

Original Articles

Research and research activities in a University in Eastern Saudi Arabia

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ABSTRACT

Objectives: The purpose of the present study was to obtain the views of faculty members regarding various aspects of scientific research, which is one of the essential functions of a University.

Methods: A cross-sectional study was conducted in the College of Medicine, King Faisal University, Dammam, Kingdom of Saudi Arabia, between January and June 2001, using a standardized questionnaire to obtain the views of faculty members in both basic and clinical departments on issues related to scientific research. The questionnaire consisted of 41 items and the responses were assessed on a 5 point scale. The variables included specified objectives for research by administration, quality of research, process of application for funding, available facilities for research, constraints to meaningful scientific research and mechanisms that would enhance its quality.

Results: The response rate was 67% (74 of the total available 110): Professors 22, Associate Professors 27, Assistant Professors 23 and Lecturers 2 in 24 departments (6 basic sciences, 18 clinical sciences). The number of completed research projects was judged inadequately by

50 (68%), and 31 (42%) thought the quality could be improved upon. The process of the application for funding was cumbersome. The major identified constraints were inadequate infrastructure, additional administrative duties (89%) and teaching schedule overload (82%). The major strategies suggested to enhance the quality of research included simplifying the process for application for research (approval and funding), provision of defined quality time for faculty members to engage in research and the establishment of adequate support and infrastructure facilities.

Conclusions: Most faculty members aspire for a higher quality of biomedical research. The following were identified strategies to improve research goals and quality: Provision of starting seedling packages for new faculty members, simplifying research application processes, establishing efficient and adequate infrastructures, and providing protected research time.

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Universities are centers with the unique tripartite mission of education, research and service.¹ Such a mission could not be established fully without devoted, disciplined, talented, capable and loyal faculty members with the high standards of ethics and focus on the endpoints of success. Periodic reviews and evaluation of various aspects of the system and objective feedback from its members of

staff are fundamental in identifying obstacles and alleviating concerns. The views of faculty members are particularly important since they function as the effector organ in the university and collegiate system. Since the establishment of the first university in the Kingdom of Saudi Arabia (KSA) more than 30 years ago, the views of faculty members in Saudi Medical Schools pertaining to some aspects of the university

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mission such as the curriculum² has been published. However, the views of the faculty members regarding scientific research are scarcely documented. This study examines the views of faculty members with regards to one of the essential aspects of the university mission, viz-a-viz scientific research activities.

Methods. A cross-sectional study was conducted in the College of Medicine at King Faisal University, Dammam Al-Khobar area, Eastern province of KSA between January through to June 2001 using a questionnaire. Faculty members in both basic and Clinical Departments were surveyed. The questionnaire consisted of 41 items. These items included issues pertaining to the presence or absence of strategic goals and objectives for research, quality of research, process of application, facilities for research, obstacles to scientific research as well as means to enhance scientific research. The responses were obtained on a 5 grade scale. In addition, the authors searched existing literature utilizing the key words Research, and KSA. Four hundred fifty publications were obtained; none of which was relevant/pertinent to the discussion/study.

Statistical methods. Data were entered into an IBM-compatible personal computer, checked for accuracy and double entries. The statistical package for social sciences program was used for analyses.

Results. The target population consisted of 110 staff members in 4 categories (professors, associate professors, assistant professors and lecturers) in 24 departments (6 Basic Sciences, 18 Clinical Sciences). There were 74 responders 67%: Professors 22, associate professors 27, assistant professors 23 and lecturers 2. Most of them were in the clinical Sciences (55%), 9 (12%) were involved with Basic Sciences and 24 (32%) had combined Basic and Clinical Sciences involvement. Twenty-five (34%) have been in the university for 5 years or more; 41 (55%) had at least one funded research experience. Of these 41, 15 had completed 3 or more funded research projects. The majority of responders 50 (68%) judged the number of research projects as being non-satisfactory and a further 31 (42%) thought the quality could be improved upon. Most responders 49 (66%) thought the application process for funded research was complicated. **Table 2** lists the variables assessed/judged by responders to be obstacles to biomedical scientific research. The lack of infrastructure and administrative and teaching overload lead the obstacles identified with 66 (89%) and 61 (82%). On the other hand their views on the strategies to enhance the quality of research are shown in **Table 3**. These included simplification of the process for application for both approval and

Table 1 - Selected faculty demographics (n=74).

