CHAPTER -1
INTRODUCTION
1.1 Prologue

The health care is a very important social service sector, which is essential for achieving the goal of sustainable human development in all the countries. Health management assumes a great significance in the present times since health is one of the prime indicators of human development. The presence of educated, healthy, resourceful and competent citizenry is a must in this age of competitiveness. Government and non-government organizations have launched series of programmes with a view to improve the status of health and nutrition of people in India. Health is one area where information has played a major role in life saving. User is the supreme in any kind of information system. The benefits of information revolution are centered around the user and his convenience. User studies are duly recognized as an important part of the information package. Information personnel in modern libraries are required to be aware of their users’ information requirements and their information seeking behaviours in order to provide user-friendly information services. Health science libraries are prime reservoirs of health information. A lot of research has been done to find out the information needs and information seeking behaviours of various categories of users of information system.

The present study evaluates the information use behaviour of mental health and neuroscience professionals in Karnataka state. The concept of health information, significance of health in modern society, role of health information in the new millennium, evolution of mental health and neuroscience education, development of mental health and neuroscience services, information requirements of mental health and neuroscience professionals, social significance of the study, statement of the problem, objectives of the study, presentation of the study are furnished in this chapter.

1.2 Importance of Health Services in Modern Society

1.2.1 Concept of Health

Health is the greatest strength and resource of the mankind. Historically, the term ‘health’ is derived from an old Anglo-Saxon word ‘HEALTH’ meaning the
condition of being safe and sound physically, psychologically and otherwise. Experts have commonly agreed upon the general belief that health is the quality resulting from the total functioning of the individual that empowers him to achieve a satisfying personality individually. Health has been defined by the modern medical science as a state of the organism of an individual in which the bio-physical, bio-chemical and structural aspects function satisfactorily in order to enable him/her to adjust with the environment.

The World Health Organization (1948) defined ‘health’ as “state of complete physical, mental and social well-being and not merely absence of diseases and infirmity”. For many years this practical definition was retained because of the common belief that health is a multi-dimensional development achieved by an individual.

J.F. William defines: “Health is the quality of life that enables the individual to live most and serve best”. The word ‘health’ has different meanings and interpretations for different people. Generally speaking, sound mind, sound body, positive thinking, constructive behaviours, active social participation and purposeful living constitute the broad spectrum of health. Therefore, health must be broadly defined as the overall well-being of human beings. However, it is the bounden responsibility of the state to develop better medical care system and protect the well-being of the mankind.

### 1.2.2 Nature of Health

The salient features of health include – (i) Health is defined as quality of life, (ii) Health is defined as an achievement of a personally satisfying life, (iii) Health is defined as an achievement of a socially useful life, (iv) Health is defined as complete physical, mental and social well-being and (v) Health can be attained by practicing healthy habits. The factors which affect the health of an individual include–heredity, environment, social habits, proper nutrition, professional health services and freedom from diseases and accidents.

William A. Glaser in Encyclopedia of Social Sciences observes: “Medical care is the application of scientific knowledge and techniques to solving the physical and emotional problems of man. To a physician, medical care denotes the body of
diagnostic and therapeutic theory and procedure developed to understand cure and prevent diseases. A social scientist, however, defined medical care is a system of social institution in a larger social structure. Since medical care is given by specialized personnel, it presents to the social scientist several problems in the sociology of professions”. In modern society, health is considered both an individual and collective responsibility. In the absence of effective medical care system, human beings cannot attain good health in modern society.

1.2.3 Importance of Health Services

In a democratic society, the citizens have a fundamental right to health. It is the responsibility of the state to ensure well organized health networks, operations and services. In a developing country like India, public and private health organizations have come into existence in good number in the post-Independence era. The economics of health management assumes great significance. Health care systems should be properly designed and developed at local, regional, national and international levels since they are very much essential for the improvement of public health.

Health care systems can be defined as “comprising all the organizations, institutions and resources that are directed to producing health actions. A health action is any effort in personal health care, public health service or through intersectional initiatives (for example, in cooperation with the educational, social or economic system) whose primary purpose is to improve health”, according to World Health Organization (2000).

Murray and Frank (2000) state: “Health care systems should respond well to people’s expectations. The goodness of a health care system is measured by the output indicators of the various fields of action or of all health actions taken together, e.g., in terms of changes in the morbidity and mortality of a total population”.

Health systems have a responsibility of not only improving the public health but also are responsible for protecting the people against financial loss of any kind caused by illness. Fairness represents a basic value of a health care system classifiable as a human right. Political will is required to ensure fairness with
respect to the management of health systems in terms of allocation of financial, institutional, technological and human resources without placing any individual or section of a population at a disadvantage. Health system also includes public health activities such as safe drinking water, sanitation, food, nutrition, environmental safety, protection against epidemics and so on. The economic component of health care is the most powerful tool of regulating health actions at any level.

Heggade (2000) observes: “These special characteristics of health care output have led to (a) increased government participation and financing of health services, particularly the public health, and (b) the emergence of a powerful and dominating private sector in the production of tertiary health services and their financing through health insurance.”

The health services assume great significance in India and other developing countries since good health promotes economic productivity of the mankind. It also enhances the longevity of life and improves the quality of future generations of human beings. The WDR (1993) explains the significance of health services thus: “Good health, as people know from their own experience, is a crucial part of well-being, but spending on health can also be justified on purely economic grounds. Improved health contributes to economic growth in four ways: It reduces production losses caused by worker illness, it permits the use of natural resources that had been totally or nearly inaccessible because of diseases, it increases the enrollment of children in schools and makes them better able to learn and it frees for alternative uses of resources that would otherwise have to be spent on treating illness. The economic gains are relatively greater for poor people who are typically most handicapped by ill-health and who stand to gain the most from the development of underutilized natural resources.”

