

Original Research

Descriptive analysis to use the community pharmacy by patients and customers

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Abstract

Community pharmacies not only act as sites of drug purchase but also as healthcare setting. The aim of this study is to examine the extent of public's use of community pharmacy and their reasons of visiting to Sabha, South part of Libya. Thus, a descriptive, cross-sectional survey with self-administered questionnaire was developed and validated. Data was collected during 2019 by registered pharmacists using the self-designed prepared questionnaire for community pharmacies in Sebha. Of all 600 questionnaires were handed during 2020, 462 forms were returned (77%, response rate). The majority of the respondents reported they had visited the community pharmacies at least once in a month (n = 343, 74%). The highest reason of visiting reported by the respondents was dispensing their prescription medications (n = 304, 65%) while purchasing medication without prescriptions was accounted with n = 162, (35%). The highest rate of the respondents was given advice about antibiotic use (n = 224, 48%) followed by physical exercises (n = 178, 39%) and healthy eating (n = 173, 37%). The majority of the respondents preferred to visit community pharmacy over other healthcare centers because of minor health problems (n = 358, 77%). The major factors influence the consumers choose any particular pharmacy were the professionalism of pharmacy staff (n = 254, 55%) and the availability of the medical products (n = 221, 48%). The respondents incline to choose community pharmacy as a primary health center when they faced drug related problem (n = 248, 54%). In conclusion, the current study revealed that the majority of Libyan people are regular users of community pharmacies and various services and topics of advice have been given by their staff. However, shortage of professional pharmacists in community pharmacies can undermine the opportunity of given reliable pharmaceutical care from these communications.

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Keywords: Community pharmacy, customer, healthcare, Libya, pharmacy practice, prescription

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Introduction

Drug policy in many countries is established to achieve availability, quality, safety and efficacy of medicines as well as timely access to affordable pharmaceutical products with ensuring rational use of medicines. Dispensing prescribing drugs and selling over-the-counter medications are the important missions of community pharmacies. Pharmacy or community pharmacy is a retail shop which provides prescription drugs, among other

products [1] and the license provided by national authority is needed to open and operate a community pharmacy in most countries. It manages numerous consumers who seek help and advice for minor illness. It is visited by persons who are sick or who are healthy. Community pharmacies have the advantage of face-to-face encounters and direct communication with most patients and customers as well as providing wide range of pharmaceutical services to the community [2]. Over the last three decades, Libyan government transited some

pharmaceutical services from public to private sector. Community pharmacies in Libya are private and licensed by Ministry of Health, Department of Pharmaceutical Control. The acute shortage of many essential subsidized medicines in public healthcare settings has activated role of community pharmacies. However, health infrastructure is still weak and it lacks reliable data, an adequate drug legislation and regulations which reflect negatively on pharmaceuticals [3]. As an insufficient data is available on investigate the extent of public use of community pharmacy services in Libya, we undertake this study. To the best of our knowledge, no previous published study was conducted to investigate the public's use of community pharmacy services in Libya. Alongside, this study will provide the initial data on the public's use of community pharmacies and its findings will form a baseline data for future comparison studies that may be conducted about community pharmacy services in Libya.

Materials and methods

Sebha is an oasis city located in Southwestern part of Libya with nearly 750 km from the capital of Libya Tripoli. Its population is estimated to be over 150 000 individuals, it was historically the capital of the Fezzan region [4]. The overall goals are to investigate frequency and reasons of public visits to community pharmacies, to describe the demographics characteristics of their clientele, examine the extent of customer's involvement with community pharmacy services and identify the factors influencing the costumer choosing to visit a particular pharmacy as well as assess their approach to visit the community pharmacy before other healthcare centers. An anonymous a self-administered questionnaire was developed from some literature sources [5, 6, 7] with some modifications. Written questionnaire in Arabic and English was designed, field-tested, revised and finalized (see supplements one for English translation). The pilot study was done to assess the reliability, understanding, design of questions and time consumed to fill the questionnaire.

Inclusion criteria: Participation in the study was voluntary, the study population comprised of patients or customers who came intended to collect medications or any other service at the community pharmacy and adult able to read and write Arabic and aged >18 years were selected with their consent. Patients unable to read the questionnaire or who had difficulty in answering questions were excluded.

Survey administration: Customers were invited to voluntarily participate in the anonymous survey. 600 questionnaires were personally handed to visitors of community pharmacies during 2020. Each survey form

was accompanied by a cover letter, supplied with the questionnaire. The objectives of the study were personally explained to all participants and explanations regarding the techniques employed to assure confidentiality and anonymity and the data used for research purposes only. The ethics approval for the study was obtained from Sebha University Research Ethics Committee.

