

**Editorial****Research in Iran: Look on the Bright Side****Kashani L (MD.)<sup>1</sup>, Akhondzadeh S (Ph.D.)<sup>2</sup>**

1- Infertility Ward, Arash Hospital, Tehran University of Medical Sciences, Tehran, Iran

2- Psychiatric Research Center, Roozbeh Psychiatric Hospital, Tehran University of Medical Sciences, Tehran, Iran

\* Corresponding author: Psychiatric Research Center, Roozbeh Psychiatric Hospital, Tehran University of Medical Sciences, South Kargar Street, Tehran 13337, Iran

Tel: +98-21-55412222, Fax: +98-21-55419113

E-mail: s.akhond@neda.net

Regarding to Dr. Richard Stone's report entitled "*Iran, a shady market for papers flourishes*" published in Science 15<sup>th</sup> September 2016. There are several points in the articles that require particular attention. The report, although presents some truth, lacks depth and balance on a problem that is not unique to Iran. To begin to understand this, perhaps one needs to remind the author that Iran's scientific infrastructure took a huge blow during 8 years of Saddam Hossein's Imposed war. This resulted in massive reduction of scientific output. For example, based on Web of Science, scientific publications from Iran before the war was twice as many as that of Turkey, which has similar population and economy, but during the war it dropped to one tenth of Turkey. Iran managed to revive its scientific infrastructure over the last 25 years to the extent that in 2011 Iran had the faster growing scientific production in the world [1]. Industry followed similar suit. For example, Iran now produces 90%

of all pharmaceutical drugs, health care quality improved so that the average life expectancy increased by 10 years, number of governmental universities increased remarkably and so on. While we had to import many foreign doctors from India, Bangladesh and Pakistan to provide health care in remote areas, today Iran is totally self-sufficient for training doctors and provides quality health care even in remote areas. None of these were achieved by buying thesis in front of Tehran University.

However, two major issues resulted from such rapid progress and expansion; firstly some university particularly in small cities was established without proper planning to ensure that there will be adequate qualified faculty, laboratories and interested students to actually make a thriving academic environment. Secondly, politically motivated economical sanctions which was particularly tightened from 2011, directly targeted academic infrastructure, limited access of Iranian scientists to international collaboration,



publications and digital libraries [2]. Iranian scientists had great difficulty in purchasing consumables and laboratory equipment even for basic requirement. Whilst these unfair and unjust actions damaged the body of Iranian scientific infrastructure, it was also perceived as waging war against the very essence of the internationally recognized concept of “*academia*” and “*universitas*” in Iran. However Iran continued to produce some of the best graduates in the world. In fact many graduates of Iranian universities can be found in top Universities such as Oxford, Harvard, Cambridge, Stanford and so on. Iranian engineering graduates are among the highest scoring students in Stanford University entry exam year after year. Medical graduates get into British, America, Canadian, and other medical systems with little effort.

Perhaps Dr. Stone would like pay attention to hundreds of low profile open access scientific journals from Asian and Eastern European countries that completely change the face of scientific publications. I believe, the impact of years of sanction on Iran, or mushroom like grow of unregulated open access journals on the quality of science produced and published are by far more than what is happening by a few opportunists in front of Tehran University.

Iranian government is working hard to block any avenue for these opportunists. For example, in the last 3 years, the Ministry of Health and Medical Education has been focusing on the quality of science rather than the number of papers published. Funding for research has moved from allocated budget to each university based on size to a competitive environment in which proposals are submitted to a newly established and independent grant awarding body called National Institute for Medical Research Development (NIMAD) where international referees review each proposal. Major reference laboratories have been setup according to international standard in the top 10 Universities in Iran. Today more than 10 large cohort and 30 disease registry programs are funded by the Ministry of Health and Medical Education in different part of the country. All these steps are taken to ensure that high quality and relevant research is carried out not just to solve domestic scientific problems but to ensure that Iran contribute to the knowledge of mankind like any other country. It is now expected that following the Joint Comprehensive Plan of Action (JCPOA) of Iran, the international scientific community recognize the hardship that Iranian scientists have been through and provide extra support to embrace them back into the community.

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## References

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