AN INVESTIGATION INTO FACTORS HINDERING EFFECTIVE USE OF MEDICAL LIBRARIES IN KENYA WITH PARTICULAR REFERENCE TO KENYA MEDICAL RESEARCH INSTITUTE (KEMRI) LIBRARY.

BY

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Muviti, Wambua
An investigation into factors hindering
DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

WAMBUA MUVITI

Date

This research project has been submitted for examination with my approval as a university supervisor.

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DEDICATION

This thesis is dedicated to my parents, Mr. Jonathan Wambua and Mrs. Priscilla Kamene, for their sacrifice, love for knowledge, and interest in building a strong foundation for my life-long education.

To my husband Victor Makau for encouraging me to pursue the course and to my loving children Peter Ngola and Ruth Kamene for bearing with my limited attention as I wrote this thesis.
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<tr>
<td>AMREF</td>
<td>African Medical Research Foundation</td>
</tr>
<tr>
<td>ICIPE</td>
<td>International Centre for Insect Physiology and Ecology</td>
</tr>
<tr>
<td>ILRI</td>
<td>International Livestock Research Institute</td>
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<tr>
<td>KEMRI</td>
<td>Kenya Medical Research Institute</td>
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<td>WHO</td>
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ABSTRACT

The central problem addressed in this study is that the factors hindering effective use of medical libraries are not clearly understood. The main purpose of the study was to investigate into the factors hindering effective use of medical libraries in Kenya. The study is a case study of Kenya Medical Research Institute (KEMRI) Library. From the library forty scientific researchers were randomly selected by picking on every second user that entered into the library. Two library staff were purposively chosen for the study.

Three types of research instruments were used to elicit data. These were questionnaire, interview and observation. Qualitative method was used to analyze the data. The study found that the physical resources were inadequate. Most reading materials were not catalogued, outdated and not relevant to the needs of scientific researchers. Most of the services were substandard and most scientific researchers were not satisfied with them. The Library staff was inadequate and had no relevant training in medical librarianship.

The Library staff was unable to organise the library, did not understand the sources of information in the library. Financial limitation had prevented KEMRI Library form providing adequate current reading
materials, expansion of library, and connecting computers to healthnet and internet. Financial limitation had also inhibited KEMRI Library from providing essential services such as photocopying, indexing, telephone, binding, translation and other related essential services. On the strength of the main findings and conclusions discussed, a number of policy recommendations were drawn. They are:

(a) The Ministry of health provide adequate financial resource to KEMRI to enable the library purchase current reading materials, expand the library, provide photocopying, binding and translation services and to employ adequate staff.

(b) KEMRI Library to strengthen interlibrary lending practice by proving requested materials in time to scientific researchers.

(c) User education services be provided.

(d) KEMRI library to employ staff trained in medical Librarianship.

(e) CD-ROM data bases be updated.

(f) The Kardex and the catalogue be frequently updated to enable scientific researchers locate reading materials easily.
The recommendations that require further research include:-

1. A similar study should be replicated using a larger study sample to cater for all categories of medical libraries in Kenya to establish whether the factors hindering effective use of medical libraries are peculiar to KEMRI library.

2. An identical study should be conducted within libraries in small urban areas.

3. Research should be undertaken to find out the influence of age, sex, information explosion and type of work performed on use of the library.

4. Research should be undertaken to find out the influence of modern technology on library use.
CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Medical revolutions in today's society have posed a challenge to information professionals. There have been a continuous growth of information (Theuri, 1989). New drugs, nutritional knowledge, medical equipment, and surgical techniques continue to emerge to cater for new diseases. Hence, the World Health Organization (WHO) declaration of "Health for all by the year 2000" (Brownlee, 1991:13; Daily Nation, 1999:7) has accelerated this challenge. Medical practitioners and researchers have thus increased their need for information given these developments. Information professionals such as librarians have thus been motivated to offer effective library services to cater for information needs of medical library users.

The majority of Kenya's population live in the rural areas where access to health facilities is limited. The health workers in these health facilities are constantly faced with difficult professional decisions to make, because the usefulness of the knowledge gained in training steadily declines due to technological advancements and emergence of new needs and concepts in health care delivery (Lin, 1998).
Health workers in rural areas lack up-to-date books and journals for reference when faced with a difficult problem (Muya and Mbatia, 1994). Most health facilities lack libraries to facilitate health workers access to information, and to assist them borrow reading materials from towns where libraries are. District libraries have only one copy of each title which are often borrowed and stay out for along time (Muya and Mbatia, 1989). The decision making process of a health worker is worsened by prohibitive distance between health facilities thus making consultation with colleagues in other centres difficult or impossible owing to poor means of communication (Muya and Mbatia, 1989). This situation isolates the health workers effectively reducing their performance. Despite the difficult working situation facing health workers in Kenya, they find medical libraries to be of great importance in meeting their information needs.

According to a study conducted on needs assessment survey in Kenya, by Muya and Mbatia (1989), hospital libraries were used to provide information to health workers to enable them gain knowledge (27%), solve problems faced in carrying out duties (54.5%), and remind themselves of what they had forgotten (18.1%).
Studies done in developed countries by Kirsten (1996) on medical surgeons in Mexico shows that surgeons require information from libraries on patient's care, medical legal aspects, research, continuing medical education, patient education, teaching and for publishing.

Physical therapists, according to Hall (1995), require health information for counselling, evaluating therapy, diagnostics method, professional relations and marketing practices. Health information is used by clinical officers to help them recognise abnormal or normal conditions, identification or evaluation of different therapies, minimisation of risk of treatment and in choice of diagnostic test (Urquart, 1996).

Members of the public would like to acquire knowledge about how their bodies function, illness, preventive measures, hospital mortality rates, and alternative modes of financing health care such as insurance and medical schemes (Rees, 1991). Members of the public also require health information to enable them make decisions and participate in their own health care at the same time, help them in making informed choices about lifestyles to improve their health (Lin, 1998).
Rees (1991:23) indicates that members of the public need health information on indicators of quality of health, cost of health care that they received as well as being interested in the qualifications of those who were offering them treatment.

Patients would like to acquaint themselves with diseases, know their symptoms, causes, prevention and services available for use at times of treatment. Policymakers would like to have information to enable them make the right decisions for instance, the proper measures to enlighten the public in case of disease outbreak.

Health managers with managerial responsibilities at the national, provincial and local levels make decisions that require health information for health planning, programming, budgeting, monitoring, controlling, evaluating and coordinating health programmes. They require health information on statistical services, health legislation as well as knowledge of the mobilisation of human and financial resources.

The government requires health information to enable organizations of prevention and early disease detection to enhance health literacy and health promotion behaviour and for development of strategies to meet new emerging health problems (Lin, 1998).
Governments require health information about death rates, birth rates, number of health facilities available and human resources available for use in hospitals.

The medical library has been referred to variously as the "heart, the core, the vital service of research, conservation and transmission of knowledge" (Rees, 1991:14). For the library to play its roles effectively it has to have relevant resources for users to exploit (Mathews and Picken, 1979). Effective service also need to be provided. Failure of the users to make effective use of the medical libraries would lead to repercussions, "it would affect their job performance, whose effects are slow decision making, low productivity, poor motivation, frustration and professional stagnation" (Muya and Mbatia, 1988:11). Lack of knowledge on developments in medical field make doctors and nurses unable to handle modern equipment. Doctors may not be able to offer proper treatment to their patients. Policy makers will make decisions that are not guided by real facts and this may have adverse effects on the health and economic situation of the country.

Researchers will find it difficult to identify and set priorities among problems. They would not be able to guide and accelerate application of knowledge to solving health problems. They would not be able to develop new tools and fresh strategies. It therefore becomes necessary to carry out a study to find out the factors hindering effective use of medical libraries in Kenya and offer recommendations.
1.2 STATEMENT OF THE PROBLEM

The research problem addressed in this study is that major factors hindering effective use of medical libraries are not clearly understood. This therefore limits the ability of the parent organisations willingness to support the libraries financially in their effort to promote effective use of medical libraries. Kithele (1992:35) writes, “Libraries will have to do a lot of work to convince their parent organization’s administration to increase library finance.”

Researches done earlier indicate that medical libraries are not effectively used. Muya and Mbatia (1989:13) on their report on needs assessment survey on health centres and dispensaries say: “The use of the basic hospital libraries by healthworkers in health centres and dispensaries was virtually non existent.”

Mburu (1990:12) in his evaluation report on essential health learning kit project says, “In majority of health facilities libraries, books were not used. They were as clean as they were bought.”

Mike (1995:105) had this to say, “General practitioners use colleagues as information sources more often than they consult medical libraries.”

Kenyan government spends 9.5% of the total national expenditure on health (Daily Nation, 1999:7). Part of it is channelled towards education of doctors, nurses and on purchase of reading materials in medical libraries. However,
there is evidence that, the high expenditure on health is not associated with improvement in health and library use. Indicators are that the health of Kenyans is worse off than we were several years ago. Daily Nation (1999:7) writes.

Levels of infant and maternal mortality remain unacceptably high, the number of people infected with Aids is rapidly increasing besieged by a resurgence of diseases such as tuberculosis, measles, typhoid, fever, malaria, cholera and Rift Valley fever.

Despite the fact that medical libraries are not used effectively, they still hold a very important position in the country. They act as sources of information to their users. Researchers need medical libraries to generate information and understanding that can help individual families and communities achieve better health, develop new medical tools and strategies, develop new drugs, vaccine and to advance basic understanding and the frontiers of knowledge. Doctors and nurses need to keep themselves updated with modern developments in medical fields and the occurrence of new types of diseases to enable them perform their duties effectively, Which will help them maintain the confidence of the members of public in them. Patients need medical libraries in order to acquire information that will help them understand their sickness and the preventive measures to undertake to prevent the diseases from reoccurrence.
Members of the public want information about the qualifications of medical providers, hospital mortality rates, comparative costs of medical services and alternative modes of financing health care, such as health insurance (Rees, 1991).

Despite the importance of medical libraries, researchers have documented certain factors as hindering effective use of medical libraries which are: lack of adequate space, (Muya and Mbatia, 1988; Kithele, 1992). lack of adequate qualified staff, inconvenient opening hours, inadequate library resources, poor service provision, poor perception and knowledge of the library, lack of time, among others (Muya and Mbatia, 1994; Mburu, 1990). The knowledge gap on factors hindering effective use of medical libraries is a problem to the parent organizations and their libraries, because neither the parent organization nor the library can devise appropriate corrective measures to enhance effective use of medical libraries, yet it is documented that users of medical libraries play a crucial role in improving human life (Mathews, 1979; Rees, 1991). Hence the reason why the development of human resource in medical field has been a priority in Kenya.

Inadequate use of medical libraries has harmful effects on job performance. It leads to poor motivation, frustration, slow decision making, professional stagnation and low productivity (Muya and Mbatia, 1988; Theuri, 1989).
The Daily Nation (1999:7) says, “The capacity of health care systems to respond to the increased health needs has totally been eroded.”

Doctors and nurses have not been able to update themselves with modern developments in medical field (Theuri, 1989), thus failure to administer the right drugs to cure patients very fast, making it economically expensive as patients must keep on visiting doctors quite often. This practice has made the members of public loose confidence in doctors treatment, hence many Kenyans look for alternative ways of treatment. Daily Nation (1999:7) says:

Patients rely on the mass media and opinions of friends and relatives for information regarding medication. They seek a doctor only when the condition is critical. ...Most often they cannot afford medical fees or do not consider it necessary as they believe they have information on how to treat themselves.

Many Kenyans have turned to traditional doctors who provide herbs and advice at a cheaper cost. Many traditional doctors are not licensed and their herbs have bad effects on the health of human being which may lead to death, as some are not safe.
Few researches have been done on medical libraries in Kenya. None of them has dealt with the factors hindering effective use of medical libraries, hence the need for this study to fill such a gap. The present study looks at factors hindering effective use of medical libraries in Kenya with a view to offering recommendations.

1.3 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to investigate the factors hindering effective use of medical libraries in Kenya with particular reference to Kenya Medical Research Institute (KEMRI) library. The study had four specific objectives:

First to find out whether the quality of physical resources at KEMRI library influence library use. Second to find out how the quality of services at KEMRI library influence library use.

Third to find out, whether or not human resource training has effect on library use. Fourth to investigate the influence of financial resource on library use.
1.4 RESEARCH QUESTIONS

1. What is the influence of physical resource on effective use of KEMRI library?

2. What is the effect of types of services provided at KEMRI library on library use?

3. What is the effect of human resource training on library use?

4. What is the effect of financial allocation on library use?

1.5 SIGNIFICANCE OF THE STUDY

The researcher anticipated that the findings of this study would be an addition to the available literature about medical libraries in Kenya. It would draw the attention of the parent organization of the library to the state of art concerning the factors hindering effective use of the library, as well as give solutions on how to curb the problems. When this is done members of the public would benefit from good performance of researchers findings, which would be utilised by doctors and nurses to improve their performance in their work; hence, contribute towards improvement in human life. The results of the present study would generate new knowledge on the status of medical libraries use. It is also expected that library service provision will benefit from this study in that recommendations will be made on effective interventions leading to improvements in most of the areas studied.
1.6 LIMITATIONS OF THE STUDY

A study with a wider scope was not possible for it was difficult to undertake an extensive research, as the study was done during coursework. The researcher had to attend lectures and sit for examinations. The study was done within limited financial and time limits hence it was not possible to travel to other medical libraries in order to undertake a comprehensive study of all medical libraries.