The World Bank Health Sector Policy Paper (1980) highlights the significance of health services thus: “Improvements in health satisfy directly a basic need and contribute health and freedom from the threat of disease which promotes economic development. Ill-health is thought to impose economic costs by -(a) reducing the availability of labour, (b) impairing the productivity of employed workers and capital goods, (c) wasting current resources, particularly nutrients and (d) impeding the development of natural resources, animal wealth and tourism.
potential. Poverty, ill-health, high fertility, high mortality, fatalism and short planning horizons constitute a low level social equilibrium. Better health is one way people achieve more positive control of their environment, and that, in turn increases their desire and ability to plan their future.”

Goel (2001) refers to the observation made in the International Conference on Health Care (1978) held at Alma-Ata, USSR, thus: “The right kind of food, regularly available, is clearly essential if people are to live socially and economically productive lives. Proper nutrition is no less essential for health and, like health; each contributes to general socio-economic development and in turn benefits from that development.”

Health management continues to be a national problem in India and other developing countries since it is linked with a total socio-economic transformation of the country. Quantitative and qualitative changes in the approach to health management should be brought about in order to boost human resources development and national development endeavours. Better coordination among union government, state government, health departments, health libraries, non-governmental organizations and educational institutions is essential for the attainment of the goal of health for all. A concerted and integrated effort is needed for better health and nutrition programmes with proper agenda setting, action plan implementation and evaluation components of health management.

1.3 Role of Health Information in the New Millennium

Health information is the foundation of public health management in modern society. Edwin Chadwick and William Farr made a pioneering work in developing public health as a legitimate discipline in England in the early 19th century. In the post World War II period health management was accorded a place of pride by the policy makers in Europe and other parts of the world. The evolution of evidence-based medicine over the last five decades has brought about commendable changes in the field of public health management. Countries and donors have invested heavily in attempts to measure effects and deficiencies of their particular health care systems globally.
Health information is a vital component of public health management. There is a need for constructing a solid platform from which specific health information might flow in a more sustainable way. Health information system is not properly developed in the present times in most of the countries. Tim Evans and Sally Stansfield observe: “The current global pre-occupation with outcomes-based development may inadvertently aggravate this precarious situation. Outcome measures are priority tasks for the Millennium Development Goals, Poverty Reduction Strategy Plans, and Global Funds to fight AIDS, Tuberculosis and Malaria and the Global Alliance for Vaccines and Immunization, among others. As these policies and programmes begin to land in countries, the demand for information accelerates rapidly. In many low income countries, the storm is brewing, as a massive influx of monitoring programmes threatens to flatten the unsteady pillars of local health information systems. Strengthening these systems requires a collaborative effort similar to the sector-wide approaches advocated for the health sector but tailored to the needs of health information system”.

The Health Metrics Network was launched in 2004 with a view to focus on improving the availability of and utilization of sound health information for policy making and planning, programme monitoring and evaluation, monitoring of international goals and measuring equity in health. The network also aims to strengthen the capacity of health information system to provide high quality, timely information in a form that is useful for public health work at the global, national, regional and local levels. It is a multi-disciplinary, multi-sectoral partnership that includes multi-lateral agencies. This system also paves the way for collection and distribution of health information at various levels and facilitates meaningful monitoring and evaluation of health status and programmes.

Health information is a basic necessity which improves the health delivery system. Improved and standardized methods are also evolved with a view to assess the quality of health information. Reformed and robust health information system is essential to accelerate the achievement of the shared health goals in the new millennium. Significant changes in information technology are taking place everywhere. Health professionals need to maximize the potential benefit of the evolving information technologies as a means of improving public access to health
information and care. A new information culture is developing where business organizations and individuals use both information and the technology as naturally and instinctively as they make use of transportation and communication facilities.

The physicians and patients have become increasingly interested and want more information about health care systems and opportunities. A new culture is developing where business organizations and individuals use both information and the technology as naturally and instinctively as they now use transportation and communication services. The patients and physicians have also become increasingly interested in health information services which are available in different sources such as libraries, media, and health institutions and so on.

Traditionally, telecommunications and broadcasting services were used to disseminate health information in wave form either down wires or over the radio spectrum which is popularly known as analogue technology. Today, health information is made available through digitalization which allows any variety of information namely, text, graphics, sound or video. In the new millennium, both the telecommunications and broadcasting industries are steadily converted from analogue to digital technology. This development has impacted the health care and health information processes profoundly.

Health information transmission networks such as telephone lines, cable and satellite have also greatly improved over the years. Multi-media has rapidly become the technology of choice for presenting health information in an entertaining, interactive and timely manner. New combinations have also come into existence in the new millennium. They include sound, video, animation, text and graphics. Multi-media programmes are also delivered in a variety of ways, namely, on compact discs, kiosks, telephone lines and satellites. There is a great deal of interactivity in the contemporary health information management system which consists of computers and Internet. An increasing number of health titles are also available on CD-ROM.

