General Practitioners' Perceptions About the Extended Roles of the Community Pharmacists in the State of Karnataka: A Study

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In developed countries, professional relationships between the prescribers and pharmacists are good due to the professional services offered by the pharmacists. Many researchers have found that, prescribers are in favour of the new extended roles of practising pharmacists as patient counsellors and drug information providers. In India, professional relationships between the prescribers and pharmacists require becoming strong in the interest of profession and patient care. The present study is aimed at analysing the general practitioners' perception and expectations from practising community pharmacists in four district headquarters of Karnataka. The study was conducted through convenient sampling method using a well-designed 14-item questionnaire to collect the opinions from the respondents. Likert scale was employed to assess the responses. One hundred and fifteen general practitioners have participated in the study. The respondents opined that only qualified pharmacists should run the pharmacies (4.73). Although the present D. Pharm qualification is sufficient to run the pharmacies (3.55), to meet the present health care demands, B. Pharm or M. Pharm is a must (3.86). Pharmacists are considered as a part of health care team (3.43) and should be located within the medical practice (3.82) and accepted as professional partner (3.30). Coming to the question of extended roles, some respondents have mentioned that pharmacists should check the legality and drug interactions in the prescriptions (3.20) and provide the necessary drug information. However, the respondents were against the pharmacist-run diabetic and anticoagulant clinics and against pharmacists prescribing cost-effective suggestions. Age has shown significant influence only on few opinions, whereas experience of the respondents has shown significant influence on majority of the opinions. Many respondents expressed positive opinion about the extended roles of the pharmacists but said the success mainly depends upon the improved knowledge base and effective communication skills.

Every day millions of people across the world visit community pharmacies for their health care needs. Due to free accessibility and friendly approach, pharmacists are placed at first point of contact in the health care system. Many people also visit their general practitioners to receive a prescription for their ailments before they go to pharmacy to have it dispensed. Though it is a close association of function, doctors and pharmacists are not perceived as working together, and many general practitioners do not regard pharmacists as a potential member of the health care team. In recent times, much focus was laid on new roles of the community pharmacists in certain developed countries like Australia, USA and UK[1-3]. The health-advice roles of the pharmacists in these countries are highly appreciated and accepted by general practitioners. Some international studies also corroborated the professional liaison of the prescribers and pharmacists predominantly due to pharmacists' extended services such as patient counselling, drug therapy monitoring and adverse drug reactions (ADR) reporting[4-6]. Bleiker and Lewis[7], in their survey with general medical practitioners regarding the extended roles of community pharmacists, observed that the respondents have shown positive attitude towards community pharmacists' involvement in prescribing advice, monitoring the repeat prescriptions, and formal reporting of adverse drug reactions. Martin *et al*[8] studied the pharmacists' activities and roles in UK. In their study, they found that most of the pharmacists were involved in advising the doctors and educating the patients. The findings of Spencer and Edwards[9] with respect to

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pharmacists' services suggest that general practitioners were satisfied with the pharmacist's health education activities. Bond *et al*[10] also found similar opinions from the general practitioners in their study regarding pharmacists' role in health education. General practitioners in UK appreciated the community pharmacists' involvement and efforts in ADR reporting[11] and drug information[12]. However, many general practitioners were not in favour of pharmacist–run anticoagulant or lithium or diabetes management clinics[13]. This may be mainly due to general parishioners' thinking that the pharmacists are encroaching into their area. Despite the criticism, pharmacists in developed countries have shown zeal in upgrading their knowledge and have refined their professional skills to meet the health care demands, and this has positioned them in a suitable place in the health care system. Various professional bodies of pharmacists also supported and encouraged the pharmacists' professional involvement in better patient care[14]. In countries like UK, pharmacists were also given the prescribing rights for certain diseases[15]. In Australia, community pharmacists are involved in Home Medication Review (HMR) programs.[16] In response to a GP's request, practicing HMR pharmacist visits the patient at his residence with prior appointment and analyses the clinical condition, reviews the prescription, identifies drug-related problems, if any, counsels the patient, and sends a report to the GP about drug-related problems and patient medication adherence behaviour. HMR pharmacists' services are not only highly recognized but also well paid.

