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Original Article

PROFESSIONAL TRAINING AND ROLES OF COMMUNITY PHARMACISTS IN MALAYSIA: VIEWS FROM GENERAL MEDICAL PRACTITIONERS

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ABSTRACT
Aim: This pilot study aimed to explore the perceptions of general medical practitioners (GPs) towards the professional training and roles of community pharmacists.
Methods: A self-administered questionnaire was distributed to all private clinics (n=160) run by GPs in a northern state of Malaysia. The instrument contained questions to evaluate the practitioners' level of agreement using a 5-point Likert-type scale.
Results: Of 160 GPs, 80 returned the questionnaire (response rate 50%). The respondents agreed that: GPs should consider the community pharmacists' recommendations whenever there is/are any problem(s) with the prescriptions given by them (46.3%); community pharmacists are the best healthcare professionals to educate patients about safe and appropriate use of medications (52.5%); the pharmacy profession had undergone a major metamorphosis from a product-oriented profession to a more patient-centred and outcome-oriented one (61.3%); if dispensing separation is implemented, they will work closely with the community pharmacists in monitoring patients' pharmacotherapeutic outcomes (77.5%).
Conclusion: The current findings suggest that GPs would support an extension of the role of the community pharmacists in number of activities of patient care activities such as medication counselling. Thus, suggesting potential collaborative care between GPs and community pharmacists towards patient care and the needs to develop and incorporate topics on inter-professional relationship in the current medical and pharmaceutical education curriculums.
Keywords: Community pharmacists, roles, training, general practitioners, perceptions.
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INTRODUCTION

Community pharmacists are the most accessible health professionals to the general public and in many parts of the world, pharmacists are increasingly being recognized as a source of professional health-related advice.[1] They supply medicines in accordance with a prescription or when legally permitted, sell them without a prescription and they maintain links with other health professionals in primary health care.[2] In recent years, pharmacists have become increasingly involved in patient care and have expanded their traditional role of preparing and dispensing medications to also influencing the prescribing process and delivery of pharmaceutical care.[3-5] In tandem with this, there has been a shift within community pharmacy practice; increasingly, patients are turning to pharmacists for a more holistic approach to their care.[6]

In an institutional setting such as a hospital, general medical practitioners are more familiar with the roles of pharmacists, who are often part of the healthcare team.[7] In the context of community-based settings, however, the links between general medical practitioners and community pharmacists are less formalised.[8] Malaysia's healthcare system is a two-

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tier system consisting of public and private sectors. The public healthcare system, funded fully by the government and financed mainly from taxes on earned income, provides services to everyone through a network of tertiary care centres, general hospitals, district hospitals and health clinics. The private sector, which consists of private hospitals and general practice (GPs) clinics, provides both curative and preventive health services on a non-subsidised, fee-for service basis and mainly caters for those who can afford to pay. In the context of private sector, medication utilization in the community setting, at current, dispensing of prescription medicines still follows a traditional 'dispensing doctors' system in which general practitioners still dispenses medications as a part of their professional practice. The 1952 Poison Act[13] and other laws in place granted the right for registered medical practitioners to exercise this responsibility and presumably the ongoing controversies and imbroglio stem from this Act. Therefore general medical practitioners practicing in private clinics (GPs) are legally allowed to prescribe and dispense medications in their clinics. From the statistics quoted in the Malaysian Pharmaceutical Services Division 2006 Annual Report,[14] there were 4,266 registered pharmacists working in both public and private sector in Malaysia (i.e. a pharmacist-population ratio of 1:5,860). In term of community pharmacies, there are about 1,700 pharmacies nationwide (i.e. pharmacy-population ratio of 1:15,828) (unpublished report from Pharmaceutical Services Division, Ministry of Health, Malaysia).

An international study had highlighted the professional cooperation between prescribers and pharmacists in cognitive services such as patient counselling, drug therapy monitoring and adverse drug reactions (ADR) reporting.[9] Different perceptions by pharmacists and general practitioners concerning the pharmacist's role could reduce the quality of their cooperation.[10] Additionally, lack of communication and misunderstanding of roles by general medical practitioners and other members of the primary health care team has been reported to undermine the potential of the primary health care team.[11] It is important that pharmacists understand medical practitioners' expectations of them and how they value the pharmacists' input regarding patients care.[12] One of the main reasons for opposing introduction of separation of functions between clinics and pharmacies in Malaysia is the acute shortage of community pharmacists practicing in the country compared to GPs and due to the uneven distribution of community pharmacy outlets throughout the country.[15] In the current Malaysian context, there are no published studies looking at the expectations and perceptions of GPs on the roles and training of community pharmacists. This pilot study is a cross-sectional survey to evaluate the perceptions of general medical practitioners in district A with regard to the professional training and role of CPs.

