

Consumer behavior towards pharmaceutical services: a scoping review

Helena Hiemisch Lobo Borba (Corresponding author)

Dept. of Pharmacy, Universidade Federal do Paraná,

Curitiba, Av. Pref. Lothário Meissner, 632, Jardim Botânico, Curitiba, PR. Zip code 80210-170, Brazil.

Denise Maria Woranovicz Carvalho

Dept. of General and Applied Administration, Universidade Federal do Paraná,

Curitiba, Av. Pref. Lothário Meissner, 632, Jardim Botânico, Curitiba, PR. Zip code 80210-170, Brazil.

Abstract

The present study aimed to map the evidence on consumer's behavior towards pharmaceutical services. A scoping review based on the PCC (Population, Concept, and Context) mnemonic was conducted in Pubmed, Scopus and Web of Science. Population included consumers of pharmaceutical services, the concept referred to marketing/consumer behavior and the context to pharmaceutical services. Electronic searches were held on December 2019. Studies published in non-roman characters were excluded. A qualitative synthesis of the data extracted from included studies (i.e. author, country, study design, aims, patient/consumer profile, pharmaceutical services, marketing strategy, data analysis, conclusion) was performed. Electronic searches retrieved 1,215 articles that were screened by titles and abstracts. Of these, 31 studies were fully appraised, of which five fulfilled the inclusion criteria. One record was identified through manual search, totaling six included articles. All studies occurred within the scope of community pharmacy. The studies show that most consumers seek pharmacist's orientation regarding over-the-counter drugs. Also, despite the expectations concerning pharmaceutical services, consumers exhibit distrust in pharmacists' competence, which may hamper the seeking for pharmaceutical services. Hence, a marketing plan involving the knowledge of consumer's value along with the recognition of the consumer needs should be considered. Through this scoping review the available evidence on consumer's behavior towards pharmaceutical services was mapped, elucidating consumer's perceptions that motivate or prevent the seek for such services in the context of community pharmacies.

Keywords: Clinical Pharmacy; Community Pharmacy; Consumer Attitudes, Patient Attitudes; Health Seeking Behaviour; Pharmaceutical Care

1. Introduction

Being healthy is a persistent aspect during the course of human life, and this makes the way people seek healthcare services a pivotal activity to be researched.[1] Moreover, several articles and stories related in mass media reveals that health is one of the opportune subjects examined.[2]

Among healthcare providers, the pharmacist stands out in its role of improving the effectiveness and safety of drug therapy. Historically, the concept of Pharmaceutical Care was introduced in 1980, referring to the

provision of the necessary services, besides determination of drug needs and dispensation of the required drug, aiming optimally safe and effective therapy.[3] Therefore, quantifying the economic value of pharmacy services is an important objective for the profession of pharmacy.[4]

De facto, despite the profession of pharmaceutic has made enormous advances, not only from the medical profession and consumers, but also in establishing clinical pharmacy as a value-added element of the health care system, the need to provide evidence of the economic benefit of clinical pharmacy services has not declined with such advances. [5]

According to Pillai et al. (2019), healthcare is considered a vital service from both personal and social points of views.[1] In this sense, pharmaceutical care lays on the philosophy of delivering patient care and comprises interactions with patients and other healthcare professionals, through which interventions aiming to improve the quality of medications use and disease management are provided.[3, 6]

In the current context of the outbreak of coronavirus disease 2019 (COVID-19), community pharmacists' role in the management of the disease is standing out. Pharmacists represent the most accessible healthcare provider, acting as an information axis and being frequently the most common first contact point of the population, hence contributing to the prevention of infection spreading and the correct use of medicines. The role of pharmacists in the context of public health emergencies, specifically in Covid-19 scenario, is in focus and was endorsed by a publication of the International Pharmaceutical Federation (FIP) entitled "Coronavirus 2019-nCoV Outbreak: Information and Interim Guidelines for Pharmacists and the Pharmacy Workforce", which highlights the key role of this professional in the public health, providing services such as informing, counseling and educating the community.[7, 8]

Indeed, the range of services offered in pharmacies is very wide, and can benefit consumers greatly, but it is observed that they do not always know that the pharmacy offers such services, which seems to point to a lack of adequate information for these consumers. In addition, it is highlighted the need for pharmacists understanding consumer's concerns in order to provide satisfactory care.[9]

Pharmaceutical care represents a significant transition in the profession of pharmacy, because the focus of pharmacy services has expanded beyond the dispensing of medication to the provision of pharmaceutical care (assessment of drug regimens, development of care plans, and execution of follow-up evaluations), rather than the distribution of drug products.[10, 11]

To Lovelock and Wirtz (2011) services correspond to activities offered by one party to another and cover a vast array of diverse and complex activities, which hampers its definition. Service is a performance that brings the desired results or experience to the customer. It is not a property; it is a form of rental. Service customers hire labor and staff experience, obtain the right to use a physical space or object, or pay for access to facilities and physical environments.[12] Indeed, the service sector indicates growth at a global level and improves competition; thus, the quality, progress, and future of an economy are measured by the liveliness and triumph of the service sector.[13] Moreover, evaluating health services and product plays crucial roles: serving as a way of controlling costs and monitoring care; promote accountability for scheduled expenditures; assure the delivering of superior quality services.[14]