The study was limited to scientific researchers at Kenya Medical Research Institute (KEMRI) library. Therefore conclusions may not be generalized to all Medical libraries in Kenya unless other additional data are incorporated. The study was also limited to the head librarian and staff in-charge of circulation section of KEMRI Library since they were judged the best to provide information that was required, due to their duties in the library.

Emergence of medical libraries in Kenya is a recent phenomenon, hence there has not been much written on the subject and more on KEMRI Library. The researcher relied heavily on scanty pieces of information.
1.7 DEFINITION OF TERMS

1.7.1 Effective
Refers to producing a decided decisive or desired effect.

1.7.2 Library
Refers to a collection of books and other items in a particular library arranged in some definite order, so that any particular item may be found within the shortest possible period of time for reading, study or consultation. It also refers to a place, building, room or rooms set aside for the housing and use of a collection of books.

1.7.3 Library Service
Refers to various means through which a library avails information to its users.

1.7.4 Library user
Refers to individuals who make use of the resources and services available in the library. A medical library has various category of users. For this study the users are the scientific researchers.
CHAPTER TWO

LITERATURE RELATED TO THE STUDY

2.1 INTRODUCTION

This chapter reviews literature on the factors hindering effective use of medical libraries. It covers the following aspects, physical resources, services, human resource training and financial resource.

Medical libraries are of different types and have different kinds of users with different needs (Mathews, 1979). The users include the following: students in nursing schools or medical institutions, doctors, nurses, researchers, and clinical officers among others. The library materials available in medical libraries are used for various reasons. Mburu (1990) found that majority of health workers use library for reference, to learn something new they might not have learnt. A small portion of the staff use library to gain knowledge, and others to refresh themselves. Muya and Mbatia (1989) found that 27% of the users read to gain new knowledge, 18% to remind themselves of what they had forgotten and 54.5% to solve problems that they continuously face in carrying out their duties. Cheng and Lam (1996:36) writes:
Information is used by medical staff to keep themselves updated, write conference papers, prepare for talks, undertake research, solve clinical and work related problems and prepare for lectures. Nurses needed information for course work.

2.2 FACTORS HINDERING EFFECTIVE USE OF MEDICAL LIBRARIES

Ideally, a medical library should be planned as a medical library right from the start (Mathews, 1979) but if this is not possible any adaptation of existing premises should be planned meticulously to take full account of a medical library. The library should be centrally placed. It should be a centre to which all potential readers should have easy access (Mathews, 1979; Phinney, 1977). The distance a user has to cover before getting into a library may be an inhibiting factor to the use of a library. Muya and Mbatia (1989:4) found that many libraries in rural areas in Kenya were located far away from their users. This view was supported by Kirsten (1996) in his study on information retrieval patterns and needs among practising general surgeons who found out that geographical isolation of rural surgeons was a barrier to library use. Mike (1995:107) supports the same view when he noted that nurses in rural areas find access to library services difficult due to distance they had to cover to reach the library.
The library should be big enough to accommodate the library staff, users, stock and furniture. There should be enough room for expansion of the library (Phinney, 1977; Mathews, 1979).

Muya and Mbatia (1988) and Kithele (1992) assert that there were no purpose built medical libraries. Libraries were allocated space where other functions were already taking place. Muya and Mbatia (1988:58) further say that "some of the libraries were operating from a nursing sisters office, medical records office, from a store, clerical officers office and medical officers offices which were quite busy with their own normal functions."

Mburu (1990:50) reinforces this point when he says:

In some provincial hospitals some space is provided but it is mainly noisy and not conducive to private reading as it might in some places be used for meetings or as doctors tea room. The health workers have to take the books outside the library unnecessarily, which limit the use of the books by other users.

This indicates that users who would like to consult the books removed from the library cannot access them.
The library space available is inadequate and makes access to reading materials impossible.

Muya and Mbatia (1988:59) say:

Books were kept in busy offices for lack of better accommodation. The intended user could not gain access to them readily. The books could be used only at times when it was convenient for the owners of such offices. In such a situation, the service could only be given on a part-time basis.

It is very important that the library has adequate furniture for use (Phinney, 1977; Mathews, 1979). Inadequate furniture inhibits library use. Muya and Mbatia (1988:58) observed:

All the libraries were seriously lacking basic equipment, few libraries had book shelves. In some instances the books were issued from cartons. Catalogue cabinets were lacking in 90% of libraries visited. Reading tables and chairs were only available in those libraries, in institutions with training facilities, only one library had a typewriter. Lack of these equipment inhibited the effective organization and use of library stock.

The preceding discussion shows that there are no purpose built medical libraries. Libraries were allocated space in areas where other functions took place. The libraries lacked adequate furniture. This study attempts to find out whether the situation is the same in the study area.
Another factor to consider is the availability of library stock. Most medical libraries need to provide up-to-date information; hence, the stock held should enable it to fulfil this role (Mathews, 1979). Medical libraries need to stock various kinds of reading materials which include books, journals, reference material, non book media among others (Morton, 1979; Mathews, 1979). If a library does not have the relevant up-to-date reading material, users will be discouraged to use the library. Muya and Mbatia (1988:41) writes, “Constant library visits without yielding relevant books may frustrate and therefore discourage users from visiting the library. In most of the libraries the only stock available is what has been donated by AMREF.”

Unavailability of adequate reading materials in Kenyan libraries causes great problems. Mburu (1990) found that 90% of health workers did not use the library or printed materials to solve professional problems because such materials were not available. According to Muya and Mbatia (1988:36), in their words:

lack of adequate books was the major problem facing medical library users, users did not go to the library as there were limited books. There were single copies hence difficult to use when borrowed. some subject areas were not covered by any book. About half of the libraries had less than 100 books and 75% had less than 400 books.

The books in most medical libraries in Africa are outdated and of little use. Patrikios (1995:94) had this to say:
The shelves in many African medical libraries are full of outdated books, most of them fifteen or thirty years old, they are hardly used. Clearly most users need current reference materials and textbooks yet available books are increasingly obsolete.

The relevance of a book to the needs of a user reflects its use. If a book is not relevant to a user, it may not be used. Mburu (1990) found that patient attendants whose basic level of education was low and other subordinates found the level of books too high for their use, hence they did not use the library. The books available did not cater for the interests of all users (Muya and Mbatia, 1988).

Mburu (1990) and Muya and Mbatia (1988) failed to look at the different categories of books in medical libraries. They did not show whether the books included dictionaries, year books, bibliographies, story books, etc., hence the need for this study to fill in such gap. This study attempts to find out how the quality of different category of books affect the library use in the study area.

Another aspect to look at is availability of current journals in medical libraries. Journals provide current information to their users (Muya and Mbatia, 1988). They are the life blood of research libraries and the crisis of information delivery to health professionals is often measured in terms of access to the journal literature (Patrikios, 1995). Journals are too expensive and not easily available in many libraries (Mathews, 1979; Rees, 1991). Muya and Mbatia (1988:53) point:
of the 77 health facilities in the sample, 66% of medical facilities did not have periodicals at all, for those who indicated they received some, they were mainly donations and covered articles in the fields of family planning, public health, medicine, nursing, community health and surgery. Four or five of those libraries which received journals had less than ten titles, hence lack of journals limited library use.

Another factor to consider is the availability of non-book materials, these too, are carriers of information just as books are. Mortion (1979) indicates that audio visual aids were an important supplement to books and lectures in medical education. Lack of non book materials limits users access to information and library use. Kithele (1992) notes that four out of seven libraries studied did not have non-book materials. The same issue was stressed by Muya and Mbatia (1988:51) in their words: “majority of those libraries had no audio-visual materials as only one in ten reported having any audio-visual material.”

Mburu (1990) noted that the only audio visual materials available were radio cassette and posters whose use was limited due to lack of power to run the radio cassettes. Users had to purchase the batteries. The cassettes were also kept in closed access and thus limited their use. The use of posters was limited as they were written in a language difficult for users to understand. Also posters were not displayed due to lack of space and materials to put posters on the wall.
Another category of stock that is considered an important source of information in a library are newspapers and magazines. Majority of hospital libraries do not keep newspapers and magazines of general nature (Muya and Mbatia, 1988). This limits library use. According to a study by Muya and Mbatia (1988:23):

85% of doctors and 82% of paramedics bought their own newspapers and magazines. 13% of doctors and 10% of paramedics borrow from friends. Only 2% of doctors and 75% of paramedics reported that they had borrowed newspapers or magazine. Some co-operated in buying newspapers to enable them to buy different titles which they shared among themselves as the libraries did not have different types of newspapers and magazines.

The pace at which medical information is published is too high. Users find it difficult to handle the many volumes of information produced (Rees 1991). Mike (1995: 105) writes, “The Volume of published information causes doctors difficult both in keeping up-to-date and in storage and retrieval”.

Korale (1989:34) in his study on health systems and medical information services in Sri Lanka says: “It has been difficult to keep track of all the information generated by the different health science information services”.

The foregoing discussion shows that majority of the libraries do not keep journals, newspapers and non-book media. The present study attempts to find out whether the study area has journals, newspapers and non-book media and how their quality influences library use.
Accessibility of library resources is an important factor to consider. This is because lack of access to library materials limits library use. Access limitation may be in form of poor organization, inconvenient library opening and closing hours (Muya and Mbatia, 1988; Cheng and Lam, 1996). According to Khan (1990:371) in his study on health science libraries in Bangladesh, “Only 45% of libraries offered open access. Access was limited due to a number of concerns such as misplacement, loss of materials and difficulties of obtaining replacements.”

Nasieku (1994) shows that access to Medline and CD-ROM databases was restricted to academic staff only. Mburu (1990) established that books were kept in closed access in cartons which limited their use.

It can be deduced from the foregoing discussion that accessibility of library materials was limited. The present study attempted to find out whether the library materials were accessible to the users in the study area. The quality of library service offered is another area to look at. This is because service provision enhance library use. Muya and Mbatia (1988:56) say that:

There were two main services that were offered in hospital libraries, mainly lending (72%) and reference service (28%), which were limited by the amount and variety of stock available, hence the number of books that a user could borrow at any one time was limited. These services were offered during the normal working hours (78%), evenings (13%) and 9% of the libraries opened on request.
Cheng and Lam (1996:37) goes further and points out that:

The services provided in the library were substandard and some services were not available in the library for use. Users were forced to move to libraries which offered services not available in their own library but available in others like CD ROM searches. Most of the comments focussed on the long waits involved in obtaining interlibrary loans and reserved books.

In a study done by Hadassa (1984) on use of Withington hospital library, he shows that some people would like direction in finding books and articles on their subject. This means that users needed guidance on use of the library. Cheng and Lam (1996) shows that 70% of respondents expressed a keen interest to attend the CD-ROM training seminars.

If users are not educated on how to use the library they may not use it effectively as some, may remain ignorant of the services available and how the library is organised. Mburu (1990) in his recommendation indicated the need to organise seminars to introduce health workers to the use of the library and how they could benefit from it. Toterdell (1976: 35) says, “Many library members were quite vague about services they had not professionally used or how the services offered were actually organised.... It was difficult for user to find their way out in a library.”
Kirsten (1996:493) said this about use of library:

Surgeons are not sure how to access up-to-date information appropriately. These surgeons use familiar sources because of barriers of information access. The surgeons are computer illiterate. They want to learn more about using the biomedical literature and new sources of information available through libraries. The libraries themselves are not taking advantage of opportunities to promote their resources or teaching roles.

Mike (1995:105) says, "Lack of information finding skills often dictates against the use of printed sources in favour of consulting colleagues."

It is important to look at library resource sharing and how it can hinder use of library. No library is self-sufficient in meeting user demands; hence, the need for resource sharing. Njuguna (1991) quoting Ifdon on this says, "No library however rich in financial and bibliographic resources can hope to meet all the demands of its clientele."

However, even though resource sharing is such an important service it has never succeeded very well owing to lack of a policy, funds and poor infrastructure especially in third world countries. Otike (1989:42) in his research on Research Medical Libraries in Kenya noted the following as limitations of library co-operation:
There was absence of national information policy and libraries did what they considered to be of interest to that parent organization. There was lack of information on available resources, few libraries published their bibliographic tools and that medical libraries were scattered all over the country. Those found in the rural areas were difficult to access due to poor roads in rural areas. There was also risk of the materials in transit getting lost.

