CHAPTER - 3
RESEARCH METHODOLOGY
3.1 Introduction

The health services have social, economic and human values since sound health promotes production and productivity of the human beings and enhances the quality of human life. The need for health services of the individuals is duly recognized by the policy makers, bureaucrats, physicians, researchers and others involved in the process of nation building. The capability of health programmes to effectively reach the masses primarily depends upon the quality, distribution and utilization of health resources in general and health information services in particular. The information use behaviour of mental health and neuroscience professionals should be understood fully and properly in order to provide need-based health information services and enhance the quality of medicare in Karnataka state and elsewhere. The primary objective of the present study, as has been made very clear in the previous chapter, requires investigating the availability of mental health and neuroscience information resources and services, and information use behaviour of mental health and neuroscience professionals in Karnataka state.

This chapter enumerates the nature and scope of the study, research questions, study variables, research design, selection of study sample, period of the study, statistical analysis, and limitations of the study.

3.2 Study Variables

Keeping the above research questions in view, the following variables were selected for the present study on the basis of discussion with subject experts.

3.2.1 Independent Variables

The independent variables of the present study include–gender, age, education qualifications and professional status.

3.2.2 Dependent Variables

The dependent variables of the present study include–information need, purpose of using information, sources of awareness, motivation factors, use of information resources, information gathering work, use of ICT facilities related to mental health and neuroscience information services.
3.3 Research Design

The present study approached the problem through a systematic survey method which is very popular in the field of Library and Information Science as well as Social Science research. Survey research is a well-established technique for generating primary data on the strengths, weaknesses, threats and opportunities of information services in particular. Questionnaire was the tool of primary data collection. The need for the integration of survey research with other approaches to empirical study in modern library and information resources including mental health and neuroscience information resources has been recognized for some time.

Besides survey research, historical research, non-participant observation, informal discussions and several secondary sources of information were also used as other methods to study the various aspects of information use behaviours of the mental health and neuroscience professionals in Karnataka State.

The historical research method was followed to understand and document the development of mental health and neuroscience education and services in the world, India and Karnataka State. The non-participant observation and informal discussion methods were followed to understand and analyse the development and management of mental health and neuroscience information centres and activities. The secondary sources of information (books, professional journals, reports, theses and other sources) were utilized to understand and evaluate the nature, scope, status and drawbacks of mental health and neuroscience information resources.

The entire study was exploratory in nature. Several ideas emerged during the course of informal discussions with the experts, administrators, physicians, researchers, students and others were incorporated into the research design. Therefore, research methods were designed on the basis of flexibility, adaptability and ground realities.

3.4 Tools employed:

A structured questionnaire was prepared by the researcher to assess information use behavior of mental health and neuroscience professionals in Karnataka. The questionnaire was validated by the experts in the field. Later the reliability was calculated. The questionnaire contained 5 sections. Brief detail on each section is given below
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Section</th>
<th>Title</th>
<th>No. of items/sub headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>A</td>
<td>Demographic Profile</td>
<td>13</td>
</tr>
<tr>
<td>02</td>
<td>B</td>
<td>Information Need, Purpose and Motivation</td>
<td>11</td>
</tr>
<tr>
<td>03</td>
<td>C</td>
<td>Use of Information Sources</td>
<td>6</td>
</tr>
<tr>
<td>04</td>
<td>D</td>
<td>Information Gathering Pattern</td>
<td>2</td>
</tr>
<tr>
<td>05</td>
<td>E</td>
<td>Use of Internet/ICT Facilities</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

### 3.5 Data collection

Data collection was made by post, e-mail administering questionnaires to the users among mental health and neuroscience professionals those who have engaged in medical practice, teaching and research in 10 medical institutes including major hospitals which have been established in Karnataka state. The mail questionnaire has been the most popular form of data collection used in Library and Information Science Studies. (Palmquist & Kim, 1988). However, the “directly administered” questionnaire method which is effective when a group of people assemble in one place (i.e. classroom) (Ary et al 1996). This researcher administered and collected the completed questionnaires in class rooms, libraries, hostels, departments, hospitals, computer centres, administration building and other campus settings. According to Ary et al, it is easy to reach a large sample of students in a variety of disciplines be administering the survey in classrooms (with permission of professors). The main advantage of the direct administration of questionnaires is the high response rate, which typically reaches 10 percent. Other advantages are the low cost and the fact that the researcher is present to provide assistance or answer their queries.

