The Role of Pharmacists in Asia and Africa
- A Comparative Study to the UK and Sweden

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Abstract

Pharmacist is an occupation existing worldwide. The primary aim of this study is to identify the public’s perception of the role of community pharmacists and their evaluation of pharmacy services in Asian and African countries. These findings have been compared to that in the UK and Sweden, in order to raise awareness that such similarities and differences may have in pharmacists’ practice with people of diverse background. The literature review looked into 25 relevant articles found mainly in Medline, from African countries Ghana, Nigeria; Asian countries India, Japan, Jordan, Singapore, Taiwan and Vietnam. Worldwide, the role pharmacists play in the multi-disciplinary team is vague. There is clear regard to their professional image in medicinal knowledge, but the perceived value of their expertise to patients’ healthcare is limited. The respondents still struggles if their inclination is on the healthcare or business practice; but a demand for health maintenance services (screening tests, lifestyle education) in pharmacies shows hope for the former. Considering the present scarce number of studies done in this topic, there is a need for far more systemic and supranational investigation in order to address how cultural differences fit into pharmacy practice context.
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Wonder what is the “story” behind the cover photo?

*Please read the Acknowledgements on Page 35.*
Introduction

Worldwide, there is no harmonized policy on pharmacy practice; operational practice varies within countries. Pharmacists’ professional standards are internationally acknowledged to protect the well-being of patients through ensuring good quality, rational use and proven efficacy of medicines. A new shift to patient-centred care in practice is also called for, involving an integrated responsibility as ‘drug therapy manager’ in the healthcare team. At the same time, acquiring new skills to meet changing patients’ needs or to expand the scope of traditional role is vital for implementing changes.

The EU countries have long been an attractive immigration destination for people outside the continent. Immigrants from Africa and Asia not only use remarkably different languages, but also have distinct cultural backgrounds. Being highly accessible, community pharmacies are believed to contribute greatly to these immigrants’ healthcare provision.

The idea of cultural competence is still under modification, but the one which is most widely referred to has been the definition by Cross et al; ‘a set of congruent behaviors, attitudes and policies that come together in a system, agency, or profession that enables that system, agency, or profession to work effectively in cross-cultural situations’. To put it into layman terms, Assemi et al makes it clear that ‘such quality enables development of the awareness, knowledge and skills required to provide care to diverse population’. This is a comparatively new quality introduced to pharmacists, and there has been discussion for its inclusion into training for pharmacy students in the US.

Patients’ acceptance to healthcare provision, either affected by the understanding of language used for communication, or cultural perception towards health belief and treatment, is greatly dependent on their cultural background. Cultural competence is directed to minimise the effects such background has in undermining therapeutic relationships.

Prejudice against healthcare providers may arise from the public’s expectations, and will influence whether they seek advice, trust the pharmacists, use pharmaceutical
services as desired. Learning about their perception towards the role of pharmacists could bring about better care addressed to their needs.

To start with the investigation of the expected role of pharmacists, there is first a necessity to define the term ‘pharmacists’.

Pharmacy is seen as a place where prescription medicines are dispensed, with over-the-counter (OTC) medicines and household toiletries can also be purchased, and ‘pharmacist’ is the person who dispenses them.\textsuperscript{4} In the UK, it has been suggested that general public often recall pharmacist as ‘chemist’ in qualitative studies.\textsuperscript{5} These two descriptors are often used interchangeably but are still well understood with no linguistic confusion. The referral of pharmacist as ‘chemist’ is due to the history when a ‘Pharmaceutical Chemist’ degree is required for practice at that time. Even until now their certificate of qualification from the Royal Pharmaceutical Society of Great Britain (RPSGB) which allows them to practice refer them as ‘Pharmaceutical Chemist’ rather than ‘Pharmacist’.

In Sweden, either an \textit{apotekare} (pharmacist) or \textit{receptarie} (prescriptionist) can be the one who dispense the medication. Although there is a clear overlap of their role,\textsuperscript{6} confusion about the definition of these terms were not mentioned by members of public in the small number of qualitative interviews which are referred to.

Similar linguistic problems or role overlapping are not documented in other countries. It is believed that the term ‘pharmacist’ is used to describe the same occupation as that in the UK.

The aim of this literature review is, to describe summary findings of the existing literature with regard to the evaluation and expectation on community pharmacists by the public in Asia and Africa, and also to compare them against that in the UK and Sweden. It is hoped through the contrast, appreciation will be learnt for the need of cultural competence in pharmacy practice. Community pharmacists are chosen instead of their hospital counterparts for the convenience of reference.
Method

The database used was Medline, with ‘Pharmacist’ being the key search word. It was combined with words which have similar meaning as ‘perception’. Search results with less than 200 articles were screened, where those exceeding were further narrowed down by an additional search word ‘public’, ‘patient’ or ‘consumer’. If the number of results were low, the third search word would be replaced by the name of the country or continent.

Figure 1 shows the search method used in Medline, the second search words are listed in a descending order of the number of search results using the logic described above.

Diagram 1 Search Method in Medline. *Evaluation: the number of results for ‘pharmacist, evaluation’ was 453, which topped the list and an optional search word had to be used.
The combination ‘pharmacist, attitude, patient’ came back with 191 results, ‘pharmacist, opinion’ and ‘pharmacist, perception’ resulted at 82 and 78 respectively. Other search combinations were found mainly to be a repetition of these searches.

Articles focusing on public’s perception with regard to the role of pharmacists brought up very few studies. Criterion for inclusion into this review could be divided into three levels. The ideal choice would be quantitative articles on patients’ evaluation of the role of pharmacist in the different countries; a second choice would be quantitative or qualitative evaluation of pharmacy services which included views towards pharmacists. When looking into Africa, the inclusion of descriptive accounts on the pharmacy ecology was necessary, as very few fitted into the first two criteria. For articles which fitted the second or third criterion, only elements that were of importance would be discussed. The number of articles fitting in the first, second and third criteria are nine, thirteen and three respectively. A summary table of relevant findings from these articles is presented at the Appendix part of this report.

In total, 25 articles covering ten countries were chosen. African studies concentrated on sub-Saharan countries Ghana and Nigeria. Asia countries stretched from Jordan in the southwest of the continent to India, and the Asia-Pacific countries like Japan, Singapore, Taiwan and Vietnam. The UK and Sweden are chosen as referral of the situation in Europe. Articles dated back from year 1992 to 2008, which are considered to be fairly recent.

The review was conducted with English being the main language as medium.
Results and Analyses

The results part will summarize what have been found in the literature relating to the topic from Asia and Africa, which can be put into particular categories. Articles found from Asia are sources from India, Jordan, Japan, Singapore, Taiwan and Vietnam; African countries included only Nigeria and Ghana.

It will start with the public’s general impression towards the role of community pharmacists, followed by looking into what their major expectations were and a description of their satisfaction towards the current portrayal of community pharmacists and pharmacy services. To get a better idea how these factors affected actual pharmacy practice, the public’s behaviour in seeking help for self-medication, obtaining drug information and general health advice or services would be scrutinized.

In order to put the summary findings into the context of Europe, the analytic part will focus on comparing the role of community pharmacists in the UK and Sweden with relevant studies. These countries are chosen because of their considerable well developed systems with a long history and also of the writer’s knowledge of them.