Muriuki (1982:13) on limitations of medical libraries co-operation indicates:

The libraries are reluctant to lend expensive or irreplaceable items. It is expensive to send large items through the post office due to the cost in postal charges. There is restriction on certain materials for interlibrary lending. Thesis and dissertations are not lend out. There are delays in delivery of interlibrary loan materials.

Due to interlibrary loan limitation, the practice does not exist in many libraries in Kenya as shown by Mburu (1990:9) in his evaluation report on essential health learning kit project, “There was no interlending which was an hindrance to effective use of the libraries.”

Hadassa (1984:74) in a survey of the use of Withnpton hospital medical library indicated that, “At present there is no union list of periodicals held by various hospital libraries. There is no union catalogue of books held, thus no inter-lending of books.”
Muya and Mbatia (1988:24) in a report of an evaluation of library development service for rural health facilities and in Kenya observed that, “Basic hospital libraries do not borrow from each other because their resources are small and basic to their own requirements. Most of the resources are common among them.”

From the preceding discussion, it shows that few services are provided in medical libraries which are substandard. The present study attempted to ascertain whether the same applied to the study area.

Another important aspect that hinders effective use of medical libraries is human resource training. The human resource discussed in this section is the staff that is found in a library, who are the people involved in organizing the library, processing library materials, and providing services to the users. Subordinate staff like cleaners are not discussed. Library staff should be trained so as to perform library work effectively. They should be trained in medical librarianship (Gastfer, 1974) which increases efficiency in terms of service provision. Ashworth (1975:22) says, “Subject knowledge gives the edge in understanding, a greater facility in selection, and a better capability in interpretation and presentation of results to suit different types of users.”
Africa suffers from a brain drain of librarians, lack of specialised training for medical librarians and a failure by most institutions to offer librarians career incentives to specialise in a subject field as medicine, where subject knowledge is essential to effective reference service. Trained librarians continue to migrate to other countries and non governmental organisations where they can get higher salaries (Screens, 1975; Patrikios, 1995). In Kenya the situation is the same as indicated by Kithele (1992:27). He says, “After Kenya attained her independence in 1963, librarians fled the country leaving behind posts in need of trained personnel.”

Musisi decried the pay package for personnel in the field of librarianship. He noted that the low salaries offered in government libraries were too low to attract trained librarians (Musisi, 1984).

The staff running medical libraries do not have the necessary training. They are assigned other duties as seen in words of Muya and Mbatia (1988:55):

Those in charge of the libraries were not adequately prepared in terms of professional knowledge and skills. The libraries were run by clerks, typists, storekeepers, accountants, nurses, medical records officers and physiotherapists. These people concentrate in their areas of specialisation and only open the libraries whenever they have free time. None of the persons in charge of the library had formal librarianship training. Half of them had attained the AMREF training workshop.
Mburu (1990:12) emphasis the same issue in his words:

Majority of persons in-charge had not been trained to run the library. They had other duties in the health facility, and were expected to do library work over and above their normal duties. Very few places had a full time librarian. In cases where the librarian had other duties, the library service was not always given a priority. Some of the people in-charge of the library were on maternity or sick leave, and others lost interest before introducing a fellow officer to take care of the library.

Untrained library staff cannot be able to run libraries effectively and this may discourage users from library use. Muya and Mbatia (1988) show that lack of adequate staff made it difficult for the librarian to organise the stock for effective use. Untrained library staff only issue and receive books, they do not process books (Mburu, 1990). Muya and Mbatia (1988) found that all the persons in-charge of libraries felt poorly prepared for library job which they were doing and lacked skills in library services, reference work, conservation and preservation of stock. Untrained library staff will discourage users from using the library due to lack of skills on how to relate with users. In the National University of Lesotho, Braimoh et. al. (1997) found that unhelpful staff inhibit 10% of the university population from using the library. In Kenya, Owino (1995:17) in a research on the visually handicapped said that, “No library staff assisted the blind in making a choice, indeed, they felt they were treated as illiterates, ignored, and considered an embarrassment.”
In the medical library, the staff should be seen as guardians or advisors on the medical information needs (Mathews, 1979). However, this is not always the case as Burton (1990:202) observes:

Unseen and unheard, the library staff are automatically seen to be the organisation’s information guardians or advisers. They are the keepers of document collection and are not consulted about information matters outside the library.

Users fear to approach library staff for assistance due to their behaviour. Some Librarians are unapproachable as Totterdell (1976:35) notes, “The staff is not approachable. They are a bit suspicious when you ask them for anything. They wonder why users ask so many questions. They are always busy.”

Wandue (1994) re-emphasised the same issue, that the staff serving at the issue desk are hostile to users. They are not willing to perform their duties, they are rude and have negative attitude to users.

Medical libraries require energetic and committed staff without which the resources will be under-utilised (Patrikios, 1995). The staff should know how to organise resources and be able to provide what users request very fast; lack of which lead to inefficient use of the library (Muya and Mbatia, 1994).
It can be deduced therefore that those running the libraries in Kenya had no formal training in librarianship and could not organise the library effectively for use. This study attempted to find out whether the same applied to the library staff in the area of study.

Availability of adequate financial resources is paramount if a library is to offer efficient services. No library can run its activities without financial resources. All activities of a library require financial resources. Money is required to employ qualified personnel, purchase library materials and for provision of services to users. However, “Libraries in Kenya have been operating in isolation and are considered inferior departments in any institution” (Daily Nation, 1999: 23). They are the last to be considered in distribution of funds to departments in an institution. Inadequate funding in a library can lead to ineffective use of a library as illustrated by Hadassa (1984:74) in his words, “If budgeting considerations prevent the library from responding to critics, the intensity of library use is likely to decline. Financial cutbacks applied to journal stock could clearly diminish the value of a good and appreciated service.”

Medical libraries in Kenya do not have adequate finance and its difficult to run the libraries (Muya and Mbatia, 1994; Kithele, 1992; Kirsten, 1996). In a study done by Muya and Mbatia (1994:67) on rural health facilities and institutions in Kenya, they assert:
that only 10% of the libraries had budget. The rest had no money to run the libraries. Most of those which had some money had less than three thousand shillings per annum, one had below 1000 Kenya Shillings, which is too little for health library considering the health materials are very expensive. Most of the libraries depend on donations because few acquisitions can be made within the budget or with other local resources.

Theuri (1989) points out that the rising cost of medical and biomedical literature prevent the libraries from having comprehensive collections. Ochieng' (1994) strengthens this point by showing that in Kenya the effects of inflation and economic recession have forced the university of Moi to reduce its financial budget for the library as a result of which there has been reduction in volume of journal subscriptions and provision of other information facilities and services. Patrikios (1995) goes further to point out that in absence of even a minimal budget for health literature, It would lead to a steady and sometimes precipitous decline in purchase of books and journals. Khan (1990:274) noted that, lack of funds had critically impended the development of necessary collection.

The researches done earlier have shown that medical libraries have inadequate finance hence the need to study the effects of scarce resources on library use.
The age of a library user can hinder library usage. Muya and Mbatia (1988:32) says, "Majority of health workers were young. They had young families and would find it difficult to attend to lots of activities outside the family. They would not be able to constantly keep on going to district libraries."

Mike (1995:104) goes further to say:

There are age related differences in library use amongst medical staff. Younger members of the profession are more willing to use the libraries, whilst the more senior prefer to gather information from course and personal collection, they update themselves more quickly than library service can. Junior staff are generally more reliant on textbooks and tend to use the library as a work place.

Mike's observation has similarly been found in other places. Likewise Verhoeven (1995:85) also observed that, "Younger physicians used libraries and printed sources more frequently than older physicians."

It is against this background that the researcher set out to investigate the factors hindering effective use of medical libraries with a view to suggesting possible solutions to the problems.
2.3 THE CONCEPTUAL FRAMEWORK.

Financial resources, human resource training, physical resources and services provided were the composite variables identified in this study to hinder effective use of medical libraries. Figure 2.1 shows the conceptual model which encompasses the variables and their possible pattern of influence on each other and eventually on library use.

Table 2.1 Correlates of factors hindering use of libraries

The structural model indicates that effective library use is directly influenced by the kind of services like lending, borrowing, interlibrary loan, literature searches, photocopying and reservations provided.
It is also directly influenced by physical resources available which includes the kind of reading materials and physical facilities. However, library use is indirectly influenced by human resource training, their number, their job satisfaction and performance at work. Library use is also indirectly influenced by the amount of financial resources available.
CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter documents the methodology used in gathering data. It covers, design and location of the study, sampling strategies and samples selection, research instruments, development of research instruments, data collection strategies and analytical techniques used.

3.2 DESIGN AND LOCATION OF THE STUDY

The study is a case study of Kenya Medical Research Institute (KEMRI) library. KEMRI library was purposely chosen because it is within Nairobi city and near Kenyatta University where the researcher was based. This made it easier for the researcher to rush there in between classes whenever she had time, as the study was undertaken during coursework. KEMRI library is also the oldest and the largest research medical library in Kenya. It was, therefore, assumed that it would facilitate the researcher to carry out the study adequately.
3.3 SAMPLING STRATEGIES AND SAMPLE SELECTION

The target population for this study was scientific researchers, a chief librarian and staff in-charge of circulation section at KEMRI library. The two library staff who participated in the study were purposively selected. The head librarian was selected because she was well equipped with information needed about financial resources. The library staff in-charge of circulation section was chosen because he was in constant interaction with users and thus was well conversant with factors hindering use of the library. The total number of registered users at KEMRI library was ninety. Forty scientific researchers were randomly selected by picking on every second user who entered the library. Thirty five scientific researchers responded and returned the questionnaires. A total of thirty seven people participated in the study.

3.4 RESEARCH INSTRUMENTS

3.4.1 Types of research instruments

Data collection instruments used in this study were questionnaires, interviews and observation. They were used because they were found suitable for collecting the type of data that was needed for this study.
Three types of questionnaires (Annexes 1, 2 and 3) were used to collect data. The scientific researchers questionnaire was semi structured. This was a combination of open ended questions and closed ended questions. The closed ended questions were utilised in cases where the range of possible responses were given on the questionnaire. The advantage was that it was easier to code responses, hence facilitated process of tabulation and analysis. The open ended questions were used sparingly. Their choice was based on the need for detailed and freely expressed opinions from the respondents.

The questionnaire sought to gather information about the scientific researchers' use of the library services, physical resources and staff. The questionnaire had twenty items.

3.4.1.1.1 Questionnaire for the head librarian

This questionnaire sought to gather data concerning physical resources, services, accommodation, acquisition, staff training and financial position of the library. The questionnaire had thirty one items. It had both open ended and closed ended questions.
3.4.1.1.2 **Questionnaire for library staff in-charge of circulation section**

This questionnaire was only one. It had twenty three items. It sought for information concerning physical resources, services and training of library staff. It had both open and close ended questions.

3.4.1.2 **Interview schedule**

To get the depth of some questions dealing with observation and opinions of the respondents the researcher thought it would reveal a lot more if an interview was scheduled to deal with this type of questionnaire. Some of the respondents who filled the questionnaire were randomly sampled to provide the required information. This method enabled the researcher to clarify some information before writing the final report.

3.4.1.3 **Observation**

Non-participant observation was used. The researcher observed the physical resources available, service provision, accommodation and situation of the library in relation to other activities of KEMRI. The researcher recorded exactly what was observed in a note book. This instrument provided first hand information of what she would get in the responses to the questionnaires and this facilitated counter checking of the reliability of the answers.
3.4.2 DEVELOPMENT OF RESEARCH INSTRUMENTS

3.4.2.1 Development of questionnaire for scientific researchers

Three stages were followed in order to develop suitable questionnaire for use. In stage one an extensive literature review was carried out. From this literature review the factors hindering effective use of medical libraries were identified. Those identified were physical facilities, financial constraints, lack of well trained staff, lack of adequate resources and services among others. The identified factors were used to design a questionnaire.

In stage two the questionnaire items were discussed at the departmental level, where by a panel composed of the head of the department and other three lecturers of the department was held. Each member of the panel examined the questions individually without reference to other members of the panel. On the whole their comments considered the question statements valid. They indicated the necessary changes in areas of content that needed to be readjusted in their questionnaire. Their recommendations were incorporated in the final questionnaire.

In stage three the developed questionnaire in stage two was pretested in the field by the researcher using an identical sample. This enabled the content
validity of the questionnaire as well as their reliability to be established (Bless and Achola, 1987: 103-117).

The following steps were used in developing the reliability of the instrument:

1. The developed questionnaires were given to five scientific researchers at AMREF.
2. The answered questions were scored manually.
3. The same questionnaire was given to the same Researchers after a period of two weeks.
4. The questions were again scored manually.
5. A comparison of answers made in step two and four was done.

From the two responses a Pearson’s Product Moment formula for test-retest was employed to compute the correlation coefficient in order to establish the extent to which the contents of the questionnaire were consistent in eliciting the same responses every time the instrument was administered. The instrument yielded a correlation coefficient of 0.78. This was considered high enough to judge the instrument reliable for use in this study.