The Medical Subject Heading "Health Services" is defined as "Services for the diagnosis and treatment of disease and the maintenance of health", while "Pharmaceutical Services" are defined as "Total pharmaceutical services provided by qualified pharmacists. In addition to the preparation and distribution

of medical products, they may include consultative services provided to agencies and institutions which do not have a qualified pharmacist". In the context of the pharmaceutical care, pharmacists may provide services such as prescribing, vaccines and drugs administration, medication therapy management, minor disorders schemes.[15] For the purposes of our study, pharmaceutical services were defined as a comprehensive range of health interventions executed by the pharmacist, within the scope of pharmaceutical care, besides the routine activities performed by this professional, such as administrative duties (e.g., stock conference) and medicine dispensing/sale without proper patient orientation.

As a matter of fact, the business practices of healthcare professionals always have many changes. One of these changes is that consumers are increasingly involved in their own health care, and take more responsibility for treatments than they used to do in the past.[16]

Due to these changes, not only is increasing the participation of the pharmacist in the health system a challenge, but also harmonizing terms, concepts and work processes related to the clinical performance of this professional, in order to elucidating the consumer about the services offered in the pharmaceutical field.[17]

How does the consumer of pharmaceutical services behave? "We strongly encourage further research into the specific characteristics of health consumers and into health marketing as an integrated field." [18] These issues refers to health consumers' behavior , which is paramount due to consumers' involvement, compliance and purchasing attitude.[18] Notwithstanding, once not all consumers attribute a high value on health, "it is important to understand how consumers make trade-offs between health goals and other life goals." [19]

What helps us to understand the consumer? "The field of consumer behavior is the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs or desires." [20]

For a marketing manager is very important to investigate consumer behavior, in order to understand the factors that affect relationships of a company, e.g., by laying emphasis on people who buy, a company is able to select the right features for the product or for the service, as well as the right price and distribution outlets, and the right words and strategies to promote the product.[21]

"On the consumer's side there exists a great need for products, services, and experiences that facilitate health and prolong the duration of human existence." [2] If the consumers seek to become more engaged in managing their own health, they need to have the ability, reliance and knowledge to understand health information and how their behavior impacts their health and well-being.[19]

Despite the immense importance of pharmaceutical services in the health scenario, there is limited attention paid to the development of studies on the consumer behavior of services offered in pharmacies. Therefore, the objective of this scoping review was to explore consumer behavior towards pharmaceutical services.

2. Methods

To accomplish the mentioned objective, a scoping review following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), the Joanna Briggs Institute and the Cochrane Collaboration recommendations was conducted. A comprehensive search strategy was elaborated based on

the PCC (Population, Concept, and Context) mnemonic, in which population included consumers of pharmaceutical services, the concept referred to marketing/consumer behavior and the context accounted to clinical pharmaceutical services.[22]

Electronic searches were performed on December 2019 in Pubmed, Scopus and Web of Science. No filters for limiting the searches were used (e.g. language, publication dates). Descriptors related to Marketing of Health Services, consumer and pharmaceutical services were combined with the Booleans AND and OR (see the complete search strategies for each electronic database in the Appendix 1). In addition, a manual search was performed by checking the reference lists of the articles included in the scoping review. Articles addressing the consumer behavior towards pharmaceutical services in the context of pharmaceutical care were included. Exclusion criteria comprised publications in non-roman characters (e.g. Chinese, Japanese, Arabic) and studies evaluating the consumer behavior on services out of the scope of pharmaceutical care. After performing the electronic searches and retrieving the articles from the databases, two independent reviewers (D. M. W. C. and H. H. B.) screened the studies by reading its titles and abstracts in order to identify irrelevant records (i.e. studies that did not fulfill the inclusion criteria). After consensus on the studies included in this stage, both reviewers, independently and in a blind fashion, appraised the full-text articles (eligibility phase), applying the aforementioned inclusion and exclusion criteria. After consensus on the studies included in the eligibility phase, both reviewers proceeded to the data extraction, again in an independent and blind fashion, followed by consensus. Data collection was conducted by using a standardize form elaborated by the reviewers, comprising the following information: author/year of publication; journal in which the paper was published; country in which the study was conducted (in the absence of this information, the country listed in the first author's affiliation was considered); study design; study aims; patient/consumer profile; age and gender of consumers; pharmaceutical services (as defined by the authors of the included studies); marketing strategy; key elements; study setting; study conclusion. The form for data extraction was developed by using the software Microsoft Excel 365.

The characteristics and results of the included studies were qualitatively synthesized. In view of the heterogeneity and nature of the retrieved data, no quantitative comparison was observed, and no statistical analysis was possible to be conducted. Regardless of that, Witell et al. (2020) suggest that qualitative research rises new insights that can lead to new directions, and researchers draw on observations from the data to introduce abstract knowledge.[23] Hence, the main findings of the included studies will be presented, highlighting the points concerning the behavior of consumers of pharmaceutical services in the setting of community pharmacies. Further discussion on how these services are structured and how they can improve, based on consumers' needs, will also be presented, along with a reflection on the direction that new studies should take to clarify issues raised by the present scoping review related to clinical pharmaceutical services.