At this juncture, it is worth mentioning the general practitioners' encouragement and support in acknowledging pharmacists' new extended roles and accepting them as part of health care team. In India, role of pharmacists, both in community and hospital pharmacy, is not clearly defined. They are still in fledgling state, and pharmacists are confined to prescriptions filling and stores management. With the changing scenario of pharmacy practice and with the introduction of clinical pharmacy programs, clinical pharmacists at JSS Hospital and also at JSS Community Pharmacy have taken lead in providing structured patient education, drug therapy monitoring, providing unbiased drug information to the doctors, and monitoring and reporting adverse drug reactions. In Hindu Pharmacy, Goa, pharmacists have initiated the patient-counselling and health-screening services activities. Apollo Group of Pharmacies is also showing interest in providing counselling services to their clients. In the changing trends in Indian practice of pharmacy, it is important to analyse the prescribers' perceptions towards the community pharmacists' extended roles and their expectations from the pharmacists for prospective professional liaison.

MATERIALS AND METHODS

The study was conducted by convenient sampling method in four district headquarters of Karnataka State. A 14-item questionnaire with an open-ended question for personal opinion was supplied to all the respondents. Since it was a convenient sampling method, there were no dropouts. Five-point Likert scale was employed to assess the opinions. In the Likert scale, score ranges from 5 to 1, based on the responses like "Strongly Agree" (5), to "Strongly Disagree" (1). Any score above 3 is considered as positive opinion, and below 3 is considered as negative opinion. Average of an opinion was calculated by dividing the total Likert value with the total number of respondents. Kruskal Wallis non-parametric statistical test (H-test) was applied to observe influence of age and experience on the opinions.

RESULTS

General practitioners (9115) in the age group of 30 to 58 years of both genders with practice experience of 1 to 25 years participated in the study. The respondents opined that only qualified pharmacists should run the pharmacies (4.73). Although the present D. Pharm qualification is sufficient to run the pharmacies (3.55), to meet the present health care demands, B. Pharm or M. Pharm is a must (3.86). Many respondents (66%) opined that pharmacists are a part of health care team (3.43) and should be located within the medical practice (3.82) and accepted as professional partner (3.30). Coming to the question of extended roles, 54% respondents mentioned that pharmacists should check the legality and drug interactions in the prescriptions (3.20) and provide the necessary drug information as and when required and also shoulder the responsibility of counselling the patients. However, many (76%) respondents mentioned that pharmacists should concentrate more on the dispensing activity, and they were also not in favour of pharmacists advising on cost effective prescription, maintaining referral forms for general practitioner advice, and offering health screening services. The results are furnished in Table 1.

Influence of age and experience on general practitioners opinions was studied using Kruskal Wallis H test, a non-

parametric test. Compared to age, experience of respondents has shown more significant influence on majority opinions. The results are furnished in Tables 2 and 3.

DISCUSSION

World Health Organisation (WHO) has clearly defined the roles and responsibilities of community pharmacists.[17]

TABLE 1: GENERAL PRACTITIONER'S PERCEPTION ABOUT COMMUNITY PHARMACIST'S SERVICES

Opinion	SD	D	U	A	SA	Average and Standard deviation in parenthesis
D.Pharm as Minimum Qualification is sufficient for community pharmacist	3	2	12	77	21	3.96 (0.76)
To meet present health care demands B.Pharm/M.Pharm is must	5	15	5	54	36	3.86 (1.12)
Pharmacist is considered as first point of contact in the health care	35	38	6	25	11	2.42 (1.34)
Pharmacists are part of health care team	12	18	9	59	17	3.41 (1.21)
Pharmacists should restrict themselves to dispensing activity.	1	18	8	33	55	4.05 (0.72)
Pharmacists should do patient counselling that will reduce our load	15	13	9	45	33	3.56 (1.35)
Pharmacists should provide us necessary drug information	3	16	01	64	31	3.92 (1.03)
Pharmacies should be located within the medical practice	5	9	9	68	24	3.82 (0.98)
Only qualified pharmacists should run the pharmacies	-	-	-	31	85	4.76 (0.42)
Pharmacists may give advice on cost effective and rational prescription	28	36	10	29	14	2.64 (1.35)
Pharmacists should the check the legality and drug interactions	17	27	09	42	20	3.20 (1.37)
I would accept pharmacist as my professional partner	15	23	10	45	22	3.36 (1.34)
Pharmacists may maintain referral forms for GP advice	13	37	18	35	12	2.95 (1.22)
Pharmacists may offer health screening services	52	39	10	10	4	1.91 (1.02)