METHOD

Research design and population

A survey was distributed to all private general practitioners (GPs) in district A. Currently in Malaysia, most general practices are solo practice. A list of GPs practicing in district A was obtained from the Health Department. At the time of the study (July 2007 - October 2007), there were 388 private clinics in the state and 183 of these were located in district A. Of these, 160 general practice clinics were selected for the study. Medical specialists were excluded as most of the specialist practitioners in the community setting might also be working in institutionalised setting and may have contact with pharmacists in these institutions. This in return will make them more aware on the roles of pharmacists compared to their counterparts working as GPs. The selected clinics were approached by a researcher to ask for their willingness to participate in the survey. A self-administered questionnaire was distributed to them on the first visit and effort was made by the researcher to collect the questionnaire distributed on the same day. Completion and return of questionnaire was considered as consent to participate in the survey.

The survey instrument

The initial survey items were developed by using information from a literature review and discussions with three pharmacists, two pharmacy educators and two general practitioners. Content validity and clarity of questions of first draft of questionnaire was reviewed and assessed by five general practitioners. The final version of the questionnaire consisted of two parts: demographic data of the GPs and a set of opinion statements regarding community pharmacists' roles and training for which respondents were required to indicate their level of agreement using a 5-point Likert scale response format (from strongly agree to strongly disagree).

Data analysis

Descriptive and inferential statistical tests were undertaken to analyze the demographic characteristics and perception scales using Statistical Package for Social Sciences version 13.0 (SPSS Inc, Chicago, IL). Fisher's exact test was applied to observe the influence of age, gender and years of experience on the practitioners' opinions. Fisher's Exact test was used because it is considered to be more appropriate for skewed data, as obtained in this survey. Furthermore, as a rule of thumb, if 25% or more of the cells in the table have expected frequencies less than 5, or if any expected frequency is less than 1, then Fisher's exact test is preferred over the chi-square test. A two-sided 99% confidence level Monte Carlo estimate of Fisher's exact p-value was computed. An a priori p-value of 0.05 or less was considered to be statistically significant.

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RESULT

Demographic data

Of the 160 questionnaires distributed, 80 were completed and returned (response rate 50%). More than two-thirds (71%) of the respondents were men. Mean age (±SD) of the GPs was 45.7 (±9.9) years, with a range of 27 to 72 years. The ethnic groups of the respondents were 37% Chinese, 32% Indian, and 22.5% Malay (Table 1). More than half of the participants (56.3%) were graduates of Malaysian universities and their years of experience as GPs ranged from one to 48 years.

Table 1. Demographic characteristics of the study participants (N = 80)

Demographic characteristic	Number (%)
Gender	
Male	57 (71.3%)
Female	23 (28.7%)
Race	
Malay	18 (22.5%)
Chinese	30 (37.5%)
Indian	26 (32.5%)
Others	6 (7.5%)
Country of Graduation	
Malaysia	45 (56.3%)
Others	35 (43.7%)

General medical practitioners' perceptions toward community pharmacists' roles and training

GPs 'disagreed' or 'strongly disagreed' that community pharmacists are well educated in or well trained to perform: clinical therapeutics (42.5%); diagnosis of minor illnesses based on the patient's signs and symptoms (52.5%); selected screening tests such as glucose and cholesterol tests (52.5%). A statistically significant difference (p = 0.03) was observed between male and female practitioners in responses to the statement on clinical therapeutics knowledge. With the exception of this, there were no significant differences in responses across other demographic categories.

Responses to statements exploring the respondents' perceptions towards community pharmacists' roles are shown in Table 2. General medical practitioners 'agreed' or 'strongly agreed' that: they should consider the community pharmacists' recommendations whenever there is/are any problem(s) with the prescriptions given by them (46.3%); community pharmacists are the best health care professionals to educate patients about the safe and appropriate use of their medications (52.5%); community pharmacists are in the best position to assist patients in selecting appropriate non-prescription medications (46.3%); they feel comfortable if community pharmacists refer patients to them for further medical evaluations (76.3%); if dispensing separation is to be implemented in the future, they will work closely with the community pharmacists to monitor patients outcomes of drug therapy (77.5%). The majority (61.3%) also were aware that the profession of pharmacy has tremendously changed from a product-oriented to a patient-oriented one. There were no significant differences between the respondents' answers across demographic groups.