3. Results and discussion

Through a scoping review, the available evidence on the consumer behavior towards pharmaceutical services was mapped, in order to elucidate potential facilitators and barriers that affect the implementation and success of such services.

Electronic searches retrieved 1,215 articles which were screened by titles and abstracts. Of these, 31 were fully appraised in the eligibility phase. Five studies met inclusion criteria and were encompassed in the qualitative synthesis. One record was identified through manual search (Figure 1).

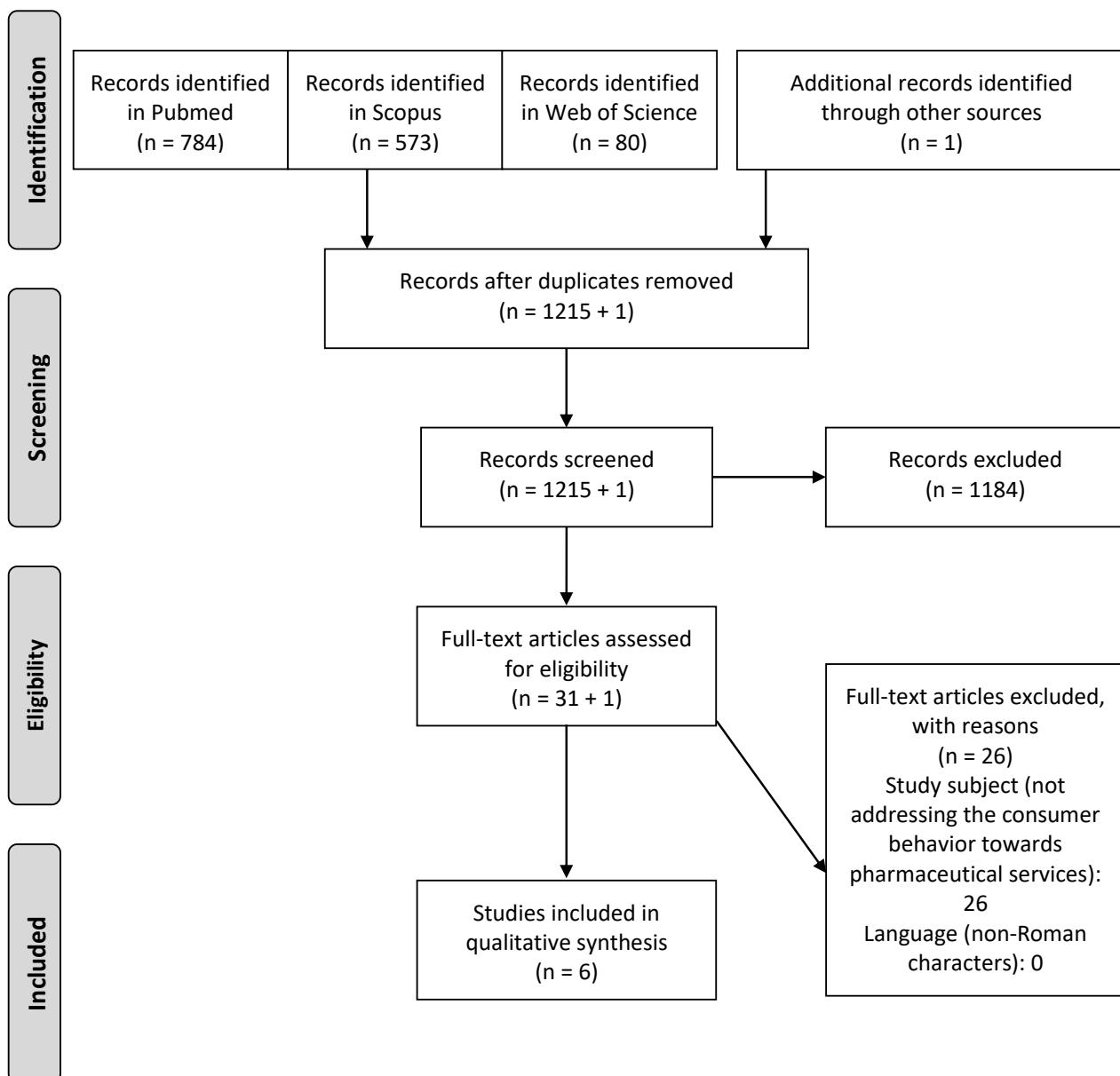


Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2009 Flow Diagram.

Among the six included studies, five were conducted in the USA[24-28] and one in China[9]. Concerning the type of study, two were commentaries[24, 26] and four were exploratory/surveys[9, 25, 27, 28], totaling 1,480 consumers. All studies were conducted in the community pharmacy setting. The complete data extracted from the six included studies is presented in Appendix 2.

