



Pharmacy teaching and practices problems in Developing Countries: Review

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Conflict of Interest: No

Copy Printing: Permission

Date of Publish: 06-10-2010

Publishes by:

DRUNPP Sarajevo Publishers, Bosnia

ISSN: 1986-8111

ABSTRACT

Objective: The objective of this research is to highlight the problems faced by pharmacy teaching and practices in developing countries where professionals have scarcer resources, with partial or no information systems. The paper also draws attention towards the brain drain of pharmacist from poor countries to rich countries.

Methods: Review of articles published in the previous 5 years was done. However, some of the older articles and research papers were also used to portray the historical background of pharmacy in developing countries.

Conclusion: A number of possible solutions have been presented to reduce the brain drain of health professional and to increase the quality of teachings of pharmacy in developing countries.

Keywords: pharmacy, teaching, information, brain drain, developing countries

Over the last 20 years pharmacy teachings and practices have changed consistently. In a world, which is continuously changed by information technology, the challenges faced by academic circles are no longer shaped by information accessibility but rather, by availability. This availability of information is an immense problem in developing countries.

In many parts of the world, pharmacists have played a significant role in provision of pharmaceutical care services. In addition, it is also widely believed that pharmacists can make a great contribution to the provision of

the primary health care, especially in developing countries (Smith, 2004; Jesson, 2006).

Their role varies in different parts of the world: some deal with the preparation and supply of medicines, while some focus on sharing pharmaceutical expertise with doctors, nurses and patients [11].

The International Pharmaceutical Federation (FIP) and World Health Organization (WHO) developed the concept of "The seven star pharmacist", which stated that a well-rounded pharmacist should be a compassionate, care giver,

decision maker, active communicator, lifelong learner and good manager; and should possess good leadership qualities and the ability to be a teacher and researcher (Reyan, 2007). According to WHO, future pharmacists must possess specific knowledge, attitudes, skills and behaviors in support of their roles (Ross, 1992; Zemit, 2003). Due to the increasing demand for pharmacists in public health, WHO recommends a ratio of one pharmacist per 2000 population in order for optimal health care to be delivered. Besides their pivotal role in public health, pharmacists can also act as advisors to physicians and nurses and contribute to policy decisions (Pharmacy Education and Healthcare, 2007).

Problems in Developing Countries:

There are significant problems in the purchase, distribution, and the use of medicines all around the world, particularly in developing countries, and social pharmacy researchers should be seizing opportunities to use their expertise to address these. This would involve making strategic alliances with those already working in these areas in the case of developing countries there is a

strong community of “rational use of drugs” experts, (Ross, 1992) the World Health Organization (www.who.int), Management Sciences for Health (www.msh.org), and other organizations with expertise, experience, and commitment to improving access to and use of medicines in developing countries.

Another problem is about the research in pharmacy, Puspitasari (2009) review illustrate that social pharmacy research is carried out in a very small number in developing countries. Despite of social pharmacy’s vital role to enhance the quality of life, it is still neglected. His search of English language publications on counseling on prescription medicines in community pharmacies found studies from the United States, the United Kingdom, the Netherlands, Finland, Australia, and Canada. This closely mirrors the development of social pharmacy expertise. Ryan (2007) found that despite of its importance, social pharmacy is being taught in 17 countries those above (although social pharmacy is taught in Finland, Finland was not included) plus 4 more Scandinavian countries, 3 more

European countries, New Zealand, and 4 countries in the developing world.

Low income level in developing countries is also considered a huge barrier in improving the quality of life. It was generally said, Pharma has stayed away from selling in developing countries due to uncertainties in their level of patent protection. The number of developing countries engaging, or seriously threatening to engage in compulsory licensing is a tiny minority (the most obvious examples being Brazil, Thailand, and India). The vast majority of developing countries lack the economic power to be able to produce credible threats of such licensing. The most concise way of referring to this problem is the 10-90 gap, in which 90% of the world's pharmaceuticals are produced for 10% of the world's population. Obviously, there is significant disagreement on the normative implications of this issue — whether Pharma ought to be selling medications at substantially reduced prices in developing

countries — but the primary reason they don't do so is not because of uncertain patent protections, but because they cannot capture the rents they are seeking in developing countries or, if you prefer, because they cannot earn a return on their investment (<http://healthcare-economist.com/2008/05/18/pharmaceuticals-in-developing-countries/>).

