

Full Length Research Paper

Research funding and access to medical literature among junior academic staff

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Abstract

The study assessed the access to biomedical literature and funds among junior academic staff in a medical college in Lagos. This is a cross-sectional study in which the 120 junior academic staff were evaluated. Data collection was by pre-tested self administered questionnaires distributed to the study population. There were 83/120 respondents (69.1%) from both basic and clinical sciences. There were 38 males (45.8%) and 45 females (54.2%). The modal age group was 31-40 years. There were significantly more lecturer I in clinical sciences compared with basic sciences (84.2% versus 55.6%, $p=0.015$). Both groups had been actively involved with research which was reportedly funded by the researchers. International agencies were the commonest sources of external funds for research, (54.8%). About one-third, 31.0% had insufficient knowledge of the Central Research Committee. Access to bio-medical literature was a major problem among the lecturers and over 50% found the college library inadequate. Significantly more basic scientists used the library than clinical scientists, $p=0.04$. Lack of effective internet services was a major constraint to effective communication and access to relevant literature by 75% of the subjects. There is an urgent need for more titles to be stocked (books, journals) and improved on-line data base. The College should assist in getting funds for research and ensure equity in distribution.

Keywords: Biomedical research, funding, medical literature.

INTRODUCTION

Research in a medical college involves creating new knowledge, developing and assessing new technologies and the evaluation of new drugs and treatment strategies to improve healthcare delivery (Shaughn O'Brien and Fidelma O'Mahony, 2007). Research paves the way for positive development and growth of nations. (Oyatoye and Akingbade, 2003)

The main determinant factor of academic excellence is the number of quality research conducted, as well as publications in reputable journals. The information age is definitely here and most medical researchers have discovered that a computer system is as necessary to clinical practice as a stethoscope or microscope (Ibegwam and Ogunyade, 2003). The healthcare environ-

ment has changed dramatically over the last decade. Apart from poor time management, academic medical researchers have experienced diffuse difficulty in obtaining funds for support of most bio-medical research.

As a result of the scientific nature of health and medicine, the information required by health professionals goes out of date at a faster rate than in most other disciplines (Akhigbe, 1997). New research is carried out constantly while drug therapy regimes change often. Health management, financial planning requires up to date information as equipments are improved and supplies' costs fluctuate.

The availability of funds is important to the conduct of research. Funds are required for materials, equipments and access to accurate information and relevant literature. It has been observed that most academic researchers do not have enough funds available individually to conduct research (Akhigbe, 1997; Fields et al., 2003; Horton 2000; Wolffers et al., 1998). Poor

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funding from both the private and public sources remains the most serious limitations to fostering a research culture. Government priorities frequently lie elsewhere because of competing interests such as energy, potable water supply, transportation, telecommunication, security/defence to mention a few (Fields et al., 2003; Horton 2000; Wolffers et al 1998). However, drug-industry investment is aimed predominantly at profitable areas such as chronic diseases of lifestyle, mental illness and allergy, whereas most of the external funding is directed at local epidemics such as HIV, malaria and tuberculosis (Gevers, 2009). Scientific publication and dissemination of new information is an important measurable indicator of research activity of academic medical centres.

The study was carried out among junior academic staff of the College of Medicine University of Lagos. The study evaluated the impediments to research among bio-medical researchers and assessed access to funds for research and obtaining relevant information for research. This paper gives the report on the findings on access to medical literature and funds for research. A second paper gives a report on the findings of impediments to research among the study population (Lesi et al., 2009). It is hoped that results of the study will assist with not only identifying the problems but suggest possible solutions to having an efficient health literature service and health research financing for institutions in developing countries and including the College of Medicine.

METHODOLOGY

All the 120 junior academic staff of the College of Medicine University of Lagos, a foremost academic medical centre in Nigeria was eligible to participate in the study. A pre-tested questionnaire was used for the survey.

Informed consent was obtained and confidentiality of data was assured to participants. This cross-sectional study was carried out using self-administered questionnaires. They were distributed at Continuing Education Workshops held periodically for junior academic staff from the Schools of Basic Sciences, Pharmacy, Clinical sciences and Dental Sciences of the College. This study was part of a larger study on impediments to research. The following information was obtained.