3.4.2.2 Development of questionnaire for the head librarian

Three stages were used in order to develop a suitable questionnaire for the head librarian. In stage one extensive literature review was done. From the
literature review factors hindering effective use of medical libraries were identified. Which were financial constraints, inadequate physical facilities, inadequate staff, inadequate resources and services among others. The identified factors were used to design a questionnaire for the head librarian.

In stage two the questionnaire formulated in stage one was given to a panel at departmental level. The panel was composed of the head of library department and other three lecturers in the department. Each member of the panel examined the questions in the questionnaire individually, without reference to other members of the panel. Their comments were individually handed over to the researcher. On the whole their comments considered the questionnaire statements valid. They indicated the necessary changes in areas of content and spelling mistakes that needed to be readjusted in the questionnaire. Their recommendations were incorporated in the final questionnaire.

In stage three, the developed questionnaire in stage two was pretested in the field by the researcher using an identical sample (head librarian AMREF library). This enabled the content validity of the questionnaire as well as its reliability to be established.

The following steps were used in developing the reliability of the instrument.

1. The developed questionnaire was given to the head librarian, at AMREF library.

2. The answered questions were scored.
3. The same questionnaire was given to the same head librarian after a period of two weeks.

4. The questions were again scored manually.

5. A comparison of answers made in step two and four was done.

From the two responses a Pearson's Product Moment formula for test-retest was employed to compute the correlation coefficient in order to establish the extent to which the contents of the questionnaire were consistent in eliciting the same responses every time the instrument was administered.

The instrument yielded a correlation coefficient of 0.69. This was considered high enough to judge the instrument reliable for use in this study.

3.4.2.3 Development of questionnaire for the library staff in-charge of circulation section.

Three stages were used in order to develop a suitable questionnaire for the Library Staff in-charge of Circulation. In stage one extensive literature review was done. From the literature review factors hindering effective use of medical libraries were identified. Which were financial constraints, inadequate physical facilities, inadequate staff, inadequate resources and services among others. The identified factors were used to design a questionnaire for the Library Staff in-charge of Circulation.
In stage two the questionnaire formulated in stage one was given to a panel at departmental level. The panel was composed of the head of library department and other three lecturers in the department. Each member of the panel examined the questions in the questionnaire individually, without reference to other members of the panel. Their comments were individually handed over to the researcher. On the whole their comments considered the questionnaire statements valid. They indicated the necessary changes in areas of content and spelling mistakes that needed to be readjusted in the questionnaire. Their recommendations were incorporated in the final questionnaire.

In stage three, the developed questionnaire in stage two was pretested in the field by the researcher using an identical sample (head of Circulation AMREF library). This enabled the content validity of the questionnaire as well as its reliability to be established. The following steps were used in developing the reliability of the instrument.

1. The developed questionnaire was given to the head of Circulation, at AMREF library.
2. The answered questions were scored.
3. The same questionnaire was given to the same head of circulation after a period of two weeks.
4. The questions were again scored manually.
5. A comparison of answers made in step two and four was done.
From the two responses a Pearson’s Product Moment formula for test-retest was employed to compute the correlation coefficient in order to establish the extent to which the contents of the questionnaire were consistent in eliciting the same responses every time the instrument was administered.

The instrument yielded a correlation coefficient of 0.87. This was considered high enough to judge the instrument reliable for use in this study.

3.5 DATA COLLECTION STRATEGIES

The study used four main methods to gather data. These were questionnaire, interview guides, observation and secondary sources.

To gather data for this study from KEMRI library, the researcher obtained a letter of introduction Ref.No.LS/PG/VOL.1/127 from the head of library studies department at Kenyatta University (Annex 4). The researcher took the letter to the director at KEMRI, who granted permission to carry out the research and telephoned the head librarian to inform her.

The researcher then went to see the head librarian and explained the purpose and the significance of the study, and the research instruments to be used. Arrangements were made on when to bring the questionnaires and conduct the interviews. The researcher personally delivered the questionnaires and handed them to respondents after a period of two weeks.
3.5.1 Administration of the questionnaire to scientific researchers

Each questionnaire was numbered. These numbers were used instead of names of the respondents. This was done to enhance confidence in the respondents. The researcher stood at the entrance to the library and handed over a questionnaire to every second scientific researcher that came into the library. The researcher explained to the scientific researcher what research she was doing, that is the purpose of the study and its significance. The researcher assured the respondent that all the information would strictly be used for research purposes only and would be kept confidential.

The scientific researchers were asked to fill the questionnaire and return it to the issue desk as they left the library. Forty scientific researchers were issued with questionnaires and thirty five questionnaires were returned.

3.5.2 Administration of questionnaire to the Head Librarian

The questionnaire for the Head Librarian was personally delivered to her by the researcher. The researcher explained to the Head Librarian details of the study including the purpose and significance. The researcher assured the Head Librarian that all the information she was to provide was to be used for the purpose of the research. She was then requested to fill the questionnaire that was later collected by the researcher after one week.
3.5.3 Administration of the questionnaire to library staff in charge of circulation section

The questionnaire for the head of circulation section was delivered by the researcher at the circulation desk. The researcher explained to the head of circulation details of the research including purpose and significance. The head of circulation was assured by the researcher that the data was to be used for the purpose of the research and would be kept confidential. The researcher then requested him to fill the questionnaire which was collected the same day.

3.5.4 Interview

The researcher randomly interviewed some of the respondents who filled the scientific researchers' questionnaire. The researcher listened to their responses and noted them down in a note book. The aim was to clarify the information given in the questionnaire and get information concerning items that were omitted in the questionnaire. The researcher made appointments with the head librarian and the librarian in-charge of circulation sections for interviews to clarify doubts in the questionnaire. Their responses were noted down in a notebook.
3.5.5 Observation

Non-participation observation method was used to gather data for the study. The researcher walked round the compound of KEMRI to find out how well the KEMRI library was positioned. That was to find out whether or not it was centrally positioned for all the users. The researcher walked round inside the library to observe things like the type of reading materials available, their recency, their number and their use, services provided were also noted down. The physical facilities were observed as regards their type, number, their use and their state. The researcher observed the way the staff interacted with the scientific researchers, the objective was to find out whether or not the staff were approachable and helpful to the users. All observations made were recorded down in a note book.

3.5.6 Collection of data from secondary sources

Secondary data was mainly from documentary sources. The major sources of secondary data were other medical libraries which were well equipped with journals and unpublished reports. The researcher also examined records at KEMRI library on interlibrary lending, accessions list, the kardex among others.
3.6 ANALYTICAL TECHNIQUES

The data for this study was derived from responses from questionnaire, observation and interview. The researcher used qualitative method to analyse the data.
CHAPTER FOUR

RESEARCH FINDINGS

4.1 INTRODUCTION

The central concern of this chapter is to present the findings of this study. The chapter looks at the state of physical resources, services, staff, and financial resources in KEMRI library. The chapter presents the findings in the order in which the objectives of the study were formulated, thus

(a) To find out whether the quality of physical resource at KEMRI library influence library use.

(b) To find out how the quality of services at KEMRI library influence library use.

(c) To find out whether or not human resource training has effect on library use.

(d) To investigate the influence of financial resource on library use.
4.2 PHYSICAL RESOURCES

The first specific objective of this study was to find out whether the quality of physical resources at KEMRI library influenced library use. Table 4.1 contains information regarding the frequency of use of library physical resources by Scientific researchers at KEMRI library. The data carried in the table indicate that bibliographies, almanack, and accession lists were never used by any scientific researcher. Reading materials never used by majority of respondents were atlases (97.1%) abstracts (94.3%), directories (91.4%) and institutional reports (85.7%). The table also shows 57.1% of scientific researchers rarely used thesis/dissertations. More than half of Scientific researchers representing about 65.7% rarely used computers. A lower proportion of scientific researchers occasionally used journals (37.1%), textbooks (34.3%), and newspapers (31.4%). Nearly half of scientific researchers constituting 48.7% frequently used journals. A low percentage of scientific researchers representing 29.9 frequently used text books.
Table 4.1 Frequency of Use of Physical Resources by Scientific Researchers in KEMRI Library

<table>
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<th>Physical resource</th>
<th>Never N</th>
<th>Never %</th>
<th>Rarely N</th>
<th>Rarely %</th>
<th>Sometimes N</th>
<th>Sometimes %</th>
<th>Frequently N</th>
<th>Frequently %</th>
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<td>Journals</td>
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<td>5</td>
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<td>13</td>
<td>37.1</td>
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<td>34.3</td>
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<td>22.9</td>
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<tr>
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<td>57.1</td>
<td>6</td>
<td>17.1</td>
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<tr>
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<td>11</td>
<td>31.4</td>
<td>4</td>
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<td>2.9</td>
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<td>45.7</td>
<td>8</td>
<td>22.9</td>
</tr>
<tr>
<td>Tables</td>
<td>2</td>
<td>5.7</td>
<td>12</td>
<td>34.3</td>
<td>10</td>
<td>28.6</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Chairs</td>
<td>2</td>
<td>5.7</td>
<td>13</td>
<td>37.1</td>
<td>9</td>
<td>25.7</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Notice board</td>
<td>4</td>
<td>11.4</td>
<td>18</td>
<td>51.4</td>
<td>9</td>
<td>25.7</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Computer</td>
<td>7</td>
<td>20</td>
<td>23</td>
<td>65.7</td>
<td>2</td>
<td>5.7</td>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>Telephone</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Almanack</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Abstracts</td>
<td>33</td>
<td>94.3</td>
<td>2</td>
<td>5.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
The study investigated the amount of time scientific researchers spend using various physical resources in the library. Table 4.2 carries information regarding time spent by scientific researchers using various physical resources. The data contained in the table shows that 60% of scientific researchers spend less than 15 minutes reading reference materials. Over half of scientific researchers (57.1%) spend less than 15 minutes carrying out computer searches. Less than a third of scientific researchers constituting 31.4 per cent, spend between 16 minutes and 30 minutes reading textbooks. About 34.3% of scientific researchers spend between 16 and 30 minutes reading reference materials. About 42.9 per cent of Scientific researchers spend between 31 and 45 minutes reading newspapers. About 17.1 % of scientific researchers spend between 46 minutes and one hour reading journals.
Table 4.2  Time Spend by Scientific Researchers Using Various Physical Resources

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount of time in minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 - 15</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Reading Journals</td>
<td>7</td>
</tr>
<tr>
<td>Reading Textbooks</td>
<td>13</td>
</tr>
<tr>
<td>Reading Newspapers</td>
<td>8</td>
</tr>
<tr>
<td>Locating reading materials</td>
<td>15</td>
</tr>
<tr>
<td>Reading reference material</td>
<td>21</td>
</tr>
<tr>
<td>computer Search</td>
<td>20</td>
</tr>
</tbody>
</table>

About 94.3 % of scientific researchers seek library information for research purposes. Nearly 77.1 % of scientific researchers seek library information to keep up to date.

The study further investigated the adequacy of physical resources in terms of quantity. Table 4.3 carries information regarding views of scientific researchers and library staff regarding the adequacy of physical resources.
Table 4.3. Rating of Adequacy of Physical Resources by Scientific Researchers and Library Staff

<table>
<thead>
<tr>
<th>physical resource</th>
<th>scientific researchers (n=35)</th>
<th>library staff (n=2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Adequate</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Journals</td>
<td>9</td>
<td>25.7</td>
</tr>
<tr>
<td>Text Books</td>
<td>15</td>
<td>42.9</td>
</tr>
<tr>
<td>Thesis &amp; Dissertations</td>
<td>34</td>
<td>97.1</td>
</tr>
<tr>
<td>Newspapers</td>
<td>8</td>
<td>22.9</td>
</tr>
<tr>
<td>Reprints</td>
<td>12</td>
<td>34.3</td>
</tr>
<tr>
<td>Bibliographies</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Accession lists</td>
<td>34</td>
<td>97.1</td>
</tr>
<tr>
<td>Atlas</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Dictionaries</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Directories</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Institutional Reports</td>
<td>31</td>
<td>88.6</td>
</tr>
<tr>
<td>Shelves</td>
<td>16</td>
<td>45.7</td>
</tr>
<tr>
<td>Tables</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chairs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Notice Boards</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Computers</td>
<td>28</td>
<td>80</td>
</tr>
<tr>
<td>Almanack</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Abstracts</td>
<td>30</td>
<td>85.7</td>
</tr>
</tbody>
</table>
The data contained in the table shows that bibliographies, atlases, dictionaries, directories and almanack were considered inadequate by all scientific researchers. All library staff rated bibliographies thesis/dissertation, accession lists, shelves, computers, abstracts, atlases, dictionaries, directories and almanack as inadequate. About 97.1% of Scientific researchers found thesis/dissertations not adequate. While all library staff found the text books adequate, reprints were considered average by about 31.4% of scientific researchers and half of library staff. About 28.6% of the scientific researchers considered shelves and text books to be average.