Study 1. Alston and Blizzard (2012) wrote a commentary on the value prescription: Relative Value Theorem (RVT) as a call to action. It mentions pharmaceutical services that usually do not appear in research of marketing services - which is a relevant contribution - and points to the creation of value and the need to know the consumer. The importance of the pharmacist is also highlighted, as this professional can provide a service that adds value. The reflection raised by this study is very pertinent for pharmacists who desire to perform services in the context of the pharmaceutical care, since the authors point to key elements such as vision of the future, perceived value, services, price, culture of dispensing medicine *versus* culture of service provision. Therefore, the essence of a good marketing plan is to create value for a target customer. A pharmacist who understands RVT can become a powerful agent of change to help the healthcare industry make the right decisions to provide high quality patient care that is sustainable in the future.[24]

To Arditto et al. (2020), value can have its origin in the relationship.[29] "Knowing the consumer's value for pharmacy services may aid the profession in marketing pharmacy services to consumers and may assist practitioners who wish to implement various pharmacy services in their practice settings. Unfortunately, the published literature to date provides little guidance on true valuation of pharmacy services. A limited number of studies have been conducted." [4] Furthermore, "it has become increasingly difficult for the pharmacist to quantify the value of his or her services." [11]

Study 2. Gore et al. (1994) conducted an exploratory study aiming to assess the extent of consumer involvement in decisions to purchase drugs without a prescription. Concerning the type of service, the focus is on consumer guidance on nonprescription medicine (over-the-counter [OTC] drugs), dispensation and health education. The key element is that consumers' information search during the purchase of OTC medicine is a function of their involvement in the purchase decision. Hence, health organizations can benefit from the development of programs to promote greater consumer involvement in the decision of purchasing OTC drugs. These programs should provide consumers with information regarding the value of proper use of over-the-counter medications and the role that affordable healthcare professionals, such as pharmacists, can play in assisting consumers with OTC drugs purchase.[25]

In this sense, effective communication is vital to a pharmacy succeed when providing services within the community pharmacy setting. To Lovelock and Wirtz (2011), communication plays a crucial role in terms of needed information and council; convincing customers of the virtues of a service; and encouraging customers to take action at particular times. "In services marketing, much communication is educational in nature." [12] In the opinion of Moser et al. (2018), consumers desire more information about the services of pharmacies.[16]

Study 3. Grauer (1981) wrote a commentary on the marketing mix (service, price, distribution, promotion) for pharmaceutical services. The study contributes to the marketing services literature, as it addresses dispensing and drug-knowledge-distribution services. The study raises a reflection concerning the identity problem that pharmacies have with the consumer of their services. The marketing concepts discussed can serve as a model for the development, communication and sale of future pharmaceutical services. Pharmaceutical services designed in this way will help the pharmacy achieve strong value with consumers of its services.[26]

Lovelock and Wirtz (2011) states that numerous services need direct interaction between service employees and customers.[12] An employee, when embrace individual consumers' feelings, is emotionally capable, and it is critical to a positive relationship experience.[30]

To Hindi et al. (2006), patients are more disposed to admit extended services if they had a good relationship with the pharmacist, and think that permanence of care with the pharmacist add a “personal touch” to services provided.[31]

Study 4. The article by Lee (2010) uses a 2002 FDA - Food and Drug Administration survey which conducted telephone interviews. As the core of the article is to evaluate the relative power of interpersonal communication and mass media, it sought to examine the struggle for power between doctor-patient relationships influenced by other health professionals and mass media, and investigates whether communication channels in mass media, hybrid and interpersonal healthcare can empower patients with the knowledge to persuade their doctors to prescribe a specific medication. The service involved is consumer orientation. The key elements are patient empowerment (through mass and hybrid media and through interpersonal communication), doctors' reaction to patient requests and patients' reaction to doctors' responses. This study presents a pertinent concern rarely mentioned in direct-to-consumer prescription drug advertising (DTCPDA) concerning the influence of other healthcare providers (e.g., pharmacists). It is true that DTCPDA and mass mediated drug information are means of education through which patients try to influence their physicians to prescribe drugs. Nevertheless, only patients who received information from other healthcare providers obtained what they wished from their physicians, pointing to the relevance of pharmaceutical care in the decision-making process towards medicine purchase and the role of the pharmacist as a communication bridge between the patient and the physician. The lack of influence of one's own physician may indicate that physicians are prescribing a medication that its patients want in addition to what they prefer. This scenario demonstrates that physicians ceded to requests of patients who were advised by pharmacists and other physicians. Therefore, the influence of drug prescription behaviors definitely emerged from interpersonal influence of healthcare providers other than from mass or hybrid media alone. This influence has proven to be so strong that patients would be willing to change their physicians who go against the advice given by pharmacists.[27]

To Wright et al. (2006), the final decisions are made by consumers, mainly because of their abilities of choice: whether to buy or not to buy. Consumer empowerment is specific to the individual consumer psyche.[32]

Successful pharmacies require cutting edge marketing approaches. A competitive strategy is necessary to anticipate customer wants and expectations, and to increase consumers' empowerment.