General Impression towards the Role of Community Pharmacists

Asians and Africans show a high regard towards pharmacists as professionals. This view is best represented by a consumer’s statement ‘pharmacists are well educated in terms of pharmacy […] they understand medicines and indications well’, and a study from Japan showed about half of the interviewed general public (46.5%; n= 5188) view pharmacists as ‘drug experts (薬の専門家)’.8

A certain degree of reliability is also cast on pharmacists by the public. In Japan, a majority expressed high and certain degree of reliability (十分信頼できる and まあまあ信頼できる; 87.8%; n= 5188) towards community pharmacists, while in Taiwan more than 80% believed pharmacists should provide drug counseling and could ensure safety in drug use (91.3%, 84.2%; n= 514). In Nigeria, pharmacy is considered reliable and a source of genuine drugs (59.2%; n= 503).10
Pharmacists were seen as medical doctor’s assistants in some countries, and one who followed doctors’ instruction with rare personal initiatives.\(^7\) In Taiwan there was a view among nearly half of the respondents that pharmacists should not question physicians about their prescriptions (47.5%; \(n=514\)). From the same study, nearly 80% (79.6%) of the subjects agreed that the only responsibility of a pharmacist was to accurately dispense medication as prescribed.\(^9\) Although the same question was not investigated in other countries, such view could be explained by the reported poor understanding of pharmacists’ role in healthcare which was shared between most of the countries this review would look into.\(^7,11,12\)

The reason behind could be due to traditional belief towards healthcare in these countries, which still lay heavily as a responsibility of doctors. The presence of dispensing doctors was mentioned in Japan,\(^13\) India\(^14\) and South Africa\(^15\), a proposed theory on the increased risk of medicinal use and a conflict of interest when a person prescribes and dispenses at the same time, lead to the introduction of pharmacists to bring about such separation. This role of pharmacists implemented by governments in these countries had an effect on the public’s perceived value of pharmacists. Narrow views towards pharmacist’s function by the public could also be explained by the relatively new work nature compared to doctors.

**Scattered View of Pharmacists as ‘Businessmen’**

The situation in Bombay was described by Kamat and Nichter where pharmaceutical companies provide incentive schemes to wholesalers, so that counter-pushing of some medicinal products could maximize profit for benefited retailers. The impact this had on the low-income public’s trust towards pharmacy was also noticeable through their description. It was stated that patients would go back to check with the doctor if a brand substitution was acceptable. The outcome was often that customers returned the substitute on the same day they bought it, saying the doctor told them not to accept it.\(^12\)

The action of framing and displaying the signature pharmacist’s license certificate for practical purposes to meet rules from Indian government was reported; in fact, some
pharmacy owners expressed experience in the retail business was far more useful than to have a pharmacy degree.¹²

About one-tenth of the Japanese public (11.8%; n= 5188) shared the view that the pharmacists were businessmen. Another study investigating patient satisfaction and dissatisfaction also showed that more than half of respondents would be dissatisfied if they found the attitude of a pharmacist businesslike.¹⁶

**Major Expectations**

This category can be further divided into the public’s expectation in service provision and attitudes. Service provision includes supplying prescribed medication and more diverse non-drug services, for example, health screening, medical testing or lifestyle promotion. Their expected attitudes will cover factors affecting consumers’ satisfaction, which are found to be judged mainly by the helpfulness and willingness to listen of pharmacists.

**Providing Prescribed Medications**

Unsurprisingly, insufficient inventory of prescribed medicines was reported to have a negative effect on patients’ satisfaction,¹¹ as this was considered to be the very basic operational criteria for pharmacies by the public. About a third of Nigerians expressed high satisfaction to the inventory for the prescribed drugs and the promise to help source scarce drugs by their current pharmacy.¹⁰ This further clarified what consumers might expect in their visit to a pharmacy.

Quick dispensing was categorized as ‘instrumental’ in Japan, which if provided would not necessarily increase satisfaction, but reduction below a specific level would trigger anger.¹⁶ In other words, consumers expected a certain degree of such service to be delivered in their patronage.
Purchase of Prescription-Only Medicines (POMs) without a Valid Prescription

Although it was not always the case in the countries this review looked into, there was clear references for the illegal selling of POMs to patients by community pharmacies in India,\textsuperscript{12} Africa\textsuperscript{17} and Taiwan.\textsuperscript{9}

In the review ‘Pharmacy in Nigeria’ it was stated that although by law pharmacies and licensed drug outlets could only provide POMs against a valid prescription, poor enforcement by the responsible authority meant patients could still buy them without a valid prescription.\textsuperscript{18}

The likelihood of POMs being dispensed without prescription in some African countries was also mentioned in qualitative interviews with practicing pharmacists. The authors also brought up whether dispensing from a prescription stood as a guarantee, when even the qualification of the prescriber was not clear.\textsuperscript{17}

It was not uncommon for patients to obtain antimicrobials without a prescription in India. These transactions by pharmacy attendants might only involve mentioning of the name or showing an old sample of the drug, and involves no presentation of symptoms.\textsuperscript{12}

Poor enforcement of governmental regulations was a clear reason why such situation happened. Nevertheless, the lack of knowledge about the correct use of medication was demonstrated to be severe in India among the public as well as pharmacy attendants. Pharmacy attendants often sold incomplete courses of antibiotics to the public. Unused or left-over medicines were also presented to the pharmacies by patients, in order to find out what they could be used for beyond the original recommendation.\textsuperscript{12}

Non-drug Services

In Nigeria, subjects considered current provision of non-drug services as ‘poor’ with reference to the ideal situation. These services were quoted as pregnancy and glucose tests, immunization, provision of health education and promotion services.\textsuperscript{10} There was no mentioning of such desire from other countries. This might be accounted for by the design of survey questionnaires to include the services for evaluation. There was no
strong proof that such services existed during the time when the survey was done, thus prejudice to new services might have been introduced. However, this still demonstrated a desire from the patients for more diversified pharmaceutical care services beyond the classic dispensing activities. It would also be reasonable to interpret such as a vote of trust for pharmacists’ or pharmacy staff’s competence. Rather unique, about three hundred Jordanians (22.9%; n=1085) also narrated going to pharmacy for ear piercing, ear irrigation or first aid services.19

**Attitudes of Pharmacists and Other Sources of Satisfaction**

An interesting phenomenon seen in Japanese consumers’ satisfaction studies was the high ranking of pharmacists’ politeness and willingness to listen to what they had to say.11,16,20 Putting together the theory that interaction with pharmacists in community pharmacies influenced consumers’ satisfaction,11 it is reasonable to believe the general public often view pharmacists’ helpfulness rather than clinical excellence as a more important quality.5,21 However one has to bear in mind how such excellence can be evaluated by the lay public. Very often they will not notice the pharmacists’ role beyond what they can see and experience directly in pharmacy premises; for example, it will be hard to recognize the support pharmacists demonstrated for other health professionals in patients’ care, which is a vital part of such excellence.

There was also a suggestion that pharmacists were expected to understand the patients’ psychology, for example to express concern when they revealed their worries and not to ask questions in an inquisitive manner.16

In addition, a small amount of subjects revealed a considerable degree of satisfaction towards being able to talk to pharmacists about matters which they could not ask doctors,16 but the study did not elaborate on the nature of such matters and the reasons behind this. Time constrain for doctors in each consultation, fear of embarrassment about asking inappropriate questions, feeling pharmacists were more approachable could all fit in the context. It also did not demonstrate whether this was a real-life situation happening in the pharmacies or not.
It seemed that people considered going to a pharmacist as patronage rather than receiving primary healthcare; the patient-pharmacist relationship was based on a service receiver-provider perspective. This supported the point that some lay public saw pharmacists as businessmen. Such view was also found in qualitative interviews with pharmacy customers in Vietnam.\(^7\)

Nevertheless, perceived poor management of patients’ information, which combined retaining prescription history, drug allergies and privacy, was also factors which consumers would mark pharmacists down on in Japan.\(^20\) The reason behind such reported distrust was not investigated by the authors.

**Factors Affecting Visits to Pharmacy and Advice-seeking Behaviour**

The reported advice-seeking behaviour from patients with regard to minor ailments to general health advice was considered low in all the countries. The frequency was roughly one in every ten people visiting a pharmacy in Singapore and Nigeria (9%; n= 181\(^22\)) and 12.0% (n= 503\(^10\)) respectively), while that in India was only 4% (n= 150).\(^12\)

Easy accessibility of pharmacists to answer any health-related problems, accessed by convenient opening hours of pharmacy\(^20\) to their availability,\(^23\) can be concluded as the main reason why members of the public seek help from pharmacists. The perceived value of pharmacists in providing such advice is mixed and highly dependent on the primary healthcare provision environment in each individual country.