Approximately 28.6% of scientific researchers and half of library staff found reprints adequate. About 82.9% of scientific researchers and all library staff rated the notice boards very adequate.

Nearly 62.9% of scientific researchers and 50% of library staff considered chairs and tables very adequate. While one third, constituting 37.1% of scientific researchers rated newspapers as being very adequate, a half of library staff considered the newspapers to be very adequate.

This study found out that there were twelve thesis, three atlases, one almanack, one directory and one bibliography.
The study investigated the level of satisfaction got from various physical resources by scientific researchers. The figures in table 4.4 shows that all respondents were not satisfied by almanacks, atlases and telephone. Majority of scientific researchers were not satisfied by accession list (97.1%), bibliographies (94.3%), thesis/dissertations (91.4%), journals (85.7%) and dictionaries (82.9%). About 45.7% of Scientific researchers were fairly satisfied by institutional reports. A low percentage (22.9) of scientific researchers were satisfied by newspapers. About 31.4% of scientific researchers were very satisfied by the tables. Nearly 22.9% of scientific researchers were very satisfied by the circulation desk. The table also shows that less than half of scientific researchers 40% were satisfied by catalogue.

Table 4.4 also shows that majority of scientific researchers were not satisfied with most of the physical resources.
Table 4.4 Level of Satisfaction of Physical Resources by Scientific Researchers.

<table>
<thead>
<tr>
<th>Physical resource</th>
<th>Not satisfied</th>
<th>Fairly satisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Journals</td>
<td>30</td>
<td>85.7</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>Text books</td>
<td>28</td>
<td>80</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Thesis/Dissertations</td>
<td>32</td>
<td>91.4</td>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>Newspapers</td>
<td>15</td>
<td>42.9</td>
<td>12</td>
<td>34.3</td>
</tr>
<tr>
<td>Reprints</td>
<td>16</td>
<td>45.7</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Bibliographies</td>
<td>33</td>
<td>94.3</td>
<td>2</td>
<td>5.7</td>
</tr>
<tr>
<td>Accessions Lists</td>
<td>34</td>
<td>97.1</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>Atlases</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dictionaries</td>
<td>29</td>
<td>82.9</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td>Directories</td>
<td>34</td>
<td>97.1</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>Institutional Reports</td>
<td>17</td>
<td>48.6</td>
<td>16</td>
<td>45.7</td>
</tr>
<tr>
<td>Kardex</td>
<td>26</td>
<td>74.3</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Catalogue</td>
<td>11</td>
<td>31.4</td>
<td>9</td>
<td>25.7</td>
</tr>
<tr>
<td>Circulation desk</td>
<td>6</td>
<td>17.1</td>
<td>15</td>
<td>42.9</td>
</tr>
<tr>
<td>Shelves</td>
<td>26</td>
<td>74.3</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>Tables</td>
<td>8</td>
<td>22.9</td>
<td>10</td>
<td>28.6</td>
</tr>
<tr>
<td>Chairs</td>
<td>19</td>
<td>54.3</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td>Notice Boards</td>
<td>17</td>
<td>48.6</td>
<td>10</td>
<td>28.6</td>
</tr>
<tr>
<td>Computer</td>
<td>26</td>
<td>74.3</td>
<td>9</td>
<td>25.7</td>
</tr>
<tr>
<td>Telephone</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Almanack</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Abstracts</td>
<td>33</td>
<td>94.3</td>
<td>2</td>
<td>5.7</td>
</tr>
</tbody>
</table>

The respondents gave reasons for lack of satisfaction with majority of physical resources. Reading materials were considered outdated by 80% of scientific researchers, and all the library staff. Journals, text books, thesis, reprints, bibliographies, atlases were also regarded as outdated. The kardex and the card catalogue were rather current as reported by 74.3% of scientific researchers. Processing of library materials took too long. More than half of library reading materials were not accessioned.
and catalogued yet were on the shelves. While 77.1% of scientific researchers indicated that a majority of the text books and journals were not relevant to their needs, all the library staff considered the text books, dictionaries, directories and journals very good and relevant to the needs of scientific researchers. A majority of reading materials were rated as inadequate as shown in the preceding section of this chapter. There were single copies of textbooks. Once borrowed it took long before they were returned. Hence the study established less than half of scientific researchers 42.9% did not have any book on loan. A low percentage 22.9 had one book on loan and 14.2% had two books on loan.

Less than half of scientific researchers constituting about 42.9% indicated that the reprints were difficult to trace as they were not systematically organised. Over half of scientific researchers (57.1%) gave the opinion that international newspapers were not provided.

About 54.3% of scientific researchers found the shelves disorganized as no shelving was done and it was difficult to locate reading materials from shelves. Nearly 42.9% of the scientific researchers said that the notice board was rarely updated.

About 74.3% of scientific researchers gave the opinion that the computers were few and were kept in closed access. Nearly 97.1% of
scientific researchers indicated they were not allowed to use the telephone facility.

The study established that KEMRI had a purpose built library. Less than half of scientific researchers 48.6% found the location of the library not convenient as it was far from their laboratories, while few scientific researchers (20%) found the location convenient. This concurred with the 50% of the librarian staff's opinion that the library was conveniently located.

About 74.3% of scientific researchers and 50% of library staff found KEMRI library small. The seating capacity accommodate 20% of scientific researchers at any time. The library had twelve chairs and twelve tables. There were no reading carrels which made concentration reduced in the open reading space.

Table 4.5 illustrated how suitable the library environment was for reading by scientific researchers and library staff. The data contained in the table reveals that 34.4% of scientific researchers found the library environment not suitable for reading. An almost identical proportion of scientific researchers constituting 28.6% found the reading environment average and suitable (25.6%). A very low percentage constituting 11.4 rated the reading environment as very suitable. This differed with
opinion of all library staff who found the library environment very suitable for reading.

Table 4:5 Suitability of Library Environment for Reading

<table>
<thead>
<tr>
<th>Library Condition</th>
<th>Scientific Researchers</th>
<th>Library Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Not Suitable</td>
<td>12</td>
<td>34.4</td>
</tr>
<tr>
<td>Average</td>
<td>10</td>
<td>28.6</td>
</tr>
<tr>
<td>Suitable</td>
<td>9</td>
<td>25.6</td>
</tr>
<tr>
<td>very suitable</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100</td>
</tr>
</tbody>
</table>

When the scientific researchers were asked to state why they found the library environment not suitable for reading a number of responses emerged. The cited factors were that: the library was dark, it had few windows, it was poorly ventilated hence difficult to get fresh air. This opinion differed with that of 50% of library staff that the library was well ventilated. Other reasons cited were, it was noisy and this reduced their concentration, congested and poorly organised. Books were scattered, all over, on the tables, floor and stairs hence making movement in the library difficult.
4.3 LIBRARY SERVICE

4.3.1 Frequency of use of the library services

The second objective of this study was to find out how the quality of services at KEMRI library influence library use. Table 4.6 carries information regarding the frequency of use of library services by scientific researchers at KEMRI library. The figures contained in the table reveal that, all scientific researchers never used material reservation and abstracting services. A high percentage of scientific researchers never used interlibrary loan (85.7%) and user education (88.6%). Slightly more than half of scientific researchers constituting about 57.1% rarely used reference services. About 42.9% of scientific researchers rarely used lending/borrowing service. A low percentage 31.4% of scientific researchers sometimes used current awareness services. A low percentage 14.3 frequently performed literature searches.
Table 4.6. Frequency of use of Library Services by Scientific Researchers in KEMRI Library.

<table>
<thead>
<tr>
<th>Service</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Lending/borrowing</td>
<td>10</td>
<td>28.6</td>
<td>15</td>
<td>42.9</td>
</tr>
<tr>
<td>Interlibrary loan</td>
<td>30</td>
<td>85.7</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>Reference</td>
<td>9</td>
<td>25.7</td>
<td>20</td>
<td>57.1</td>
</tr>
<tr>
<td>User Education</td>
<td>31</td>
<td>88.6</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Material reservation</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Current awareness</td>
<td>7</td>
<td>20</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>Abstracting</td>
<td>35</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Literature search</td>
<td>7</td>
<td>20</td>
<td>13</td>
<td>37.1</td>
</tr>
</tbody>
</table>

The scientific researchers were further asked to give an evaluation of services provided in the library. Table 4.7 displays responses regarding evaluation of services by scientific researchers. The data contained in the table reveals that 85.7% of scientific researchers were not satisfied by abstracting service. About 82.6% of scientific researchers were not satisfied by literature searches. Less that half of scientific researchers 40% were fairly satisfied by individualised guidance service. Nearly 48.6% of scientific researchers were satisfied by user education. A low percentage of scientific researchers constituting about 22.9% were satisfied by individualised guidance. About 51.4% of scientific researchers were very satisfied by lending/borrowing services. Less than half of scientific researchers (22.9%) were very satisfied by current awareness service.
Table 4.7. Evaluation of Services by Scientific Researchers.

<table>
<thead>
<tr>
<th>Service</th>
<th>Not satisfied</th>
<th>Fairly satisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Lending/ borrowing</td>
<td>9</td>
<td>25.7</td>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>Interlibrary loan</td>
<td>28</td>
<td>80</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Reference</td>
<td>17</td>
<td>48.6</td>
<td>9</td>
<td>25.7</td>
</tr>
<tr>
<td>Literature search</td>
<td>29</td>
<td>82.6</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>User education</td>
<td>3</td>
<td>8.6</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Current awareness</td>
<td>13</td>
<td>37.1</td>
<td>8</td>
<td>22.9</td>
</tr>
<tr>
<td>Material reservation</td>
<td>12</td>
<td>34.3</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Individualised guidance</td>
<td>9</td>
<td>25.7</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>Abstracting</td>
<td>30</td>
<td>85.7</td>
<td>5</td>
<td>14.3</td>
</tr>
</tbody>
</table>

4.3.2 Reasons for lack of Satisfaction with Library Services

The study established that 51.4% of scientific researchers found most of the library services substandard, and not relevant to their information needs. This differed with opinion of all the library staff who considered the library services to be good and relevant to the needs of scientific researchers.
About 57.1% of scientific researchers found the lending/borrowing system cumbersome, as one was required to sign the borrowers card. Borrowed books took long to be returned in the library hence limiting their users.

About 48.6% of scientific researchers expressed the opinion that literature searches were hampered by inadequate computers and CD-ROM databases which were rarely updated. Hence, these gadgets did not give accurate information. Popline and Toxline had stopped functioning. The library staff lacked computer skills to perform searches for scientific researchers. There was no photocopier and printer hence scientific researchers could not photocopy or print any search. 11.4% of scientific researchers said that the content pages of journals were rarely passed to them and News bulletins were not provided.

About 48.6 percent of scientific researchers indicated that reference materials were very few. Nearly 40% of scientific researchers said the reference librarian who was the staff incharge of circulation section did not answer their reference questions adequately. He seemed not to be well conversant with sources of information available in the library.
About 60% of scientific researchers expressed opinion that the abstracts provided were only on research done at KEMRI alone and experimental design and methodologies rarely featured in the abstracts.

A large proportion of the scientific researchers constituting 71.4%, pointed out that they had not been educated on how to use the library hence lacked skills on how to use the library. About 40% of the researchers who were educated on use of the library rated the instruction as good. While 30% found the instruction average, around 10% considered the instruction given to be poor. The instruction on use of library was regarded poor because scientific researchers were not educated on how to use computers and kardex. They were not introduced to different kinds of sources of information and services available in the library. The instruction given was usually short.

Other reasons given for dissatisfaction with library services which led to low use of the services were. About 40% of scientific researchers indicated the library took too long to provide requested materials from other libraries. Not all requested materials from other libraries were provided. About 62.9% of scientific researchers indicated that the library staff often requested them to go to other libraries like ILRI, ICIPE and
University of Nairobi to read materials they needed. They found traveling cost to other libraries too high. The library staff gave reasons for the poor state of interlibrary lending which were: The library had no vehicle to deliver or pick any items requested from other libraries. The library staff had to meet the travelling cost to other libraries, hence would not accept to be involved in interlibrary lending practice. Interlending practice was undertaken on gentleman agreement. There were no formal binding agreements that guided the conduct of the activity. Libraries lend out materials which they wanted, and were free not to lend out materials. The postal charges involved were too high for KEMRI library to afford.

4.4 HUMAN RESOURCE

The third objective was to find out whether or not human resource training has effect on library use. KEMRI library had four library staff, who were considered inadequate by all of the library staff. None of the library staff was professional in medical librarianship. The head librarian held a masters degree in librarianship from a country she did not disclose. Her training covered one year. About 75% of library staff were paraprofessionals in librarianship. They had diploma in librarianship from Kenya polytechnic. Their training covered three years. All the library staff felt well trained for the work they did. The library had
one copy typist who was a form four leaver. She had a certificate in secretarial duties.

None of the library staff attended inservice courses. None of the library staff was allowed to go to other libraries to see what goes on there. This was caused by lack of finance and adequate staff to perform their duties in their absence. About 50% of the library staff indicated they did not like their jobs because the salary was low, they were never promoted and the scientific researchers did not respect them. About 50% of library staff said if they could get a job in another library they would leave KEMRI.

