

Correspondence

Quantity and quality of research from the Gulf Corporation Council countries

Sir,

I read with great interest the study by Dr. Deleu et al,¹ on the geographical distribution of biomedical publications from the Gulf Corporation Council countries (GCC). This excellent study raises a few points worthy of discussion. It would have been better to normalize the number of publications per the number of population per annum. This makes it easier to compare the publication rate between countries of the GCC and with those from the United States of America (USA). Most of the USA's Medline publication rates were above 15/100,000.² Since Deleu et al used the logarithmic scale to present their data,¹ it was difficult to retrieve the crude data from their graph. Using their described technique,¹ the data for year 1999 was retrieved from PubMed.³ The population data was obtained from the country profiles of the BBC News Middle East Website.⁴ The normalized rate for the biomedical publications for year 1999 was then calculated (Table 1). The Table shows that the number of publications increases with the increased population.

I agree with Dr. Deleu et al that the number of publications does not reflect quality¹ but I completely disagree that the impact factor or the citation index can be used to measure the quality of research. The impact factor has many deficiencies and can be manipulated easily. A high self-citing rate may significantly affect the impact factor.⁵ If an institution asks its members to cite its publications, despite being loosely relevant, this will increase the impact factor of its research and related journals.⁶ Furthermore, being excluded from the source journals and being included in the cited-only journals reduces the impact factor.⁷ This will be more pronounced for a narrow field speciality journal or

for a journal targeting a specific population. Simply, the impact factor is not a good measure for evaluating research quality.⁸ I think that the best measure is the benefit for both the patients and community. The real impact comes from spreading knowledge that is relevant to the local problems, improving patient management, debating on critical national health issues, along with spreading knowledge to the outside world.⁹ This can be measured within each community separately. In this context, we appreciate the value of local journals such as Saudi Medical Journal which serve targeted populations.

Fikri Abu-Zidan

*Department of Surgery
Faculty of Medicine and Health Sciences
United Arab Emirates University
PO Box 17666, Al-Ain
United Arab Emirates*

Reply from the Author

Sir,

We appreciate the comments of Dr. Abu-Zidan as well as the opportunity to address his concerns regarding certain issues in our paper.¹ We agree that a number of publications in Medline controlled for population size of each country per annum is an alternative way of presenting the data. Although we initially intended to normalize for population size and even gross domestic product (GDP), there were 2 limitations to this: firstly, the population in the Middle East is essentially very young (for example, in Oman more than 51% of the population is under the age of 15) and hence cannot be compared to the population of the USA or Europe.¹⁰ Secondly, in a rapidly growing population, it was essential to have

Table 1 - Medline publication rates of the Gulf Corporation Council countries for year 1999 normalized by the country population.

Country	Number of publication for 1999	Population (million)	Number of publication per 100,000
Kingdom of Saudi Arabia	433	21	2.06
Kuwait	186	2	9.30
United Arab Emirates	98	2	4.90
Oman	55	2	2.75
Bahrain	17	0.6205	2.74
Qatar	9	0.5	1.80

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census data for the last decade. To avoid these potential interpretation errors we simply decided to present the publication pattern as found and leave it up to the reader to make comparisons where desired. Referring to the logarithmic scale of Figure 1, the only and easiest way to plot all the data in one graph (number of figures are limited) was to do it the pharmacokinetic way. The presentation of data in Figure 1 allows one to observe the changing pattern in a number of publications for each country over this past decade rather than to compare between countries.

As pointed out by Dr. Abu-Zidan, the real value of the impact factor remains a matter of debate. Despite its popularity, the authors acknowledge that the parameter should be used with careful attention to the many phenomena that influence citation rates. Authors' selection of references is subject to biases unrelated to quality. Moreover, there is a tremendous bias towards English language journals compared with those of other languages. Fairness demands comparisons to homogeneous journals with the respect to confounders such as language. We agree that ultimately the best measure for evaluating research quality is the benefit for both the patients and community and we like to reemphasize the value of local journals.

Dirk Deleu, Margaret G. Northway
*Department of Pharmacology & Therapeutics
College of Medicine*

Yolande Hanssens
*Drug Information Services, Hospital Pharmacy
Sultan Qaboos University
P.O. Box 35
Al Khod
Muscat-123
Sultanate of Oman*

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