Wazaify *et al* had also tried to clarify the reasons of pharmacy visits by 1085 Jordanians. A little over two thirds (67.4%) reported visiting a pharmacy at least once per month, with a reported primary reason of obtaining prescription medicines (50.3%), and only 15.0% to purchase over-the-counter (OTC) medicines.\(^19\) The first author also did a research in Northern Ireland to investigate the societal perspective on OTC medicines in a similar approach,\(^24\) which would be discussed later in the section comparing to the selected European countries (see under ‘Visits to Pharmacy and Advice-seeking Behaviour’ in ‘Comparison to the Role of Pharmacists in the UK and Sweden’ on Page 20).
Availability and Confidentiality

In some African countries which are not as well developed, pharmacies are often the first port of call for treatment. This is highly correlated to the uneven distribution of health clinics in rural parts of the country, where pharmacies have become their only available choice. Also people from low income communities often cannot afford the double cost of going to see doctors and buying medicines from pharmacies; they would rather go directly to the pharmacies to get the medicines.17

In Ghana, data suggested pharmacists were the main point of contact for treating sexually transmitted diseases (STIs) in communities, which was made attractive by the accessibility as well as confidentiality.23 While this may have been a special case of consideration for a specific disease, it does flag up one of the key advantages patients thought pharmacies have compared to clinics.

A telephone counseling service by pharmacists for the public from the Japan Pharmaceutical Association (JPA) was mentioned. The survey collected 1667 phone calls with 2602 counseling items which were categorized during a period of 9 months. Efficacy and indications of the medicine, followed by anxiety of adverse effects topped the list with 45% (n= 1667) of the total number of phone calls, or less than a third of frequency in counseling items (29.1%, 29.0%; n= 2602).25 A demand for a high quality and good attitude of pharmacist were reflected when patient seeks help from phone counseling.16 The significance of the service can be seen as the callers’ initiative to seek health advice from a pharmacist by phoning. Whether acceptance to this service was due to anonymity or availability, the study did not address.

Self-medication in Minor Ailments

The study from Singapore, which concentrated on patients’ behaviour in seeking self-medication advice, revealed more than half of the respondents claimed that they had never consulted a pharmacist for minor ailments, such as cough, cold, diarrhea, gastric discomfort etc. The number of respondents that would consult a pharmacist immediately when they experienced these symptoms was about half those who would have gone to
doctors. A majority stated that they would seek help from professionals when self-medication had failed.\textsuperscript{22}

Another perspective to patients’ evaluation on seeking advice from a pharmacist may also be determined by if they thought the consultation was worth a fee, and if so, how much. In Singapore, less than one-third of those who sought advice from pharmacists in minor ailments agreed to this view, and over half of them were prepared to pay no more than S$5 (US$3).\textsuperscript{22} In total 40% of consumers in Nigeria expressed a moderate or higher satisfaction to consultation fees for pharmacy services compared to their ideal-referent pharmacy.\textsuperscript{10} Again, this did not necessarily mean they were willing to pay for such services; the authors did not describe whether by the time the study was done such fees were applied to patients.

**General Reluctance to Seek Drug Information from Healthcare Professionals**

In Taiwan, only less than half of the respondents who expressed confidence in the advice provided by healthcare professionals, which included pharmacists, had actually sought for this service. It was revealed that one-fifth of respondents (18-20%; \( n = 514 \)) did not know what to ask about their drugs; some misunderstood ‘drug information’ as that provided by doctors only, while counseling from other healthcare professionals were ‘product information’.\textsuperscript{9} These findings confirmed not only their poor recognition of pharmacists’ competences, but also a misinterpretation from the public with respect to medicinal information. Doctors were still considered as the most qualified person to provide drug information.
Comparison to the Role of Pharmacists in the UK and Sweden

In order to put the findings above into the context of Europe, this analytic part will follow the sequence of the previous description for easier reference.

General Impression towards the Role of Pharmacists

Pharmacists are again treated with high regard as professionals. They are described as knowledgeable, and are relied upon by lay public members as drug expertise. There was mentioning of the pharmacists’ ability to ‘double check’ the doctor’s prescriptions rather than thinking pharmacists were doctor’s assistants and should not question their decision.26 The public seems to think that although doctors still have the over-riding power, pharmacists are at a position with sufficient knowledge and status to question about the decisions made.

Moreover, it was revealed that many placed them between doctors and nurses.27 Perhaps this suggested pharmacists are seen as assistants to doctors, but one with more status than the nurse to influence doctors’ decision. It is interesting to note that the majority of respondents thought pharmacists should wear a white coat. The reasons given were to differentiate from other staff and reflect a professional image.28

There were also worries from the public that community pharmacists might be business-oriented.5,29,30 There were not many studies to quantify how wide-spread such a view was shared among the public, as was done by Hayashi in Japan (n= 5188),8 but it was reported people more strongly agreed to the healthcare professional aspect of the community pharmacists.5 Near one third of respondents (32%; n= 261) thought of pharmacists as primarily business-oriented, with 41.8% considered there was a good balance between both healthcare and business matters, while a quarter (26.2 %) thought they were primarily healthcare-oriented. The respondents also showed a strong desire for a shift towards the healthcare aspect.28

In general they were more seen as individuals within the multi-disciplinary team in the UK and Sweden compared to the previous countries.
Major Expectations

The number of articles covering this topic is even less than that done in the previous countries. However, it should be reasonable to believe community pharmacists are more accepted by the public to be involved in their healthcare provision, rather than just a drug supplier. The delegation of community pharmacists to safeguard POMs supply against presentation of a valid prescription is more strictly followed. Community pharmacists are more contacted by the public for drug-related queries. Nevertheless, corresponding to previous findings on consumer satisfaction in Japan, it appeared that attitudes of pharmacists, namely helpfulness and willingness to listen were at the top of British consumers’ expectation list.5,21

Prescription-based Advice

Back in 1993, Morrow, Hargie and Woodman provided findings of the public’s desire for more unsolicited advice and explanations of medication from pharmacists. Although satisfaction was seen in the advice and amount of information given, the subjects desired for more. They wanted pharmacists to demonstrate how to use medical appliances, including medication delivery devices, and assure their understanding together with proficiency in applying them.31 However, these described advices were prescription-based; it appeared that clinical competence was not included as one of the expectations.

This could be supported by the low expectations of community pharmacists’ extended roles such as advice-giving, diagnosis or treatment of illnesses.5

Non-drug Services

In terms of demand, health screening services such as blood pressure, cholesterol level, diabetes testing and healthy living advices were the most commonly mentioned in the UK.27,28 These were the same as what was desired in the previous countries.
**Attitudes of Pharmacists**

Not only physical problems, but being able to discuss feelings, anxieties, concerns and the sensitivity towards handling ‘private’ consultations were strongly desired by the public from the pharmacists.28

The postal survey in Scotland revealed that getting to speak to the pharmacist, pharmacist being helpful in getting items and quick dispensing were the top three statements which respondents strongly agreed to when considering the quality of a good chemist (53.4 %, 51.7 %, 46.8 %; n= 1000).5 This summarized the findings on what the major factors affecting consumer satisfaction were in the previous countries (see the part titled ‘Attitudes of Pharmacists and Other Sources of Satisfaction’ on Page 13).

In a report showing the outcome of a Community Pharmacy Medications Management Service in elderly with heart disease living in England, the majority of respondents expressed their view for attitudinal behaviour of pharmacists towards them. The 365 members in the control group (who had not had the service) were asked about their expectation and satisfaction for pharmacists. The results showed patients considered whether pharmacists were able to answer questions ‘satisfactorily’, being knowledgeable about heart treatment, giving patients the opportunity to ask questions, taking their concern seriously and making sure their degree of understanding.32

**Higher Degree of Concern for Privacy in Personal Information**

Whether medication records and personal information had been handled in a way to protect the patient’s privacy were frequently brought up in the UK, Sweden 5,30,33 and Japan as a concern.11,16,20 A division is proposed whether to interpret this as distrust to the pharmacy or the pharmacist on information management in particular.