Scientific researchers were asked whether they approached library staff for help. Table 4.8 carries information on frequency of scientific researchers approach to library staff for help. The data contained in the table shows that about 40% of scientific researchers rarely approached library staff for help. About 31.4% of scientific researchers sometimes approached library staff for help. Nearly 17.1% of scientific researchers frequently requested for help from library staff. A low percentage constituting about 11.4 never approached library staff for help.
Table 4.8: Frequency of Scientific Researchers approach to Library Staff for help in KEMRI Library.

<table>
<thead>
<tr>
<th>Frequency of Consultation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Rarely</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>Sometimes</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Frequently</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100</td>
</tr>
</tbody>
</table>

The scientific researchers were further asked to rate the help they received from library staff. Table 4.9 displays data regarding the rating of help scientific researchers got from library staff. The figures contained in the table reveals that nearly 34.3% of scientific researchers considered the library staff helpful. About 28.6% of scientific researchers rated the library staff as very helpful. While 25.7% of scientific researchers rated library staff help as just average. About 11.4% of the scientific researchers found library staff not helpful.

Table 4.9  Rating of help Scientific Researchers got from Library Staff in KEMRI Library.

<table>
<thead>
<tr>
<th>Help</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not helpful</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>Average</td>
<td>9</td>
<td>25.7</td>
</tr>
<tr>
<td>Helpful</td>
<td>12</td>
<td>34.3</td>
</tr>
<tr>
<td>Very helpful</td>
<td>0</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100</td>
</tr>
</tbody>
</table>
About 50% of library staff indicated most common given help to scientific researchers was in locating materials through a variety of services offered. Less commonly help given to scientific researchers was in introducing them to other relevant libraries which they could use.

This study established that less than half of scientific researchers constituting about 45.7% considered the knowledge of library staff about information sources to be poor. Hence the explanation of why 11.4% of scientific researchers did not approach them for help, and 40% of scientific researchers rarely approached library staff for help. Nearly 11.4% of scientific researchers found the library staff knowledge of information sources good where as all library staff indicated they had good knowledge of information sources in the library. While 28.6% of scientific researchers considered the knowledge level of library staff regarding information sources as average, only 14.3% rated them as very good.

The scientific researchers were further asked to rate the library staff job performance. Table 4.10 carries data on scientific researchers rating of library staff job performance. The table shows that 40% of scientific researchers found library staff work performance poor. Nearly 31.4% of scientific researchers rated library staff work performance as average,
while a low percentage 17.2 of scientific researchers rated library staff performance as good.

Table 4.10 Rating of Library Staff Job Performance by Scientific Researchers in KEMRI Library.

<table>
<thead>
<tr>
<th>Performance</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>Average</td>
<td>11</td>
<td>31.4</td>
</tr>
<tr>
<td>Good</td>
<td>6</td>
<td>17.2</td>
</tr>
<tr>
<td>Very good</td>
<td>4</td>
<td>11.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35</td>
<td>100</td>
</tr>
</tbody>
</table>

The finding that less than half of scientific researchers 40% found work performance of library staff poor, differs with the opinion of the 50% of library staff, that work performance of all library staff was good.

The scientific researchers gave the following as indicators of poor job performance by library staff. Nearly 80% of scientific researchers found the library staff lacking computer skills to perform searches. The scientific researchers were thus not educated on how to use the computers. This resulted to low use of computers for searches as earlier indicated in table 4.6. The scientific researchers also spend a lot of time performing the searches due to lack of computer skills. The library staff
did not update the databases in computers. This made scientific researchers fail to use computers, and hence did not access current information. About 28.8% of the scientific researchers indicated library staff had failed to update the Kardex and the catalogue.

The library staff were not able to perform minor repairs in computers. It took too long before a technician was called to repair minor breakage and the scientific researchers could not use the computers during such breakdown. This concurs with the opinion of the head librarian that it took long before computers were repaired by technicians. About 22.9% of scientific researchers indicated that the library staff could never answer their questions. While about half, constituting 45.7% of scientific researchers indicated the library staff could sometimes answer their questions, only 31.4% reported that the library staff could always answer their questions.

The failure to answer scientific researchers questions by library staff was attributed to lack of knowledge of information sources. Nearly 42.9% of scientific researchers found the library staff unable to locate reading materials easily hence caused a lot of delay, at times the material needed was not provided.
About 80% of scientific researchers found the library disorganised. No shelving was done by library staff hence they were unable to locate reading materials in the library easily. This concurs with the opinion of the librarian in charge of circulation section that common problem of scientific researchers was inability to perform a systematic search for information hence could not locate materials, as the library was disorganised.

4.5 INFLUENCE OF FINANCIAL RESOURCE ON LIBRARY USE

The fourth objective was to investigate the influence of financial resource on library use. KEMRI library had an irregular budget of 100,000 shillings. The money was not under control of the head librarian. KEMRI administrator controlled the use of the money. In acquisition of reading materials, scientific researchers were normally asked to list down the textbooks and journals that they required. The list would normally be forwarded to the administrator by the head librarian. The administrator give comments on what to be purchased and forward the list to the head librarian to make the purchases.

Nearly 100% of library staff indicated the budget was not adequate. It could not meet all financial needs of the library. It was only enough for purchase of newspapers which were bought on daily basis. Textbooks,
journals and CD ROM databases were rarely bought. This resulted in 90% of reading materials being outdated. Which resulted into low use of the library. Table 4.11 carries information on frequency of scientific researchers use of the library. The table shows that over half of scientific researchers constituting about 57.1% visited the library once or twice per week. Nearly 17.1% of scientific researchers visited the library two or three times a week. About 14.3% of scientific researchers did not use the library at all.

Table 4.11  The Frequency of Scientific Researchers use of KEMRI Library

<table>
<thead>
<tr>
<th>Frequency of using the library per week</th>
<th>(n=35)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>1-2</td>
<td>20</td>
<td>57.1</td>
</tr>
<tr>
<td>2-3</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td>3-4</td>
<td>4</td>
<td>11.4</td>
</tr>
</tbody>
</table>

The scientific researchers were further asked to state how much time they spent in the library per visit. Table 4.12 carries information on duration of scientific research use of KEMRI library. The table shows 42.9% of scientific researchers spend less than half an hour in the library. About 34.2% of scientific researchers spend between 1/2 hour and one hour in the library. A low percentage constituting about 14.3 spend between one hour and one and half hours in the library.
Table 4.12  The Duration of Scientific Researchers use of KEMRI Library.

<table>
<thead>
<tr>
<th>Length of time staying in the library</th>
<th>(n=35)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1/2 hour</td>
<td>15</td>
<td>42.9</td>
</tr>
<tr>
<td>1/2 hour - 1 hour</td>
<td>12</td>
<td>34.2</td>
</tr>
<tr>
<td>1 - One and Half hours</td>
<td>5</td>
<td>14.3</td>
</tr>
<tr>
<td>One and Half hours - 2 hours</td>
<td>3</td>
<td>8.6</td>
</tr>
</tbody>
</table>

The study established that audio visual materials and reference materials were never purchased due to their high cost. Thus the reason why reference materials were rarely used by over half (57.1%) of scientific researchers. Inadequate finance forced KEMRI library to rely heavily on donations of reading materials from other countries. This had led to accumulation of unprocessed outdated materials in the library which were heaped everywhere. They made the library unattractive for readers. They made location of reading materials by scientific researchers difficult as they were already kept on shelves. Hence the reason why 80% of scientific researchers found the library disorganised.

Inadequate financial resource had made it difficult for expansion of the library. The library was congested as indicated by 62.9% of scientific researchers and 50% of library staff. There were no reading carrels to provide quiet atmosphere for reading. Scientific researchers used open reading space, which was not suitable for reading as found by 34.4% of
scientific researchers. The library staff were not adequately accommodated. Cataloguing was done in the open reading space. This made uncatalogued materials mix with reading materials for scientific researchers. The scientific researchers spend a lot of time sorting out their reading items. The cataloguer disturbed scientific researchers as they read when she communicated with other library staff. Nearly 34.3% of scientific researchers indicated the library staff as source of disturbance in the library by their noise.

Inadequate finance had resulted in provision of inadequate irrelevant textbooks as found by 85.7% of scientific researchers. This was why 42.9% of scientific researchers had no book on loan. Few scientific researchers 22.9% had only one book on loan. Those who had books on loan would keep them as long as they wanted for fear of failing to get another dealing with the same topic.

Provision of stationary to library staff was considered poor by all the library staff. This reduced the rate at which they performed their duties. The absence of cataloguing cards, rubbers and pencils, reduced the rate at which current reading materials got to the shelves for use. As a result more than half of library materials were not catalogued. They were already outdated. They were of no use to scientific researchers.
Due to limitation of financial resource KEMRI library did not provide binding service to scientific researchers. Complete volume of journals were not bound and this made identification of a certain volume difficult. Scientific researchers could not bind their work in the library. They had to go to commercial dealers in Nairobi city for binding, which they found expensive.

KEMRI library had no photocopier due to lack of finance. Scientific researchers could not photocopy documents for use outside the library. Scientific researchers were forced to borrow documents to photocopy outside the library.

Financial limitations had led to employment of inadequate library staff as found by 57.1% of scientific researchers and all library staff. Lack of enough staff had led to the failure of the library to provide indexing, and translation services. Documents that were written in foreign languages were not used, as indicated by 28.6% of scientific researchers and 100% of library staff. Only documents written by KEMRI staff were abstracted. Scientific researchers wasted a lot of time reading document that had no abstracts, hence the reason why 85.7% of scientific researchers were not satisfied with abstracting services.
Telephone service in KEMRI library was not provided to scientific researchers because there was no money to cater for the cost. Scientific researchers were forced to go outside the library and outside KEMRI to make calls. Thus a lot of time was wasted which could have been used by scientific researchers reading in the library. Only the library staff were free to receive and make calls in the library.

Inadequate financial resources had led to the failure of the library to provide enough computers. Only two computers were available which were kept in closed access. These were used by both scientific researchers and library staff. The computers were not connected to healthnet and internet as the library could not meet the cost. Scientific researchers did not benefit from current health information available in healthnet and internet as they could not access them.

The computers had no e-mail or internet facilities. Scientific researchers could not receive or send mails. All the library staff indicated they could not send mails to scientific researchers in their laboratories to inform them about availability of current materials. Scientific researchers got to know about newly acquired materials when information contained in them was already outdated thus they failed to use the reading materials.
Inadequate financial resource prevented KEMRI library from providing news bulletins to scientific researchers to inform them, about newly acquired materials and services. Only notice boards and display shelves were used to pass new information to scientific researchers. This prevented the scientific researchers from reading current materials, as they only got to know about new materials when information in them was already outdated.

Financial limitation inhibited library staff from attending inservice courses. This had made it difficult for the library staff to acquire skills which they had not acquired in their training. The library staff could not effectively conduct literature searches as they had no skills in computers as indicated by 50% of library staff and 80% of scientific researchers.

Financial limitation made it impossible for the scientific researchers to use the library on weekend. The library remained closed on weekends, and holidays. It was opened at 8.00 am and was closed at 5.00 p.m. from Monday to Friday because there was no library staff to man it after 5.00 p.m. and on weekends.

Nearly 31.4% of scientific researchers found the opening and closing hours of the library convenient, while 11.4% found it inconvenient. Those who found opening and closing hours of library not convenient
expressed their wish to have the library opened after 5.00 p.m. as they would like to read inside after leaving the laboratories. They would also want to use the library on Saturdays when they were free.
CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 DISCUSSION

This chapter gives discussion, conclusion and recommendations of the findings of the study.

This study found out that bibliographies, almanack and accession lists were never used by scientific researchers. Atlases, Abstracts, directories and institutional reports, were rarely used. Majority of scientific researchers spent less than 15 minutes reading reference materials. Few scientific researchers spent between 46 and 60 minutes reading journals.

Majority of the reading materials were not adequate. This finding concurs with that of Muya and Mbatia (1994) who found out that reading materials where inadequate in all libraries studied. The finding also concurs with that of Mburu (1990) who found that 90% of health workers did not use the
libraries because the reading materials were not available. Notice boards, chairs and tables were found to be very adequate.

The study found out that majority of scientific researchers were not satisfied with most of the physical resources. This explained why majority of physical resources were never used.

About 90% of reading materials were found outdated by majority of scientific researchers. This finding is consistent with studies done by Muya and Mbatia (1988) and Mburu (1990). Both who indicated that majority of reading materials were outdated and discouraged use of the libraries. The finding also concurs with that of Patrikios (1995) who reported that the shelves in many African Medical libraries were full of outdated books, most of them fifteen or thirty years old. The finding is also in line with that of Cheng and Lam (1996) in Hong Kong who found out that 80% of respondents stated weak collection of library as hindrance to use of the library as it was outdated and failed to meet the users needs.