Results

All 600 questionnaires were personally handed to visitors of community pharmacies. Only 462 questionnaires of the distributed questionnaires were returned and collected (77.0%). The demographic data is showed in the **Table 1**. The majority of respondents (n = 436, 94.0%) were classified of ages in terms as young age (18 - 30) and middle age (30 - 60) years old which were accounted n = 224 (48.5%) and n = 212 (45.9%), respectively. The rest of them were elderly people (age > 60 years) was consisted of only n = 62 (05.6%) of the respondents. The distribution of the participants according to gender was mostly equal.

A large proportional of the respondents, n = 201 (43.5%) were employee which also represented over two-fold of respondents of who were working on self-employed (108, 23.4%).

Regarding participants educational level, over half of the respondents were university graduates which represented 52.2%, (n = 241) compared to those who are at secondary level of education and represented just over the quarter of respondents (n = 122, 26.4%).

| Demographical characteristics | | n (%) |
|-------------------------------|------------------|------------|
| Age | 18 - 30 years | 224 (48.5) |
| | 31 - 60 years | 212 (45.9) |
| | > 60 years | 62 (5.6) |
| Gender | Male | 242 (52.4) |
| | Female | 220 (47.6) |
| Occupation | Students | 092 (19.9) |
| | Own business | 108 (23.4) |
| | Employee | 201 (43.5) |
| | Others | 061 (13.2) |
| Educational Level | Secondary | 122 (26.4) |
| | University | 241 (52.2) |
| | Higher education | 086 (18.6) |
| | Academic | 013 (2.8) |

Frequency of visiting: The majority of the respondents (n = 343, 74.3%) reported that they had visited the community pharmacies at least once in a month and over one third (34.0%) of those respondents reported they had visited at least once a week which at the same time

represent just over the quarter (n = 120, 26.0%) compared with all respondents, **Table 2**. A few of the respondents had visited community pharmacies twice a year or once a year which was accounted n = 75 (16.5%) and n = 44 (9.5%), respectively.

| Rate of use a pharmacy | Frequency | % |
|------------------------|-----------|------|
| Weekly | 120 | 26 |
| Monthly | 223 | 48.3 |
| Twice a year | 75 | 16.2 |
| Once a year | 44 | 9.5 |

Reasons for participants visiting community pharmacies: The main reasons for visiting community pharmacy are shown in **Table 3**. The majority of the participants, n = 304 (65.8%) reported: dispensing their prescription medication was one of the main reasons for visiting the community pharmacies and followed by purchasing medication without prescriptions (n = 162, 35.1%). However, the reasons for purchasing women's and baby's products were represented by 21.0%, (n = 97) and 20.0% (n = 93) of all the respondents, respectively. Consultation and getting health information, cosmetics and medical supplements were reported in less extent by n = 74, (16.0%), n = 71, (15.4%) and n = 70, (15.2%) of the respondents, respectively. In general, the reasons for

purchasing non-medication items represented 72.0% of the respondents.

Role of the community pharmacy visits on public education: The common topics of advice were given by the pharmacy staff was showed in **Table 4**. Nearly half of the respondents (n = 224, 48.5%) reported that they had been given advice about antibiotic use and misuse which represents the highest rate.

Moreover, a large proportion of the participants reported that they had been given advice regarding physical exercises and healthy eating which were accounted by n = 178, (38.5%) and n = 173, (37.4%) of the respondents, respectively. Lower ratios were found among the respondents who reported that they had been given advice regarding smoking cessation and diabetes which accounted for 24.7%, n = 114 and 22.9%, n = 106, correspondingly. However, the respondents who denied they had been given advice regarding smoking cessation and diabetes disease were accounted with n = 195, (42.2%) and n = 199, (43.1%), respectively.

In addition, lesser respondents reported that they had been given advice regarding pregnancy and oral contraceptive which was accounted for by a fifth of respondents (n = 91, 19.7%) while those opposed them accounted for n = 184, (39.8%). Interestingly, the rate of giving advice regarding the neurological disorders to the respondents was reported the lowest which was accounted for only 13.4%, n = 62) compared respondents who denied which they were accounted by 48.7%, (n = 225).