Respondents in a small pilot study from the neighbouring north east of Scotland expressed mixed feelings towards pharmacists being able to access selected information from medical notes with a proposed expansion of their role.33 The small size of sample in this study (n= 96) may have been a limiting factor for drawing into conclusion.
In fact, recently, this concern was still considered as a main barrier to pharmacists’ extended role in England. With inclusion of consultation rooms in the pharmacy premises, many still felt uncomfortable talking about private medical problems, in fear of being overheard.\textsuperscript{27}

**Visits to Pharmacy and Advice-seeking Behaviour**

The reason for visits is different from the availability of pharmacists as observed in previous countries. In terms of getting advice from a pharmacist on OTC medications, the reported occurrence could be approximated to one in ten (15\% in Jordan,\textsuperscript{19} 9.0\% in Singapore,\textsuperscript{22} 11.3\% in UK,\textsuperscript{24} 13\% in Northern Ireland\textsuperscript{28}).

The Department of Health in the UK published data describing the frequency of visits and whether people tend to use the same pharmacy. Nearly half (49\%; n= 1645) would use community pharmacy at least once a month, with a vast majority (87\%) always or often using the same pharmacy. The reason for paying a visit to the pharmacy for treatment of minor illnesses lay hugely on the seriousness of the problem and practicality to get a doctor’s appointment. A particular regular pharmacy was chosen because of its proximity to the respondents’ home.\textsuperscript{27}

These findings corroborated similar studies done in Northern Ireland. In 1993 by McElney\textsuperscript{28} or more recently by Wazaify\textsuperscript{24} in 2005, they reported a majority of interviewees (67\%; n= 903 and 61.1\%; n=1000 respectively) would go to the pharmacy because they felt the symptoms were not serious enough to see a doctor. The second likely reason was that they did not have time to wait for a doctor’s appointment (14.3\%, 11.3\%). These articles also added the second most likely reason for visiting the same pharmacy to be the good advice offered, with percentages of 13.7 and 18.3.

Wazaify adopted a similar method he used in Northern Ireland to find out the reason why Jordanians visited a particular pharmacy. The primary reasons were still proximity to home and the good advice offered (26.2\%, 20.9\%; n= 1085).\textsuperscript{19}
Presence of Expanded Pharmaceutical Care Service or Equivalent

The delivery of pharmaceutical care is most direct in the community pharmacy settings by a service allowing the pharmacist to sit down and go through medication with patients. The aim is to see if their current medications are appropriate, if they are using the drugs correctly and give them the opportunity to clear any doubts they may have for their health. Such a service is described as Medicines Use Review (MUR) in the UK, while in Sweden the adapted translation is Patient Medication Record (PMR) counseling service. There are subtle differences in the way these services are provided in these countries; however the underlying principle and objective are about the same in terms of pharmaceutical care provision. It is not the aim of this review to describe the similarities and differences of the services, but rather to treat them as an indicator of pharmacists’ clinical role in the community context in these countries.

A research done by qualitative interviews to find out the perception of such service in Sweden among those who had used it, demonstrated that some patients were unaware they had had such a service, they lacked understanding towards pharmacy services. It attracts further attention as to why some subjects in these studies thought such a service should have been the doctor’s work if only they had more time.

In England, a patient evaluation on pharmacist-run medication review clinics with elderly showed that respondents not only misunderstood the objective of such services, they also did not see the need to attend a pharmacist review when they felt ‘quite happy’ with what they had got from their doctors. Clearly these individuals were thinking about the perceived benefits of having such a service from their point of view, and might see this service as a way to check up on their doctors.

For the completion of this discussion, Medline searches for ‘pharmaceutical care’ services in all the ten countries were performed. The engine only came up with articles from Japan and Nigeria.

In Japan, there has been mentioning of such service in hospitals as therapeutic drug monitoring, but no documentation in the community settings. It addressed also the need to improve the training system in order to raise the level of such care in the medical care system. It will be reasonable to consider such a care service as a new programme
under development. On the other hand, a recent article quoted such service to be nascent in Nigeria.  

**Discussion**

The main theme of this section is to outline findings and propose what consequences they may bring up. Recommendations for further research topics are also raised. Diagram 2 put together main findings about the role of pharmacists in Asia and Africa.

**Diagram 2** The Public’s Impression and Expectation on Pharmacists with Reasons to Go to Pharmacy in Asia and Africa.

**Similarities and Differences between the Two Groups in General**

Although pharmacy practice is very different around the world, people often have no difficulty correlating pharmacy to a profession. The common image lies heavily on a long educational training followed by declaration of their qualification by a certificate. A partial picture to the understanding of the role of pharmacists is reflected.
Pharmacists have a certain status within the societies and are trusted as experts in drugs, but there are doubts about their ability beyond that. There is clearly a certain degree of trust cast on them, but that is not supported by the public’s conscious action. The reported low rate of one in every ten customers visiting a pharmacy for advice on health and self-medication is somehow discouraging. The tendency where pharmacists are approached only out of practicality reasons, such as availability of doctors and proximity to patients’ home, adds to the frustration.

The occasional mentioning of pharmacists as businessmen is shared by people from the UK and Sweden.\textsuperscript{5,27,30} They are being evaluated on helpfulness and willingness to listen on top of other qualities.\textsuperscript{5} However, the societies favoured an involvement of them in health screening, such as blood pressure, cholesterol or blood glucose tests; education on healthy living, immunization are also brought up.\textsuperscript{27,29,31}

The clinical role of pharmacists is budding in countries with more developed pharmacy systems, as in Japan, Nigeria, Sweden and the UK.\textsuperscript{36-38,6,27} While pharmacists in these countries, together with health authorities, have been engaged into expanding the scope of pharmacy services, the perceived acknowledgment from the public is very little. Their traditional role as sole drug suppliers is rooted deeply into the public’s mind.

As discussed earlier, pharmacists are mainly seen as a supplier of drugs who do not have independent thinking.\textsuperscript{7,9} This is not the case in the UK or Sweden where they are perceived of having the ability to check doctors’ prescriptions.\textsuperscript{26,5}

The opportunity for patient-pharmacist contact is believed to be lower in urban cities of Asia and Africa. In rural parts where there is poor accessibility to clinics, it becomes the pharmacists’ responsibility to diagnose and treat. This may sometimes involve selling POMs. There are reported sellings of POMs including antibiotics without presentation of valid prescriptions in some countries.\textsuperscript{18} The strict control by law is believed to have prevented such happening in the developed countries.

The diagram below is a pictorial representation of what has been covered.
What do community pharmacists really do in different countries?

Pharmacists’ role is constantly changing worldwide. From the ten countries we have looked at so far, three main blocks of services in practice can be identified according to the description from the references used. The traditional role is a drug supplier offering quality-assured medicines and related drug safety assurance. The situation in India, Taiwan and Vietnam is described as a fixation to this role of pharmacists.  

In addition to the traditional role, provision of advices in self-medication and healthy lifestyle is usually one of the service differentiations. The poor usage of pharmacists in these aspects is a worldwide issue, but in Singapore and Jordan OTC advice is sometimes sought. In Ghana they are often recognized as a first port of call for STIs and in Nigeria they are desired to provide health maintenance services.

In the UK and Japan the clinical role of pharmacists are under development. Sweden is in a transition state as major changes will be undergone to the pharmacy systems by the proposed de-regulation of the state-owned pharmacy company.

It is also observed from these countries that the less differentiation from the traditional role, the higher the likelihood where pharmacists are considered as business-oriented. As a result the patients’ trust towards them is compromised. However, people...
think pharmacists will acquire a balance between business and healthcare matter at a point; where beyond that patients’ care will become the pharmacists’ main consideration in practice.

What consequences do the differences in pharmacy practice worldwide have?

