Chapter - III

Objectives, Hypotheses and Methodology
OBJECTIVES, HYPOTHESES AND METHODOLOGY

In this Chapter, a brief statement of objectives, hypotheses, methodology and the studies conducted on health care information are presented.

3.1 OBJECTIVES

The following are the specific objectives of the study:

1. To assess the health care information needs of the rural people;
2. To examine their awareness and satisfaction with regard to health services and programmes;
3. To know the channels through which the information relating to health is obtained;
4. To identify the barriers which affect the people to follow good health practices;
5. To know the role of superstitions in health care;
6. To assess the role of health professionals in providing health care information to rural people; and

7. To ascertain the role of public libraries in the promotion of health care information to them.

In addition to the above specific objectives, the researcher also intends to present a brief profile of Chittoor District and to examine the health services infrastructure in India.

3.2 HYPOTHESES

The following broad hypotheses have been setup for the investigation:

1. There would be no significant differences among the different groups of rural people namely men and women, literates and illiterates, lower income and higher income groups, and residents of Mandal Headquarters and village residents. In their awareness of the importance of health care information.

2. There would be no significant differences among the different groups of rural people in reading newspapers, watching television, and listening to radio.

3. There would be no significant differences among the different groups of rural people in obtaining suggestions from different categories of people on health care.

4. There would be no significant differences among the different groups of rural people in their awareness of Primary Health Centres and their services.
5. There would be no significant differences among the different groups of rural people in their awareness on immunization programmes, vitamins and nutrition.

6. There would be no significant differences among the different groups of rural people in their opinions on introducing sex education in academic studies.

7. There would be demand for health care information from rural people.

8. Health workers may be playing a major role in the provision of health care information to rural people.

9. Majority of the rural people may be needing information on Immunization Programmes, Maternal and Child Health, and Family Planning.

10. The Libraries located at Mandal Headquarters may not be meeting the health information requirements of rural people and health professionals due to inadequate budget, inadequate manpower, inadequate audio and video materials and lack of computer facilities.

3.3 METHODOLOGY

Generally the following three methods are used for collection of primary data.

i. Questionnaire

ii. Interview

iii. Observation
3.3.1 Questionnaire

This is the most commonly used technique for collecting data from respondents. In this technique, the investigator prepares a number of simple and unambiguous questions keeping in view the objectives and hypotheses of the study.

3.3.2 Interview

An interview involves verbal interaction between the researcher and one or more respondents. In this method the researcher contacts the respondent and collects the required information from him. The interview may be of two types namely structured interview and unstructured interview. In the structured interview, all the questions are determined in advance before the interview and then the interviewer gets answers from the respondents for the determined questions. In the unstructured interview, the questions are not determined in advance. The interviewer keeping in view the objectives of the study, asks the questions and collects the answers from the respondents.

3.3.3 Observation

Observation is one of the most prominent methods in the social science research. It enables to study the behaviour of individuals as it occurs. Observation may be two types. They are participant observation and non-participant observation. When the researcher participates with group under study, it is called participant observation. When the investigator observes the activities of the group or individual from a close distance, it is called non-participant observation.
3.4 Collection of Data

In this study, interview and questionnaire methods were mainly used for collection of data. Three types of questionnaires were prepared for the collection of data from rural people, medical officers and branch librarians respectively. Data was also collected from the annual reports of the Department of Health and Family Welfare, District census handbook, Chittoor and other reference books. The total data needed for the study was collected during the period from 5th March 1998 to 30th April 1999.

There are 66 Mandals in Chittoor District. These Mandals are classified into three divisions according to Department of Health, Government of Andhra Pradesh namely Chandragiri(15 Mandals), Chittoor(20 Mandals) and Madanapalli(31 Mandals). Five Mandals which do not have executive officers for the Grampanchayats of their Headquarters were selected from each division at random. Hence, the people residing in these Mandals are considered as rural people for the purpose of this study. The list of total Mandals in each division and selected Mandals from it are given in Appendix A. The location of selected Mandals for the study is shown in Map 3.4. From each Mandal, 75 households were selected by the investigator using his own discretion. In total 1125 households were selected as sample out of 1,18,506 households. The number of households in each selected Mandal and the sample selected from it are given in Appendix B.