A number of kiosk-based public access health information systems have also been developed. The users can access a wide range of information about diseases and health related topics. The Internet or “Information Super Highway” is the largest
computer network in the world which links millions of computers through a mixture of private and public telephone lines. The users can connect to the Internet either through online commercial network or through Internet service providers. Various types of software, known as web browsers allow users to access the web, interpret hypertext links and display web pages. The search engines and software function called bookmark allows the users to have their directories of web page files and direct access. Health information on the Internet has become a new way of life. Health on the Internet is a monthly review of Internet information sources for health professionals. Other publications give a healthy insight into the range of diverse health related information that is available globally.

Simon Wallace (1997) emphasizes the need of health information in the new millennium thus: “As we approach the millennium, our culture will inevitably move towards one which is more information dependent and uses networked broadband multi-media technology. Different health related organizations provide information in a variety of ways. As the technology becomes increasingly integrated into daily life, the concept of electronically accessed health information will become more acceptable to both health professionals and the public. Health professionals need to maximize the potential benefit of the evolving information technologies in order to improve public access to information and care. Health promotion agencies have a fundamental role to play. One way forward would be to provide public access to the Internet with a wide range of tested web pages on different subjects for members of the public to use. There is an urgent need for a national strategy to address health information in the new information age”.

The health information assumes profound significance in the evolving information society which has set new information standards from health management point of view. There are a large number of information have-nots especially in the developing and underdeveloped countries. They include farmers, workers, elderly citizens, disabled persons and people on lower incomes. The health information system should meet the information needs of the have-nots. In future, there will be a wealth of health information available electronically. The most important factor for success will be the quality of health information. Health professionals should take an active role in the development of public health
information system which could be multi-disciplinary, evidence-based, user friendly, entertaining and easily accessible to all sections of the public.

1.4 Development of Mental Health and Neuroscience Services

Mental health is a vitally important aspect of public health that has long been segregated and neglected. Mental health should be duly considered as an important component of health policy and practice in a civilized society since mental disorders are highly prevalent all over the world regardless of the developmental status of a country. Mental health care means not only to encourage mentally ill people to seek treatment but also to inform the patients, their relatives and the public about mental disorders and their treatment. Mental health care systems frequently show characteristics that cannot be explained either by the current evidence for particular modes of treatment and care or the present economic state of a country.

A good deal of interest has been aroused all over the world in neurosciences. A survey of neuroscience activity in the world reveals that in the various fields of neurosciences, neuro anatomy, physiology, pharmacology and toxicology, neuro-genetics, ecology and clinical neurological and behavioural sciences, nuclei and groups exists scattered all over the world. Neurosciences are based on the systematic understanding of anatomy and physiology of nervous system of the individuals. Neuroscience also broadly includes neurophysiology, neurochemistry, neuro-pharmacology, neuro-immunology, neuro-genetics, neuro-endocrinology, neuro-toxicology, neuro- oncology and other aspects connected with the development and management of nervous system. An integrated approach involving biochemical, electro-physiological, behavioural and morphological methods has to be used for the systematic study of neurosciences.

The early stages of mental health care are marked by charitable initiatives mostly run by religious communities. The French Revolution provided new ideological and operational dimensions to the mental health care system and practice. The advent of civil rights was of decisive importance for the rise of modern mental health care. In the 19th century, mental health care consisted of long term treatment of lunatics in mostly closed institutions and of the treatment of the less severely ill by physicians in private practice.
According to Tuke (1882), the British pioneer of the no-restraint movement, “Pinel introduced a new philosophy of mental health care. By this act, born of the spirit of the French Revolution and symbolic of a new attitude to the insane Pinal abolished brutal repression and replaced it by a humanitarian medical approach, which in the mid-19th century, culminated in the great English no-restraint movement and which made possible psychiatry as it is known today”.

The abnormal behaviour of the human beings was viewed as illness by the society. Mental health care was born in response to this societal attitude and care. Psychiatry was seized by idealism in the mid-19th century. The leading proponent of this idealistic pedagogical school was the Heidelberg psychiatrist C.F.W. Roller who concluded that the mentally ill should be isolated from their purportedly pathogenic environment. The mental hospital moved out of the general hospital, consciously isolating itself. This system was doomed to failure since the treatment strategies proved practically ineffective.

Kraepelin (1904) recalls the stigma and discrimination associated with the isolation of mental patients in remote asylums. It reads: “Let us now turn our minds to the severe forms of idiocy that make up the great mass of patients in our asylums: common to these people is the destructions of the unity of their psyche and personality, their exclusion from the human community and their social environment.”

Hitler in 1935 signed an Act of Enablement that led to the compulsory sterilization of nearly 300000 people truly or reportedly suffering from hereditary disease. It was his first radical breach of human rights which was followed by the mass murder of some 2000000 mentally ill people in 1939. A large number of mental hospitals continued to be run like prisons until after World War II. A fundamental change of attitude in society and on the part of governments was felt necessary to secure the right to life of the mentally ill all over the globe after World War II. This kind of a new realization and rediscovery of human and civil rights brought about the transition of psychiatry from custodial care to a therapeutic discipline.
Until the mid 20th century, effective therapies for chronic or acute mental disorders were almost non-existent. There was also a fundamental lack of knowledge of the causes, consequences and remedies of mental disorders. The emergence of psycho-tropic drugs in growing numbers and a growing variety of efficacy brought about a sea change in the mental health care system in 1950s. The advent of effective and economical psycho-therapeutic methods such as behavioural and cognitive therapies and improvement in diagnostic techniques also played an increasingly important role. The sophisticated electro-encephalogram diagnosis and magnetic encephalography techniques were also introduced subsequently. New methods of investigation in the fields of biochemistry, neuro-immunology and molecular biology also brought about great advances in diagnosing neuro-biological anomalies and dysfunctions.

