
<b>B</b>	Under Ministry of Health, Govt. of India				
1	RIMS Hospital	1	1074	1074	1073
<b>C</b>	Under private Sector				
1	Regd. Hospital and Nursing Home	26	807	807	807
	Grand Total (A+B+C)	590	3923	3422	2945

(Annual Report, 2011-12. Health Department, Government of Manipur).

Table 3.3 the numbers of cases treated by the health institutions under the State Health Department

Sl. No.	Item	Total		
		2009-10	2010-11	2011-12
1.	OPD attendance	2,57,385	1,56,991	5,42,607
2.	IPD attendance	21,084	9,868	34,966
3.	Major Operation performed	4,905	2,570	3,912
4.	Minor Operation performed	-----	5,518	20,641
5.	No. of deliveries conducted	7,025	2,075	9,983

(Annual Report, 2011-12. Health Department, Government of Manipur)

The present study is conducted in 3 (three) Government Hospitals - one hospital which is attached to medical college, one hospital in the valley and one hospital in the hill.

### **Sampling of Hospitals**

Each of the nine districts in Manipur has one major government hospital. However, Jawaharlal Nehru Institute of Medical Sciences (JNIMS) Hospital is the only state general Hospital which is attached to Medical College. Therefore, it was included in the study. And two more district hospitals, one from valley and one from hill districts were randomly selected by adopting stratified random sampling under equal allocation. That is District Hospital, Bishnupur was randomly selected from valley District Hospitals and District Hospital, Churachandpur was selected from hill District Hospitals. Brief descriptions of selected Hospitals are mentioned below.

#### **1. Jawaharlal Nehru Institute of Medical Sciences (JNIMS), Imphal.**

Jawaharlal Nehru Institute of Medical Sciences Hospital is situated at the heart of Imphal city in the Imphal East district. The hospital is well connected and easily approachable from different parts of the state. It turned to be a full- fledged medical college from a state general hospital formerly named Jawaharlal Nehru (JN) Hospital in the year 2010. It does not only serve 4, 52,661 heads in the district but the whole population of the state as it is a referral hospital. The institute is a 500 bedded hospital with 430 OPD attendance and 27 IPD admissions daily in average.



## 2. District Hospital, Bishnupur

Bishnupur, 27 km, from Imphal is inhabited by Meiteis, Muslims, Kabuis and other tribes. The district hospital not only serves 2, 40,363 people but the people of the neighbouring Tamenglong district as well. The 50 bedded hospital has an average attendance of 111 OPD Patients and 7 IPD Patients admission per day.

## 3. District Hospital, Churachandpur

Churachandpur, 63 kms from Imphal is inhabited by Kukis, Mizos, Hmars, Paites, Muslims, Meiteis and others. Majority of the inhabitants are tribes. The hospital serves a total population of 2, 71,274 people with 120 bed strength for IPD patients with daily average attendance of 257 OPD and 25 IPD patients admission. The hospital is considered to be the biggest district hospital in the state of Manipur.

### **Sampling of Patients**

The study covered patients both from out-door and in-door departments (OPD and IPD). Patients in the Paediatric, Psychiatric and Dental departments and patients who are critically ill were excluded from the study. Patients, both male and female who were sixteen years of age and above were covered for the study. The selected three Hospitals were treated as strata and Stratified Random sampling under Proportional Allocation used for selecting OPD and IPD patients.

### **Sample of OPD Patients**

A large number of patients visited out-patient department every day. It was not possible to interview all of them. Annual attendance of OPD patients was calculated for one year prior to one year from the official records and annual reports of the concerned hospitals and also from the annual report of Health Department, Government of Manipur. From these, average daily attendance was calculated for each hospital separately and 30 p.c. of the average daily attendance was taken as the representative sample. The total sample for OPD patients covered 238.

### **Sample of IPD Patients**

The admission rate of the inpatients was calculated for a period of one year prior to the study period. From this admission rate, average daily admission was calculated for each hospital. Since the number of inpatients admitted daily has been found to be few, one day average admission was taken as representative sample. The total sample of IPD patients covered 59.