DISCUSSION

In the current study, nearly half of the respondents agreed that GPs should accept community pharmacists' recommendations whenever there is any problem with the prescription given by them. The mission of pharmacy practice according to International Pharmaceutical Federation (FIP) is to provide medications, other health care products and services and to help people and society to make the best use of them.[17] Furthermore, the World Health Organization (WHO) has long thought that pharmacists could make a greater contribution to the provision of health care.[2] Pharmacists are viewed as being well-placed to advise on the management of common symptoms and long-term conditions, and to participate in health education and promotion. In order to uphold all these tasks, the WHO has clearly defined the roles and responsibilities of community pharmacists. In addition to the dispensing of prescription medications, other professional roles of community pharmacists include processing of prescriptions, care of patients or clinical pharmacy, monitoring of drug utilization, extemporaneous preparation and small-scale manufacture of medicines, traditional and alternative medicines, responding to symptoms of minor ailments, informing health care professionals and public, health promotion, domiciliary services, agricultural and veterinary practice.[2]

This study showed that the majority of the GPs were well informed about pharmacists' core duties in identifying drug-related problems among patients. In recent years, the term "pharmaceutical care" has established itself as a philosophy of practice, with the patient and the community as the primary beneficiaries of the pharmacist's actions.[17] GPs were comfortable if community pharmacists referred patients to them for further medical evaluations. In line with the FIP/WHO recommendations to facilitate continuity of care among patients by referral, this will create an opportunity for collaborative patient care.[19] The Crown Report from the UK had highlighted the need of greater collaboration between the two professions, and if barriers exist, these must be overcome before comprehensive inter-professional working can be realised.[8] Moreover, the respondents were aware that pharmacy profession had

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Table 2. General practitioners' perceptions about community pharmacists' training and roles

Statement	Responses, N (%)					P – value*		
	SA	A	N	DA	SD	Age	Gen	Y. Ex
In my opinion, community pharmacists are well educated in clinical therapeutics.	4 (5.0)	15 (18.8)	27 (33.8)	22 (27.5)	12 (15.0)	0.09	0.03	0.91
I believe community pharmacists are well trained to perform diagnosis of minor illness.	1 (1.3)	8 (10.0)	29 (36.3)	26 (32.5)	16 (20.0)	0.70	0.90	0.97
In my opinion, community pharmacists are well trained to perform selected screening tests such as glucose and cholesterol tests.	0	6 (7.5)	32 (40.0)	24 (30.0)	18 (22.5)	0.25	0.69	0.72
In my opinion general medical practitioners should listen to the community pharmacists' recommendations if there is any problem with the prescriptions given by them.	8 (10.0)	29 (36.3)	26 (32.5)	7 (8.8)	10 (12.5)	0.69	0.88	0.19
In my opinion, community pharmacists are the best health care professionals to educate patients about the safe and appropriate use of their medications.	6 (7.5)	36 (45.0)	21 (26.3)	8 (10)	9 (11.3)	0.20	0.37	0.94
In my opinion, community pharmacists are the best person to assist patients in selecting appropriate non-prescription medications.	11(13.8)	26 (32.5)	26 (32.5)	11 (13.8)	6 (7.5)	0.48	0.40	0.90
In my opinion, community pharmacists are the best persons to advise GPs on rational use of medicines.	3 (3.8)	13 (16.3)	17 (21.3)	33 (41.3)	14 (17.5)	0.12	0.06	0.31
I feel comfortable if community pharmacists refer patients to me for further medical evaluations.	31 (38.8)	30 (37.5)	9 (11.3)	5 (6.3)	5 (6.3)	0.69	0.58	0.10
I believe pharmacists should be given the right to make changes to a prescription that can harm a patient without consulting the prescriber.	1 (1.3)	7 (8.8)	15 (18.8)	31 (38.8)	26 (32.5)	0.47	0.19	0.41
I believe community pharmacists should maintain a complete medication profile of the patients.	4 (5.0)	16 (20.0)	28 (35.0)	18 (22.5)	14 (17.5)	0.82	0.06	0.11
I am aware that the pharmacy profession had undergone major changes from just being a dispenser or compounder of medicine to more patient oriented profession.	9 (11.3)	40 (50.0)	23 (28.8)	2 (2.5)	6 (7.5)	0.47	0.04	0.06
In future, if dispensing separation is implemented, I will be working very closely to monitor patients' outcome of drug therapy with community pharmacists.	14 (17.5)	48 (60.0)	13 (16.3)	2 (2.5)	3 (3.8)	0.25	0.61	0.21

SA = strongly agree; A = agree; N = neutral; DA = disagree; SD = strongly disagree; Gen = gender; and Y. Ex = years of experience as a general practitioner
*Fisher's exact test was used to determine the p-values.