- socio-demographic characteristics
- academic position and research activities
- perceptions towards research and publications
- use of the medical library was assessed based on frequency of use and reasons for using the library. The library was further assessed using open-ended questions on problems observed by subjects and the recommendations for improved library status
- open-ended questions were used to assess subjects' knowledge of the sources of funds for research. Questions on the role of the College and the Central

Research Committee in research funding were also featured.

- A review of the activities of the Central Research Committee was done using available published reports.

The study subjects were classified into two distinct subgroups based on the departments. Academic staff from anatomy, biochemistry, morbid anatomy, physiology, physiotherapy and pharmaceutical sciences was considered basic scientists. While subjects from anaesthesia, clinical pathology, community health, dental sciences, internal medicine, microbiology, obstetrics and gynaecology, paediatrics, parasitology, psychiatry, radiation biology and surgery were classified as clinical scientists.

Statistical analysis of data generated was carried out using the Epi-Info 2007 (CDC, Atlanta, GA) statistical package. Associations were subjected to Chi-square or Fisher's exact test. $P < 0.05$ was considered significant.

RESULTS

Demography

A total of 83 academic staff participated in the survey. The subjects were from basic sciences department (54.2%) and clinical sciences department (45.8%). There were 38 males (45.8%) and 45 females (54.2%). Majority were in 31-40 years age group (52.4%). Out of the total number of subjects, there were 57 (68.7%) lecturer I, 24 (28.9%) lecturer 11 and 2 (4.4%) graduate assistants.

College library

A total of 67 (80.72%) of the academic staff used the College library. However, significantly more basic scientists used the library more than colleagues in clinical sciences departments. $\chi^2 = 4.21$, $p = 0.04$.

The commonest complaint recorded among those who did not make use of the library was the fact that it was poorly stocked. Other reasons given include uncomfortable (75%), bureaucracy (25%), poor opening hours (12.5%). Other complaints were unfriendly staff, poor organisation of the library, need for better retrieval system, cloakroom and toilets not easily accessible and library charges for Medline/internet too expensive.

Assessment of college library

The assessment of the library among the users shows that, 16(23.88%), 20(29.85%) use the library very often or often respectively and 27(40.3%) use the library occasionally. A large majority, 59(88.06%) make use of the journal facility available in the library. The use of monographs was also popular among the library users

Table 1. Evaluation of Library among users (N=67)

| CHARACTERISTIC | NO. (%) |
|-------------------------------------|------------|
| 1. Frequency of library use | |
| Very often | 16 (23.88) |
| Often | 20 (29.85) |
| Sometimes | 4(5.97) |
| Occasionally | 27(40.30) |
| 2. Facility used | |
| Journals | 59(88.06) |
| Index Medicus | 4(5.97) |
| Monographs | 31(46.27) |
| Medline/internet | 26(38.81) |
| Photocopy | 12(17.91) |
| Quiet reading/newspapers | 3(4.48) |
| Reference section | 10(14.93) |
| 3. Comments on library | |
| Old publications available | 34(50.75) |
| More titles needed | 23(34.33) |
| Lacks relevant information | 20(29.85) |
| Needs improvement | 36 (53.73) |
| Others | 17(25.37) |
| 4. Evaluation of the library | |
| Good | 14(20.8) |
| Fair | 10(14.93) |
| Poor | 43(64.18) |

(46.27%), Medline/internet (38.1%). Other facilities used include photocopying (91%), reference section (14.93%), and quiet reading/newspapers (4.48%). Over 50% of academic staff that make use of the College library expressed the fact that the library needed improvement and that only old publications are available. Almost one-third of the library users are of the opinion that more titles are needed in the library; there is lack of relevant information on basic sciences. Only 14(20.8%) of College library users evaluated the library as being good. Almost two-thirds, 64.18% evaluated the library as being poor overall Table 1.

Research funding

The commonest source of funds for research among the academic staff studied was International agencies (54.8%). Other sources mentioned were individuals/philanthropists (32.1%), pharmaceutical companies (27.4%) and oil industry (10.7%). About a third claimed they had no knowledge of sources for funding. On the Central Research Committee, 35.7% were of the opinion that it was well accepted. 22.6% felt there was too much bureaucracy linked to it and 10.7% stated that there was a need to advertise. However, 31.0% had no idea about the Central Research Committee.