Study 5. The article by Lindstrom et al. (2007) is an anonymous and self-administered survey (5-point Likert scale), applied in 8 community pharmacies within grocery stores. Study aims were assessing consumer preferences concerning pharmaceutical services and identifying the characteristics of study participants that can foresee the success of pharmacy services. The types of services include: traditional and expanded; 24-hour pharmacy (20 miles distance of home); 24-hour drug information; education in heart disease; vaccinations (influenza and pneumococcal); cholesterol screening; education concerning

diabetes; automatic refills; diabetes screening; comprehensive medication reviews; urgent care clinics in the interior of the pharmacy; osteoporosis screening; A1C testing; education on fitness; education on pain management; travel vaccines; liver function screening; thyroid function screening; memory screening; weight / fat analysis of the body; trainings on diabetes glucose meter; drive-through pharmacy; screening of blood pressure; asthma education; classes on smoking cessation; liquid medicine flavoring; diabetic shoe fittings; delivery service; compounding medicine. Marketing, pharmacy services and patient preferences are key elements of the research. The study shows that a broad range of nontraditional pharmacy services could be integrated into community pharmacies. However, pharmacies need to supply both traditional and expanded pharmacy services to encounter desires and expectations of patients. Additionally, pharmacy practitioners should enlarge their marketing options based on patient preferences and market services. Profession must secure that the pharmacy services provide complement patient interest. Acknowledging the prominence of this concept before initiating new or updated pharmaceutical services will lead to increasing value, improving customer satisfaction, and enhancing rates of use.[28]

Study 6. Chen et al. (2018) conducted an exploratory study aiming to investigate consumer's perceptions vis-à-vis pharmaceutical care provided by community pharmacists on OTC drugs. The type of service is consumer orientation. The key elements are: expectancy on pharmaceutical care; posture onto pharmacist's competence; experience of self-medication. The study indicates that consumers expected pharmacists to supply professional service about OTC drugs at community pharmacies; however, they were not accumulate on pursuing pharmaceutical care from community pharmacists owing to distrust in pharmacists' competency. That is, on one hand, participants exhibited high expectations on pharmaceutical care provided by community pharmacists, nevertheless they were not inclined to seek community pharmacy services. Distrust in the competence of the pharmacist was the main reason, including mistrust in pharmacist's certification, in knowledge, in communication skills, and in attitude. The lack of demand for pharmaceutical orientation in this regard is worrying, since confidence on self-medication with OTC drugs caused higher drug risks to consumers.[9]

To Ou and Sia (2010), both trust and mistrust can be present in individuals simultaneously, as positive and negative feelings.[33] Athavale et al. (2015) argue that numerous studies have evaluated the relationship between trust in the pharmacist and loyalty behavior.[34] According to Bergel et al. (2019), customer loyalty has been judged a success indicator across varying industries, and it is true also to pharmacies.[35] Božić et al. (2020) postulate that trust helps customers reduce the perceived complexity correlated with buying activities.[36] One of the key barriers pharmacies face when offering health promotion is, according to Joyce et al. (2007), the level of confidence of pharmacists.[37]

The article written by Chen et al. (2018) also make some reflections concerning self-medication.[9] To Eticha and Mesfin (2014), self-medication is a component of day-to-day self-care behavior and an important issue in healthcare systems. "Self-medication is common in a wide range of illnesses, and makes consumers more health conscious, reduces treatment burden on healthcare facilities and curtails the cost and time of obtaining access to treatment. However, it increases risks: excessive use of medication, extended duration of consumption, incorrect diagnosis, drug interactions, and polypharmacy." [38] Self-medication process requires that all parties involved are aware of risks and benefits of any self-medication

product.

According to Chui and Li (2005), managing self-medication is a frequent practice worldwide. In this sense, consumers must know about potential risks caused by the indiscriminate use of medicines, especially OTC products. Advising consumers on the correct use of medicines is an important role to pharmacists to play.[39]

Thus, pharmacists must embrace its role in guiding consumers towards the proper use of medicines, especially within community practice.[39]

Clinical pharmacy services have shown to improve patient's health, especially when targeting specific conditions (e.g. hypertension). Successfully implementing these services may be challenging, and the patient is a key stakeholder in this scenario, since its behavior influences significantly the achievement of this branch of pharmaceutical market.[6, 17]

The present scoping review reveals consumer's lack of knowledge about pharmaceutical services in the community pharmacy setting. This is a major barrier to the successful implementation of these services, highlighting the need for disclosure and clarification of the interventions that the pharmacist, as a healthcare professional, can perform. In addition, this study also indicates that pharmacists and pharmacy owners/managers must recognize consumer's needs before starting the design and implementation of services, otherwise consumers will not seek for services that are not of their interest. Therefore, the present scoping review highlights two major elements that should be considered when implementing pharmaceutical services within the community pharmacy setting: proper communication and recognition of consumer's needs.

Thereby, this paper adds to the existing literature in view of the fact that, whereas previous research has yielded important insights into consumer behavior of health services, to the best of our knowledge, the plethora of services provided by pharmacists have not yet been examined as core competency of pharmacists, and this feature can add value to healthcare consumers and maximize the safe use of medications. Likewise, this study can stimulate a deeper knowledge of differentiation strategies, because of the hypercompetitive market of the current pharmacy landscape. Additionally, once services are relevant in terms of employment and output within countries economies[40], it is important to consider that services involves not only what is consumed, but how it is delivered, and even health care is been impacted by the rise in the service economy.[41] So, due to the fact that to quantify the economic value of pharmacy services be an important objective to pharmacists[42], through the exploration of the role of the pharmacist as health services provider, innovations in the pharmaceutical sector may be achieved, along with improvements in healthcare field and a positve economic impact, i.e., innovation in health products and services, especially in the economic and social aspects, points to the strategic importance of offering adequate training to the pharmacist [43]

The present scoping review has some limitations. Despite the comprehensive search strategy only six studies were included. Due to the heterogeneity among them, no quantitative synthesis was possible to be conducted. Nevertheless, the evidence mapped and untangled through this review helps to understand the perceptions of the consumer that motivate or prevent the seek for pharmaceutical services in the context of community pharmacies.