The study established that majority of the textbooks and journals were not relevant to scientific researchers needs. This had the implication that KEMRI library did not adequately meet the scientific researchers information needs.
This finding is supported by Muya and Mbatia (1994) who noted the lack of relevant books and journals in libraries.

The study found out that majority of the reading materials were not catalogued and could not be used. The implication here is that useful books to scientific researchers could be held up among uncatalogued materials. This finding is in line with that of Muya and Mbatia (1988) who found that 88% of medical libraries did not catalogue their reading materials.

The study found that no shelving was done, hence it was difficult for scientific researchers to locate reading materials. The study found that computers were kept in closed access. This finding concurs with that made by Khan (1990) that only 45% of libraries offered open access. The finding also concurs with Nasieku (1994) that computers and CD-ROM databases were in closed access.

The study found that 48.6% of scientific researchers found the location of the library not convenient. This finding concurs with that of Muya and Mbatia (1988:12) who found that many libraries in rural areas in Kenya were located far away from users, which discouraged users from their use. The finding is also consistent with that of Kirsten (1996), in Industrialised countries that geographical isolation of rural surgeons was a barrier to library use. The finding is also in line with observation by mike (1995) that nurses in rural
areas found access to library services difficult, due to distance they had to cover to get into the libraries.

The study established that KEMRI library was small and could not accommodate all scientific researchers. This finding concurs with studies by Muya and Mbatia (1994) and Mburu (1990), who found the libraries small.

The study established that KEMRI library was not suitable for reading as it had few windows, it did not get enough light for reading. It was also noisy which reduced the concentration of scientific researchers when using the library. The finding is supported by Muya and Mbatia (1988) who found that libraries were not suitable for reading. The finding is also supported by Totterdell (1976) in London who found that the libraries were not suitable for reading as they were noisy.

The study established that majority of scientific researchers never used most services provided at KEMRI library. Majority of the scientific researchers were not satisfied with most of the services as they found them substandard and not relevant to their information needs. This finding concurs with what Cheng and Lam (1996) in Hong Kong found that the services were substandard. The finding is also in line with that made by Sheba (1998) that information services were substandard and did not meet information needs of users.
The study found that the computer databases were rarely updated hence provided outdated information to scientific researchers. Toxline and popline could not be used as they had stopped functioning.

The study found that majority of scientific researchers had not been educated on how to use the library. Thus they could not perform literature searches. This finding concurs with that made by Babakisi (1998) that lack of user education programme affected use of the library resources and services. The finding is also supported by Kirsten (1995) and Mike (1995) who reported that lack of user education contributed to poor use of library resources and services. The study found that KEMRI library provided to scientific researchers only abstracts on research work done in KEMRI.

The study found that interlibrary loan service was not successful and majority of scientific researchers did not use it. Reading materials requested by scientific researchers from other libraries were not provided. Instead KEMRI library requested scientific researchers to go to other libraries and read the materials there. The implication was that scientific researchers felt that the library staff had no interest in meeting their information needs. The finding that KEMRI library was involved in interlibrary loan practice differs with what
Muya and Mbatia (1988) and Mburu (1990) found that interlibrary loan practice was not available.

The study established that KEMRI library had inadequate staff. This finding concurs with findings of Mburu (1990) and Muya and Mbatia (1994) who found that medical libraries had inadequate staff. None of the library staff was a professional in Medical librarianship. Most library staff were para-professionals. This finding differs with observation of Muya and Mbatia (1994) that none of those in charge of the surveyed libraries had any trained library staff. The finding also differs with words of Gasfer (1974) that medical library staff should be trained in medical librarianship in order to increase efficiency in service provision.

The library staff never attended in-service courses. The implication is that they did not get opportunities to acquire knowledge in development in medical field or improve their skills in areas in which they were not educated in.

The study established that about half of scientific researchers approached library staff for help in locating reading materials. This finding differs with words of Owino (1995) in his study on visually handicapped in Kenya that no library staff assisted the blind in making a choice of reading materials.
The study found that about half of scientific researchers found the library staff had poor knowledge of sources of information in KEMRI library. This finding is consistent with that made by Rees (1991) in Canada that the library staff had poor knowledge of sources of information and difficulty in using the sources.

The study established that about 22.9% of scientific researchers found library staff unable to answer their questions. This finding concurs with that made by Muya and Mbatia (1994) that the library staff was unable to answer most questions asked by users.

The study found that the library staff was not able to locate reading materials easily, because the library was disorganised as no shelving was done. This finding concurs with that made by Muya and Mbatia (1994) that the staff was unable to organise the library systematically.

The study established that KEMRI library had a budget of 100,000 Kenya shillings which was inadequate. This finding concurs with findings of Mburu (1990), Kithele (1992) and Muya and Mbatia (1994) in Kenya who found that medical libraries had inadequate finance. The finding is also consisted with findings of Menya (1989) in Uganda and Patrikios (1995) in Zimbabwe, both who noted that finance was inadequate in medical libraries.
The study found that the available finance was adequate only for purchase of newspapers which were bought on daily basis. The library relied heavily on donations of reading materials from other countries, which were outdated, and of little use to scientific researchers. This finding concurs with that of Patrikios (1995) in Zimbabwe that the library relied heavily on donors for reading materials.

The study revealed that financial limitation had prevented the expansion of KEMRI library, as the existing library was congested. Scientific researchers read in the open reading space which was noisy. Their reading materials got mixed up with unprocessed materials of the cataloguers as they shared the open reading space.

The finding that KEMRI library was congested is in line with that made by Mburu (1990) and Muya and Mbatia (1988) that the libraries were small, congested and difficult to use.

The study found that KEMRI library had no binder and photocopier. Scientific researchers could not bind their work in the library or photocopy documents that they could read while outside the library. This finding concurs with
findings of Kithele (1992) that the libraries had no photocopiers and binding machines.

The study established that indexing and translation services were not provided due to financial inability of the library to employ adequate staff to provide the services hence documents written in foreign languages were not used. Lack of adequate staff made it impossible for KEMRI library to be opened after 5.00 p.m. on week days and also during weekends and holidays.

Financial limitations had prevented KEMRI library from connecting computers to healthnet and internet thus, scientific researchers did not access current health information available in healthnet and internet. The library staff could not use news bulletins and email facilities to inform scientific researchers about availability of new library materials. This prevented scientific researchers from knowing about existence of new materials when information in them was still current.
5.2 CONCLUSION

Most of the reading materials at KEMRI library were inadequate, outdated and not relevant to the needs of scientific researchers. Majority of the reading materials were not catalogued and were not used. KEMRI library was small and could not accommodate all scientific researchers. Majority of scientific researchers were not satisfied with most of the services at KEMRI library. The services were generally below average. User education service was not provided to majority of scientific researchers.

It was established that all the library staff had neither been trained in medical librarianship nor attended inservice courses. The library staff had inadequate understanding of the sources of information in the library and were therefore unable to answer questions posed by scientific researchers. The library staff were unable to organize the library. The staff did no shelving and was unable to locate reading materials for scientific researchers.

KEMRI library had inadequate budget which could only purchase newspapers and other few items. The library relied heavily on donations of reading materials from other countries. Financial limitations had prevented KEMRI library from its expansion, provision of binding service, translation services, photocopying, indexing services, connecting computers to healthnet and
internet. Financial limitations also inhibited use of e-mail facilities by library staff to inform scientific researchers about availability of new library materials.

5.3 RECOMMENDATIONS

5.3.1 Policy Recommendations

1. The study found that KEMRI library had inadequate financial resources which made it impossible for the library to provide adequate current reading materials, expand the library, provide services like photocopying, binding, translation and employ adequate library staff. This study recommends that the ministry of health provide adequate financial resources to KEMRI so as to enable the library purchase current reading materials, expand the library, provide photocopying, binding and translation services and to employ adequate library staff.

2. The study found that interlibrary loan practice was not successful as materials requested by scientific researchers were not provided. This study recommends that KEMRI library strengthen interlibrary lending practice by providing requested materials in time to scientific researchers.
3. The study found that a majority of scientific researchers were not educated on use of the library. The study recommends that user education service be provided to all scientific researchers and this should include skills on how to use computers.

4. The study found that KEMRI library staff were not professionals in medical librarianship and were unable to answer questions from scientific researchers. This study recommends that KEMRI library should employ staff trained in medical librarianship.

5. The study found that the CD-ROM databases for computers were rarely updated. This study recommends that KEMRI library update the CD-ROM databases so as to provide current information to scientific researchers.

6. The Kardex and the catalogue should be updated frequently to enable scientific researchers to locate reading materials easily.
5.3.2. **Recommendations for further Research.**

1. A similar study should be replicated using a larger study sample to cater for all categories of medical libraries in Kenya to establish whether the factors hindering effective use of medical libraries are peculiar to KEMRI library.

2. An identical study should be conducted among libraries in small urban areas.

3. Research should be undertaken to find out the influence of age, sex, information explosion and type of work performed on use of the library.

4. Research should be undertaken to find out the influence of modern technology on library use.


Kenya Medical Research Institute (1985). Annual Medical conference on Recent advances in Management and control of infection in East Africa. Nairobi: KEMRI.


AHILA.


ANNEX 1

FACTORS HINDERING USE OF MEDICAL LIBRARIES

SCIENTIFIC RESEARCHERS QUESTIONNAIRE

This research aims at finding out the factors that hinder effective use of medical libraries in Kenya with particular reference to Kenya Medical Research Institute (KEMRI) Library. You are one of the researchers selected to participate in this exercise hence you are being requested to complete this questionnaire as accurately as possible. All information that you supply will be treated with strict confidence and used for the purpose of the research.

I look forward to your co-operation in this exercise.
QUESTIONNAIRE FOR SCIENTIFIC RESEARCHERS.

A USE OF THE LIBRARY.

1. How many days per week, on average, do you use the library? (Tick appropriately)

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>NUMBER OF DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
</tr>
<tr>
<td>1 - 2</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td></td>
</tr>
<tr>
<td>3-5</td>
<td></td>
</tr>
</tbody>
</table>

2. How much time on average do you spend in the library anytime you visit the library? (Tick appropriately)

<table>
<thead>
<tr>
<th>PERIOD - MINUTES</th>
<th>PERIOD SPENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 30</td>
<td></td>
</tr>
<tr>
<td>30 - 60</td>
<td></td>
</tr>
<tr>
<td>60 - 90</td>
<td></td>
</tr>
<tr>
<td>90-120</td>
<td></td>
</tr>
<tr>
<td>Over 120</td>
<td></td>
</tr>
</tbody>
</table>

3. For what purpose do you seek information from the library? (Tick appropriately)

(a) keeping up-to-date
(b) Seeking professional solutions
(c) Research
(d) Recreation
(e) Writing papers for conferences
(f) Any other purpose, (specify)

4. How much time do you spend in the library performing activities listed below? Following the codes complete the table. (4 = 46-60 minutes, 3 = 31-45 minutes, 2 = 16-30 minutes, 1 = less than 15 minutes)

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading journals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locating material on shelves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer search</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading newspapers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any other, (please, specify.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5 (i) How convenient do you find the opening and closing hours of the library? (Tick appropriately.)

| A | Fairly convenient |
| B | Convenient |
| C | Very convenient |
| D | Not convenient |

5 (ii) If your answer to 5 (i) above is not convenient, give your reasons.

6 (i) How many books do you currently have on loan?

6 (ii) If your answer to question 6 (i) is none, please give reasons.

7 (i) Do you use other libraries apart from KEMRI Library?

   (a) yes (b) No

7 (ii) Give reasons for your answer in questions 7 (i) above.

B SERVICES

8 (a) Below is a list of services offered at KEMRI Library. Give your evaluation of each of the service by ticking in the appropriate space provided.

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>Fairly satisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lending/Borrowing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-Library loan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature searches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material reservation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualised guidance</td>
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<td>Abstracting</td>
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</table>
8(b) If you are not satisfied by any of the services provided in the KEMRI Library, please give your reasons.

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9 Below is a list of services that are available at the KEMRI Library. Indicate how frequently you use them by ticking in the appropriate columns.

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>Rarely</th>
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<th>Frequently</th>
<th>Never</th>
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</table>

10(a) Have you received any instruction on use of the library?

(a) Yes □         (b) No. □

11(b) How good was the instructions that you received?

A  Poor  □
B  Average □
C  Good  □
D  Very Good □
Below is a list of physical resources that are available at the KEMRI Library. Please indicate how adequate they are by ticking in the columns provided.

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<th>RESOURCE</th>
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<td>Any other, (specify)</td>
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Below is a list of physical resources available at KEMRI Library. Give your evaluation of each resource by ticking in the appropriate space provided.

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<tr>
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</table>
### 12 (b) If you are not satisfied by any of the physical resources at KEMRI Library, give reasons.


### 13. Below is a list of physical resources that are available at KEMRI Library. Please indicate how frequently you use them, by ticking in the appropriate columns.