3.4.1 Rural People

To get information from rural people, a questionnaire was prepared both in English and Telugu languages. They are given as Appendix C and D.
respectively. It consists of questions to know their social conditions, health care information needs, their awareness and satisfaction with regard to health services and programmes, reading habits, channels used to obtain health care information, the use of the library in getting health care information and the superstitions they are holding with regard to their health. The data was collected with the help of questionnaire from the heads of households selected.

Copies of questionnaire (Telugu version) were given to those heads of households who were literates and able to fill up the questionnaire. The investigator clarified the doubts while filling up the questionnaire by the respondents and collected the filled in questionnaires. The illiterate heads of households were interviewed with the help of questionnaire and the replies were recorded in the questionnaire itself by the investigator.

3.4.2 Medical Officers

The questionnaire intended for medical officers consists of questions on the type of information provided to rural people, the availability of health care information in local library, receiving of different types of materials on health care, problems faced in providing health care information and channels used to provide it. It is given in Appendix E. Copies of questionnaire were posted to all 74 medical officers of primary health centres in Chittoor District with stamped self addressed envelopes. However, the investigator received replies from 57 medical officers only.
3.4.3 Libraries

Questionnaire intended for librarians consist of questions relating to library budget, health care information policy, book collection, conducting talks on health topics, organising health care information exhibitions and other services provided by the library in promoting health care information to rural people. It is given in Appendix F. Copies of questionnaire were posted to 66 librarian of branch libraries which are located at Mandal headquarters in Chitoor District with stamped self-addressed envelopes. However, the investigator received responses from 31 librarians only.

3.5 Analysis of Data

After collecting the data from the respondents, the data was analysed according to the objectives and hypotheses stated. First the data was recorded on data sheets and then fed into the computer. The data was analysed by using 'LOTUS' and statistix (SX) software packages. However, percentages and other necessary calculations were done with the help of calculator.

Both descriptive and inferential statistical techniques were employed. Chi-square values were calculated using the SX software package.

3.6 Presentation of Data

The data was presented in the form of tables, pie diagrams and bar diagrams. The bibliographic details of references cited in each chapter were given at the end of the chapter.
3.7 Studies on Health Care Information

The area of health care information is wide and diverse. Many studies have been conducted on consumer health information, health information systems, media of health care communication, information seeking behaviour of health professionals and the role of public libraries in the provision of health care information. The significant studies on them are described in the following paragraphs.

Stevens and others\(^1\) report in their paper the different sources of consumer health care information available to the public. They also list out the different consumer health information services available within Trent Region. The use of electronic sources of health information and the availability of electronic public access community information systems as sources of health information within the Trent Region of U.K. are discussed.

Satyanarayanarao and Bhooopathy Rao\(^2\) discuss the medical health care problems in India. They explain the problems from four major dimensions namely 1. The Medical and Health Policy, 2. The Hospital System, 3. The pattern of Primary Health Care and 4. The Health Administration Infrastructure.

Branger and others\(^3\) report in their paper that health care providers are dependent mainly on paper documents and paper mail. At present several alternatives of paper based communication are available such as the fax, electronic mail etc. The authors also describe in their paper the existing
communication problems and examine the current state of development and research aimed at improving this communication using electronic communication techniques that are gradually replacing paper based communication. They further examine applicability and shortcomings of these new techniques.

Dixit⁴ in his study probes the strengths and weaknesses of prevalent health literature information services such as bibliographical, current awareness, selective dissemination of information, MEDLARS/MEDLINE, indexing and abstracting, translation, and reprographic services of 240 medical libraries belonging to modern medicine and recommends the suitable steps to be undertaken to optimize the utilization of available resources and services.