## **Doctors' Sample**

The population of doctor at the commencement of the study was obtained from the official records and annual reports of the concerned hospitals excluding the number of doctors employed in Psychiatric, Paediatrics and Dental departments. The total population comes to 140. Since the researcher was asked to personally distribute the questionnaire, it was difficult to contact all the doctors. From the total strength of doctors calculated, 30 p.c. were taken as the representative sample by using stratified random sampling under proportional allocation. The total sample came to 42.

## **Research Design**

Research designs are plans that specify how data should be collected and analysed. The research design adopted for the study was descriptive and exploratory, based on the objectives of the study. Descriptive design presupposes prior knowledge of the problem to be investigated. The major goal of descriptive research is to describe events, phenomena and situations (Ahuja Ram, 2011)

Exploratory design is used when the investigator involves the exploration of the field of research to be conducted on knowledge about the problem under investigation. Zikmund, 1988, stated three purposes of exploratory research (i) diagnosing a situation, (ii) screening alternatives and (iii) discovering new ideas (Ahuja Ram, 2011).

## **Field Work**

The time schedule for the research to be completed was divided into three (three) phases, (i) nearly one and half years, from April 2012 to September, 2013 were spent for collecting secondary data preparing questionnaire, pretesting of the questionnaire, meeting the key personnel of the hospitals for obtaining permission for data collection and making appointments for interviews of doctors. (ii) Duration of one year, from October 2013 to November, 2014 was utilized for surveys and interviews of patients and doctors. (iii) The subsequent period after data collection were subsided for analysis and interpretation, report writing and compilation.

## **Data Collection**

The data for the present research was collected from patients both from Out-patient departments (OPD) and In-patient departments (IPD) and doctors in three government hospitals of Manipur. The primary data was collected by personal/face-to-face interview method using structured interview schedule, self-administered questionnaire method using semi-structured questionnaire and focused interview method using topic guide and field observation method.

## **Tools and techniques**

The study was conducted using validated tools. Separate structured Interview Schedules were administered for OPD patients and IPD patients. Interview schedule or simply the schedule is a set of structured questions in which answers are recorded

by the researcher herself. The interview schedule comprises of 3 sections. Section A. Demographic profile of the patients. Section B. Satisfaction and dissatisfaction of patients with health care received. Section C. Views of patients on doctors.

Patients below 16 years of age were excluded from the study. For the interview of OPD patients, patients were selected at random and approached at the waiting shed and asked about the frequency of visit to the particular hospital. Those patients who visited the hospital twice or more and who are willing to participate in the study were interviewed face to face, using structured interview schedule. Due explanation about the study was given and written informed consent was taken before the interview. Total number of OPD patients interviewed was 238.

Critically ill patients and patients below 16 years of age were excluded from the study. Indoor patients were selected at random and approached in their respective wards by taking verbal permission from the sister-in-charge of the wards. Patients were explained about the purpose and significance of the study. Those patients who stayed for at least 2 days in the hospital and who are willing to participate in the study were interviewed face-to-face using structured interview schedule. Written informed consent was taken before each interview. The total number of in-patients interviewed was 59.

The questionnaire for doctors includes both open and closed questions. The questionnaire covers five sections. Section A includes Socio-demographic profile. Section B covers Satisfaction related to working hours, recognition and respect from the public, co-operation from patients and behaviour of patients. Section C includes difficulties faced in performing duties, problem patients, main cause of conflict,

preference of treatment between elderly and young patients and suggestions for strengthening doctor-patient relationship. Section D covers doctors' views and opinions on level of communication necessary, requirement of more equipment, medicines, beds, lack of co-ordination, role of media and need for patient grievance redressal mechanism. Section E covers comment and opinion on the organisational aspects of the hospitals including medical care, appreciation in the work group, professional growth, pay, clarity of rules and regulation, Nurses' role performance, inter-departmental co-ordination.