Moscarelli and Rupp (2000) comment: “Mental health services systems are typically shaped by historical tradition, political decisions and conventions of practice, financing and organization. To be able to understand the role of these factors in mental health care systems, it is necessary to make a short excursion into the history of the social and political ideas and the economic conditions that have moulded health and mental care systems”.

Psycho-social care and occupational rehabilitation are in part provided by the mental health care system alone, mostly in cooperation with the existing general health and social services all over the world. But the mentally ill are still at risk of being disadvantaged compared with the physically ill. In many countries, mental health care primarily consists of the therapy traditionally supplied by psychiatrists and medical services provided by state run or contribution based systems. Modern scientific medicine entered various domains of mental health care. Scientific methods and technologies continued to pervade mental health care all over the globe since they are cheap and user friendly. Mental health and neuroscience have grown over the years into an integral part of the modern medicine. They have acquired novel ways of intervening in psychological and neuro-biological structures and processes.

Psychiatry was developed into a scientific and therapeutic discipline of late since mental care system has been slow in almost all countries. The widespread
ignorance of the high frequency of mental disorders and of their social and economic implications was not overcome until trans-nationally comparable population studies were conducted in different parts of the world. The health policy makers and administrators also did not realize the necessity of providing suitable mental health care systems quantitatively and qualitatively as compared to the general health care system.

According to Pirisi (2000), “Mental illness has sit on the back burner around the globe in terms of medical and public attention and resources. It has kept mental illness from getting its due recognition as a costly, disabling form of disease. Social stigma has been foremost in contributing to the long silence that has kept mental illness locked away in asylums and harboured as dirty family secrets not to be mentioned to neighbours or employers”.

The universe of mental health care clearly exceeds that of general health care since it is very vast and multi-dimensional according to the experts in mental health. The early forms of mental health care, knowledge of the nature of illnesses and their prevention and treatment, as well as the systems of the protecting against financial risks, did not evolve homogeneously, states Hafner (2002).

The WHO Expert Commission (1954) issued recommendations that called for shifting the focus of mental health care delivery system from the mental hospital into the community. The Health and Family Welfare Departments also started a policy of setting of psychiatric units in general hospitals. The target of moving from hospital centered custodial care to comprehensive community care was based on the recommendations of several Working Groups and WHO Expert Commission. The humanitarian gain of the deinstitutionalization and community care programme has been demonstrated by several studies. There is also visible social and cultural change and the inflationary growth of need for treatment of mentally disabled persons.

Sangsingkeo (1963) comments on mental health in developing countries thus: “Under modern conditions the world cannot long remain divided into a few prosperous islands and a vast sea of human misery. In our crusade toward better mental health of mankind and harmonious relationships among all peoples of the
world, it is our responsibility to take an active interest in the mental health problems of developing societies, as well as those of highly developed societies. It must be recognized that in many parts of the world to-day steps are being taken that are of the greatest concern to the world mental health of tomorrow and that the tempo of social change has become accelerated to a degree never reached before”.

In 1975, about 54 per cent of all the treated patients with mental disorders received their care in the primary care out-patient medical sector, about 15 per cent received exclusive care from the specialty mental health sector, and another 6 per cent obtained care from both the specialty mental health sector and the out-patient medical sector. The data revealed that a majority of the patients received care for psychiatric disorders from primary care physicians rather than specialists in mental health and neurosciences.

In the age of globalization, market-oriented health care systems have affected the management of mental health care delivery system. Mechanic (1996) concludes: “On a profit-oriented, unregulated health care market the seriously mentally ill and disabled with long-lasting and multifarious needs for medical, psychological and social care are clearly disadvantaged. For this reason, the US Centre for Mental Health Services is pushing for a governmental safety net”.

The importance of mental health care is now accepted all over the world. Mental diseases and allied neuro problems are increasing because of the stress and strain of the modern world regardless of educational and developmental statuses of the countries and regions. In reality, the need and importance of mental health care are on the increase and that the professionals should cope with the challenges and opportunities of mental health care. Mental health care in low-income countries is not satisfactory since the mental health and neuroscience institutions run by the governments do not have enough human capital, infrastructural facilities and allied services.

The WHO recommends that governments work out national mental health policies, create suitable institutional networks and provide people friendly services. There is need for integrating the mental health care system with the general health care system since it would facilitate better therapeutic approaches and quality-
oriented services. In most countries around the world, the mental health care system has become an integral part of the general health care system. The mental health care system is profiting from the multi-disciplinary setting and the scientific progress in diagnosis and therapy in the field of medicine.

1.5 Social Significance of the Study

Health care system comprises all the organizations, institutions and resources that are directed to producing health actions which improve people’s physical, social, psychological and economic well-being in modern society. Health systems are responsible for the improvement of people’s health in general and people’s production and productivity in particular economically and otherwise. According to Heinz Hafner (2002), “The goodness of a health care system is measured by the output indicators of the various fields of action or of all health actions taken together, e.g., in terms of changes in the morbidity and mortality of a total population”.

Health care systems should respond well to people’s expectations. The World Health Organization has called upon the policy makers all over the world to facilitate health for all on a top priority basis. All citizens have a right to health and that fairness represents a basic value of a health care system classifiable as a human right which is practiced at the political level. It requires the allocation of financial, human and institutional resources without placing any individual or section of a population at a disadvantage.

