

Community pharmacy services in Middle Eastern Arab countries: consumers' perspective

Hisham A.A. Razzaq^a, Syed A.S. Sulaiman^b, Sabin Thomas^c

^aDepartment of Social and Administrative Pharmacy, School of Pharmaceutical Sciences,

^bSchool of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia, ^cSchool of Pharmacy, College of Pharmacy and Nursing, University of Nizwa

Correspondence to Hisham A.A. Razzaq, MSC, Department of Social & Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, PO box 768, Penang 133, Malaysia. Tel: 604-6533888 Ext. 2254; Fax: 604-6570017; E-mail: hishamrazzak@yahoo.com

Received: 6 November 2022

Revised: 18 December 2022

Accepted: 19 December 2022

Published: 31 March 2023

Egyptian Pharmaceutical Journal 2023, 22:11–17

Over the past few decades, the role of pharmacists has been shifted from medicines to patients' care. This article is a literature review of the several published works concerning consumers' perceptions toward community pharmacy services (CPS) from different Middle Eastern Arab countries (MEACs). To identify consumers' perspectives toward CPS in the MEACs. Standard search strategies were adopted using PubMed, ScienceDirect and Google Scholar for the published literatures ($n=22$) related to CPS in MEACs in the period between 2000 and 2022. All articles assessing customers' perception towards CPS in the MEAC. Three themes were identified from the review articles: consumers' perception toward community pharmacy practice, consumers' perception toward the role of community pharmacists (CPs) and indicators to develop community pharmacy practice. Consumers showed varied perception toward different aspects of community pharmacy practice. The public showed good understanding toward the traditional role of CPs. Moreover, public is interested to extend the role of CPs. Several barriers were identified that limit the public from seeking medical advice from CPs.

Keywords:

community pharmacists (CPs), community pharmacy services (CPS), community pharmacy (CP), Middle Eastern Arabic countries (MEACs)

Egypt Pharmaceut J 22:11–17

© 2023 Egyptian Pharmaceutical Journal
1687-4315

Introduction

Community pharmacy (CP) is the first station to be accessed by customers as it is easily approached [1]. Daily, millions of people around the world visit CP either to buy medicines or to get medical advice [2]. These numbers escalated during the pandemic of coronavirus disease 2019 [3]. The drastic change in pharmacy profession shifted pharmacist's responsibility from the traditional role of medicines' compounding and dispensing (i.e. fill and bill) to communication with customers regarding their health status and their medications [4]. These massive changes necessitate understanding customers' expectations, perceptions, and addressing unmet needs to improve the services and increasing customers' satisfaction [5]. Determining consumer's perception is an integral part to assess the quality of service delivered by CP and identify gaps.

Criteria of the studies selected

Any study involved assessment/evaluation of patients/customers/population or public toward services delivered by community pharmacists (CPs) in any of the Middle Eastern Arab countries (MEACs). Selection of countries based on similarity in their region, language, and cultures. Articles involved in this literature review included studies published in English.

Methodology

Extensive search was done in different database resources (PubMed, ScienceDirect, and Google Scholar), where 22 articles were selected from different MEACs (Table 1). Articles chosen were published in the period between 2000 and 2022.

Selected articles were reviewed and thematically classified/analyzed following the six steps of thematic analysis procedure [27] as shown in Fig. 1. Three themes were identified as shown in Table 2.

Public perception toward the current community pharmacy

Perception of public toward the current community pharmacy services

In general, literature review showed that the respondents were satisfied with community pharmacy service (CPS) /pharmacists' role and responsibilities. For examples, six studies [8,9,21,22,24,26] indicated that customers showed good to moderate perception toward services delivered by CPs in percentage terms of 41, 50, 60,

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Table 1 Summary of publics' perception toward community pharmacy services