SD= Strongly Disagree, D= Disagree, U = Uncertain, A= Agree, SA = Strongly Agree

TABLE 2: INFLUENCE OF AGE ON OPINIONS (KRUSKAL WALLIS 'H' TEST)

General Practitioners opinions	N1 = 50		N2 = 49		N3 = 16		K.K	P
	M	SD	M	SD	M	SD		
D. Pharm as minimum qualification is sufficient for community pharmacist	3.85	0.81	3.95	0.74	4.18	0.65	2.14	NS
To meet present health care demands B. Pharm/M. Pharm is must	3.75	1.14	3.87	1.16	4.12	0.95	1.53	NS
Pharmacist is considered as first point of contact in the health	2.22	1.32	2.52	1.35	2.75	1.34	2.71	NS
Pharmacists are part of health care team	3.30	1.21	3.35	1.24	3.93	1.06	4.34	NS
Pharmacists should restrict themselves to dispensing activity	3.38	1.06	4.10	1.17	4.56	1.03	9.12	S
Pharmacists should do counselling that will reduce our work load	3.40	1.38	3.56	1.38	4.06	1.12	2.95	NS
Pharmacists should provide us necessary drug information	3.83	1.18	3.95	1.01	4.12	0.95	1.10	NS
Pharmacies should be located within the medical practice	3.73	0.99	3.81	1.02	4.12	0.80	2.25	NS
Only qualified pharmacists should run the pharmacies	4.71	0.45	4.71	0.42	4.87	0.34	1.74	NS
Pharmacists may give advice on cost effective and rational prescription	2.38	1.33	2.79	1.38	3.00	1.26	3.40	NS
Pharmacists should the check the legality and drug interactions	2.87	1.31	3.35	1.39	3.93	1.23	8.34	S
I would accept pharmacist as my professional partner	3.10	1.32	3.41	1.38	4.00	1.09	6.05	S
Pharmacists may maintain referral forms for GP advice	2.65	1.18	3.08	1.25	3.50	1.03	7.16	S
Pharmacists may offer health screening services	1.67	1.08	1.87	0.93	2.37	0.95	9.83	S

M = Mean, SD = Standard deviation, KK = Kruskal Wallis value, P = level of significance, S = significant and NS = non significant

TABLE 3: INFLUENCE OF EXPERIENCE ON OPINIONS

General Practitioners opinions	N1 = 50		N2 = 49		N3 = 16		K.K	P
	M	SD	M	SD	M	SD		
D. Pharm as minimum qualification is sufficient for community pharmacist	3.74	0.86	4.07	0.65	4.41	0.51	9.77	S
To meet present health care demands B. Pharm/M. Pharm is must	3.64	1.19	3.96	1.10	4.50	0.52	6.51	S
Pharmacist is considered as first point of contact in the health	2.07	1.23	2.67	1.41	3.25	1.35	9.90	S
Pharmacists are part of health care team	3.13	1.23	3.53	1.22	4.33	0.49	11.47	S
Pharmacists should restrict themselves to dispensing activity	3.72	1.13	4.21	1.10	4.91	0.28	16. 9	S
Pharmacists should do counseling that will reduce our work load	3.25	1.39	3.71	1.34	4.50	0.52	9.62	S
Pharmacists should provide us necessary drug information	3.70	1.13	4.05	0.95	4.50	0.52	7.05	S
Pharmacies should be located within the medical practice	3.60	1.04	3.94	0.95	4.41	0.51	8.98	S
Only qualified pharmacists should run the pharmacies	4.68	0.46	4.78	0.41	5.00	0.00	5.55	NS
Pharmacists may give advice on cost effective and rational prescription	2.25	1.24	2.92	1.42	3.50	1.16	10.6	S
Pharmacists should the check the legality and drug interactions	2.72	1.28	3.51	1.13	4.41	0.51	18.7	S
I would accept pharmacist as my professional partner	2.94	1.31	3.59	1.34	4.41	0.51	14.9	S
Pharmacists may maintain referral forms for GP advice	2.50	1.12	3.25	1.25	3.91	0.79	17.0	S
Pharmacists may offer health screening services	1.52	0.90	2.09	1.14	2.75	1.05	19.1	S

M = Mean, SD = Standard deviation, KK = Kruskal Wallis value, P = level of significance, S = significant and NS = non significant