Prakasam⁵ examines the primary health care services namely: Ante-natal and Post-natal, immunization and Family Planning etc. rendered by Primary Health Centres in Guntur District in Andhra Pradesh. His study describes the utilization of primary health services with regard to general medicines, family planning etc. The study reveals that non-availability of doctors, non-availability of medicines and distance from the place of residence to PHCs are the main factors responsible for the poor utilisation of primary health care services by the respondents.

McCarthy⁶ describes new health care information products. He stresses the need for health care information system for hospital research organisations, insurers and individuals who suffer from health problems.
also briefs in his work about some information products like diagnostic support, patient management, hospital information, health education & training on medical management system.

Krishna Murthy\textsuperscript{7} stresses the need for a well organised information system to collect, process and disseminate information. He stresses that organisation of information system which collects, processes and disseminates information is essential to have free and rapid flow of information to all health professionals. Information is also needed on motivation, communication, social-culture aspects of programmes like family planning programmes. He mentions that information is essential for public as well as professionals to keep track of the latest developments in their fields.

Gladwin\textsuperscript{8} studies the evaluation of training package intended to improve health information systems in primary health care. The package was developed by Agakhan Foundation International Development Organisation.

Kanchan\textsuperscript{9} examines the importance of health in developing individuals. He discusses the pattern of health care delivery in Vadoda District of Gujarat State. He stresses that PHC's should be made universally accessible to individuals and families. He examines that the present existing Primary Health Centres are not enough to serve the rural people. Redistribution of some PHCs and establishment of few new PHCs were suggested. He also identifies the barriers in preventing the utilisation of health care services by rural people.
Ranjit Singh discusses in his thesis entitled ‘An Assessment of Health Manpower Requirement for Rural Community’ the different health programmes offered by primary health centres and the staffing pattern of those centres in Delhi.

Stevens and others probe into the provision of health care information direct to the public, often called consumer information. They also believe that the public has traditionally obtained health information from a variety of sources. They are doctors, media, self-help groups, libraries, telephone and electronic services like internet. They also discuss the electronic public access information system which provides information to the public. A descriptive account about local authorities who are providing electronic access community information to the public is presented.

Uta studies health communication to rural population in Malawi. The broad aims of the study were to investigate the problems of dissemination of health information and to explore ways for an efficient and effective transmission of relevant information. Field survey was conducted in Malawi among predominantly illiterate sample. The respondents were asked to indicate their perceived sources of health information and how they went for seeking information. A health knowledge test was conducted on them to analyse their claim for knowledge and level of awareness of two diseases namely AIDS and Bilharzia.

Keeran describes the kind of information required for planning, implementation and evaluation of health service programmes. He highlights
the importance of health of the people and the health problems they are facing according to their climatic conditions, religious practices and social factions of their area. According to him, most of the rural health problems would automatically be solved through the health education of the rural people. He makes out a case of national network of health information system in India. He mentions the nature of services and modern equipment required at different levels of information centres/libraries. He pleads for legal status for National Medical Library.

Lippeveld and others discuss the importance of Health Information system. The aim of developing the system is to provide specific information support for decision making process in Health Services System. They also discuss the components of a Health Information System and implications for the strengthening of Health Information Systems.

Fein in his paper pleads for a Universal Insurance Programme in United States of America as medical costs are rising rapidly and there is no health care coverage for millions of people.

WHO Technical report on health education of the public describes in a detailed way the methods of media that can be used in providing health messages for the public.

Graham and others study the health information provision in men and women's magazines. Content analysis was used to examine the health information in six selected magazines. Four of the health editors were also interviewed for getting required information from them.
The differences in health information coverage are greater between the individual magazines than between the total women's and men's groups. Overall, men's magazines appear to treat health information in a more informative manner than women's, although both groups provide unusually high levels of information required to change their reader's health behaviour. Many of these magazines have no clear health information policy and that their editors have no qualification or training in either health or science.

A study has been carried out into the sources of consumer health care information available in U.K with particular emphasis on the use of electronic sources of health information by Stevens and others\textsuperscript{16}. They identify the types of health information available through internet. They describe the sources of health information that are available to the public focusing on electronic information sources and present their results from the search of the internet for health information.

