

Introducing social pharmacy courses to pharmacy students in Malaysia

MOHAMED IZHAM MOHAMED IBRAHIM, RAHMAT AWANG & DZULKIFLI ABDUL RAZAK

School of Pharmaceutical Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia

SUMMARY Faculty in the Social Pharmacy area believe that curricular changes accommodating components or subject-matter in social/behavioral courses would constitute a substantial increase in the quality of pharmaceutical education and in students' competency. Based on the fact that students must be provided with more opportunities and exercises that elevate communication competence, critical thinking, problem solving, and analytical and ethical reasoning, a list of social pharmacy-related courses was introduced into the undergraduate curriculum. This paper is intended to describe the significance and relevance of a sample program in social pharmacy—'Drugs in Developing Countries'. It has two components: (1) mid-term projects, 30%; and (2) final exam, 70%. The use of various learning modalities in this course as well as the introduction of new topics aims to provide students with a better understanding of the application of social pharmacy-related concepts to the Malaysian health care system.

Introduction

The view that pharmacy is a profession is well accepted by most health professionals and is viewed as such because of its claim to a unique specialized body of knowledge about drugs and their use (Wertheimer & Smith, 1989). To be a pharmacist, a student must not just become proficient in the application of this knowledge base, but must also understand human behaviour as it relates to health and illness. The development and incorporation of pharmaceutical sociology components have been partially responsible for this progression in academic and practice orientation as has been suggested by the Nuffield Foundation (1986). Based on the fact that students must be provided with more opportunities and exercises that elevate communication competence, critical thinking, problem solving, and analytical and ethical reasoning, a list of social pharmacy-related courses was introduced into the undergraduate pharmacy curriculum at the Universiti Sains Malaysia: (1) Drugs in Developing Countries; (2) Communication Skills; (3) Pharmacoepidemiology; and (4) Pharmacoinformatics.

This paper discusses an elective course—'Drugs in Developing Countries'—which has been offered for the last

four academic sessions (i.e. since the 1992–93 academic session). In addition, to implement change in Malaysian Pharmacy education the Social Pharmacy faculty addresses the necessary strategies taken to introduce a Social Pharmacy syllabus in the Malaysian Pharmacy Education curriculum and to develop a new Social Pharmacy discipline, which is an entirely new area in the Malaysian health care arena. It is believed that curriculum development that is well planned and skilfully facilitated can be critical to the achievement of a programme such as the Social Pharmacy courses (Birch, 1992).

Rationale

Malaysia as a developing country has its own unique features. It is a multiracial and multicultural country. In Malaysia, there is a wide range of medical (e.g. modern, traditional and homeopathy) and pharmaceutical options available for the various ethnic groups (e.g. Malay, Chinese, Indian, Iban, Kadazan, etc.) for the treatment of physical discomfort and emotional distress. Medical systems in Malaysia, like social systems in general, are rooted in a cultural matrix. The practice of medicine, therefore, has evolved as a result of its setting in a unique cultural context. Another interesting feature is that the medical system is controlled by the physicians, where most of the dispensing of drugs in the private sector is done by physicians, and pharmacists in the community setting have to rely mostly on Class C drugs (i.e. those that can be prescribed by a pharmacist) and OTC products (over-the-counter medicines) for their business income. In addition, most of the drugs available in the Malaysian market are imported drugs and the pharmaceutical market is controlled by multinational industries.

Pharmacy practice and pharmacy education in Malaysia are very much dependent on the overall health-care development that is currently taking place. In the last

Correspondence: Mohamed Izham Mohamed Ibrahim, PhD, Social & Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia. Tel: (04)-6577888, Ext. 2579. Fax: (04)-6570017. Email: mizham@usm.my

Table 1. Students enrolment on the course

Academic session	Year	No of students	Academic session	Growth rate (%) (from previous year)
First	1992–93	22	1st to 2nd	13.64
Second	1993–94	25	2nd to 3rd	96.00
Third	1994–95	49	3rd to 4th	16.34
Fourth	1995–96	57	–	–

24 years, pharmacy education programmes in Malaysia have put increasing emphasis on basic pharmaceutical sciences and pharmaceutical technology. For this reason, students in training receive very little exposure to the social-behavioural factors involved in illness and health and other factors that directly affect or are affected by the delivery of health services.

In the future, pharmacy graduates must not just have much greater knowledge of drug products and their effects on the human organism, but they have to have a better understanding of and competence in the fields of human behaviour, cultural determinants, health service systems and their economics (Grussing, 1987).