Parameter	n (%)
Duration of being a faculty member	
>10 years	17 (23)
5-10 years	8 (11)
<5 years	49 (66)
Area of expertise	
Clinical sciences	41 (56)
Basic sciences	9 (12)
Basic and clinical sciences	24 (32)
n of funded research proposals	
>3	15 (20)
1-2	26 (35)
0	33 (45)
n - number	

Table 2 - Variables assessed by faculty to be obstacles to biomedical research.

Obstacles to scientific research	n (%)
Lack of infrastructure	66 (89)
Administrative and education overload	61 (82)
Lack of clear objectives/guidelines	58 (78)
Complicated process	49 (66)
Presence of part-time activity in the private sector	36 (49)
n - number	

Table 3 - Strategies to enhance quality of biomedical research.

Means to enhance research	n (%)
Establish more symposia devoted to research	70 (95)
Provide start up packages for new faculty	66 (90)
Simplify process	63 (85)
Establish an infrastructure	62 (84)
Create a society for biomedical research	58 (78)
Provide faculty with protected research time	55 (74)
Recruit faculty specifically for research	55 (74)
n - number	

funding, provision of defined quality time for research to faculty members, establishing adequate support and infrastructure as well as setting up units for biomedical research at both local and national levels and having frequent symposia devoted specifically to research. Thirty nine (52.7%) felt that faculty members who prepare for promotion pay more attention to research than teaching and community service as against 27 (37%) who thought otherwise and 8 only (11%) were undecided. On the other hand, there was no definite direct relationship between the numbers of units needed for promotion versus the abundance of research proposals: 20 (27%) responded positively, 25 (34%) negatively and a significant number of responders 27 (37%) were undecided. Most responders 54 (73%) thought that graduate students play a fundamental role in the advancement of scientific research whereas 11 (15%) thought otherwise. Translation of medical books to Arabic language should be given as much priority as research was the response in 34 (49.9%), 30 (41%) disagreed and 10 (14%) were undecided.

Discussion. Biomedical research is defined as "a class of activities designated to develop or contribute to generalized knowledge. Generalizable knowledge consists of theories, principles and relationships or the accumulation of information on which these can be corroborated by accepted methods of observation and inference. Research is also a valuable means towards progress in medical care or health.³ Two types of research are known. The first is basic sciences research and the 2nd is applied research. This study shows that the majority of the faculty members are not satisfied with the quality or the number of the research projects being carried out and they aspire to a better quality. This is not particularly new or surprising and usually good intentions are responsible for discontent. It is known that scientific research is one of the primary responsibilities and objectives of the university, and frequently, the reputation of a university is tied closely to its devotion to scientific research. Therefore, most faculty members aspire for the highest standards of research. The other constraint identified is the obvious perception of the lack of infrastructure needed to perform quality research,

coupled with administrative and educational load. The latter pertains largely to undergraduate curriculum overload, which minimize the time devoted for scientific research. Murssi⁴ reported that the faculty member in the Arab world spend no more than 5% of his time for scientific research compared to 29.1% and 23.1% spent by the American and the British counterparts.⁵ Such time allocation reflects clearly on the research productivity of the prospective faculty members that may enhance faculty satisfaction of quality and quantity of research.⁶ Therefore faculty members should be provided with protected time for research. Protected time refers to the notion that individual faculty members has time to devote to research as part of their regular schedule. Seventy four point four percent of responders identified such a proposal as means to enhance research. It is also my opinion that junior faculty members who would have the most of energy and untainted talent should avoid major administrative rules unless it is anticipated that their particular career development and future might be linked to that activity. In addition, to sustain the scholarly activity of scientific research faculty members need to perceive research as a necessity not as a luxury.⁷ From meeting this necessity stems the prosperity and scientific security of not only the individual but also the nation at large.

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