changed tremendously from being one concerned with the distribution of drug products to one centred on ensuring that optimal therapeutic outcomes are achieved in patients and an overwhelming proportion of the GPs agreed that if dispensing separation was to be implemented, they will work collaboratively with the community pharmacists to monitor patients' therapeutic outcomes. This is consistent with previous studies conducted which have found that prescribers are in favour of the new extended roles of practising pharmacists as patient counsellors and drug information providers, especially in developed nations.[9,16] In developed countries, professional relationships between the prescribers and pharmacists are good due to the professional services offered by the pharmacists.[16] Pharmacists are being challenged to become key players in the prescribing process, as well as becoming advocates for patients through optimizing and monitoring drug use.[3] This has resulted in provision of new and innovative services on patient care by pharmacists compared to their traditional role as drug dispensers.[6]

This pilot study showed that the majority of the GPs believed that the community pharmacists were not well-educated in clinical therapeutics, performing diagnosis of minor illnesses and selected screening tests. But this was not consistent with their agreement that the profession had undergone major changes. Some of the medical practitioners also disagreed with maintaining complete medication profiles of the patients by the pharmacists. The GPs were probably uninformed about the current aspects of pharmacists' training and curriculum which are more patient-oriented rather than product-oriented[20] and deliver in-depth training in pharmacotherapeutics. Most doctors would favour an extension of the activities of community pharmacists but have concerns about their role in screening and counselling patients and in prescribing.[21] The study conducted by Barber *et al* reported that lack of awareness emerged as a major barrier, with GPs reporting that they had little idea of the training and skills of pharmacists, and pharmacists reporting that GPs were not aware of their role in health care and believed that their contribution was undervalued.[7] These findings highlight the needs to develop and incorporate topics on inter-professional relationships in the current medical and pharmaceutical curriculum and to emphasize on collaborative care between physicians and pharmacists. Both professions should have a good understanding of and insight on practice from global perspective, professional training, rights and responsibilities as well as inter-professional relationships.

Majority of GPs (about 60% - 70%) were not comfortable with community pharmacists being given the right to make changes on a prescription that could harm a patient without prior consultation with the prescriber and disagreed that community pharmacist is the best person to advise them on rational use of medicines. In recent times, much focus is placed on the new roles of the community pharmacists in certain developed countries like Australia, USA and UK.[22] The health-advice roles of the pharmacists in these countries are highly appreciated and accepted by general practitioners. In most developed nation, general practitioners in UK for example appreciated the community pharmacists' involvement and efforts in ADR reporting and drug information.[23,24] However, a survey on physicians' opinions towards expanded clinical pharmacy services found that general medical practitioners generally opposed pharmacists performing autonomous decision-making tasks, but favoured adjunct tasks such as patient counseling.[10] Muijrers *et al* in their study reported that some aspects of the pharmacist's current role, such as providing advice and medication-control, are already well received by general practitioners.[25] However, other aspects, such as prescribing medications and adjusting an ongoing pharmacotherapy, are often less well-perceived.[25] Physicians are open to pharmacists' responsibilities related to detecting and preventing medication errors, providing patient education, and suggesting use of non-prescription medications.[12]

As this was only a pilot study, the sample of selected clinics limited to only district A, the results may not apply to all GPs in Malaysia. There may be potential respondent bias, as the response rate of 50% was relatively low. However, it is often difficult to recruit GPs into this type of research. We did not conduct a detailed missing data analysis on the non respondents. As completion of questionnaires was not done anonymously but in the presence of researcher, there may also be bias response (if applicable). Nevertheless, findings of this study could be early indicators of Malaysian GPs' perception of professional training and roles of community pharmacists in Malaysia. A nationwide survey is strongly recommended to complement the current findings and provide conclusive insights into the current issues.

CONCLUSION

Good patient care would need a strong collaborative approach between GPs and community pharmacists. This study suggests that Malaysian GPs are aware that current professional training of CP is more patient oriented; they are willing to collaborate with CP in monitoring drug therapy and adverse drug effects; they recognized the role of CPs as educators and advisers to patients on safe use of drugs and choice of non prescription drugs. However Malaysian GPs are not prepared for CPs to diagnose minor ailments, write prescriptions or to conduct screening tests. They strongly disagreed that CPs be given the right to make changes to their prescription without informing them or to maintain complete medication profile of patients.

Development and incorporation of topics related to inter-professional relationships in the current medical and pharmaceutical education curriculum will help to improve working collaboration between physicians and pharmacists.

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