

National medical research ranking and scientific productivity: Where do we stand?

Farzaneh Aminpour^{1,2}

¹Medical Education Research Center, Isfahan University of Medical Sciences, Isfahan, Iran. ² School of Health Management and Information Sciences, Tehran University of Medical Sciences, Tehran, Iran.

Background: Continuous evaluation of research performance is an effective tool for financial and human resource allocation to promote knowledge production by academic institutions. The aim of this study was to evaluate the scientific performance of Isfahan University of Medical Sciences (IUMS) from April 2010 to April 2011 in the national medical research ranking. **Methods:** This cross sectional study was carried out through running advanced searches in the national, local and international information databases and other websites. Then the data were analyzed in order to demonstrate IUMS scientific production and research status at a national level. **Results:** From April 2010 to April 2011, about 9% of total Iranian medical articles, 6% of total Iranian ISI indexed articles in medical science and 12% of Iranian PubMed indexed articles affiliated to Isfahan University of Medical Sciences. Although Isfahan University of Medical Sciences stood at the third place in the annual national research ranking, but it was first in the scientific growth among Iranian medical universities. **Conclusions:** The study indicated that Isfahan University of Medical Sciences witnessed striking improvement in scientific productivity, research performance and national research grade during 2010-2011.

Key words: Scientific Productivity, Research Performance, Academic Ranking, Biomedical Research, Health Information Management

INTRODUCTION

Knowledge production is one the basic missions of research institutes and universities. A basic prerequisite for financial and human resource management to promote knowledge production by academic institutions is continuous evaluation of research performance.^[1] The quality and the quantity of published articles of each country is a major factor in determining its status in the international academic rankings.^[2] The number of Iranian medical publications and citations to these publications have significantly increased in recent decades.^[3] Iran cooperation to the world scientific production increased from 0.0003% in 1970 to 0.29% in 2003.^[4]

Many studies confirmed that Iran and some particular Iranian universities have experienced remarkable improvements in research performance over the recent years.^[5-8] Tehran University, Sharif University and Tehran University of Medical Sciences are three Iranian universities which had the highest participation in Iran's scientific productivity in 2004.^[9] Isfahan University of Medical Sciences (IUMS) is a major Iranian university which has great contribution to Iran's remarkable scientific growth. The core of the present study was a quantitative evaluation of scientific production of IUMS from April 2010 to April 2011 and its ranking in

national medical research ranking.

METHODS

This cross sectional study was carried out through running advanced searches in the national, local and international information databases, Electronic Journal Collections and other scientific websites including ISI Web of Science, PubMed, Scopus, Embase, Biological Abstracts (BA), Chemical Abstracts (CA), Cumulative Index to Nursing and Allied Health Literature (CINAHL), SciVerse Science Direct, IndexCopernicus, Index Medicus for the Eastern Mediterranean Region (IMEMR), Scientific Information Database (SID), Iranian Research Institute for Information Science and Technology (IRANDOC), Iranian Journal Database (Magiran), Iranian Biomedical Journals (IranMedex) and also official websites of the scientific journals accredited by Iranian Ministry of Health and Medical Education and Iranian Ministry of Science, Research, and Technology. Total scientific articles affiliated to IUMS published from April 2010 to April 2011 were retrieved and scored according to the national research evaluation protocol of Iranian Ministry of Health and Medical Education, Deputy of Research. Data on research performance of total Iranian medical universities were extracted from various reports

Address for correspondence: Farzaneh Aminpour, Medical Education Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.
E-mail: f.aminpour@gmail.com

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released by Deputy of Research of Iranian Ministry of Health and Medical Education during recent years. The data were analyzed to demonstrate IUMS's scientific production and research status at a national level.

RESULTS

According to the national medical research ranking report 2011, IUMS stood at the third place after Tehran University of Medical Sciences and Shahid Beheshti University of Medical Sciences in the annual national research ranking,^[10] while it was first in the scientific growth among Iranian medical universities (Table 1). During the period of the study, about 27% of total 1257 articles published by IUMS were indexed by ISI Web of Science Databases. The majority of IUMS's articles were indexed by other websites including national and local databases (Figure 1). Among total articles published by IUMS, 77.6% were appeared in Iranian medical journals while 22.4% were published by foreign journals. About 9% of total Iranian medical articles, 6% of total Iranian ISI indexed articles in medical science and 12% of Iranian PubMed indexed articles affiliated

to IUMS during the period of the study. The number of article published per faculty member of IUMS was 1.9. It declined to 0.5 per capita for ISI indexed articles.

DISCUSSION

Science production and the way to derive benefit from it are among major challenges of governments. Scientific productivity is a frequently used scientometric indicator to determine the status of countries and universities in the majority of academic ranking systems.^[11] IUMS stood at the third place in the annual national research ranking, but it was the first in scientific growth among Iranian medical universities. Comparing current national research rank of IUMS to its status in the previous national ranking shows remarkable improvement from 6th grade to third grade. It seems that technical and financial support of IUMS researchers and research centers during the last year could improve IUMS overall research performance. However, academic contributions to the scientific productivity at IUMS was not normally distributed among the faculty members.^[1]

Table 1. IUMS Position in the national medical research ranking

Criterion	Score	Rank
Research Performance	30217	3
Scientific Production	21589	3
Paper Production	17980	3
ISI indexed Papers	7700	4
PubMed/Medline indexed Papers	2777	2
Scopus/ Embase/ CA/ BA indexed papers	3506	3
Papers indexed in other database	3817	3

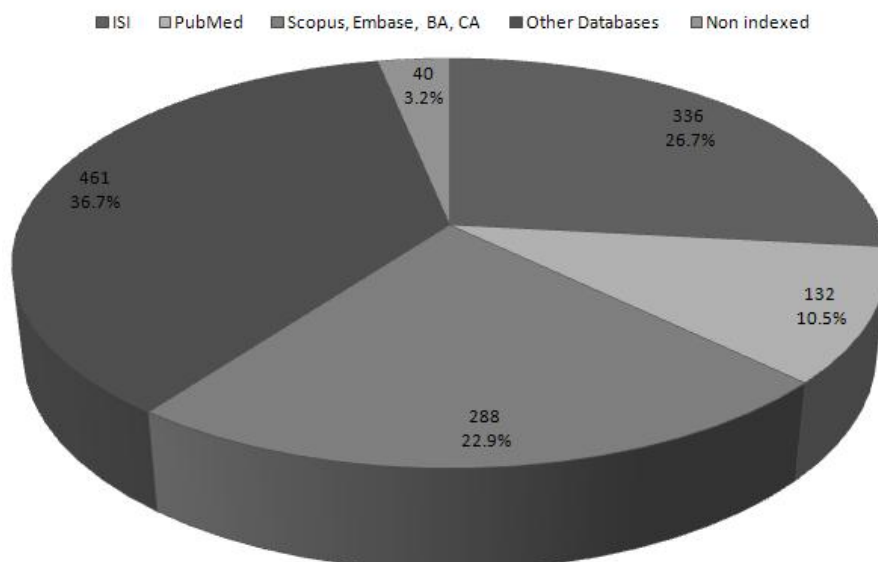


Figure 1. The indexing status of IUMS papers

CONCLUSIONS

The study indicated that Isfahan University of Medical Sciences witnessed striking improvement in scientific productivity, research performance and national research grade during 2010-2011.

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