Over a third, 39.3% of the academic staff suggested that the College should assist in soliciting for funds locally. Other suggestions on the role of College in funds for research includes, reduce protocol (29.8%), create awareness (25.0%) and ensure equity in distribution (19.0%) Table 2.

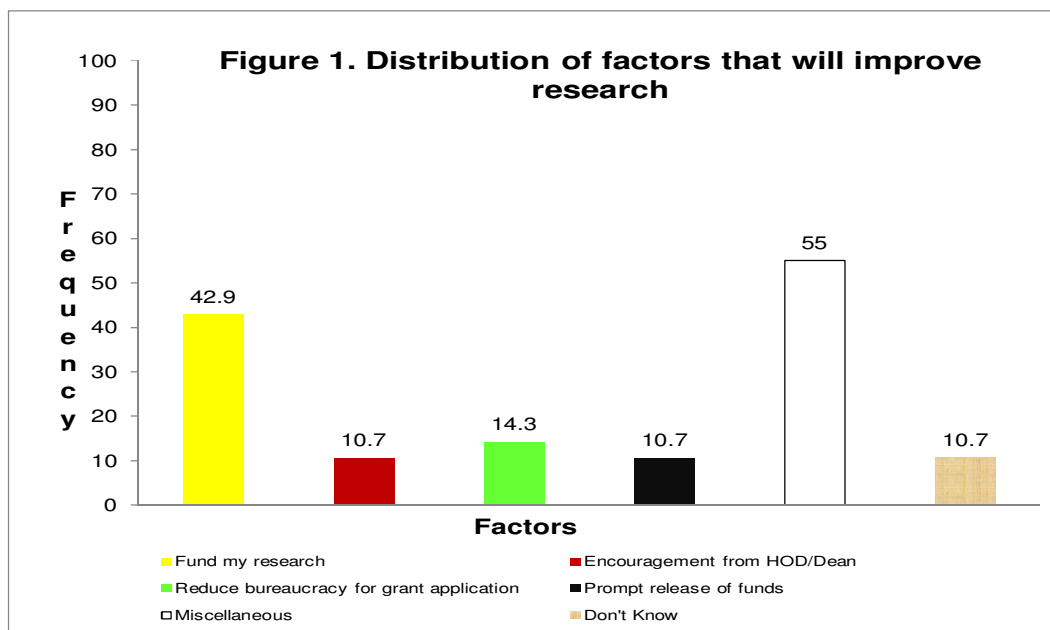
Figure 1 shows the distribution of factors mentioned that would improve research activities among the sample studied. The funding of research was the most common, 42.9%. Other factors were reducing bureaucracy of processing proposals (14.3%), prompt release of funds on approval and encouragement from Head of Department or Dean 10.7%. Over fifty percent of the academicians mentioned other factors associated with their research productivity.

DISCUSSION

The findings from the present study show that access to the various sources of health literature and funds for research is very poor. This is similar to reports in the scientific literature from most developing countries (Oyatoye and Akingbade, 2003; Ibegwam and Ogunyade, 2003; Akhigbe, 1997). The cumulative effect is multiple and relevant research findings that can uplift the efficiency of the health care delivery system are not

Table 2. Research Funding: Sources, CRC, Role of Institution (N=83)

| 1. Source of funds for research | No. | % |
|---|-----|------|
| Banks | 8 | 9.5 |
| International agencies | 46 | 54.8 |
| Pharmaceutical companies | 23 | 27.4 |
| Individuals/philanthropists | 27 | 32.1 |
| Oil industry | 9 | 10.7 |
| Others | 8 | 9.5 |
| Don't know | 23 | 27.4 |
| 2. Role of Central Research Committee in research funding | | |
| Well accepted | 30 | 35.7 |
| Need to advertise | 9 | 10.7 |
| Bureaucratic/difficult to access | 19 | 22.6 |
| Others | 8 | 9.5 |
| No idea | 26 | 31.0 |
| 3. What role should one's Institution play in making funds available for research? | | |
| Reduce protocol | 25 | 29.8 |
| Create awareness | 21 | 25.0 |
| Ensure equity in distribution | 16 | 19.0 |
| Solicit for funds locally | 33 | 39.3 |
| Others | 20 | 23.8 |
| Don't know | 12 | 14.3 |



diffused readily among the health professional. This chronic lack of research support has created impoverished academic and laboratory facilities, which can be worsened by weak institutional interest in encouraging research that meets international standards.