The mental health care is an integral part of the overall health care system, its curative medical, disease prevention and health promotion sectors. Mental health is a vitally important aspect of public health that has long been segregated and neglected. Recent population surveys have shown that mental disorders are highly prevalent in most countries throughout the world. Mental disorders are found in large number especially in low income countries which lack adequate financial and human resources. Mental health care also incorporates encouraging mentally ill people to seek treatment but also to inform the patients, their relatives and the public about mental disorders and their treatment. The public health components of mental
health care system encompass multi-disciplinary health promotion and disease preventive actions.

Pirisi (2000) highlights the public-health relevance of mental disorders thus: “Mental illness has sit on the back burner around the globe in terms of medical and public attention and resources. That has kept mental illness from getting its due recognition as a costly, disabling form of disease. Social stigma has been foremost in contributing to the long silence that has kept mental illness locked away in asylums and harboured as dirty family secrets not to be mentioned to neighbours or employers”.

The social and economic implications of mental disorders were not fully and properly understood for several years. The enormous public health relevance of mental health disorders should receive the attention of policy makers and general public’s. There is a great necessity for any society to provide for a mental health care system quantitatively and qualitatively of the same standard as the general health care system.

Ustun (2000) adds: “The universe of mental health is vast and multi-dimensional”.

In reality, the universe of mental health care clearly exceeds that of general health care. A mental health care system should offer not only medical and psychiatric remedies, but also a wide range of psychological services. Hence, an essential indicator of the goodness of the mental health care system is whether and to what extent the needs of the chronically mentally ill and disabled for non-medical and social care are met. The French Revolution gave a new dimension to mental health care which was an outcome of the advent of civil rights. There was a radical transition of psychiatry from custodial care to a therapeutic discipline. The social component of mental health care system was greatly realized by the policy makers. The human and moral catastrophe of World War II led to a deep respect for human and civil rights worldwide.

The last decades of the 20th century were also characterized by numerous efforts to reform systems of health insurance and health care. The social domain of mental health care was also greatly influenced by the system of social services, their
financing and cooperation with the mental health care system. Most of the countries established mental health care institutions and facilitated the development of specialized mental health care professionals. The growth of the managed mental health care system has been fast. The World Health Organization has also prevailed upon the national governments to work out national mental health policies and create better infrastructural facilities for the effective management of mental health care system.

The US Department of Health, Education and Welfare (1969) has brought out publications dealing with the findings of the major research studies on mental health status and mental illness in America in the context of urbanization, and the positive and negative mental health effects of the various socio-cultural-environmental factors associated with urbanization. The report also provides certain recommendations for building up the kind of infrastructure and manpower for minimizing psycho-pathology and promoting mental health amongst the socio-culturally deprived sections of urban society.

The Expert Committee constituted by the WHO (1975) also dealt with the approaches, problems, issues, constraints and recommendations for developing mental health services all over the world. The report clearly spelt out certain measures for reaching out effectively to the rural populations and the unreached urban areas, particularly keeping in view the extremely limited institutional resources and specialized manpower all over the world.

The report of a WHO Study Group (1984) reviews the experiences of some of the countries in developing and implementing national mental health programmes, and some of the problems and issues in effectively adopting a primary health care. Keeping in view the constraints of physical infrastructure and trained psychiatric manpower in these countries, the report provides a set of recommendations which need to be considered by the national governments for initiating and improving national mental health programmes. The report has also highlighted the need of effectively reaching out to the mentally ill in vast, unreached, remote rural communities and the faceless urban slums.
Mental health, though an important component of public health system, has not been given the right place because of various reasons. The policy makers, administrators, professionals and activists were engaged only in dealing with disease management process. The World Development Report (1998) states: “Mental illnesses are not killing diseases but disabling diseases. The manpower lost due to neuro-psychiatric disability is much more than the manpower lost by cancer and cardio-vascular disorders put together”.

In most countries, mental health care system has become an integral part of the general health care systems. The mental health care system is profiting from the multi-disciplinary setting and the scientific progress in diagnosis and therapy in the field of medicine. The mental health care system itself is currently undergoing rapid changes. Institutional frameworks are also created for the purpose of ensuring solutions and care for mental health which ensures better life for all in a systematic way.

In India, mental health neuroscience institutions are also created on the basis of the recommendations of Bhore Committee. General Hospital Psychiatric Units (GHPU) were also established in the post-Independent India. The latest phase in the development of mental health services in India has been the Community Care Approach which has involved the physicians of primary health care centres at the grass roots level. Community Mental Health (CMH) work was also taken up by various centres in the country. The non-psychiatric physicians and paramedical personnel are also trained in the psychiatric know-how and skills. Major Mental Health and Neuroscience Institutions are also established in the country in accordance with the provisions of National Mental Health Programme, 1982. NIMHANS, Bangalore was established in 1986 during the 7th plan period to prepare programmes of action and ensure promotion of mental health. Several workshops were conducted for the state level planners, administrators and mental health professionals with a view to integrate mental health with primary health care in the country.

Several national seminars were conducted in India on the role of government agencies, non-government agencies, educational institutions and health care agencies in mental health care. These proceedings were brought out in the form of
publications which contain articles regarding mental illness and mental health care, child mental health and school related problems, alcohol and drug dependence, mental retardation and welfare services. In particular, the progress report of the Government of India (1989) presents the background of mental health services in India since independence and achievements of National Mental Health Programme, 1982 and other factors associated with the management of mental health programmes in India. It is estimated that there are at least 50 million people needing mental health intervention and approximately 10 million people needing serious psychiatric intervention or hospitalization in India.