Selected at random, doctors were approached in their respective units and were explained about the purpose and significance of the study. Those doctors who are willing to participate in the study were distributed the self-administered questionnaire. The questionnaire included a mix of open and closed questions. Written informed consent was enclosed along with the questionnaire. A time limit of one week was given to the doctors to fill in the questionnaires.. Altogether 34 questionnaires were returned, giving a response rate of 76%. From these, 2 questionnaires were found to be incomplete and could not be used for analysis. Hence, the total number of completed questionnaire used for analysis of the study was 32.

### **Focused Interview**

In order to obtain more understanding on the nature of relationship and to explore the contributing factors affecting the relationship of doctors and patients in the government hospitals in Manipur, focused interviews of 15 doctors, 5 from each

of the three hospitals were conducted. Focused Interview is a face-to-face conversation of two persons or groups which is focused on a specific topic where respondents are subjected to the same experience. Here, the respondents get more freedom of responding to questions; information is more specific and can explore more information about the topic.

A broad topic guide covering certain core themes was used for the focused interview of doctors.

#### Core Themes:

1. Views on the nature of doctor-patient relationship in Manipur
2. Main causes of conflict between doctors and patients in Manipur
3. Professional & Personal Satisfaction
4. Role of doctors, patients and other staffs
5. Views on patients and society
6. Suggestions for a healthy doctor-patient relationship

Of the 15 doctors interviewed, 3 of them have work experience of 10-15 years, followed by 5-10 years for 7 doctors and the remaining 5 doctors have less than 5 years of experience in their respective hospitals. Selected at random, doctors were approached at their respective units to confirm whether they would be willing to participate in the personal interview. Interviews were conducted at a time and place of the interviewees' choice. Written consent was obtained at the start of each interview. All interviewees were assured confidentiality and anonymity. Hence,

names and personal details of doctors will be masked throughout the thesis. Each interview lasted approximately 45 minutes. All interviews were audio recorded, with permission from the interviewees. The main advantage of audio recording the interviews was that a detailed record could be made without taking written notes during the interview. This allowed for greater focus on the interviewees' responses and consideration, enabled greater non-verbal interaction such as eye-contact or nods and also allows the conversation to flow in a relatively uninterrupted way. Audiotapes were transcribed verbatim and later translated into English since the interviews were conducted in local language (Manipuri).

### **Field Observation**

The data is also supported by field observation. The researcher did not assume the role of a participant observer; however some of the sights, routine and emergencies which make up hospital activities were observed. Non-controlled and non-participant observation has been followed in the study.

### **Data Measurement**

Both quantitative and qualitative measurements were used. Many study variables relating to opinion on satisfaction of doctors and patients were qualitative in nature. These qualitative measures were converted into quantitative measures by adopting Likert's scaling method so as to quantify the level of their opinion. Both 3-point and 5-point Likert's scale were used as scaling method.



## **Statistical methods**

The data obtained from the survey were presented in the form of charts (like Bar-chart, Pie-chart etc.) and frequency tables. Descriptive statistics, viz., percentage, mean, standard deviation etc. were used to interpret the findings. Further, t-test, chi-square test and ANOVA (or F-test) were used as tools for testing the hypotheses. Chi square can be used only when the observations are qualitative in nature or in the form of frequency. And t-test is used to test the significant differences between two groups. And F-test or ANOVA is applied to test the significant differences between or among three or more groups. P-value is the observed level of significance for possible rejections of the hypothesis under consideration. If P-value is less than 0.05, hypothesis is significant at 5 percent level significance. If p-value is less than 0.01, then hypothesis is significant at 1 percent level of significance.

## **Difficulties encountered in field work**

Since the research work covered both OPD and IPD patients as well as doctors, it was a big challenge for the researcher to manage all three components during the short period of the study. Any research could not be conducted without the permission of the concerned authority or personnel. On account of this, the researcher faced lots of difficulties while taking the permission as it involved a lot of time and patience. There were some difficulties at the time of distributing and

collecting the questionnaire and also taking appointments for interviews due to the tight schedules of the doctors.

### **Delimitation of the study**

The study area is limited to 3 large hospitals of Manipur including one hospital attached to a Medical College of Manipur, one district hospital in the valley and one district hospital in the hill.