4. Conclusion

Through a scoping review it was possible to gather the available evidence regarding the consumer behavior towards pharmaceutical services. Most consumers seek pharmacist's orientation for the correct use of OTC drugs. Nevertheless, despite consumer expectations regarding pharmaceutical services, a certain level of distrust in pharmacists' competence was identified. The implementation of new health services into established healthcare practices is defiant;[17] the service that most affects quality of life refers to health care, because it is the service that demands more resources and that deals with more challenges when facing the future.[44] Actually, marketing scholars often seek to contribute by bringing new knowledge applicable to all sectors, but some sectors have unique characteristics that require the development of sector-specific knowledge, such as pharmaceutical companies, in which marketers face some challenges (e.g. in the promotion of treatment, there is the issue of managing communication and encouraging patient compliance).[45] Lack of knowledge and lack of use of pharmacy services suggests the need to disseminate the knowledge and skills of health promotion of community pharmacies, in addition to the need to disseminate the knowledge and skills of health promotion of community pharmacies. Understanding consumer behavior and needs more deeply, and developing appropriate communication with these consumers, can lead them to know and purchase pharmaceutical services, which will transform the pharmacy into a valuable health promotion scenario. In this sense, a good marketing plan involving the knowledge of consumer's value for pharmacy services in addition to the proper recognition of the consumer needs by the pharmacists may contribute to the successful implementation of pharmaceutical services in the context of community pharmacies. Further studies are needed to develop field research that seeks to better understand the behavior of consumers of pharmaceutical services. Such surveys can identify not only what consumers expect from services and pharmacists, but also the reason for the lack of knowledge about the existence of such services in community pharmacies. Other questions that further research could address include the following: What are the determinants of the consumer's choice of pharmacy and pharmaceutical service? Why does the consumer seek little or is completely unaware of pharmaceutical services? How to generate value to the consumer of pharmaceutical services? How to customize the offer of services to the consumer? Could effective marketing communication increase demand for services?

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Appendix

Appendix 1. Complete search strategy by database.

Pubmed	<pre>#1 (((((((("Marketing of Health Services"[MeSH Terms]) OR "Health Services Marketing"[Title/Abstract]) OR "Health Marketing Service"[Title/Abstract]) OR "Marketing of Health Services"[Title/Abstract]) OR "Health Marketing Services"[Title/Abstract]) OR "healthcare marketing"[Title/Abstract]) OR "health marketing"[Title/Abstract]) OR "health care marketing"[Title/Abstract]) OR "pharmaceutical marketing"[Title/Abstract]) OR "marketing mix"[Title/Abstract]) OR "market mix"[Title/Abstract]) OR "marketing mixes"[Title/Abstract] OR "market mixes"[Title/Abstract]) OR Marketing[MeSH Terms]</pre>
	<pre>#2 (((((((((("consumer*[Title/Abstract]) OR "consumer behavior"[Title/Abstract]) OR "Consumer Behavior"[MeSH Terms]) OR "Consumer Behaviors"[Title/Abstract]) OR "Consumer Preference"[Title/Abstract]) OR "Consumer Preferences"[Title/Abstract]) OR "Consumer Satisfaction"[Title/Abstract]) OR "healthful behaviors"[Title/Abstract]) OR "healthful behavior"[Title/Abstract]) OR "health behavior"[Title/Abstract]) OR "health behaviors"[Title/Abstract]) OR "health-related behavior"[Title/Abstract]) OR "health-related behaviors"[Title/Abstract]) OR "consumer decision making"[Title/Abstract]) OR "consumer decision-making"[Title/Abstract]</pre>
	<pre>#3 (((((((("Pharmaceutical Services"[MeSH Terms]) OR "Pharmaceutical Services"[Title/Abstract]) OR "Pharmaceutic Services"[Title/Abstract]) OR "Pharmaceutic Service"[Title/Abstract]) OR "Pharmaceutical Service"[Title/Abstract]) OR "Pharmacy Services"[Title/Abstract]) OR "Pharmacy Service"[Title/Abstract]) OR "Pharmaceutical Care"[Title/Abstract]) OR medicines[Title/Abstract]) OR drug*[Title/Abstract] OR pharmacy[Title/Abstract] OR pharmacist*[Title/Abstract]</pre>
#1 AND #2 AND #3	
Scopus	<pre>#1 (TITLE-ABS-KEY ("Health Services Marketing") OR TITLE-ABS-KEY ("Health Marketing Service") OR TITLE-ABS-KEY ("Marketing of Health Services") OR TITLE-ABS-KEY ("Health Marketing Services") OR TITLE-ABS-KEY ("healthcare marketing") OR TITLE-ABS-KEY ("health marketing") OR TITLE-ABS-KEY ("health care</pre>