Results from this study shows that significantly more basic scientists use the library than colleagues in clinical sciences. It was also observed that less than a quarter of those using the library made use of the facilities often, that is at least once a week. These observations may be

adduced to the mental laziness of users, attitude and motivation towards facilities in the library. The opening hours of the library appears to be more acceptable to the biomedical scientists than to the clinical scientists who tend to work late in wards, clinics and taking calls. The need of specific disciplines in the clinical sciences is also poorly represented in the library.

Over 50% of the library users expressed the fact that only old publications are available and the ineffective Internet facilities were not conducive for research. The problem of non-availability of up to date health literature is because procuring relevant medical and biotechnology literature has become very expensive, as a result of poor exchange rate of local currency. The funding of libraries and education in Nigeria has also diminished (Akhigbe, 1997; Lesi et al., 2007).

Majority of the research conducted by this group of academicians was self-financed, and external funding was mainly provided by international agencies. Other studies have reported that government funding of biomedical research has reduced drastically and that most foundations have set their own priorities on specific health issues for funding. The government's funding of biomedical research should be seen as not only sponsoring investigators, but also stimulate private-sector firms to conduct and fund research on their own. Ideally, government efforts motivate an array of other funding sources, thereby increasing the probability of success and keeping research costs competitive. In most developing countries in Asia and Sub-Saharan Africa, government funding of bio-medical research is negligible (Akhigbe, 1997; Fields et al., 2003; Horton, 2000; Wolffers et al., 1998). Education and health score low on government priority list as security, defence and debt repayment take a large chunk of the expenditure. There is also a serious lack of donor coordination in most developing countries (Wolffers et al., 1998).

Even though a third of the academic staff was unaware of the Central Research Committee (CRC), about a third felt that the CRC was well accepted and would want the College to assist academicians in sourcing for funds. As with most other academicians in developing countries, the funding of research appears to be the most important factor that will help improve research. It will appear that poor funding from public and private sectors remains the most serious limitation to fostering a research rich culture.

Reports from University Research Grant awards and CRC proceedings however show that resources are available for research in the University from the CRC/ National Universities Commission (NUC), Federal Ministry of Education and International Donor Agencies (CRC, 2001; URG, 2002).

The reports on research grants awards show that the CRC, NUC assist in funding of biomedical research. The utilization of research grant is expected to be in the ratio of 60%:40% in favour of sciences for conventional

universities, University of Lagos. Research grants are released to Universities annually based on research grant utilization. Utilization of at least 50% of outstanding grants by the University is required before the release of the next grant by the NUC. Academicians should be encouraged to make use of the available resources through an initial enquiry path, submit an application using the approved format, establish good rapport and maintain a cordial relationship with relevant staff (Ahonsi, 2006).

In conclusion, financial constraints and access to current medical literature are major problems faced by academicians as observed from the present study. The co-founding factors will include poor technological support and interpersonal communication.

Alternative sources of funding should be explored and the institutions in this case the College of Medicine University of Lagos should play a more dynamic role in the financial support of biomedical research within the College at individual, collaborative and or departmental level. The decentralisation of the CRC may also encourage biomedical researchers and reduce the apathy in application for grants.

Accurate and timely information dissemination to biomedical scientists as well as uninterrupted access to health literature is essential for qualitative medical research, education practice and progress. The College library system of exchange and sourcing literature from medical libraries locally and internationally should be further strengthened. A library committee involved with the improvement of library networking, acquisition of materials may provide possible solutions. The committee's terms of reference to include addressing the issue of the financial aspect and literature resource of the library. This is inevitable. The College stands to benefit from these for problem solving of the various factors associated with impediments to research.

The provision of journal funds by the University commensurate with level of biomedical research may become necessary so as to provide a means of literature resource to emerging subspecialties, which may not be readily available in the library. The recruitment policies and guidelines (if any) for biomedical researchers may also need to be reviewed to identify reasons for apathy and ensure that we are recruiting committed individuals.

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