Design of the course

The 'Drugs in Developing Countries' course is a two-unit elective course (18 hours of lectures and 6 hours of presentations or tutorials) that has been offered at the School of Pharmaceutical Sciences, Universiti Sains Malaysia since the 1992–93 academic session. It is open to all pharmacy students, but priority is given to the first-year pharmacy students because it is intended as an introductory course giving initial exposure to the students. It has generally been quite popular compared with the other eight elective courses and several optional courses (i.e. courses offered by other schools) offered throughout the four-year pharmacy programme, with enrolment closing at the 57-student maximum during the recent 1995–96 academic session (see Table 1). The class format is both lecture and class discussions. Topics are usually introduced by a lecture, and this is followed by an open discussion during the lecture or during the last 10 minutes of a particular lecture. There is no tutorial, but students are allotted time for self-study.

Course objectives

The purpose of this course is to introduce to students a number of issues related to drug use, particularly in developing societies such as Malaysia. It reviews the historical development of modern drugs and its effect on the practice involving and usage of drugs. This course also introduced a number of international concepts and programmes (e.g. WHO's policies and principles), and practice in handling of problems leading to drug use, especially in developing societies. The roles of the pharmacist in this connection are also discussed.

As a result of the satisfactory completion of this course, the student should be able to:

- (1) acquire high consciousness/realization of current issues related to health and pharmaceutical problems within the society in developing countries;
- (2) have a critical way of thinking based on current health care development;
- (3) evaluate alternative ways of solving problems related to health and pharmaceutical issues.

Course content (1992–94 versus 1995–96)

Six lecture topics have been introduced to students since the course started in the 1992–93 academic session. Until the introduction of this course, the general orientation was very much guided by basic and clinical sciences. In the 1995–96 academic session, a couple of new topics were added to the syllabus, to ensure the objectives of this course will be achieved. The contents also include discussion on the behaviour of the pharmaceutical industry, health professionals and patients. On the first day of lectures, students are given a study guide which has the course objectives, list of topics, references and grading system. The list of topics is shown in Appendix 1.

The 'Drugs in Developing Countries' course begins with an introductory lecture that deals with the history and development of modern drugs. It identifies major factors in the development of modern drugs, assessing the importance of modern drugs from the historical perspective of health care and the development of the modern drug industry.

The second topic emphasizes the major criteria in identifying the role of modern drugs such as therapeutic needs, safety and effectiveness qualities, related ethical issues, cost and risk factors involved.

In the next topic, health trends and problems in developing countries—especially in Malaysia—are discussed. Also included in the discussion are the trends of modern drugs utilization versus traditional medicines, and the prescribing behaviour of physicians in relation to modern drugs. As much as possible local scenarios were used as the basis. Other aspects are marketing strategies and their effect on consumers and patients, and issues surrounding the quality of modern drugs information available to the public as well as to the health care professionals.

Major characteristics of the health care system are then reviewed, for example, the types and distribution of local health services in the Malaysian health care system, the need for primary healthcare, the role and position of the pharmacist in the system, and the current types and scope of pharmacy services. These factors are compared with other developing and developed countries.

On the topic of drug promotion and advertisement the many perplexing questions involved in evaluating pharmaceutical promotion and trends in advertising pharmaceuticals are discussed, especially in the Malaysian context.

The concepts and principles of 'Essential Drugs' and the rational use of drugs are discussed next. Issues that are included in the discussion are the evaluation, criticism and the disadvantage of the concepts. Students are then given alternative steps to resolve the issue and discuss current developments in Malaysia.

On the topic of national drug policy, this is explained to students in terms of the objectives, importance, planning and implementation of a national drug policy in a particular country. The class reviewed current Malaysian regulations on drugs as compared with certain developed countries, and their implications for developing countries (e.g. problems of biopharmacy, pharmacogenetics, etc.).

Explanation was then given to students regarding health expenditure, the total spent on drugs as part of overall health expenditure, and the rising cost of health care. These factors will force decisions to be made regarding both the effectiveness of new medical technology or new drugs development and the overall cost implications. Students are presented with various techniques to evaluate the economic contribution of specific drug therapies at a policy level and for individual patient needs. In addition, issues on pricing policy which would reduce over-consumption, save money, aid industry and promote research are highlighted.

Grading and evaluation component

The student grading system is divided into two components: coursework (30%) and a final examination (70%). The coursework is divided into three sections. To carry out this coursework, students are divided into several groups. All assignments for the coursework need to be carried out and presented in groups of 6–8 students per group. This number might decrease or increase based on the number of enrolments. Students are asked to work as a team and the importance of the concept of team building is emphasized early in the semester and this is evaluated.