| Reasons | Frequency | % |
|--|------------|------------|
| Collect a prescription (for myself, someone else or both) | 304 | 65 |
| Purchase medication without prescription | 162 | 35 |
| Consultation and get health information | 74 | 16 |
| Medical supplements | 70 | 15.1 |
| Cosmetics | 71 | 15.3 |
| Baby's product (milk , food) | 93 | 20 |
| Woman's products | 97 | 21 |
| Total | 871 | 100 |

| Give an advice about any of the following by the pharmacy staff | yes | | No | | No answer | |
|---|-----|------|-----|------|-----------|------|
| | F | % | F | % | F | % |
| Smoking cessation | 114 | 24.7 | 195 | 42.2 | 153 | 33.1 |
| Diabetes | 106 | 22.9 | 199 | 43.1 | 157 | 34 |
| Healthy eating | 173 | 37.4 | 169 | 36.6 | 120 | 26 |
| Pregnancy and oral contraceptive | 091 | 19.7 | 184 | 39.8 | 187 | 40.5 |
| Physical exercise | 178 | 38.5 | 154 | 33.3 | 130 | 28.1 |
| Neurological disorders | 062 | 13.4 | 225 | 48.7 | 175 | 37.9 |
| Antibiotics use | 224 | 48.5 | 136 | 29.4 | 102 | 22.1 |

Reasons for consumer approach the pharmacy before the clinic: In Table 5, the attitudes of the consumers toward the contact with the community pharmacy before visiting the clinics. The majority of the respondent's n = 358, (77.5%) reported the minor health problems were their main reason for visiting community pharmacies rather than they attempt to seek the clinics and followed by the easy communication with pharmacy staff which is accounted for 26.8%, (n = 124) of the respondents. Whereas, the reasons "no appointment is needed to visit the community pharmacy" and "the consultation in community pharmacy is free of charge" were reported by 25.8% and 22.3%, respectively. Respondents who totally disagree with visiting community pharmacies before the clinic was the lowest rate which was accounted for n = 76, (16.5%).

| The reason for you to approach the pharmacy before the clinic | Frequency | % |
|---|------------|------------|
| Minor health problems | 358 | 77.4 |
| Easy communication with the pharmacy staff | 124 | 26.8 |
| No appointment is needed to visit the pharmacy | 119 | 25.7 |
| The pharmacy consultation is free of charge | 103 | 22.2 |
| Always go to the clinic before the pharmacy | 76 | 16.4 |
| Total | 780 | 100 |

Factors that influences the consumer choose any particular pharmacy to visit: The main factors influencing the choice of any particular pharmacy are shown in Table 6. The primary factor that was considered among respondents was the expertise and professionalism of pharmacy staff which was accounted for more than half of the respondents (n = 256, 55.4%). The next was "the availability of products" which was represented by n = 221, (47.8%) of the respondents. Moreover, a large proportion of respondents consider "pharmacy reputation" (n = 138, 29.9%), the availability of the pharmacist to answer queries (n = 122, 26.4%) of the participants, because of its location (n = 82, 17.8%), quick services (n = 80, 17.3%), confidential and private customer processing (n = 78, 16.9%) and previous social relation with community pharmacy staff (n = 69, 14.9%) whilst the lowest percentage for pharmacy appearance and decoration (n = 46, 10%) of all the respondents.

The first healthcare center you will choose to visit by participants about drug related question or problem: Regarding preference of participants to choose the first

health care center when they faced drug-related information, the primary health center was chosen by the respondents was the community pharmacy which accounted for more than half of respondent (n = 248, 53.7%) compared with just over the quarter of respondents (n = 124, 26.8%) chose the private clinics and nearly a fifth of the respondents (n = 90, 19.5%) preferred to go to the public clinic.

| Factors may influence participant selection particular pharmacy to visit. | Frequency | % |
|---|-------------|------|
| Knowledge and experience of the pharmacy staff | 256 | 55.4 |
| Availability of products | 221 | 47.8 |
| The previous social relation of pharmacy staff | 69 | 14.9 |
| Quick services | 80 | 17.3 |
| Dealing with confidential and privacy | 78 | 16.8 |
| Attractive pharmacy appearance and decoration | 46 | 9.9 |
| The availability of the pharmacist to answer your questions | 122 | 26.4 |
| Location of pharmacy | 82 | 17.7 |
| Pharmacy reputation | 138 | 29.8 |
| Total | 1092 | |