Nowadays, it is very common for people to travel around the world, either because of work, vacation or even migration. There is a high chance of which they will need primary healthcare services. Pharmacists are one of the most highly accessible among the team. This has been shown as the major reason for pharmacy visits. Though it maybe a discouraging perspective for the recognition of pharmacists’ competence, on the other hand, pharmacists can make good use of this advantage over medical clinics. There is a trend towards an aging population in developed countries; proximity and accessibility will become practical issues when seeking primary healthcare.

The public’s trust at the moment is built on a very fragile basis; they may not be ready for further enhancement in the role played by pharmacists in their healthcare. This lag between ‘what they think pharmacist do’ and ‘what pharmacist are really doing’ may further widen the distance between pharmacists and patients.

Few voices depicted pharmacists as businessmen. The observed trend is with least differentiation from the traditional supplier role, the more likely they may be seen as business-oriented. Business-orientation has an inverse relation to the degree of trust cast on them; diagram 4 also showed that the balance is shifted because of a great
desire from the public for health maintenance services in pharmacy, which is clearly towards healthcare provision.

Considering the interest of patients, insufficient degree of trust cast on pharmacists is the main obstacle to the delivery of patient-centred care. Together with a partial knowledge of the function of pharmacists, assurance of drug safety may also be lost, which can lead to inappropriate use of medicines. Pharmacists are also at a position to provide guidance on the use of complementary medicines, homeopathic products and food supplements which has become more popular worldwide.

In the less developed countries, obtaining POMs or even antibiotics without medical supervision can mean putting patients’ health at risk. Drug safety issues, inappropriate treatment and increased microbial resistance are the most direct consequences.

Effective utilization of hospital can be achieved if only the primary care filters the necessary referral cases as required. All these together, the burden on secondary healthcare may worsen.

Vague Role of Pharmacists Worldwide

Worldwide, the role of pharmacists is unclear with regard to what they really do in the healthcare team. Views from the obedient medical doctor’s assistants to profit-minded businessmen are not uncommon. Diagram 5 below demonstrates what contributes to this situation (as described in the last section) and what proposed consequences are.
**Diagram 5 Proposed Theory on the Reasons for and Consequences of Pharmacists’ Vague Role.**

(*) Overlapping of role refers to prescriptionists in Sweden and dispensing doctors which are of particular problem in Asia and Africa. Secondary (2°) healthcare represents hospital, speciality clinics, etc.
In some of the non-European countries we have looked into, the high regard of pharmacists is believed to be an outcome of pharmacy as an education degree, rather than the perceived function and role of pharmacists within their primary healthcare.\textsuperscript{7, 9, 12} Clearly there are still misconception and confusion among the public on the function of pharmacists.

The presence of dispensing doctors\textsuperscript{13-15} may serve as a reason causing the indistinct role between prescribers and dispensers. The supplier function has long been the very basic of the pharmacists’ work, with such overlapping in role it is hard to define a clear stand of their function.

On the other hand, pharmacists’ failure to demonstrate their competences outside dispensing also has a negative effect to their extended role. This can be a result of several factors; lack of continual professional development (CPD) to keep them updated on relevant training, time constraint in everyday pharmacy practice, economic consideration and the amount of support from other healthcare professionals.

Due to the community pharmacy settings, compared to nurses and doctors, pharmacists have a slight predisposition towards business orientation. It is very usual nowadays in some countries for pharmacy shops to sell household goods alongside with providing medication and healthcare. It will be understandable for the public to correlate pharmacy practice with consumer patronage rather than healthcare provision.

Collectively, these have all lead to a restricted expectation among the public about what pharmacists can do. Pharmacists’ great effort to outreach beyond the basics seems to have little effect to the public’s recognition of their function.

Development of Pharmacists’ Role in the Future

One point to note about the pharmacists’ role development in the UK is the implementation of supplementary and independent prescribing. Supplementary prescribing allows pharmacists to prescribe medicines in accordance to a management plan agreed by independent prescribers which are normally a doctor or dentist who initiated assessment. Certain classes of medicine for specific symptoms under a named patient basis may be prescribed as assessed by the supplementary prescriber.
The first pharmacist supplementary prescriber started in 2004, and in the coming future there are plans for the implementation of qualified pharmacist with sufficient training to become independent prescribers.\textsuperscript{34} This is considered to be a great leap forward for pharmacists becoming key player in patients’ healthcare. Again however, few studies have been done so far to reflect on how the public see such a huge move in the pharmacists’ role and function. The market research report published in conjunction with the White Paper suggested issuing of prescription drugs for minor ailments by pharmacists was supported among the public.\textsuperscript{27}

In Sweden, it was proposed that the unique monopoly company Apoteket AB which owns all the pharmacies would be de-regulated. This move would allow different pharmacy chains to enter the market. This also allows a chance to reflect on the current role played by pharmacists compared to prescriptionists.

Limitations of this Review

The very few number of studies has been one of the major findings, yet also a drawback for this review. Effort has been made to include as much quantitative statistics as possible, at the same time, qualitative interview reports and descriptive texts have to be employed to give a fuller portrayal in different countries. This meant that these articles may not be specially designed to reflect our focus on the perceived role of pharmacists by the public.

They are commonly used to investigate pharmacy services, rather than pharmacists. Besides, numerous methods were applied by the authors to measure satisfaction, dissatisfaction and expectation among the public.

\begin{table}[h]
\begin{tabular}{|l|}
\hline
\textbf{Limitations}  \\
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\hline
\textbullet{} very few targeted studies  \\
\textbullet{} no consensus in employed methods to measure satisfaction and expectation  \\
\textbullet{} various sample sizes ranging from 100 to 5000  \\
\textbullet{} only one search engine used due to time constrain  \\
\textbullet{} geographical locations of the 10 countries do not  \\
\hline
\end{tabular}
\end{table}

\textbf{Box 1} Summary of Limitation for this Literature Review.
The designs of survey questionnaires are inconsistent, which makes direct comparison of results difficult and little multinational perspective can be drawn. Oparah and Kikanme\textsuperscript{10} adapted 19 out of 26 items from the study done by Kamei \textit{et al} in 1995,\textsuperscript{20} with an addition of 13 other items that were considered applicable in Nigeria. Wazaify \textit{et al} has also found out about Jordanians’ behaviour towards pharmacies by using similar approach he applied in Northern Ireland.\textsuperscript{19,24}

The sample sizes vary greatly from less than 100 to more than 5000.\textsuperscript{33,8} The respondents groups can be pharmacy users,\textsuperscript{21} a representative sample of adults,\textsuperscript{27} or others mostly general public.

The decision of using only one search engine due to time constrain is also a constriction to what could be included. Another weakness is the grouping of countries due to their geographical locations, which does not necessarily correspond to the actual distance of their culture.

\textbf{Suggestions for Further Research}

There has often been a theory questioning if pharmacists really are professionals. Preliminary findings from this review suggested that they are looked upon as professionals, but have not succeeded in demonstrating their distinctive values from other healthcare counterparts such as doctors or nurses. Yet their roles seem to be going down a path of further expansion. It will be intriguing to know how receptive the public, other healthcare professionals and pharmacists themselves are towards these big leaps forward. How would people compare them to other healthcare professionals, for example, doctors and nurses? Through such reflection, it is hoped that could help consolidate pharmacists’ status, both socially and medically.

Migration has become a world issue. Due to language barrier, immigrants living in foreign countries maybe prone to experiencing a lower level of care. It will be beneficial to learn what potential problems and difficulties this may include, and to suggest feasible solutions. This not only helps the patient, but also develops the image of pharmacists.
Multinational researches should be done in order to contrast how distinctly people think about this profession in various parts of the world. This may provide theories as to how cultural background affects people’s expectations.

Conclusion

The amount of literature published on perception towards pharmacists from the public is scarce and methods used are unsystematic. There is a need for more studies to be done.