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>Rarely</th>
<th>Sometimes</th>
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<td>Any other, specify</td>
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</tbody>
</table>
14 How convenient do you find the location of KEMRI Library? (Tick appropriately)

A  Not Convenient
B  Convenient
C  Very Convenient

15 (a) How suitable do you find the library environment for reading purposes (Tick appropriately)

A  Not Suitable
B  Average
C  Very Suitable

15 (b) If the answer to question 16(a) is not suitable, give your reasons.

D  STAFF

16 How frequently do you approach the library staff for assistance? (Tick appropriately)

A  Never
B  Rarely
C  Sometimes
D  Frequently

17 How would you rate the help you receive from the library staff at the KEMRI Library? (Tick appropriately)

A  Not helpful
B  Average
C  Helpful
D  Very Helpful

18 Which of these statements is true about the library staff at KEMRI? (Tick appropriately)

A  The Library staff can sometimes answer my questions
B  The library staff can always answer my questions
C  The library staff can never answer my questions
19. How would you rate the library staff knowledge of library sources of information? (Tick appropriately)

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<tr>
<td>A</td>
<td>Poor</td>
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<td>B</td>
<td>Average</td>
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<td>C</td>
<td>Good</td>
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<tr>
<td>D</td>
<td>Very Good</td>
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</table>

20. How would you rate the library staff job performance (Tick appropriately)

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<tbody>
<tr>
<td>A</td>
<td>Poor</td>
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<td>B</td>
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<td>C</td>
<td>Good</td>
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<td>D</td>
<td>Very Good</td>
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</tbody>
</table>
ANNEX 2

QUESTIONNAIRE FOR LIBRARIAN INCHARGE OF CIRCULATION SECTION

A STAFF TRAINING

1. For how long have you worked at KEMRI library? (specify)

2(a). Had you worked in any other Medical library before joining KEMRI library (Tick appropriately)

(i) Yes (ii) No

2(b). If yes to question (2a) for how long had you worked there?, (please specify)

3(a) Are you trained in Medical librarianship? (a) Yes (b) No

3(b) If you are trained in Medical librarianship, what level of training did you attain? (Please, specify)

3(c) Where did you train? (specify)

4. How adequate did the training that you received provide you with skills to serve scientific researchers? (Tick appropriately)

(i) Not adequate
(ii) Average
(iii) Adequate
(iv) Quite adequate

4(b) Do you consider in-service training to be useful to you? (I) Yes, (ii) No.

5. How often do you attend in-service courses?

(i) Never
(ii) Rarely
(iii) Frequently
(iv) Very Frequently
6 (a). How do you like your present job? (Tick appropriately)
(i) Do not like at all
(ii) A little
(iii) Much
(iv) Very much

6 (b) Given another chance would you transfer from your present profession?
(i) Yes (ii) No

B. PHYSICAL RESOURCES

7. How would you rate scientific researchers visit of KEMRI library?
(i) Rare
(ii) Average
(iii) Frequent
(iv) Very frequent

8. What do most scientific researchers do in the library?
(i) Read books
(ii) Read journals
(iii) Read newspapers
(iv) Make reference
(vi) Make literature searches

9. When do you open the library? (Specify)

10. How suitable do you find the opening hours of the library for scientific researchers?
(i) Not suitable
(ii) Suitable
(iii) Very suitable

11. How good is the library ventilation system?
(i) Poor
(ii) Average
(iii) Good

12. How good is the lighting system at KEMRI library?
(i) Poor
(ii) Average
(iii) Good
(iv) Very good

13. (a) How suitable are the chairs/tables at KEMRI library for reading purposes?
(i) Not suitable
(ii) Average
(iii) Suitable
(iv) Very suitable
13(b) How adequate are the following physical resources? (Indicate in the columns provided)

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>NOT ADEQUATE</th>
<th>AVERAGE</th>
<th>ADEQUATE</th>
<th>VERY ADEQUATE</th>
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</thead>
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<td>Notice Boards</td>
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</table>

14(a) How would you describe the current library reading materials and their relevance to scientific researchers needs?
(i) Not satisfactory
(ii) Average
(iii) Good
(iv) Very satisfactory

14(b) If your answer to question 14(a) is not satisfactory give reasons.
......................................................................................................................
......................................................................................................................

14(c) What factors prevent scientific researchers from using library physical resources effectively?
......................................................................................................................
......................................................................................................................
......................................................................................................................

C. SERVICES

15. What methods do you use to notify users of new library materials?
......................................................................................................................
......................................................................................................................

16(a) Does the library advertise itself to the Scientific researchers?
(i) Yes  (ii) No
16(b) If yes to question 16(a) in what ways does the library advertise itself?

17. How would you describe the current library services and their relevance to scientific researchers needs?
   (i) Not satisfactory
   (ii) Average
   (iii) Good
   (iv) Satisfactory

18(a) What materials do you lend out?

18(b) For how long do you lend out the material?

19(a) What problems do scientific researchers face as they seek information in KEMRI library? (Use the scale 4, 3, 2 and 1 to rate your responses 1=Never, 2= Not common, 3= common, and 4= Very common)
   (i) They are unable to locate the materials
   (ii) Inability to make use of reference sources
   (iii) Inability to make use of library staff
   (iv) They are unable to undertaken a systematic search for information.
   (v) Any other (specify)

19(b) What reasons account for the problem faced by scientific researchers seeking for information? Use scale, 3,2,1 to rate them. 3= Most common, 2= Common 1= Less common.
   (i) They lack user education skills
   (ii) They do not understand the role of the library staff.
   (iii) Lack of time
   (iv) Library disorganization

20. What assistance do you give scientific researchers seeking information? (Use the scale 4,3,2,1 to rate the help offered. 4= Most commonly given, 3= Commonly given, 2= Less commonly given, 1= Never given.)
   (i) Locating materials for them through variety of services offered at KEMRI library.
   (ii) Introducing/informing them of other relevant libraries and information centres, within and outside Nairobi.
   (iii) Providing individualised user education to help them search for formation independently.

21. How do you ascertain the needs of scientific researchers at KEMRI library?
22. What problems do you face as you perform your duties?

23. What suggestions would you offer for improvement of library use.

111
ANNEX 3

FACTORS HINDERING USE OF MEDICAL LIBRARIES

HEAD LIBRARIAN QUESTIONNAIRE

This research study aims at finding out the factors that hinder effective use of Medical libraries in Kenya with particular reference to KEMRI library. You are one of the library staff selected to participate in this exercise hence you are being requested to complete this questionnaire as accurately as you can. All information that you supply will be treated with confidentiality, and used only for research purpose. I look forward to your cooperation in this exercise.
A. LIBRARY STAFF TRAINING

1. For how long have you worked in KEMRI library? (specify)

2. Had you worked in any other Medical library before joining KEMRI library? (Tick appropriately)
   (i) Yes   (ii) No

3(a) Are you trained in Medical librarianship? (Tick appropriately)
   (i) Yes   (ii) No

3(b) Where did you train?

3(c) How long did the training take?

4. What is your level of training? (specify)

5(a) How many library staff do you have? (specify)

5(b) How many of your library staff are (indicate in space provided?)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tbody>
<tr>
<td>Professionals in medical librarianship</td>
<td></td>
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<tr>
<td>Paraprofessional in medical librarianship</td>
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<tr>
<td>Untrained</td>
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<td>Any other specify</td>
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</table>

6. How would you rate the staff number in KEMRI library?
   (i) Not adequate   (ii) Average
   (iii) Adequate     (iv) Very adequate

7. How would you rate the library staff work performance?
   (i) Poor   (ii) Average
   (iii) Good
8. How often do library staff go for in-service training?
   (i) Never 
   (ii) Rarely 
   (iii) Frequently 
   (iv) Very frequent

9. How frequent do you hold library staff meetings?
   (i) Never 
   (ii) Rarely 
   (iii) Frequently 
   (iv) Very frequent

10. How frequently do you allow library staff to go to other libraries to see what happens there?
    (i) Never 
    (ii) Rarely 
    (iii) Frequently 
    (iv) Very frequent

11(a) Are you motivated to perform your duties?
     (i) Yes 
     (ii) No

11(b) If no to question 11 (a) above give reasons

B ACCOMMODATION

12. Does your library have a purpose built accommodation? (Tick appropriately)
    (i) Yes 
    (ii) No

13. What are the major sections of KEMRI library? (Specify)

14. What is the seating capacity of KEMRI library? (Specify)
15(a) How adequate would you describe the library accommodation for the following (Tick appropriately)

<table>
<thead>
<tr>
<th></th>
<th>NOT ADEQUATE</th>
<th>AVERAGE</th>
<th>ADEQUATE</th>
<th>QUITE ADEQUATE</th>
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<tbody>
<tr>
<td>Readers</td>
<td></td>
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<tr>
<td>Staff</td>
<td></td>
<td></td>
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<tr>
<td>Material storage</td>
<td></td>
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<tr>
<td>Any other (specify)</td>
<td></td>
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</tbody>
</table>

15(b) If your answer to question 15(a) above is not adequate how does it affect library use?

C FINANCE

16(a) Does your library have a budget?
   (i) Yes  (ii) No

16(b) If yes to question 16(a) how much is it in Kenya shillings?

16(c) If KEMRI library has a budget how adequate is it? (Tick appropriately)
   (i) Not adequate  (ii) Adequate
   (iii) Very adequate (iv) Not adequate

17(a) If KEMRI library does not have adequate budget does it affect library operations?
   (i) Yes  (ii) No

17(b) If the answer to question 17(a) is yes, how does it affect operations of the library? (specify)

18(a) Which of the following library materials do you acquire?
   (i) Books  (ii) Periodicals
   (iii) Audio visuals (iv) Any other (specify)

18(b) How do you acquire them?
   (i) Donation  (ii) Exchange
   (iii) Purchase (iv) Any other (specify)
19. Who does the purchase? (specify)

20. Who decides what to be bought? (specify)

21. How frequently do you purchase the following materials (Indicate in columns provided)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NEVER</th>
<th>RARELY</th>
<th>SOMETIMES</th>
<th>FREQUENTLY</th>
<th>VERY FREQUENTLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals</td>
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<tr>
<td>Newspapers</td>
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<tr>
<td>Audio Visual</td>
<td></td>
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<tr>
<td>Furniture</td>
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<tr>
<td>CD-ROM</td>
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<tr>
<td>Reference Material</td>
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</tr>
</tbody>
</table>

22. Mention any problem you encounter in acquisition of library materials?

D PHYSICAL RESOURCES

23. What physical resources are available in the library? (Specify)

24(a) How would you describe the current library reading materials and their relevance to scientific researchers needs? (Tick appropriately)
(i) Not satisfactorily (ii) Average (iii) Good (iv) Very good

24(b) If your answer to question 24(a) is not satisfactorily or average give reasons
25. How adequate are the following physical resources?

(Indicate in columns provided)

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>NOT ADEQUATE</th>
<th>AVERAGE</th>
<th>ADEQUATE</th>
<th>VERY ADEQUATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td></td>
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<tr>
<td>Journals</td>
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<tr>
<td>Computers</td>
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<tr>
<td>Chairs</td>
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<tr>
<td>Tables</td>
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<tr>
<td>Circulation desk</td>
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<tr>
<td>Shelves</td>
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<tr>
<td>Cupboards</td>
<td></td>
<td></td>
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<tr>
<td>Bibliographies</td>
<td></td>
<td></td>
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<tr>
<td>Accession lists</td>
<td></td>
<td></td>
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<tr>
<td>Almanack</td>
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<tr>
<td>Notice board</td>
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</table>

E. SERVICES

26. What services are provided at KEMRI library? (specify)

27(a) How would you describe the current services provided at KEMRI library and their relevance to scientific researchers needs? (Tick appropriately)
   (i) Not satisfactory
   (ii) Average
   (iii) Good
   (iv) Very good

27(b) If your answer to question 27(a) is not satisfactory give reasons

28(a) Is KEMRI library involved in interlibrary lending? (Tick appropriately)
   (i) Yes
   (ii) No

28(b) If your library is engaged in interlibrary lending what materials are involved in it? (specify)

28(c) Which libraries do you co-operate with?
28(d) How would you rate the interlibrary lending practice KEMRI library is involved?
(i) Not successful   (ii) Successful
(iii) Very successful

29. If KEMRI library inter-lending practice is not successful, give reasons

30. What problems do you experience in carrying out your duties?

31. What suggestions would you give towards the improvement of library services?
Dear Sir,

RE: WAMBUA MUWITA - M.Ed (LIBRARY STUDIES) STUDENT

This is to confirm that the above postgraduate student is undertaking a study of medical libraries in Kenya. Your library has been selected to participate in this study.

It is hoped that the findings of the study will contribute to the improvement of such libraries in future.

Any assistance you give to our student in the course of this study will be greatly appreciated.

Yours faithfully

P.G. Mwathi
CHAIRMAN: LIBRARY STUDIES DEPARTMENT

KENYATTA UNIVERSITY LIBRARY

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