	<p>marketing") OR TITLE-ABS-KEY ("pharmaceutical marketing") OR TITLE-ABS-KEY ("marketing mix") OR TITLE-ABS-KEY ("market mix") OR TITLE-ABS-KEY ("marketing mixes") OR TITLE-ABS-KEY ("market mixes")</p> <p>#2 (TITLE-ABS-KEY (consumer*) OR TITLE-ABS-KEY ("consumer behavior") OR TITLE-ABS-KEY ("Consumer Behaviors") OR TITLE-ABS-KEY ("Consumer Preference") OR TITLE-ABS-KEY ("Consumer Preferences") OR TITLE-ABS-KEY ("Consumer Satisfaction") OR TITLE-ABS-KEY ("healthful behaviors") OR TITLE-ABS-KEY ("healthful behavior") OR TITLE-ABS-KEY ("health behavior") OR TITLE-ABS-KEY ("health behaviors") OR TITLE-ABS-KEY ("health-related behavior") OR TITLE-ABS-KEY ("health-related behaviors") OR TITLE-ABS-KEY ("consumer decision making") OR TITLE-ABS-KEY ("consumer decision-making"))</p> <p>#3 (TITLE-ABS-KEY ("Pharmaceutical Services") OR TITLE-ABS-KEY ("Pharmaceutic Services") OR TITLE-ABS-KEY ("Pharmaceutic Service") OR TITLE-ABS-KEY ("Pharmaceutical Service") OR TITLE-ABS-KEY ("Pharmacy Services") OR TITLE-ABS-KEY ("Pharmacy Service") OR TITLE-ABS-KEY ("Pharmaceutical Care") OR TITLE-ABS-KEY (medicines) OR TITLE-ABS-KEY (drug*) OR TITLE-ABS-KEY (pharmacy) OR TITLE-ABS-KEY (pharmacist*))</p> <p>#1 AND #2 AND #3</p>
Web Science of	<p>#1 TÓPICO: ("Health Services Marketing") OR TÓPICO: ("Health Marketing Service") OR TÓPICO: ("Marketing of Health Services") OR TÓPICO: ("Health Marketing Services") OR TÓPICO: ("healthcare marketing") OR TÓPICO: ("health marketing") OR TÓPICO: ("health care marketing") OR TÓPICO: ("pharmaceutical marketing") OR TÓPICO: ("marketing mix") OR TÓPICO: ("market mix") OR TÓPICO: ("marketing mixes") OR TÓPICO: ("market mixes")</p> <p>#2 TÓPICO: (consumer*) OR TÓPICO: ("consumer behavior") OR TÓPICO: ("Consumer Behaviors") OR TÓPICO: ("Consumer Preference") OR TÓPICO: ("Consumer Preferences") OR TÓPICO: ("Consumer Satisfaction") OR TÓPICO: ("healthful behaviors") OR TÓPICO: ("healthful behavior") OR TÓPICO: ("health behavior") OR TÓPICO: ("health behaviors") OR TÓPICO: ("health-related behavior") OR TÓPICO: ("health-related behaviors") OR TÓPICO: ("consumer decision making") OR TÓPICO: ("consumer decision-making")</p> <p>#3 TÓPICO: ("Pharmaceutical Services") OR TÓPICO: ("Pharmaceutic Services") OR TÓPICO: ("Pharmaceutic Service") OR TÓPICO: ("Pharmaceutical Service") OR TÓPICO: ("Pharmacy Services") OR TÓPICO: ("Pharmacy Service") OR TÓPICO: ("Pharmaceutical Care") OR TÓPICO: (medicines) OR TÓPICO: (drug*) OR TÓPICO: (pharmacy) OR TÓPICO: (pharmacist*)</p> <p>#1 AND #2 AND #3</p>

Appendix 2. Data extracted from the included articles.

Author, Year	Country	Study type	Study goals	Number of consumers/ gender	Age	Consumer profile	Pharmaceutical service	Marketing strategy	Key elements	Conclusion
Alston; Blizzard, 2012	USA	Commentary	Commentary on "The value prescription: Relative value theorem as a call to action"	NA	NA	NA	General (e.g., immunizations, smoking cessation services, disease state management, drug regimen reviews, or prescription dispensing services)	Relative value theorem	Future Vision of Pharmacy Practice, perceived value, services, price, culture of dispensing drugs, culture of the provision of services	A pharmacist who understands the RVT can become a powerful agent of change to help the health care industry make the right decisions to provide sustainable high-quality patient care in the future.
Gore; Madhavan; McClung; Riley, 1994	USA	Exploratory	To determine the extent of consumer involvement in nonprescription medicine purchase decisions	458 Males: 185 Females: 247	NR	NR	Orientation regarding over-the-counter drugs	Five of Zaichkowsky's items were modified to measure involvement in the context of buying drugs without a prescription and the other two items were developed to further reflect the information search characteristic of the involvement construct	Consumers' Involvement Score by Information Source Utilization	No significant differences were noted when involvement was compared on the basis of frequency consultations with family members, friends, or colleagues for nonprescription medicine information. This result, when taken with the differences in involvement that were noted for expert source consultations, suggests that the greater the involvement, the greater the likelihood of expert source consultation for nonprescription medicines. Lay source consultations probably take place because of their immediate accessibility; therefore, irrespective of the degree of their involvement, most consumers use these sources. In contrast, expert sources, because they are not as easily accessible as lay sources, are consulted only when information is actively sought as in the case of high involvement behavior. The nonsignificant correlation between age and