The general population lacks recognition towards pharmacists having a shared responsibility with doctors in healthcare provision. Patients seem to value their relationships with pharmacists in terms of what they have experienced from consumers’ satisfaction point of view, i.e. helpfulness and friendliness. Their expectation still lies hugely on the medication supplying role of pharmacists. Pharmacists have been trying hard to move from this traditional image to become an integral part of a patient-centred healthcare team, but poor understanding of their value is still circulating among societies. The role of community pharmacists caused confusion, which made it hardly convincing in the acquisition of trust, or distancing from business-orientation. Attention should be drawn to self-reflection of current role for future developments in practice.
References


Acknowledgements

Första, ursäkta mig för mina dålig svenska.


Mitt projekt har gett mig ett nytt perspektiv i farmaci. Jag njuter min tid i Uppsala. Sverige har många olika landskap och städer, som de är vackerna. Jag gillar snön, ljus och fyrverkeri i november. Jag vill komma igen, men kanske i sommar!

Jag hoppas att se dig i Hong Kong eller Storbrittanien! God jul och lycka till!

Just to add on the previous paragraph, thanks to everyone who has shown an interest in my project. Gratitude to those who have gone through the whole paper despite its length. ‘Vielen Dank!’ to those who understands it (Christin, Annemarie and Johanna I hope I got it right!), for your kind hospitality and accompany kept me lively in the BMC.

I must admit I have met the most diversified group of people during my stay in Uppsala, and have realized the need for ‘cultural competence’ in socializing as well. Not far from here, have you any idea what languages it displayed for the word ‘pharmacy’? The cover photo was taken by myself during our family trip to Italy in summer 2003. The answer is Italian/Spanish, English, French, German, Russian/Bulgarian, Serbian/Macedonian/misspelled-Greek (we have had some discussion going on for this one, but this piece of information is from a reliable source i.e. Sofia’s father (Tack tack!), please feel free to throw in anymore ideas, or better an answer.), Arabic, and lastly Japanese (yes, not Chinese! The first character is understandable to Chinese, but it is not how we write it. The way it is written in this photo will be like a wrongly written character to us. We write it like this, 藥., which means drug. The second character means a bureau in Chinese and I guess it has the same meaning in Japanese. So the combination of these two characters means ‘drug bureau’, i.e. pharmacy).

Merry Christmas and all the best in the future!
Appendix

The articles are tabulated in alphabetical order of its continent, and then their country, and if necessary the chronological order of the date of publication.