Supreme Court and National Human Rights Commission have also taken up the cause of mental health and are helping in the improvement of quality of care in the mental hospitals and other mental health care centres. Central and State governments are consciously working together in providing necessary care to mentally ill person, in preventing mental illness and in promoting mental health. The non-government organizations have also come forward to help the chronically mentally ill by establishing half-way homes, long term care homes and day care centres. It was commonly agreed upon that government and non-government agencies should work together in building necessary infrastructure, developing manpower and rendering necessary services in the urban and rural areas. A new generation of counselors has emerged in Indian society in order to effectively manage mental illness. More recently, mentally disabled people and their family members have begun to speak with conviction regarding their needs.

There are also a considerable number of public and private institutions in Karnataka State which deal with mental health care. There are exclusively mental health care and neuroscience information centres in Karnataka state. Efforts are also made by the policy makers and administrators to provide standardized information services through these centres. The physicians, researchers, students, patients and the general publics need appropriate mental health and neuroscience related information resources and services in order to effectively prevent mental illness and neuro problems in modern society. The crucial role of mental health and neuroscience information services becomes even clearer since the modern society
moves towards a knowledge-based society from the point of view of mental health management.

In our experience, information gap exists between the mental health and neuroscience centres and users of information. There is growing recognition in Karnataka State about the crucial role of mental health and neuroscience information system, resources and services. Collection, processing and dissemination of need-based mental health and neuroscience information on round the clock basis have to be managed in a scientific way especially in a developing state like Karnataka. Informing the people about mental health disorders and being informed about the promotional measures is not a sporadic activity. The information services have to be planned and delivered in accordance with the needs of the user’s community.

Hence, it was decided to evaluate the information use behaviour of mental health and neuroscience professionals not as a means of communication, but as a support to mental health promotion closely woven with it. Thus, the present study on “Information Use Behaviour of Mental Health and Neuroscience Professionals in Karnataka” is justified because of the ‘model state’ status once enjoyed by the Karnataka State from the point of view of development in general and research dealing with mental health and neuroscience information use behaviour in particular.

1.6 Need and Importance of the Study

There has been a tremendous growth in health science education for the last three decades in Karnataka. There were 4 Government medical and 21 private medical colleges offering graduate and postgraduate courses in different branches of medicine and surgery along with hospital facilities by 2005. Some of these colleges in later stage initiated education in mental health and neurosciences and also related areas. Presently there are 41 medical colleges in Karnataka out of which 8 medical colleges are offering courses at postgraduate level in mental health and neuroscience disciplines.

National institute of mental health and neurosciences, Bangalore, that attained the status of deemed to be university in 1994 is a major step in mental health and neuroscience profession. This institute apart from imparting education
both at graduate, postgraduate and including research levels in different branches of mental health and neurosciences. NIMHANS has made rapid progress in medical research and as well as public service. Several specializations have been emerged within mental health and neurosciences where in NIMHANS has carried its high reputation. In addition to NIMHANS, (National Institute of Mental Health and Neurosciences) Bangalore, MAHE (Manipal Academy of Higher Education) Manipal another deemed to be university has contributed richly to the health education and as well as mental health and neuroscience fields.

Further, there are several other institutions like, Karnataka Institute of Mental Health Dharawad recently renamed as Dharawad Institute of Mental Health and Neurosciences, Dharawad (DIMHANS) which have devoted to extend health service in mental health and neurosciences, steady growth in mental health and neuroscience education institutions initiating different specialization has lead to the growth of number of practicing specialists in these areas. The significant developments in information technology and communication technologies have left no field untouched. These developments have inevitably transformed the way the information resources are organized, stored and retrieved for the information users in all spares activities, and also in mental health and neuroscience disciplines.

Like other science subjects, drastic growth in the field of mental health and neuroscience has vast amount of literature in different forms. In addition to large amount of printed resources, electronic gadgets carrying huge information in the field of mental health and neurosciences are available today. The Internet has opened flood of literature in the field. There exist many on-line databases in the field and also in the related fields. It is presumed that this shift in the literature made a distinct impact on mental health and neuroscience professionals, students, teachers, and medical practitioners and research scholar who use information for their study, research and practice. As seen in the previous paragraph some of the studies both in India and abroad have been carried on to know the information use behaviour of these professionals. But no detailed study in India, particularly in Karnataka has not been carried on this issue. Hence the present attempt has been made to study information use behavior of mental and neuroscience professionals with an emphasis of its resources and their impact on their information use behaviour.
The study is significant due to the fact that, it attempt to unfold information requirements of faculty, research scholar and practicing professionals in the area of mental health and neurosciences. It also shows the pattern of their information use particularly E-resources and services and problems encountered by them. It attempts to find out various ways and means to overcome these problems and enhance the usage of information by the mental health and neuroscience professionals.

1.7 Statement of the Problem

The mental health and neuroscience services have been expanded over the years in India and other parts of the world. In developing countries, the emphasis is on people’s participation in the process of development since it is vital for their progress. There is a growing recognition in Karnataka state also about the crucial role of information which is an instrument of integrated mental health management. Mental health and neuroscience information scenario of Karnataka state is less understood due to the lack of comprehensive information investigations. There are certain drawbacks and limitations on the part of mental health and neuroscience libraries in Karnataka from the point of view of information management. A synthesis of the available literature suggests that the mental health and neuroscience information scenario suffers from series of limitations especially from research and development points of view.