									involvement must be noted with concern. A positive correlation indicating greater involvement among the elderly would have been a more desirable finding, implying the safe and effective use of nonprescription medicines by members of this vulnerable population group.
Grauer, 1981	USA	Commentary	Commentary on "Marketing concepts for pharmaceutical service development"	NA	NA	NA	Dispensing and drug-knowledge-distribution	Target market and Marketing mix	Pharmacies have an identity problem with the consumer of their services. The marketing concepts discussed in the article can serve as a model for the development, communication and sale of future pharmaceutical services. Pharmaceutical services designed in this way will help the pharmacy achieve strong value with consumers of its services.

Lee, 2010	USA	Survey	<p>To investigate whether these mass-mediated, hybrid, and interpersonal health communication channels can empower patients with the knowledge to influence their physicians to prescribe a specific drug</p> <p>762 Males: 242 Females: 520</p>	<p>18 - 85 years 48.02 (mean)</p>	<p>Patients who had visited the physician within 3 months and were exposed to direct-to-consumer ads on television, newspapers, and magazines before the survey</p>	Orientation	<p>Two-step flow model; multistep-flow model; direct-to-consumer prescription drug advertising</p>	<p>Empowerment of patients (through mass and hybrid media and through interpersonal communication); physicians' reaction to patients' requests; patients' reaction to physicians' responses</p>	<p>This study raises a pertinent concern seldom talked about in Direct-to-Consumer Prescription Drug Advertising (DTCPDA) regarding the influence of other health care providers such as other physicians and pharmacists. It is proven true that patients educated by DTCPDA and mass mediated drug, information did try to influence their physicians to prescribe drugs, but only patients who had consulted other health care providers got what they wanted from their physicians. The fact that one's own physician is not involved in this type of influence may mean that the physician is prescribing a drug that his or her patients want other than what he or she prefers. That means the physicians gave way to requests of patients advised by other physicians and pharmacists. In this regard, the influence of drug prescription behaviors certainly has come from interpersonal influence of health care providers other than from the mass or hybrid media only. The influence is so strong that patients would switch their own physicians who go against the advice given by pharmacists.</p>
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Lindstrom; Casper; Green; Pedersen, 2007	USA	Survey	<p>To assess the preferences of grocery store patrons concerning pharmacy services, especially those beyond traditional dispensing activities, using a survey tool and identify study participant characteristics that may predict the success of pharmacy services in the community setting</p>	<p>163 Males: 43 Females: 120</p>	<p>range 19-87 (n=1 48)</p>	<p>General population, over 18 years</p>	<p>24-hour pharmacy within 20 miles of home; 24-hour drug information; Heart disease education; Influenza and pneumococcal vaccinations; Cholesterol screening; Diabetes education; Automatic refills; Diabetes screening; Comprehensive medication reviews; Urgent care clinics inside of pharmacy; Osteoporosis screening; A1C testing; Fitness education; Pain management education; Travel vaccines; Liver function screening; Thyroid function screening; Memory screening; Weight and body fat analysis; Diabetes glucose meter trainings; Drive-through pharmacy; Blood pressure screening; Asthma education; Smoking cessation classes; Liquid medicine flavoring; Diabetic shoe fittings; Delivery service; Compounding medicine</p>	<p>Marketing of pharmacy services</p>	<p>Pharmacy, pharmacy services, patient preferences, marketing, advertising</p>	<p>A wide range of nontraditional pharmacy services could be incorporated into community pharmacies. However, pharmacies need to provide both traditional and expanded pharmacy services to meet the desires and expectations of their patients. In addition, pharmacy practitioners should expand their marketing options based on patient preferences and market popular services such as flu shots to atypical groups of people, such as those 25–34 years of age. The profession must ensure that the pharmacy services offered complement patient interest.</p>
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Chen; Ung; Chi; Wu; Tang; Hu, 2018	China	Exploratory	This article aimed to explore consumers' perceptions regarding the pharmaceutical care that community pharmacists provide in relation to over-the-counter (OTC) drugs	97 (the study did not set up a target sample size but stopped recruiting when theoretical data saturation was reached) Males: 43 Females: 54	Over 18 years	People who were older than 18 years and had bought OTC drugs at community pharmacy in the past 6 months	Pharmaceutical care that community pharmacists provide in relation to OTC drugs; Consumer orientation	Qualitative marketing research	Expectations on pharmaceutical care; attitude toward pharmacist's competence; experience of self-medication; suggestions for improving pharmaceutical care	Consumers expected pharmacists to provide professional service about OTC drugs at community pharmacies. However, they were not keen on seeking pharmaceutical care from community pharmacists due to distrust in pharmacists' competence. Consumers' reliance on self-medication with OTC drugs caused them higher drug risks. Collective actions of pharmacists, community pharmacies, and government should be taken to rebuild consumers' trust in the competence of community pharmacist to improve the safe and appropriate use of OTC drugs at community pharmacy.
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