Brain Drain of Pharmacist:

Increase in globalization and the labor market of professionals and technicians appears to be the main causes of brain drain. Countries' signing free trade agreements with other countries also encourages professionals and technician to travel from low salaried countries to high salaried countries. This also increases the move towards the standardization of education systems. In most of the Asian and African countries curricula is mostly adopted from those in US, UK or any other developed country (irrespective of their own need), which make it more easier for health professionals to move into the overseas labour markets for better future.

This emigration, which includes, doctors,

nurses and pharmacists, from poor countries to rich countries is a noticeable problem. In most of the developing countries essential working conditions are not met. Social or personal development opportunities are limited making it difficult for health professionals to remain satisfied. This also causes the shortage of health professionals in developing countries. For example, in a country such as Malaysia, which is one of the leading countries in terms of economic growth in the south-east Asia region, there is an acute shortage of pharmacists practicing in community settings (Sing, 2001). Data for 2006 showed that the ratio of pharmacists to population in Malaysia was 1:6207 (MoH, 2003).

African nations such as Ghana paints a gloomy picture of pharmacists' ratio, the shortage of pharmacists is even worse: it has been reported that only 619 pharmacists are serving 2.9 million people in Greater Accra (Frances, 2008), which is far behind the WHO recommendation (1:2000). In Zimbabwe, only 20% of Zimbabwean pharmacists were reportedly still in the country at the end of 2003.

Possible Solutions:

We would like to offer some possible solutions first long-term partnerships, which include funding and training to strengthen research, clinical and teaching infrastructure of institutions in developing countries can adopted from those in developed countries. This would ensure the survival of academic and teaching institutions in developing countries. There are always opportunities to work with universities and build capacity in pharmacy research in developing countries. Multinational pharmaceutical organizations of developed countries can also offer number of research grants to universities in developing countries that will results a good and cheaper research. All this money rushing into emerging market pharmaceuticals will better the health of those living in poorer regions around the world.

Grants could also be made available to attract professionals to return to their home countries, and developed countries could be encouraged to set up distance education programs for professionals in

developing countries. It was said earlier that the pharmacy curricula of developing countries can be adopted from developed countries but it must be modified according to their own requirements. Governments in developing countries could do more to retain and facilitate the return of professionals by creating favorable working conditions.

Pharmacy students from developed countries could be encouraged to participate in trainings or workshops in developing countries. Most of the pharmacy schools in South Asian countries, particularly in Pakistan, are surviving even without an attached hospital where the pharmacy students can get basic clinical knowledge.

To correct the problem, it is better to introduce a pharmacy residency program or specialized internships at the postgraduate level in areas like clinical pharmacy.

References:

Frances OD, Felicity S, Rita S: Addressing the workforce crisis: the professional aspirations of pharmacy students in Ghana. *Pharm World Sci.* 2008, 30(5):577-583.

Gilbert L: To Diagnose, Prescribe and Dispense: Whose Right Is It? The Ongoing Struggle Between Pharmacy and Medicine in South Africa. *Current Sociology* 2001, 49:97-118.

Weblink assess date: 01-07-10. <http://healthcare-economist.com/2008/05/18/pharmaceuticals-in-developing-countries/>

Jesson J, Bissell P: Public health and pharmacy: A critical review. *Critical Public Health* 2006, 16:159-169.

Ministry of Health: Malaysia Health Statistic: Number of Pharmacist and Ratio. 2008 <http://micpohling.wordpress.com/2008/03/08/malaysiahealth-statistic-number-of-pharmacist-and-ratio/>].

Pharmacy Education and Healthcare. 2007 (http://www.gcu.edu.pk/Library/NI_Feb07.htm)

Puspitasari H, Aslani P, Krass I.A review of counseling practices on prescription medicines in

community pharmacies. *Res Social Admin Pharm* 2009; 5: 197–210.

Ryan K, Bissell P, Anderson C, Morgall Traulsen J, Sleath B. Teaching social sciences to undergraduate pharmacy students: an international survey. *PharmEduc* 2007; 7: 1–9.

Ross-Degnan D, Laing R, Quick J, et al. A strategy for promoting improved pharmaceutical use: the international network for rational use of drugs. *Soc Sci Med* 1992; 35: 1329–1341.

Sing WS: Pharmacy practice in Malaysia. *Malaysian Journal of Pharmacy* 2001, 1:3-9.

Smith F: Community pharmacy in Ghana: enhancing the contribution to primary health care. *Health Policy Plan* 2004, 19:234-241.

Zammit D: How to make ethical decisions. *The Pharmaceutical Journal* 2003, 271:468.