Macdougall\textsuperscript{19} conducts a study in Ireland to find out the information needs of health care professionals and public. The survey of health service professionals in Ireland indicates that the most important reasons for seeking information were to keep up to date, to help with a particular case and for continuing education purposes. Seventy per cent of doctors regularly need to access to information within 24 hours, although methods of obtaining the information varied widely. A third of respondents needed access to information out of normal office hours and less than half of the respondents were successful in satisfying their information needs.
The most frequently used information sources were colleagues at work, followed by journals. Almost a third of staff seldom or never read any government publications. Half of the staff surveyed seldom or never consulted a librarian for advice on information seeking and over half seldom or never used computer information systems such as MEDLINE or CINAHL as sources. The regular use of libraries was in direct relation to accessibility. Hospital doctors were the highest users of libraries amongst the medical and nursing professions and were the most likely to have relevant libraries easily accessible to them. However, many doctors experienced difficulties in obtaining specialised information.

Reasons for non use of libraries by doctors were mainly related to General Practitioners and hospital doctors who lived in rural areas and/or had no access to medical libraries. Nurses complained of lack of proper library provision with relevant nursing material while the paramedical professionals also lacked access to specialist library and information services. Managers with professional library services in the Health Board made more use of libraries than those without. Many of the latter noted the lack of suitable facilities for health service managers generally. Environmental health officers overwhelmingly referred to the lack of library and information services. Overall, a general lack of awareness of library and information services and facilities was very evident in the responses. Less than a third of staff surveyed had ever had any training in library use or information handling skills.
The greatest restrictions to accessing information are lack of time and geographical location. One third of health service staff worked at least 10 miles from the nearest specialist collection relevant to their work. Lack of access to specialist information was felt to be a restriction by over a third of respondents. Over a third of staff said that restricted access (in terms of policy and opening hours) to health sciences libraries was a barrier to obtaining information. Over 40% of senior manager and 31% of doctors were restricted to their access to information by the lack of computer systems and networking facilities. One-fourth of health professionals said that the lack of a librarian or information specialist restrict their access to information. Many staff commented on difficulties of obtaining up-to-date information in their specialist areas due to these restrictions. Concern was expressed by all professional groups at the difficulties experienced in gaining access to the most recent specialist journals for information on the latest advances in techniques and research.

Suggestions on improving access to library and information service were most frequently concerned with increasing access to computers, networks and CD-ROMs and to greater awareness of information resources and services available in health science libraries. Increased access to libraries and more education and training in the use of libraries and information searching and retrieval was seen as very important by many respondents. Those staff who had experienced a professional library service were aware of the benefits and time saved in the effective use of such a facility. Many staff demanded increased resources including more library staff, easier access to specialist journals, up-to-date books and more space in the library for studying.
Health service professionals survey expressed overwhelmingly that there was a lack of adequate information on health care and related matters at the right level for the public, patients and their carers. Although the situation in consumer health information was improving, particularly with the publication of leaflets by voluntary bodies, charities, the Health Promotion Unit, and television and radio programmes, there were gaps in coverage in some areas. The lack of public availability and awareness of health care information was also a matter of concern to many staff, particularly in rural areas.

The survey of public library provision in this area reveals an increasing demand over recent years for information on all aspects of health care, self-help, alternative and preventive medicine, and diet and fitness. There is need for better coordination of the dissemination of consumer health information and a directory or listing of material available, particularly leaflets and booklets. While all public librarians stocked some materials on health and fitness subjects, it is difficult in a multi disciplinary service to track up-to-date information in leaflets produced by a wide variety sources. Most of the public libraries do not have the resources to provide enormous multiple copies of books and videos required for the branches, or the staff to maintain the leaflet collections as well as they would like.