The first section of the coursework is a short project (i.e. 10% for a written report) and group presentations (5%). The evaluation of the presentation is based on content, style and ability to respond to questions. The second section is an assignment in the form of book review (e.g. *The Politics of Essential Drugs* by Zafrullah Chowdhury [London, Zed Books, 1995]). One particular book will be used in each academic session. Chapters of a book are then taken separately and given to each group. Students are required to read, comprehend and summarize the assigned chapter. The summary report (2–3 pages) and presentation were assigned 10%. The last section of the coursework is a report (5%) on students' visit to government or non-government organizations such as district hospital, public health office, rural health care centre, midwife clinic and consumers' organization.

All assignments or reports need to be typewritten and follow standard guidelines. The use of statistical procedures and pictorial statistics wherever necessary is encour-

aged. The submission of all reports and presentations needs to be done during the last two weeks of the semester.

The final examination requires students to answer five out of six essay questions (20% for each question). The type of questions varies. Questions might ask for the definition of a principle or concept, require a major essay on a particular topic, or questions where students need to give their own ideas and arguments to support their position on a particular topic or case.

Selected texts and supplementary materials

Use of several excellent available texts (approximately 25 texts) containing ideas and concepts by well-respected authors and practitioners ensures that students are exposed to points of view other than the faculty's. Some of the text are listed below (see also Appendix 2):

- WHO (1988) *The World Drug Situation* (Geneva, WHO);
- Illich, I. (1976) *Limits to Medicine: Medical Nemesis—the Expropriation of Health* (London, M. Boyars);
- Wertheimer, A.I. & Smith, A.C. (1989) *Pharmacy Practice: Social & Behavioral Aspects* (Baltimore, University Park Press);
- Spivey, R.N., Wertheimer, A.I. & Rucker, T.D. (1992). *International Pharmaceutical Services: The Drug Industry and Pharmacy Practice in Twenty-Three Major Countries of the World* (New York, Haworth Press).

This step is taken as an important consideration. A series of videotapes produced by the NGOs (e.g. Consumer International) is very beneficial, especially to the students. The tapes (e.g. 'Talking Medicines', 'Prescribing Rationally Not Fashionably', 'Generic Substitution') are used as supplementary materials and are shown to students at the end of the semester.

Student perception

The driving force for offering a social pharmacy course and setting up a discipline of social and administrative pharmacy at the School of Pharmaceutical Sciences, Universiti Sains Malaysia originally was faculty interest in the area. However, student interest in the course has been high since its inception, and the course is almost always filled. Student evaluations are generally quite positive. The responses of a recent surveys conducted are shown below (scale: 1 = strongly agree, 2 = agree, 3 = not sure, 4 = disagree, 5 = strongly disagree):

- (1) The topics discussed have been taught at the pre-university level (mean = 4.46).
- (2) The topics discussed have been or will be taught in other pharmacy courses at the 100, 200, 300 or 400 level (mean = 3.48).
- (3) I felt free to ask or to discuss things with the faculty in the class (mean = 2.48).
- (4) The course contents are useful for my future clerkship (mean = 1.72).
- (5) I am sure that I can use the information/knowledge/skill gathered from the course in future (mean = 2.16).

- (6) I have found that the course being taught is very easy to follow and understand (mean = 2.80).
- (7) The grading system and evaluation have been clearly explained (mean = 2.12).
- (8) All the topics in this course have been clearly discussed (mean = 2.90).
- (9) All coursework is very interesting and stimulating (mean = 2.56).
- (10) The coursework given is related to the lecture/syllabus (mean = 2.38).
- (11) The lectures are very relevant to the pharmacy profession (mean = 1.78).
- (12) Overall the course is one of the best and most interesting courses that I have ever had (mean = 2.70).

Conclusion

The rationale of developing a programme in social pharmacy and consequently setting up a separate discipline in Malaysian Pharmacy education is to:

- (1) bring more knowledge of human behaviour to the student;
- (2) develop models for the study of patients'/consumers' behaviour;
- (3) provide improved ways and means for students to learn about the nature of the multiple factors—social, psychological and biological—which affect the maintenance of health, and the prevention of disease and disability;
- (4) make possible the development of behavioural science teaching—sociology, anthropology, social psychology, economics, political science and history—as an integral part of the modern pharmacist's education.

The course described in this paper is such a course, which incorporates the above factors. The section on 'Student perception' clearly indicates that the course has been well received.