Therefore, the primary tasks of present study are concerned with identifying a reasonably representative sample of information users of mental health and neuroscience institutions so as to assess their views on the current status of information management and library intervention for integrated mental health care management both in urban and rural areas in Karnataka state. The problem entitled “Information Use Behaviour of Mental Health and Neuroscience Professionals in Karnataka: A Study” has been chosen for the present study because:

a) Information occupies an enviable status in the process of mental health care management regardless of region.

b) Information management cannot remain as a neglected sector of mental health care system.
c) Karnataka’s efforts in expanding mental health care services has motivated considerable number of governmental and non-governmental organizations to take active part in promoting mental health care.

d) Other states in the country are following the attempts made by Karnataka to expand mental health care base in urban and rural areas.

e) A constant and continued research on the changing information scenario, subject to rapid progress in social, economic, scientific and technological contexts is imperative.

It is essential to have a vision backed up by appropriate research action on information system advancement in a developing state like ours in order to achieve resounding success in the field of mental health care through systematic library intervention. To raise the efficiency of the mental health and neuroscience libraries, their present level of management efficiency has to be assessed and suitable methods should be designed to increase the same. In the absence of suitable research support, it would be difficult to achieve this goal. The present study, was therefore, designed to cover all these dimensions and make it more comprehensive.

1.8 Explanations of the Concepts

1.8.1 Information Seeking Behaviour/Information Use Behaviour:

According to Case “Information seeking is a conscious effort to acquire information in response to a need or gap in your knowledge. Information seeking behaviour encompasses information behaviour as well as the totality of unintended or passive behaviour as well as purposive behaviour that do not involve seeking, such as avoiding information (2002).

A widely accepted definition amongst scholars is that information-seeking behavior begins when someone realizes the existence of an information need and ends when that need is believed to have been satisfied (Krikelas, 1983). The seeker turns to formal and informal sources of information and is ultimately satisfied or dissatisfied with the end result (Wilson, 1999). The theories of information-seeking behavior tend to differentiate between immediate needs, the related activities of which are deemed to be “information-seeking behavior,” and deferred needs, which many researchers have termed “information gathering” (Krikelas, 1983). 
**World Health Organization** defines the Mental Health refers to a broad array of activities directly or indirectly related to the mental well-being component included in the WHO's definition of health: "A state of complete physical, mental and social well-being, and not merely the absence of disease". It is related to the promotion of well-being, the prevention of mental disorders, and the treatment and rehabilitation of people affected by mental disorders.

**The Free Dictionary Defines**

1. A state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society, and meet the ordinary demands of everyday life.
2. A branch of medicine that deals with the achievement and maintenance of psychological well-being.
3. A person's overall emotional and psychological condition: Since witnessing the accident, his mental health has been poor.

**1.8.2 Mental health**

The psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment mental condition, mental state, psychological condition, psychological state - (psychology) a mental condition in which the qualities of a state are relatively constant even though the state itself may be dynamic; "a manic state" Mental balance, mental soundness the healthy psychological state of someone with good judgment Saneness, sanity - normal or sound powers of mind mental disease, mental illness, psychopathy - any disease of the mind; the psychological state of someone who has emotional or behavioural problems serious enough to require psychiatric intervention

**1.8.3 According to Medical Dictionary, “Neuroscience”** is the study of the brain and nervous system, including molecular neuroscience, cellular neuroscience, cognitive neuroscience, psychophysics, computational modelling and diseases of the nervous system. See also: Neuroscientist.

**Answer.com** defines the Neuroscience is the study of all aspects of nerves and the nervous system, in health and in disease. It includes the anatomy, physiology, chemistry, pharmacology, and pathology of nerve cells; the behavioural
and psychological features that depend on the function of the nervous system; and the clinical disciplines that deal with them, such as neurology, neurosurgery, and psychiatry.

**Neuroscience** is the scientific study of the nervous system. Traditionally, neuroscience has been seen as a branch of biology. However, it is currently an interdisciplinary science that collaborates with other fields such as chemistry, computer science, engineering, linguistics, mathematics, medicine and allied disciplines, philosophy, physics, and psychology. The term neurobiology is usually used interchangeably with the term neuroscience, although the former refers specifically to the biology of the nervous system, whereas the latter refers to the entire science of the nervous system.

The scope of neuroscience has broadened to include different approaches used to study the molecular, cellular, developmental, structural, functional, evolutionary, computational, and medical aspects of the nervous system. The techniques used by neuroscientists have also expanded enormously, from molecular and cellular studies of individual nerve cells to imaging of sensory and motor tasks in the brain. Recent theoretical advances in neuroscience have also been aided by the study of neural networks.

Given the increasing number of scientists who study the nervous system, several prominent neuroscience organizations have been formed to provide a forum to all neuroscientists and educators. For example, the International Brain Research Organization was founded in 1960, the International Society for Neurochemistry in 1963, the European Brain and Behaviour Society in 1968, and the Society for Neuroscience in 1969.

