Scientific Production of Medical Sciences Universities in North of Iran

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1. INTRODUCTION

"Scopus is an abstract and indexing database with full-text links that is produced by the Elsevier Co. Scopus which reportedly has excellent navigation skills. The verbal and behavioral feedback of these librarians and researchers was analyzed and used to improve the product." (1) "Scopus developers claim to index over 14,000 STM and social science titles from 4000 publishers, stating that it is the largest single abstract and indexing database ever built". The database claims 4600 health science titles are indexed including 100% MEDLINE coverage, 100% of EMBASE coverage and 100% of Compendex coverage. The list of titles indexed is selected based on user demand and market research. It contains 27 million abstracts with citations back to 1966. In addition to American journals, it includes European and Asia Pacific literature in both English and non-English languages. Indexing includes CAS registry numbers, MeSH terms, EMTREE terms, and supplemental key terms added by indexers." (1)

Some features of Scopus include: Links to both citing and cited documents, allowing the user to go both forwards and backwards in time, Open access titles are included in the index, Indexes web pages and patents, with a claim to over 167 million relevant web pages, OpenURL compliant and works with any link resolver, using image-based linking, Runs an entitlement check prior to returning a full-text image is the article if available to the user, and can link to the publisher’s web site to view the document (1)". "Scopus was born in 2004 with the best software module for presenting result lists. When the H-Index was introduced, users could very efficiently scroll down in chunks of maximum two hundred items per page in the result list in Scopus, sorted by decreasing order of citation counts in order to eyeball the H-Index value, the point where the number of citations received by a publication is equal to or larger than its rank order number. Web of Science beat Scopus in coming up with an automated H-Index generator in late 2006, but by mid-2007, Scopus came out with two automated H-Index generation options. One is good, but the other one is very unfair to accomplished scholars, because it excludes from the H-Index calculation any paper published before 1996—even when they have been cited extensively since 1996."(2)

The database can be used for collection development as well as for research". (1) Scopus database is chosen because more articles will provide a base for Iranian writers, so they search for articles and citations to articles on this site which are easier and more useful. "For citation analysis, Scopus offers about 20% more coverage than Web of Science, whereas Google Scholar offers results of inconsistent accuracy. Scopus covers a wider journal range, of help both in keyword searching and citation analysis, but it is currently limited to recent articles (published after 1995) compared with Web of Science"(3).

In Iran, the scientometrics started in
1997 and till now numerous studies have been done in this context, and the main ones that have more relevance to our studies are reported. Abbaspour (2001) investigated the condition of the articles published by the faculty member of Guilan University of Medical Sciences during the year 1997 through 2001. He found that the medical faculty with 9487 and the nursing faculty with 949 had the highest and lowest number of published articles respectively (4). Noori et al. (2007) investigated the ISI Web of Science indexed articles published at the Isfahan University of Medical Sciences from 1976 through the end of 2006. In this study 488 articles were investigated, most of them in the study were original and most of the peripheral blood vessels diseases. All of the published articles were not evaluated to be indexed, therefore it is suggested that university authorities provide better environment to improve the situation on order to create motivation to improve the researchers’ articles quality (5).

Zorzetto et al. (2006) has studied: “The scientific production in health and biological sciences of the top 20 Brazilian universities, most of the production is focused in public universities and research institutes located in the richest part of the country. Among all areas of knowledge, the most productive are Health and Biological Sciences. During the periods of 1998-2002 these areas presented heterogeneous growth ranging from 4.5% (Pharmacology) to 191% (Psychiatry), with a median growth rate of 47.2%. In order to identify and rank the 20 most productive institutions in these areas, searches were made in three databases (Data CAPES, ISI and MEDLINE) which permitted the identification of 109,507 original articles produced by the 592 Graduate Programs in Health and Biological Sciences offered by 118 public universities and research institutes. The 20 most productive centers, ranked according to the total number of ISI-indexed articles published during the 1998-2003 period, produced 78.7% of the papers in these areas and are strongly concentrated in the Southern part of the country, mainly in São Paulo”.