Discussion

In this study, a total of 462 out of the 600 customers of community pharmacies surveyed responded to the questionnaire. It represents high response rate which exceeded our target return of 50%. This high rate of responding could be related to several factors including: short time required to complete the questionnaire, filling out the questionnaire while in the community pharmacy and high percentage of educated adults among the respondents. The study revealed that females participated nearly equal to the males. This is not surprising since the community pharmacies contain various products especially for women and babies. However, the finding of the present study varied from studies in the UK that reported females are more likely to use community pharmacies compared with males [5, 8]. Pharmacies as a community setting that are frequently visited by many local people from different categories. The findings showed the majority of the respondents of this study were regular users of community pharmacies at least once a month, regardless of their reasons. This finding is concordant with other previous studies from different

countries [6, 7, 9 - 11]. The majority of customers of community pharmacies were young and middle age groups which represent about 95% while the elderly was accounted for only 5%. This trend consistency of the last statistical analysis of Libyan population in 2007 which reports that elderly people above 65 years and over were 5% of the general Libyan population [12]. This minority of elderly costumers of community pharmacies could also be explained by the societal cultures in many developing countries where usually the elderly are appreciate and assisted by their families rather than relying on themselves. However, Zimbabwe's study revealed the elderly are extensive users of the community pharmacies [13]. The majority of the respondents had at least graduated from universities. This can be attributed to the fact that many Libyans are highly educated, which may provide the community pharmacy staff easiness in communication and counseling with their customers.

There are several similarities between countries in terms of the public reasons use of community pharmacies. Present study reveals that the majority of the respondents went to the community pharmacy on reason to the purchase of prescription medications while the followed reason was purchasing medications without prescription or over-the-counter medications. Similar trend was reported in several studies that dispensing prescribed medication is the primary reason for using community pharmacies where purchase OTC medications were the second reason for using community pharmacy among the public [5, 14-16]. However, Qatar study revealed that visiting pharmacy was to obtain over-the-counter (OTC) medications was the most reasonable and followed reason was prescription medications [7]. These variation rates between the processing of prescribing drugs and OTC products in different countries could be associated with affordability and availability of OTC medicines compared with prescription medicines in each country. In addition, in Libya, community pharmacies setting is still been portrayed as a place of dispensing and selling medicines. In many countries, community pharmacies unquestionably handle and manage large numbers of consumers and are recognized as a source of professional health advice. Present study found small minority of respondents consciously use the community pharmacy to seek consultation and get health information or advice. The Low level of purchasing OTC medications and seeking health advice compared with purchasing prescribing medications suggested that community pharmacy staff in Libya as many developing countries are not actively involved in providing pharmaceutical care-

related services. Pharmaceutical care involves the detection, prevention and solution of drug-related problems has proved beneficial in diseases [17]. The study also revealed that the reason for purchasing non-medications was represented about 70% of the respondents which indicate expansion of community pharmacy services to the society. Practice of community pharmacies over the last decades is developing from its traditional role of providing preparation and dispensing to becoming an accessible healthcare destination [18]. They are ideally positioned to provide healthcare advice to all categories of people [19]. Community pharmacies manage large numbers of consumers who seek help and advice on different topics regarding their health. Community pharmacy staff have an opportunity to implement interventions related to antimicrobial stewardship due to their expertise in medicines and accessibility to patients. Nearly half of the respondents reported that they had been given advice about antibiotic use. Pharmacy staff believes that they have role in educating the public through counseling patients on effective self-care treatments for common infections, appropriateness of antibiotics, antibiotic adherence and how to prevent their adverse effects [20]. Spanish study reported that patients' antibiotic adherence behavior is improved when verbal education was provided in the pharmacy, compared with the control group [21]. Lower ratios were found among respondents who reported they had been given advice regarding other diseases as diabetes disease, smoking cessation, pregnancy and neuropsychiatric disorders. This variation in topics of the advice that had been given to the respondents in community pharmacies could be associated with the level of satisfaction of the customers toward the professionalism of the community pharmacy staff about these topics. One of the advantages of community pharmacies over other healthcare settings is accessibility. Over the quarter of respondents and reported that "no appointment is needed to visit the community pharmacy" was one of the behind reasons for their preference to visit community pharmacy over the clinic. Studies from different countries indicates that the customer's long waiting period may restrain the clients to receive easily accessing the health care services [22 - 24]. Community pharmacy staff can support customers who seek self-care for their minor ailments and, in case they need further investigations the pharmacy staff will also refer them to appropriate healthcare professionals. The majority of respondents reported the minor health problems were the main reason for their visiting to