**1.8.4 Karnataka State**

Karnataka with its capital at Bangalore is the country's 8th largest state. It is located at Deccan Plateau, and is surrounded by Maharashtra to the north, Arabian Sea to the west, Goa to the northwest, Kerala to the southwest, Andhra Pradesh to the east and Tamil Nadu to southeast. Karnataka's economy benefits from gold, manganese, oilseed, and coffee, silk and sandalwood production. Over 90% of India's gold production comes from south Karnataka. Extractions are carried out at
manganese ore from the districts of Bellary and Hospet. Karnataka is the largest producer of coffee, raw silk and sandalwood based products. Its service sector boasts of its Real estate, Consultancies, Travel and Tourism, Educational Institutes, Hotel Industry and Insurance.

1.9 Objectives of the Study

1) To understand the nature and extent of information needs of mental health and neuroscience professionals in Karnataka.
2) To examine the information seeking patterns of mental health and neuroscience professionals in Karnataka.
3) To assess the extent of use of print and electronic resources by the mental health and neuroscience professionals in Karnataka.
4) To identify the problems if any encountered by mental health and neuroscience professionals in using information required by them.
5) To suggest ways and means to overcome these problems.

1.10 Hypotheses

1. Mental health and neuroscience professionals will vary significantly in their nature and extent of information needs.
2. Mental health and neuroscience professionals will vary significantly in their information seeking patterns.
3. Mental health and neuroscience professionals will vary significantly in their use of print and electronic resources.
4. Mental health and neuroscience professionals will vary significantly in their problems to regarding information seeking.
5. Mental health and neuroscience professionals use a variety of information sources both print and electronic for their teaching, medical practice and research work.

1.11 Scope and Limitations of the Study

The geographical scope of the study is limited to the state of Karnataka. The study covers following 10 Medical Institutes where faculty, medical practitioners and research scholars engaged in teaching, medical practice and research activities including private medical practitioners.
List of the selected institutions for the study

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of the selected institutions</th>
<th>Year of established</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangalore Medical College and Research Institute, Bangalore. (BMCRI).</td>
<td>1955</td>
</tr>
<tr>
<td>2</td>
<td>Dharawad Institute of Mental Health and Neurosciences, Belgaum Road, Dharawad. (DIMHANS).</td>
<td>1948</td>
</tr>
<tr>
<td>3</td>
<td>Jawaharlal Nehru Medical College, Belgaum. (JNMC).</td>
<td>1963</td>
</tr>
<tr>
<td>4</td>
<td>JJM Medical College Davanagere. (JJM).</td>
<td>1965</td>
</tr>
<tr>
<td>5</td>
<td>JSS Medical College, Sri Sivaratrishwar Nagar, Mysore. (JSS).</td>
<td>1984</td>
</tr>
<tr>
<td>6</td>
<td>Kempegowda Institute of Medical Sciences, K.R. Road, Bangalore (KIMS).</td>
<td>1980</td>
</tr>
<tr>
<td>7</td>
<td>Manipal Academy Higher Education, Manipal. (MAHE).</td>
<td>1953</td>
</tr>
<tr>
<td>8</td>
<td>National Institute of Mental Health and Neurosciences, Hosur Road, Bangalore. (NIMHANS).</td>
<td>1954</td>
</tr>
<tr>
<td>9</td>
<td>Ramaiah Medical College, Mathikere Bangalore. (RMC)</td>
<td>1975</td>
</tr>
<tr>
<td>10</td>
<td>St. John’s Medical College, Sarjapur Road, Koramangala Bangalore. (SJMC).</td>
<td>1963</td>
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</tbody>
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1.12 Organization of the Study

The first chapter deals with the introduction wherein the objectives of the study are presented. It also throws light on the importance of health services in modern society, role of health information in the new millennium, development of mental health and neuroscience services, social significance of the study, statement of problem and scope and limitations of the study.

The second chapter viz., review of literature presents an overview of the prominent studies relating to information seeking behaviour of Mental Health Professionals, Neurologists, Neuro-Surgeons, Pediatricians, Orthopaedicians, Medical Practitioners, Clinicians, Health Sciences Faculty, Medical Oncologists, Nurses, Pharmacists, Physiotherapists and Speech Pathologists/Occupational Therapists in India and abroad.
The third chapter, viz., research methodology deals with the nature and scope of the study, research questions, study variables, research design, data processing and statistical tests of the study.

The fourth chapter presents the mental health and neuroscience education, mental health and neuroscience services and mental health and neuroscience information services in Karnataka.

The fifth chapter contains the demographic features of the sample, information need, purpose of using information, extent of use print and electronic sources, use of information sources, information gathering habit, use of Internet/ICT facilities and services related to mental health and neurosciences in Karnataka.

The sixth chapter summarizes the findings and recommendations of the study with brief resume and implications of the findings. The last part of the thesis indicates the bibliography and questionnaire.

1.13 Summary

In a democratic society, the citizens have a fundamental right to health. It is the responsibility of the state to ensure well organized mental health networks, operations and services. Health information is the foundation of public health management in modern society. Mental health is a vitally important aspect of public health that has long been segregated and neglected. A good deal of interest has been aroused all over the world in neurosciences. The WHO recommends that governments work out national mental health policies, create suitable institutional networks and provide people friendly services. The crucial role of mental health and neuroscience information services becomes even clearer since the modern society moves towards a knowledge-based society from the point of view of mental health management. The present study evaluates the information use behaviour of mental health and neuroscience professionals in Karnataka state. The primary tasks of present study are concerned with identifying a reasonably representative sample of information users of mental health and neuroscience institutions so as to assess their views on the current status of information services and library intervention for integrated mental health care management in Karnataka state.