Dakik et al. (2006) in a research entitle: “Research productivity of the medical faculty at the American University of Beirut” for analyzing the quality and quantity of scientific publications in a six year period (1996-2001) found that: “The faculty consisted of 203 members. Their average productivity rate (mean (SD)) was 1.24 (1.38) publications/faculty member/year (PFY), with a mean impact factor of 2.49 (4.63). Eighteen per cent of the faculty did not have any publication in the six year study period, and only 20% had two or more publications per year. There was a significantly higher publication rate among newly recruited faculty members (0.93 (1.40) PFY for those appointed before 1990, 1.45 (1.24) PFY for those appointed during 1990-1995, and 1.67 (1.43) for those appointed after 1995, = 0.007), and among those who are younger member (p=0.01). Collaboration with international investigators resulted in more original publications than work done only at AUB (65% v 35%, p=0.001), and a higher journal impact factor for the publications (3.20 (3.85) v 1.71 (2.36), p=0.05)” (7).

Bjorn et al. in a research entitle: “Doctoral prepared nurses in Denmark and their scientific production between 1976 and 2005” by the purpose of to identify the number of Danish nurses holding a doctoral degree by the end of 2005 and to document their scientific production, found that: “a pattern of growing engagement in publishing peer-reviewed articles among the Danish nurses holding a doctoral degree. Fifty per cent of these doctoral prepared nurses published peer-reviewed papers. The majority apparently pursued a career in health sciences. Nursing as an academic discipline is evolving in Denmark, but, with its roots in clinical nursing, scientists may have to be aware of the necessity to prevail as a discipline through scientific production”(8).

Shahbedagh (2010) due to his research: “Quantitative and qualitative growth of Shahid Beheshti University of Medical Sciences articles on ISI reports during the last twenty years (1989-2008)” concluded that out of 2330 articles, 2118 (91%) were published in periodicals, only 212 (9%) were presented in the conferences. Most papers were in the field of pharmacy, 124 papers were published by faculty members of Shahid Beheshti university of Medical Sciences in Iran in collaboration with the USA researchers (9).

In this study we aimed at to investigate the Scopus indexed written papers at faculty members of northern Iran Medical Sciences Universities.
The table 1 shows progressive rate of the articles in the years 2009 and 2010, indicating the suitable scientific activities of the faculty members.

Table 2 shows that the H-Index published articles of the northern Iran universities had 3259 citations till 30 October 2010. In other words, mean citation to each article was 2.5 times. If we study the rate of citation based on H-Index, it would be cleared that, at present, the highest and lowest H-Index papers is for the Mazandaran and Guilan Universities of Medical Sciences respectively.

H-Index is one of the main indices of evaluating the effectiveness of articles in scientific societies. In the table 4- if look at to the H-Index universities, we would find that, always more number of articles is not indicative of more effect in the scientific society, but the rate citation is the indicative of the significance and effectiveness. In the table 5, the list of high cited articles in the field of medicine published by the faculty member of the northern Iran Medical Universities along with information given. This list is important, because the young researchers can get ideas and familiar to the titles presented internationally and act better in the selection of research topics. As shown in the table -4, among the 10 high cited articles, 4 belonged to every Babol and Mazandaran Universities of Medical Sciences and 1 to every Guilan and Golestan Universities of Medical Sciences. Interesting point in the table is that though Babol University of Medical Sciences though had lower number of articles from than Guilan and Golestan University of Medical sciences but had quiet higher citation. Therefore, it is concluded that the rate of efficiency of Babol University of Medical Sciences articles is more than other university under studies.

The comparison of table 3 with table 4 showed that of the 15 writers with highest Scopus indexed articles one person is highest cited articles. It means that, in the scientific society’s majority of the articles published by the faculty members of the university under study have not been cited. It could be concluded that the articles of high active faculty members lack the scientific qualification.

4. DISCUSSION

This study has illustrated the general image of the articles indexed at Scopus database from the Iran Northern Medical Sciences Universities. Results showed that publication of the articles by the under study universities from 2005 through 2010 had significant growth. Also, it was found that the part of Babol and Mazandaran Universities in production of good quality and high cited articles is much more than the Guilan and Golestan universities. Most of the articles published from 2005 through 2010 were orderly were in the subjects of biochemistry, genetics, biology, pharmacy, chemistry, immunology, but subject diversities varied among the universities, that is, at Mazandaran University of Medical Sciences most articles were on pharmacy, but at the Golestan, Guilan and Babol universities most articles were on the subjects of biochemistry and genetics.

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