Social pharmacy programmes can be approached through a variety of course types and formats. There has been considerable serious discussion at the Universiti Sains Malaysia regarding the incorporation of social-behavioral concepts and principles into other courses throughout the pharmacy curriculum (Dolinsky, 1990). Students may be taught social pharmacy concepts and principles in every subject. For example, pharmacy economics, pharmacoepidemiology, sociobehavioral aspects of health and ethical issues could and should be discussed during lectures and prior to clinical rotations.

The shift in pharmacy practice from a product- to an information- and patient-based orientation, affects patient knowledge, and increases liability and health care costs, which all continue to place pharmacists in a position of great responsibility. Therefore, social pharmacy in Malaysia is an area of extraordinary promise. As proactive pharmacy educators, we have a responsibility to provide a strong foundation for such endeavours.

Notes on contributors

MOHAMED IZHAM MOHAMED IBRAHIM, PhD is a lecturer in the Social & Administrative program and a consultant to several

government and non-government organizations. He is also an associate at the National Poison Center, Malaysia. Most of his research and publications are in the area of social and behavioural aspects of health.

RAHMAT AWANG, PharmD is a lecturer at the School of Pharmaceutical Sciences and Head of the Drug and Poison Information Unit of the National Poison Center, Universiti Sains Malaysia. Most of his work is related to training in the Clinical Pharmacy/Toxicology area.

DZULKIFLI ABDUL RAZAK, MSc is the Director of the National Poison Center and a Professor at the School of Pharmaceutical Sciences Malaysia. He is a pharmacist/pharmacologist by training. He frequently serves as a consultant with the World Health Organization, and is also a member of the WHO Expert Advisory Panel on Drug Policies and Management.

References

- BIRCH, D.A. (1992) Improving leadership skills in curriculum development, *Journal of School Health*, 62(1), pp. 27–28.
- DOLINSKY, D. (1990) Planning a social/behavioral component of a pharmacy curriculum, *American Journal of Pharmaceutical Education*, 54, pp. 377–380.
- GRUSSING, P.G. (1987) Curricular design: competency perspective, *American Journal of Pharmaceutical Education*, 51, pp. 414–419.
- NUFFIELD FOUNDATION (1986) *Report of a Committee of Inquiry appointed by the Nuffield Foundation* (London, Nuffield Foundation).
- WERTHEIMER, A.I. & SMITH, M.C. (1989) *Pharmacy Practice: Social and Behavioral Aspects of Health* (Baltimore, Williams & Wilkins).

Appendix 1: Course topics from 1992–94

- (1) The history and development of modern drugs
- (2) The roles of modern drugs in the development of a healthy society
- (3) Drug usage in developing societies
- (4) Health care system in the developing countries
- (5) Essential drugs and rational drug use
- (6) Towards a national drug policy
- (7) Invited speakers from industries, government bodies and/or consumer organizations

New topics introduced into the course during the 1995–96 academic session:

- (1) Drugs promotion and advertisement
- (2) Drug pricing policy
- (3) Concepts and the importance of pharmacoconomics in pharmacy practice

Appendix 2: Texts

Below are some of the texts used in the class:

- (1) *The World Drug Situation* (WHO)
- (2) *Limits to Medicine: Medical Nemesis—the Expropriation of Health* (Ivan Illich)
- (3) *The Development of a Medicine* (R. B. Smith)
- (4) *Pharmaceuticals and Health in the Third World* (S. J. Patel)
- (5) *Pharmacy Practice: Social and Behavioral Aspects* (A. I. Wertheimer & M. C. Smith)
- (6) *The Wrong Kind of Medicine* (C. Medawar)
- (7) *Textbook of Community Medicine in South-East Asia* (W. O. Phoon & P. C. Y. Chen)
- (8) *The Practice of Community-oriented Primary Health Care* (S.L. Kark)
- (9) *Improving Health Care Management* (G.F. Wieland)

- (10) *The Use of Essential Drugs—Model List of Essential Drugs* (WHO)
- (11) *The Rational Use of Drugs* (WHO).
- (12) *Guidelines for Developing National Drug Policies* (WHO)
- (13) *Report of the Sale of European Pharmaceutical Products in the Countries of the Third World* (Council of Europe Parliamentary Assembly)
- (14) *Adverse Effects: Women and the Pharmaceutical Industry* (K. McDonnell)
- (15) *The Pharmaceutical Industry in ASEAN Countries: Malaysia* (M. Musa)
- (16) *Commercial Drug Compendium Information: A First World/Third World Comparison* (A. M. Pleil & D. S. Pathak)
- (17) *Practising Health for All* (D. Morley, J. Rohde & G. Williams).

Copyright of Medical Teacher is the property of Carfax Publishing Company and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.