<table>
<thead>
<tr>
<th>Country</th>
<th>Title</th>
<th>Authors</th>
<th>Source</th>
<th>Category</th>
<th>Relevant Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>The Role of Pharmacists in Voice from Nine African Countries</td>
<td>Mofiono T, Tomson G, Mafubza P, Lundgren GM</td>
<td>Pharmaceutical World Science, 2007, Vol 25:25-33</td>
<td>Qualitative, semi-structured interviews with 15 pharmacists from various African countries</td>
<td>1) Profit-making from selling drugs was not frequently mentioned 2) Low access to phet and pharmacies was commonly brought up 3) Need to develop phet's clinical role was mentioned</td>
</tr>
<tr>
<td>Ghana</td>
<td>Pharmacists Role in Managing Sexually Transmitted Infections Policy Issues and Options for Ghana</td>
<td>Mayhew S, Nzerem K, Pepin J, Adei S</td>
<td>Health Policy and Planning, 2001, Vol 16(2):152-60</td>
<td>1) Qualitative interviews with Phet in-charge in 252 pharmacies 2) Questionnaire to phet, their employees and patient</td>
<td>1) Accessibility and confidentiality in the management of STIs had attracted public into seeking advice from pharmacist rather than governmental facilities 2) more than 60% of respondents reported going to pharmacy first with regard to STI</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Consumer Satisfaction with Community Pharmacies in Warri, Nigeria</td>
<td>Oparah AC, Kikanre LC</td>
<td>Research in Social &amp; Administrative Pharmacy, 2006, 2:499-511</td>
<td>Quantitative survey - 503 respondents</td>
<td>The authors adapted the questionnaires from the Japanese Paper (2000) and made some alterations to suit the situation in Nigeria. Moderate satisfaction of the public was observed in general, major satisfaction lay upon genuity of drugs, phet, household goods etc., a situation which was commonly observed in developing countries; while they were least satisfied with non-drug service provision (BP check, pregnancy and glucose tests, immunization). Other points to note 1) Patients had to pay for their own medication (yet to implement proposed healthcare scheme) 2) low income earners experienced higher satisfaction 3) desire to see immunization, pregnancy &amp; glucose tests, medication records, purchase of household consumer items in pharmacies</td>
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KEY
Phet = Pharmacist
Dos = Doctors
Px = Prescription
HCP = Healthcare (Professional)
Qs = Questions
Di = Drug Information
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<tr>
<th>Country</th>
<th>Title</th>
<th>Authors</th>
<th>Source</th>
<th>Category</th>
<th>Relevant Findings</th>
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<tbody>
<tr>
<td>India</td>
<td>Self-medication and Pharmaceutical Marketing in Bombay, India</td>
<td>Kamat VR, Niditer M</td>
<td>Social Science and Medicine, 1998, Vol 47 (6): 779-794</td>
<td>1) Quantitative interviews: 75 pharmacy owners and managers; 150 interviews with exit customers. 2) Qualitative interviews with 35 pharmaceutical sales reps. 3) Participant observation in selected pharmacies. 4) Analysis of drug-use data from 2564 medicines. <em>Studies were done in pharmacies in high, middle or low income locality.</em> Pharmacological Environment 1) Dramatic proliferation of pharmacies in 1990s due to profit-making potential. 2) Most customers attended by pharmacy attendants who might not have received proper training in pharmacology. 3) Qualified pharmacists rarely had interaction with patients, hired on part-time basis to sign bills for scheduled drugs. Experience is far more important than having a formal degree. 4) Scheduled drugs and antibiotics could be bought OTC, often in loose form (incomplete course). 5) Service seeking behaviour of customers from pharmacy staff was very low. 6) Customers were suspicious about brand substitution, which they would go back and ask Drs for confirmation.</td>
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<tr>
<td>Japan</td>
<td>Classification of Pharmaceutical Services from the Viewpoint of Patient Satisfaction/Dissatisfaction</td>
<td>Hayashi S, Hayase T, Nakashima K, Hashiguchi M, Tsukihara T</td>
<td>Yakugaku Zasshi, 2005, Vol 125 (1): 159-66</td>
<td>Quantitative - questionnaire survey among 5000 general public divided into two groups: customers at community pharmacy and employees of pharmaceutical companies and family members. The authors were trying to investigate whether the converse of 'being satisfied' was 'being dissatisfied' in community pharmacies. Respondents have to go through a total of 20 scenario statements, each of 13 on satisfaction/dissatisfaction, and mark their degree of satisfaction/dissatisfaction. Some questions were designed to be pairs of symmetric situations. Based on the results the pharmaceutical services were categorised into instrumental and expressive. Patient did not feel satisfied when instrumental services were provided, but would be dissatisfied if they were not. Expressive were those which when provided would increase satisfaction. The results show that attitude of pharmacist, phone consultation were factors which were both instrumental and expressive. Protection of privacy was considered to be instrumental, while quick dispensing was expressive. They also were satisfied about being able to ask phath matters they could not ask Drs.</td>
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<tr>
<td>Japan</td>
<td>The Expected Role of Community Pharmacist in Society</td>
<td>Hayashi S</td>
<td>Yakugaku Zasshi, 2003, Vol 123 (3): 163-71</td>
<td>Quantitative - questionnaire survey among 5158 general public, 1045 Dns, 1750 community phats. The paper was written in Japanese. The authors also presented participants views on 1) role of pharmacist as a) expert in drugs b) healthcare provider c) drug producer d) businessperson; 2) feeling of reliability towards pharmacist.</td>
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<tr>
<td>Japan</td>
<td>Investigation of Patients' Demand for Community Pharmacies: Relationship between Pharmacy Services and Patient Satisfaction</td>
<td>Kamat M, Teshima K, Fukushima N, Nakamura T</td>
<td>Yakugaku Zasshi, 2001, Vol 121 (3): 213-20</td>
<td>Quantitative - questionnaire survey among 699 general public. This paper was a continuation of a previous study (next item) and aimed more specifically on relating patient satisfaction to pharmacy services provided. The same questionnaire was used with an additional item (patient satisfaction) with the pharmacy used today. The previous information category had been integrated into the 'expectations' category in this study. The author discussed the possibility that patients might not be able to differentiate between the drugs that were actually providing pharmaceutical care beyond dispensing, and would rather form impression based on how they were treated in a customer in the pharmacy. Communication with pharmacist at community pharmacies and insufficient inventories had an impact on patient satisfaction. Short waiting time for prescription filling and convenience of opening hours were also judged.</td>
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<tr>
<td>Japan</td>
<td>Comparative Analysis of Pharmacy Services Based on Newley Developed Evaluation Index</td>
<td>Kamat M, Teshima K, Nakamura T</td>
<td>Yakugaku Zasshi, 2000, Vol 120 (11): 1185-92</td>
<td>Quantitative - questionnaire survey among 713 general public in Tokyo and Osaka. The paper was aimed to compare 2 groups of patients, each visited A) the adjacent hospital pharmacy (391 respondents) or B) other community pharmacies (322 respondents) after receiving prescription from the hospital, on how they thought about the pharmacy used today to their 'ideal pharmacy' by a 5-point scale. Considering relevance to this review, findings of Group B was specifically looked into. Attitude of patient, information management and convenience hours were the most important factors affecting their patronage. A point to note was the similar expectations for their ideal-relevant pharmacy in both groups and they considered the 'pharmacy used today' was below what they expected from the ideal.</td>
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<tr>
<td>Jordan</td>
<td>Societal Perspectives on the Role of Community Pharmacists and Over-the-Counter Drugs In Jordan</td>
<td>Watzlaff M, Al-Batou-Younes A, Abu-Ghaliib E, Tahaline L</td>
<td>Pharmaceutical World Science, 2006, Vol 30: 884-91</td>
<td>Quantitative questionnaire - 1085 members of public. The author described briefly the pharmacy ecology in Jordan. The questionnaire investigated 2 things which were relevant: a) attitudes towards community pharmacy and patient contact with pharmacists; b) attitudes about the concept of pharmaceutical care, the extended role of the pharmacist and willingness to pay for such a service. Authors mentioned 1) some ICs, even antimicrobials and CDs, could be obtained without a Rx. 2) The frequency and reasons behind pharmacy visits: 66.4% always often use the same pharmacy due to proximity and good advice. 3) 26.8% bought BP, blood glucose measurement, other services (weight measurement, ear piercing and irrigation) 4) 76.7% live to see other services like health promotion and education. This study is similar to the one done by the same leading author in 2003, and corresponds partly to the paper written by McBrievy in 1993, both in Northern Ireland.</td>
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<td>Country</td>
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<td>Authors</td>
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<td>Relevant Findings</td>
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1) two-thirds would self-medicate and only consult professional when desired outcome not achieved  
2) about 20% would consult Dr immediately  
3) < 10% approached pharmacist first option for advice  
4) > 50% never consulted pharmacist for minor ailments  
Experience with pharmacist:  
1) managed with professionalism (WWW:AMQe)  
2) acknowledged pharmacist recommendation of non-drug management after consultation  
3) majority (90%) expressed satisfaction with advice from pharmacist. |
| Taiwan  | Effects of a National Medication Education Program in Taiwan to Change the Public’s Perceptions of the Roles and Functions of Pharmacists | Wen MF, Lin SJ, Kao Yang YM, Huang YM, Wang HF, Chen CS, Lin Yi YL | Patient Education and Counseling 90 (2003) 301-310 | Quantitative - questionnaire survey among 365 general public pre- and post-national medication program | The effects aimed to demonstrate how a national medication education program had changed people's views towards the role and function of pharmacist. Several things were also covered including where and the perceived credibility of the public's major source of advice were, their endorsement of pharmacist role and function, what kinds of information they would pay attention to during drug use. Key findings:  
1) less than 50% subjects had frequently consulted pharmacist;  
2) feeling already informed by physician (41-53%), unaware of pharmacist as information source; they did not know what to ask (each of 15-20%).  
3) physicians, nurses, package inserts considered as the three most trustworthy sources of information, community pharmacist ranked bottom compared to other HCPs.  
4) great confidence in abilities of pharmacist but narrow view of their function shown from point no. 1  
5) dissatisfaction and not enough understanding towards role of pharmacist. |
| Vietnam | Health Professionals' and Consumer Views on the Role of the Pharmacy Personnel and the Pharmacy Service in Hanoi, Vietnam – A Qualitative Study. | Olsson E, Taplet LTN, Nguyen HA, Lundborg CS | Journal of Clinical Pharmacy and Therapeutics. 2002 Vol 27: 273-82. | Qualitative - 21 interviews: 6 pharmacists, 5 drs, 5 pharmacy students, 5 pharmacy customers | Health professionals (HP = pharmacist, assistant pharmacist, other members of pharmacy staff with at least 3 years of experience)  
Presented participants views on  
1) role of pharmacist as a) counselor b) Dr's assistant c) businessman  