Vasanjee and others examine the effects of four sets of factors on curative health services among rural women living in Gujarat, India. The
factors analysed are (1) the demographic characteristics of women; (2) the characteristics of the household in which they lived; (3) characteristics of the environment in which they lived; and (4) the proper convenience of care. The study focused on rural married women aged who had at least one child. Four types of services namely private doctors, Aga Khan Health Services Centres, government health centres, and traditional healers were examined. Other things being equal, women’s education, income, family structure and kinship affiliation were significant predictors of use of service. Women seemed to be more sensitive to travel time to the health service and its associated costs (purdah restrictions, transportation and its costs) than to the direct costs of service. Factors such as women’s occupation and sanitation facilities, while associated with use of service were not significant predictors of use of service. Implications of health planning are offered, including initiatives to implement health promotion and disease prevention programmes in addition to increasing to the existing health services.

Dayananda Pai conducted a study on the health care information and health services information available in Kasturba Medical College Library. The objectives of the study are:

- To analyse the major components of medical informatics and their active role in medical librarianship;
- To explain the vital role of medical informatics by taking specific area of maternal and child health area with reference to Kasturba Medical College;
- To correlate the information needs of health professionals and the information infrastructure developed in Kasturba Medical Library; and

- To work out the possibilities of enhancing the computer capabilities, manpower development in the library so as to withstand the pressure of trends in medical informatics.

Data was collected from the people working in the area of health services by interview method. Data was also collected from medical records patients, official records and other secondary sources of information. Gross inequalities exist in the availability of health information in developing and developed world.

Marshal discusses the issues involved in clinical information delivery and the new role of the librarian. The need to assess the impact of information services in terms of cost-effectiveness and the development of quality improvement programmes are stressed.

Gasser reports that although computerized nursing information systems were well established in the United States by 1989, nurses were often not included in the selection, planning, or development of these systems. Due to this, the systems are frequently incompatible with the needs of nursing care. He offers a framework of requirements for such systems in the form of a graphic model with five outputs: (1) nursing information function, (2) nursing information processing requirements, (3) nursing system outputs, (4) nursing data requirements, and (5) nursing system benefits.
Morey\textsuperscript{24} discusses the need for improved clinical information systems in Australia. He asserts that the mere presence of quality assurance programmes and accreditation of healthcare facilities in that country did not necessarily indicate that the information available was adequate for health planning and resource allocation.

Neame\textsuperscript{25} stresses the importance of including patient care systems based on medical records in hospital information systems. He argues that patient data are central to the effective administration and strategic planning.

Duckett\textsuperscript{26} discusses the information needs of regional health authorities and explains the different needs of hospitals and regions.

Consumer Health Information (CHI) is the fastest growing area in health care information. It is a direct response to increasing public demand and pressure from governments for health organizations to be more open and accountable. The publication in the U.K. of 'The Patient's Charter'\textsuperscript{27} was recognition of this trend and set out the basic rights of healthcare consumers, including access to detailed information on health services. Patients and caregivers are demanding increasingly sophisticated information about the range of health services, illness, treatments, side effects, and self-help and support groups. In addition, the public wants information on how to improve and maintain health. There is also a growing awareness of the need for more
information aimed at specific groups such as ethnic minorities, the disabled, and children. Gann provides a history of consumers health information, beginning with Hippocrates, continuing with the development of consumer health information services in the United States.

Dahlen describes the role of libraries in the provision of Consumer Health Information in the United States. He stresses that libraries should maintain links with community and state organizations which produce and distribute information resources.
REFERENCES

1. STEVENS (Caroline A) etc. Consumer health information provision in the Trent region. The Electronic Library. 14; 1996;347-356.


3. BRANGER (L N) etc. Communication in health care. Methods of Information in Medicine. 34; 1995; 244-52.


14. LIPPEVELD (Theo) etc. Health information systems making them work. World Health Forum. 18; 1997; 176-184.


18. STEVENS (Caroline A) etc. Internet health information sources. The Electronic Library. 14; 1996; 135-148.


20. VASANJEE (B) etc. Utilization of Health Services among rural women in India. Public Health. 3; 1997; 135-148.


24. MOREY (Sue). The need for better clinical information systems. Australian Medical Record Journal. 20; 1990; 159-161.