The researcher contacted the Director/HOD’s of the concern institute and hospitals in related to data collection. Before sending the questionnaire to the respondents, he has communicated through letter for seeking prior permission to conduct survey at their respective institute/ hospitals. Based on the permission from the respective authority he has distributed questionnaires to the mental health and neuroscience professionals namely faculty, medical practitioners and research...
scholars of the related branches.

3.6 Data Collection Sources

To study the information use behavior of mental health and neuroscience professionals in Karnataka the following sources were used to collect data.

1. Institute/ Library website/homepage
2. Library resources and services given to users
3. Annual reports and brochures of the institutions
4. Questionnaires filled by the users
5. Address directories of professional bodies in relating to mental health and neuroscience field.

3.7 Study Areas

10 selected medical institutions and major hospitals spread across the length and breadth of Karnataka state including (NIMHANS) National Institute of Mental Health and Neurosciences, Bangalore and Karnataka Institute of Mental Health Dharawad, which is recently renamed as Dharawad Institute of Mental Health and Neurosciences (DIMHANS) constituted the study areas. The Directorate of Health and Family Welfare, Government of Karnataka, Bangalore and Rajiv Gandhi University of Health Sciences, Bangalore (RGUHS) was approached and information was gathered regarding the selection of the study areas. These areas truly represent the social, educational, economic and professional characteristics of Mental Health and Neuroscience Professionals in Karnataka state.

3.8 Selection of Sample

It was decided to collect data through questionnaire from Mental Health and Neuroscience professionals of Karnataka state who truly represent the various educational and professional characteristics. Independent variables such as gender, age, education and profession were primarily considered for the purpose of selection of study sample. An exhaustive and intensive study was not possible because of large number of professionals and time and resource constraints. Incidental sampling technique was followed in selecting the Mental Health and Neuroscience professionals since this method of selection also gives significantly correct results with much less time, money and material. Therefore, 1000 respondents working in
10 selected medical colleges and major hospitals in Karnataka state including NIMHANS, Bangalore representing teaching faculty, researchers and medical practitioners were selected for the study.

3.9 Period of the Study
The pre-test was conducted during the month of May 2008 but the actual data collection from the selected respondents in the sample area was done during August to December 2008.

3.10 Statistical Techniques used for Data Analysis
The collected data has been analyzed with help of statistical package for social sciences (SPSS). Statistical methods like percentage, Chi-square and mean score were used. Chi-square (x): Chi-square (x) has been used to complete the difference in regard to non-metric data like age-wise, status-wise and institute wise distribution of sample.

3.11 Statistical Analysis
The analysis of data was done by using percentage analysis, frequencies procedure, descriptive procedure, chi-square test procedure, cross tabs procedure and graphical representation.

3.12 Simple Percentages
The percentages were worked out to represent the proportion of respondents to the total sample considered in the study. The data were reduced to respective percentages in the case of data analysis of information use behaviour of mental health and neuroscience professionals in Karnataka state.

3.13 Frequencies Procedure
The frequencies procedure provides statistics and graphical displays that are useful for describing many types of variables of the study like Information need, purpose of using information motivation factors, extent of use of information resources including print and electronic resources, use of information resources, information gathering work, use of ICT facilities related to mental health and neuroscience information services.
3.14 Descriptive Procedure

The descriptive procedure displays univariate summary statistics for several variables in a single table and ensures calculation of standardized values (z scores) which can be ordered by the size of their means (in ascending or descending order) alphabetically or by the order in which the variables are selected by the researcher.

3.15 Chi-square

The Chi-Square test procedure tabulates a variable into categories and computes a chi-square statistics. This test compares the observed and expected frequencies in each category to test either that all categories contain the same proportion of values or that each category contains a user-specified proportion of values.

3.16 Graphical Representation

Graphical representation in the form of bar diagram is made available to provide clarity to the data pertaining to information use behaviour of mental health and neuroscience professionals in Karnataka State.

All these advanced statistical procedures were adopted in the study and that the results were obtained from IBM PC AT computer through Statistical Package for Social Sciences (SPSS). In particular, the Windows Version-16 (2007) was employed for statistical analysis.

3.17 Summary

In the present chapter the research methodology adopted for the present study has been dealt in detail, which included scope of the study, variables selected, research design employed, data collection procedure, study areas, sample selection, statistical methods applied etc., The data analysis for the data collected in the present study has been systematically analyzed and interpreted in chapter V.