2) information provision from pharmacist as a) passive b) active with b.1) emphasis on quality b.2) reiteration of Dr's words  
Conclusion: General public did not seem to be fully aware of pharmacist capabilities; HPs unaware of pharmacist's importance; HPs considered passive by more customers than others (students, drs, pharmacists) with information provision. |
### Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Title</th>
<th>Authors</th>
<th>Source</th>
<th>Category</th>
<th>Summary/Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>Exploring Objective Outcomes Perceived by Patients Receiving a Pharmacists in Asia and Africa.Pharmaceutical Care Service</td>
<td>Rana P. T., Liubinzel AK, Tully MJ</td>
<td>Research in Social and Administrative Pharmacy. 2006. Vol 2, 212-31.</td>
<td>Qualitative interview with 12 patients who had used the PHR service for about 2 years.</td>
<td>The respondents expressed a feeling of gaining control for their medication and increased feeling of safety. The effect such service had was to make patients more available, initiation of a shared responsibility of drug treatment between the clinician and patient. The construction of drug summary sheet was useful for other HCPs if emergency care was needed for the patient. The patient was also given the chance to ask CQs. However, some patients saw little benefit from this service, more often the case there was misunderstanding towards its aim of such service.</td>
</tr>
<tr>
<td>Sweden</td>
<td>Medicated Hypertensive Patients' Views and Experience of Information and Communication Concerning Antihypertensive Drugs</td>
<td>Larsson L., Rosano G., Söderbom P., Blomberg K.</td>
<td>Patient Education and Counseling. 1987. Vol 32. 147-55.</td>
<td>21 qualitative interviews with hypertensive elderly</td>
<td>A lack of acknowledgment towards what pharmacists could do for the patient was portrayed by the public. Patients did not consider pharmaceutical staff as inforntive sources, and this could partly be explained by the passivity of pharmaceutical staff for such provision. They were considered as patiently receiving, understandably spoken and able to provide written information. Concrete examples of personnel could not be shown by patients' account. This public showed a desire to learn more about side effects than other things.</td>
</tr>
<tr>
<td>UK</td>
<td>Community Pharmacy Use - Market Research Report</td>
<td>Continental Research Solutions Research</td>
<td>Department of Health, UK. 2008.</td>
<td>Quantitative Survey and Qualitative interview with representative 1645 adults throughout England, fitting into different pre-set quotes.</td>
<td>Pharmacies were mainly used for getting prescribed medications. Around one in ten got advice from their pharmacy but seldom for urgent advice. There was a very low use of other health-related services offered such as health monitoring and advising. Pharmacies served as source of advice for minor ailments, and use was driven by experience and communication (advertisements). Uncertainty lay on how well and what pharmacist were trained for, and also their ability to diagnose and prescribe. Pharmacies placed in par with nurses, or below, and many thought somewhat in between DJs and nurses. Privacy and confidentiality were raised for reasons people feel uncomfortable discussing their problems with pharmacist. Expectations included emergency hormone contraception (EHC), smoking cessation and some repeat Pts, while they welcomed also BP, diabetics testing and healthy living advice. Pharmacist providing for minor ailments, MURs and EHC are widely supported.</td>
</tr>
<tr>
<td>UK</td>
<td>Patient Evaluation of a Community Pharmacy Medications Management Service</td>
<td>Tewell M., Bond C, Stenbrooke A, Jeffrey M., Watson M., Harrford K.</td>
<td>The Annals of Pharmacotheraphy. 2007. Vol 41. 1922-70.</td>
<td>Quantitative survey completed at baseline (T1,20) and follow-up (T1, 6 months later) (T2,8)</td>
<td>The research was done to state the difference the Community Pharmacy Medications Management Service had. An intervention group (979) and a control group (365) were chosen to assess three sets of questioners on their expectation, satisfaction towards pharmacy, and their reported attitudes and behaviour compared with one year ago when they had not had this service. Considering the reference to this review, only the data from control group were considered. The survey included a statement asking if the patient would recommend others to discuss their medication with the pharmacist. Two thirds understood information given, half stated they asked all questions they wanted to ask and were satisfied with answers. 40% felt concerned and reported that made sure they understood how to take their medication.</td>
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<td>UK</td>
<td>Societal Perspectives on Over-the-Counter Medicines</td>
<td>Watzalay M., Venables S., Hughes CM, McKinlay JC</td>
<td>Family Practice. 2005. Vol 22. : 172-8.</td>
<td>Qualitative interviews - 1000 members of public.</td>
<td>This study was conducted in a way which strongly corresponded to McKinlay's study in 1998. It found 34% (74.6%) reported visiting the community pharmacy at least once a month. 68.3% reported always using the same pharmacy. Only 11.3% visited to purchase OTC medication. 11.3% reported seeking help from pharmacist when the condition is not serious enough to visit GPs, with 11.3% when they had no time to wait for a Dr appointment. These results are not comparable to the societal perspectives developed by McKinlay and Department of Health (UK) 2005.</td>
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<tr>
<td>UK</td>
<td>Patients View of a Pharmacists-run Medication Review Clinic in General Practice</td>
<td>Petty DR, Knepp P., Raynor DK, House AO</td>
<td>British Journal of General Practice. 2003. Vol 83. 807-13.</td>
<td>Qualitative interview with 18 patients who had used the service.</td>
<td>The respondents were asked about how they felt after attending the clinic (perceived purpose, expectation, how it went), what they thought about the service, and concerns for discussing medication issues with pharmacist instead of doctors. The clinical competence of pharmacist was not recognized fully, some refused to accept advice offered. Misunderstandings for the service included suspicion towards doctor's reasons for such service or to save money for the NHS, others had unrealistic expectations. A few did not see the need for such service as they were happy with their GP and feared this would mean a check-up on their Dr. The pharmacist role was unfamiliar to the respondents.</td>
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<tr>
<td>UK</td>
<td>Attitudes of the General Public to the Expanding Role of Community Pharmacist: A Pilot Study.</td>
<td>Forrest L., Mollison J., MacLeod TN</td>
<td>Family Practice. 2001. Vol 18 (5). 534-5.</td>
<td>Qualitative survey completed by 60 respondents.</td>
<td>The study looked into how individual would accept some current POM like antibiotics, EHC, contraceptive pills to be made OTC. Respondents thought pharmacist should be unable to offer monitoring in long term illness (38), otherwise majority (62%) accepted health advice and screening, and supported HCPs repeat dispensing. Mixed feeling observed for pharmacist to access medical notes, with more feeling (60.5%) a need for private counselling rooms for health advice sessions.</td>
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<tr>
<td>UK</td>
<td>Advice Provided in British Community Pharmacies: What People Want and What They Get</td>
<td>Haswell P., Noyce P., Rogers A., Harris J., Wilkinson J.</td>
<td>Journal of Health Service and Research Policy. 1998. Vol 3 (6). 218-25.</td>
<td>Qualitative interview with 1000 customers to find out their pharmacy visit purpose. 44 interviewed after being observed for advice.</td>
<td>Corroborating to other findings, helpfulness was what was most desired, rather than clinical competence. The proactive role of pharmacist providing was lacking, which was partly resulted from the low demand from patient.</td>
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<td>UK</td>
<td>Users’ Views and Expectations of Community Pharmacists in a Scottish Communal Town</td>
<td>Vallis F, Wylie S, Cunningham-Surley S</td>
<td>Pharmaceutical Journal. 1997. Vol 258: 457-80</td>
<td>Qualitative interviews with 50 people. 576 returned quantitative survey,</td>
<td>This paper suggested reasons for choice of pharmacy: what makes a good chemist? Why was there a low expectation from community pharms? Accessibility and helpfulness were the main reasons. Getting to speak to phar, being helpful in getting forms and quick dispensing being least satisfaction. Low expectation was due to distrust in pharl to obtain full picture of medical history. One respondent remarked on how enclosed community pharmacy premises were for diagnoses and dispensing of health problems. Opinions had also been made by another respondent, further elaborating on why they did not want to see pharmacist prescribing in Scotland. He explained that pharl's clinical judgment would be based on what the patient chose to tell them, which might not be the whole picture. He believed the Drs would have a better way to elicit information from the patient than a pharl.</td>
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<td>UK</td>
<td>Consumer Perceptions of and Attitudes to the Advice-giving Role of Community Pharmacist</td>
<td>Morrow N, Hargie O, Woodman C</td>
<td>Pharmaceutical Journal. 1999. Vol 251: 25-7</td>
<td>Quantitative questionnaire - 201 members of public</td>
<td>This was a continuation of the previous paper by the same authors in 1993 (footnote 24). The Drs were not interested in checking the patients' understanding and proficiency in using the medication-related devices like delivery devices. Past experience in seeking for advice resulted significant degree of satisfaction. A lack of unsolicited advice was also reported.</td>
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<tr>
<td>UK</td>
<td>Consumer Perceptions of and Attitudes to the Advice-giving Role of Community Pharmacist</td>
<td>Morrow N, Hargie O, Woodman C</td>
<td>Pharmaceutical Journal. 1999. Vol 252: 566-81</td>
<td>Quantitative questionnaire - 261 members of public</td>
<td>The majority of respondents thought pharsl should wear a white coat for differentiation from other staff and stating professional image. Psychological support was desired. The public thought the photo here a good balance between health and business matter (41.8%), primarily business-oriented (32%) and primarily healthcare-oriented (28.2%). Only 8% reported treating pharl on first preference person for health advice, being after Drs and family members.</td>
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<tr>
<td>UK</td>
<td>The Role of Community Pharmacist in Northern Ireland</td>
<td>Maddix N, Nicholl AJ, Rosear J, T.J.</td>
<td>International Journal of Pharmacy Practice. 1990. Vol 2: 95-100</td>
<td>Quantitative questionnaire - 906 members of public</td>
<td>Pharmacy visiting behaviour (frequency, going to the same pharmacy, reasons), views towards OTC medications, what services they would like to see pharmacy introduced were covered. The authors also tried to find out if sex and age may affect patient's view towards pharmacy services. 67.7% visited pharmacy at least once a month, with females being more likely to visit more frequently than males. Proximity to home (43.2%) was the main reason for visiting the same pharmacy, with only 13.7% thinking about good advice, 9.8% of prompt service. They tended to seek advice from pharl only when the condition was not severe enough (63.7%), or did not have time to wait for GP appointment (14.3%). Comparable amount (16.9%) also said they would never sought advice from pharl. Pharl were found to have a role in health education (30.4%) by individualizing advice, 90.6% supported screening services.</td>
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