Apart from dispensing prescription medications, other professional roles of pharmacists include patient counselling, clinical pharmacy services, drug information, and health promotion. The closer professional relationship between the pharmacists and general practitioners is always essential in improving the quality of patient care. Development of liaison between pharmacists and the prescribers mainly depends on worthwhile contribution by pharmacists towards better patient care through patient counselling, drug therapy monitoring, adverse drug reaction monitoring and reporting, and unbiased drug information to the doctors. This requires the pharmacist to have sound therapeutic knowledge and good communication skills. In India, as per the requirements of Section 65(1) and (2) of Drugs and Cosmetics Act, Rules, 1940[18], a qualified person is essential to open and run a community pharmacy, which is otherwise called as medical shop. In a study conducted at Mysore, it was observed that 35% of the pharmacies are run by non-pharmacists hiring the license of qualified persons[19]. Profit motive is the main reason behind non-pharmacists entering into the drug store business. Thus many respondents clearly mentioned that only qualified pharmacists should run pharmacies. Majority registered practising community pharmacists in India also behave as traders. Lack of adequate professional knowledge, lack of training and lack of confidence are the major reasons for this situation, which also reflect on their professional practices. In order to provide the pharmaceutical care services such as patient counselling, drug information and health education, a pharmacist with B. Pharm or M. Pharm qualification may do the job in a better way. Majority respondents (78%) also confirmed this. For a busy practitioner, educating the patient is a big burden. Thus Indian doctors (67%) were also in favour of pharmacists providing patient counselling (3.60) like doctors in developed countries[20]. Structured patient education will improve medication adherence required for achieving better therapeutic goals and will also enhance pharmacists' professional image[21]. About 54% respondents opined that pharmacists should check the legality of the prescriptions and identify possible drug interactions. Many pharmacists do not practice this. Reasons are, as earlier mentioned, inadequate therapeutic knowledge, lack of professional development programs, and more trade interest than professional responsibility. Answering the open ended question, some respondents have mentioned that a pharmacist should dispense medication only written in the prescription given by registered medical practitioners and should do not substitute the medication without prior approval of the prescriber. This problem is seen in majority of the places of India. Thus prescribers and pharmacists should engage themselves in a bilateral discussion to solve this problem. In Australia, the Royal Australian College of General Practitioners (RACGP) and the Pharmaceutical Society of Australia (PSA) have signed a joint draft, stressing the importance of communication between pharmacists and prescribers[22]. The recommendation of the draft highlights the improved medication care through proper communication between doctors and pharmacists, using some identified range of abbreviations in their prescriptions. Such abbreviations signal the pharmacists to provide necessary counselling to the patient. This effort made a good advancement in the medication care[23]. In United Kingdom, community pharmacy model practices projects developed by pharmacists with the help of GPs and patients optimized the pharmaceutical services quality and thereby made a net societal saving of $110 per patient to the health system[24]. Such practices certainly help health care system in India also by improving the communication between the prescriber and the pharmacist. Rational and cost-effective prescriptions were best achieved when pharmacists and general practitioners worked together in UK community pharmacy model practices projects. The respondents in the present study were against the pharmacists' involvement in rational and cost-effective prescription and providing health-screening services to the patients. This may be because the respondents might have felt professionally threatened. In the interest of the patients, the Government and professional bodies like Indian Pharmaceutical Association should work together in building the trust, confidence, involvement, and mutual respect for each professional to strengthen the objectives and functioning of the health care team. Development of these elements should start from undergraduate, postgraduate clinical education of doctors and pharmacists. This suggests the need of introduction of B. Pharm professional pharmacy course.

Age and experience were the two variables considered to assess their influence on respondents' opinions. Experience has shown high significant influence on majority opinions. This may be because of increased maturity due to experience in analysing role effectiveness of the community pharmacists in the health care system.

Internationally, pharmacists are proving their professionalism by providing pharmaceutical care services such as patient counselling, drug therapy monitoring, health screening services, and by providing unbiased

drug information services to the doctors. The professional relationship between the doctors and pharmacists will be strengthened only when practicing pharmacists contribute their professional knowledge for better patient care through patient education, monitoring the treatment outcomes with health screening services.

Government also should realize that two-year diploma qualification is useful only in prescriptions filling but not helpful in providing various pharmaceutical care services. In many countries, five-year B. Pharm is considered as minimum qualification to practice pharmacy[25]. Thus the Indian Government should also consider mandating B. Pharm as minimum qualification for registration. Pharmacists with B. Pharm qualification may contribute towards better patient care and net societal savings.

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