community pharmacy rather than visiting the clinics. Similar trend in Qatar's study found that about 90% of respondents would prefer to approach the pharmacists over the physicians in the case of minor ailments [7]. In the same way, the majority of respondents in this study seem to have trust in the community pharmacies from their response, they were willing to contact to pharmacy professional staff a first, on drug-related issues. Even though most health care providers can rationally involve in drug use, WHO has recommended a distinctive role for pharmacists, particularly ensuring safety and effective administration of drugs [25]. Pharmacists are able to provide clinical expertise regarding drug choice, the best admiration, appropriate utilization of medications and making sure that drugs achieve the maximum benefits for the patients' health outcome [26]. However, in Libya as many other countries, there is an acute shortage of pharmacists practicing in community settings including community pharmacies [27]. The pharmacist population was only 6 pharmacists per 10,000 people [28]. Therefore, the absence of qualified pharmacists in community pharmacies is an important factor that vastly contributed to inappropriate community pharmacy practices in countries that health infrastructure is still weak. Deliver successful marketing services that meet patients' expectations is one of the main challenges for many community pharmacies in Libya. This study revealed that the next factor that influences the respondents to choose any particular pharmacy was the availability of products in the community pharmacy among nearly half of the respondents. Elfituri et al. (2018) document the professional opinion of 20 community pharmacy professionals which reported that pharmaceutical marketing complains from frequent drug shortages and the cost of products on the rise up [3]. Community pharmacies mainly in many developing countries are considered the first health care setting for getting free medical advice [29, 30]. This consistent with our study which showed that the respondents reported the free charge consultation in community pharmacy is one of the preference reasons to visit community pharmacy rather than to approach other healthcare settings.

Based on this preference of respondents to the community pharmacy as their primary health setting for treatment of simple ailments would have a significant advantage from different perspectives such as easiness to communicate with the community pharmacy staff without previous determining appointments or getting referrals [31]. These reasons seem related to the community pharmacy but other factors could also promote the use of community

pharmacy such as the consumers don't wish to stay a long time in queues as in hospitals, shortage of specialist physicians in clinics or public hospitals and reducing the overall cost of adhering the process of health care [20]. In such unstable countries as Libya where the health facilities are limited coupled with lacking adequate infrastructure in the health system and poor quality of the services may constrain many people from being able to access the services of public healthcare settings which may make the community pharmacies to the individuals the last resort especially for those with a minor ailment. It is not surprising in Libya that the majority of the users of community pharmacy approach the pharmacy before the clinic since they believe treating minor illness is an easy mission. This needs an expert pharmacist to be available in community pharmacies to ensure introduce desired pharmaceutical services to the customers. Some Libyan community pharmacies operate with no licenses and their owners and dispensers at some of them are not pharmacists [3].

Given the competitive marketing, community pharmacies need to have to provide their consumers' unique services and strategies to achieving strategies of trust, satisfaction, and loyalty [32]. Consumer choice towards a particular pharmacy is crucial in the business matter and depends to an extent on gaining of benefits from received pharmacy services during visiting the pharmacy. In other words, the quality of community pharmacy services and the performance of its staff can influence people's decisions as to which pharmacy they would visit. At the disaggregated level, present study revealed that the majority of respondents consider the expertise and professionalism of pharmacy staff as the primary factor for choosing a particular pharmacy. This finding is in line with the existing studies from different countries [33 - 37]. Clients or patients who are satisfied with the quality of health care services by the particular health care center or specialists are more likely to adhere to their treatment instructions and at the same time they are less likely to change their current choice to others [7, 38]. Over a quarter of respondents accounted for the availability of the pharmacist to answer queries which were represented by of the participants. Pharmacist is qualified to provide medication counseling to patients which can enhance rational drug use and facilitate achieve desired outcomes [7].

The presence of a pharmacist is a legal requirement whenever the pharmacy is opened and if no pharmacist is in the community pharmacy, it must be closed during this absence [39].

Conclusion

Majority of Libyan people are regular users of community pharmacies and purchasing of prescription medications was the main reason for visiting community pharmacies. Various topics of the advice that had been given in community pharmacies to customers are not a routine performance by community pharmacy staff. The expertise and professionalism of pharmacy staff is the primary factor for choosing a particular pharmacy, shortage of availability of pharmacists in Libyan community pharmacies can undermine opportunity of given reliable quality educational services from these pharmacist-patient communications. Thus, it is important to adopt suitable strategies to facilitate the accessibility of pharmacist in community pharmacy by strict government enforcement to adhere to the health ministry regulations and regularly monitoring the performance of community pharmacies, in order to improve the participation of community pharmacists in public health activities.

Ethical issues

Including plagiarism, Informed Consent, data fabrication or falsification and double publication or submission have completely been observed by authors.

Author's contribution

All authors contributed to the development of ideas and design of the study. A. O. Hassan and M.O. Rajab, wrote the first draft of the manuscript, which was critiqued reviewed by M.A. Alssageer. All authors have approved the final manuscript.

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Conflict of interest

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