Studies assessed public perception towards CPS				
References	Country/ year	Study design	Sample size	Main results
Al-Arif [6]	KSA/ 2012	Questionnaire	1699	37.3% of participants perceived that CPs is merely a vendor. About 38% assured that pharmacists doing counseling proactively (suo moto), CPs considered by 34% of respondents as a health awareness provider and 44.6% perceived that pharmacist as an effective part of health-care system
Alhomoud <i>et al.</i> [7]	UAE/ 2016	Cross-sectional study (CSS)	415	The CPS focused on product with minimal pharmaceutical care provided
Ali <i>et al.</i> [8]	UAE/ 2019	CSS	210	Respondents perceived that CPs is not an expert to treat minor ailments and he/she should not advise patients about general health issues other than drugs. Patients are least satisfied with the privacy maintenance during medication counseling with CPs
Awad <i>et al.</i> [9]	Kuwait/ 2017	CSS	433	Overall, respondents showed a negative perception toward CPs. 20% perceived that pharmacist had a good balance between health and business matters; 53% consider physician is the first person to be contacted for drug-related problems. About 59% agreed that they trust pharmacists. About 55% did not believe that pharmacist's role to involve health progress monitoring
Alotaibi and Abdelkarim [10]	KSA/ 2014	Questionnaire	100	72% of consumers perceived that pharmacist are not caring to the presence of prescription when dispensing medications, 48% feel embarrassed to ask questions to CPs inside the premises, 26% of respondents indicated that pharmacist is not delivering enough counseling, and 26% of participants encountered previously a dispensing error
El Hajj <i>et al.</i> [11]	Qatar/ 2017	Interview using survey	58	50% considered physician is the first person to be called for drug-related issues. 79% agreed that CPs should provide advice regarding minor ailments treatment; but not expected that CPs to monitor any health screening. About one-third of respondents agreed that pharmacist give them sufficient time to discuss their problem
Jose <i>et al.</i> [12]	Oman/ 2015	CSS	390	Many respondents (62%) perceived that pharmacist could extend their services to include health screening services, blood pressure (BP) and blood sugar monitoring. While 66% of participants were satisfied with pharmacy privacy
Khdour and Hallak [13]	Palestine/ 2012	Questionnaire	790	Physician was perceived as the preferred source of advice. Only 17% of respondents perceived pharmacists as health professionals about drugs. One-third reported that the pharmacist used a private area within the pharmacy. Majority of respondents were willing to extend pharmacy service like BP monitoring
El Sharif <i>et al.</i> [14]	UAE/ 2017	Questionnaire	375	About 23% of respondents trust pharmacists. About 44% agreed that pharmacists clearly labeled medications. About 38% agreed that privacy was respected in the pharmacy
Sharrad [15]	Iraq/2017	CSS	150	About 65% of respondents stated that they first contact physician in case of a drug-related problem. 66% of respondents consult their pharmacist in the case of minor health problems. Positive view toward expanding the role of CPs. Patient's privacy should be further maintained
Ibrahim <i>et al.</i> [16]	Iraq/2013	CSS	410	55% of the respondents indicated that pharmacist is the first person to be called in case drug-related problem. Pharmacy selection depends mainly on the location. About 80% of participants under-appreciated pharmacist's performance
Iskandar <i>et al.</i> [17]	Lebanon/ 2017	CSS	565	About 5% of respondents do not trust the pharmacist. About 46% believe that pharmacist lacks knowledge or had no time to counsel (47%). Among the barriers that prevent patients to ask pharmacists questions is pharmacist's attitude that makes fear of intimidation
Al Akshar <i>et al.</i> [18]	UAE/ 2014	CSS	385	11% of respondents believe that pharmacists are primarily concerned with making money. 49% of patients indicated that privacy was not maintained. 17% of patients perceived that the major barrier to approach pharmacists is that physicians are more trusted
Basheti <i>et al.</i> [19]	Jordan/ 2018	CSS	812	About 55% of respondents had no knowledge about pharmaceutical care. Dispensing and counseling were the important activity to be done by pharmacists from the attitude of respondents. 86% believe that pharmacists have a role in providing health-care services

(Continued)

Table 1 (Continued)

Studies assessed public perception towards CPS				
References	Country/ year	Study design	Sample size	Main results
Alotaibi <i>et al.</i> [20]	KSA/ 2017	CSS	600	About 34% of respondents were not willing to discussing drug-related issues with the pharmacist, about 50% of the respondents consider pharmacist as merely a vendor
Almohammed and Alsanea [21]	KSA/ 2021	CSS	387	Public showed, in general, a positive perception (81%) and attitude (70%) concerning CPs working in CPs. Female customers' attitude was more positive than male customers (about 75 and 67%), respectively. Participants' satisfaction was mostly with pharmacists' communication and commitments but not with the level of pharmaceutical care provided
El-Kholy <i>et al.</i> [22]	KSA/ 2022	CSS	1000	80.5% of respondents showed that CPs treat them with respect. Factors influencing respondents' opinion toward CPS are the availability and knowledge of pharmacists, counseling services, and promptness of services provided. Physicians identified as the preferred source for counseling (59%). Satisfaction toward CPs and CPS were about 63 and 65%, respectively
Panda <i>et al.</i> [23]	KSA/ 2022	CSS	945	Respondents showed a positive perception toward the role of CPs toward their communication and counseling. The main reason to visit a particular pharmacy is the close location (52%). However, participants expressed their negative attitude toward medications cost and diagnostic services provided by CPs. Public revealed a positive perception toward community pharmacist's role and their extended services provided during the pandemic of COVID-19
Studies assessed public perception towards CPS				
References	Country/ year	Study design	Sample size	Main results
Bawazir [5]	KSA/ 2003	Questionnaire	911	56% of respondents perceived that pharmacists were concerned more with business. 45% felt that pharmacists are giving them the time to ask questions. Respondents showed positive attitude toward services including BP, blood glucose, and cholesterol monitoring also to weight, height, and temperature measuring
Al-Tannir <i>et al.</i> [24]	KSA/ 2016	CSS	500	Issues increase customers satisfaction are the availability of more than one pharmacist, presences of female pharmacists, and extending opening time of the pharmacy. Pharmacists need to improve their professional appearance and allocate more time for patient counseling
Al-Jumaili <i>et al.</i> [25]	Iraq/2020	CSS	400	Patients are more satisfied with female pharmacists, availability of more than one pharmacist, and with pharmacies which are opening full time
Farajat <i>et al.</i> [26]	Jordan/ 2017	CSS	100	Implementation of online services and domiciliary services. More attention toward para-pharmaceutical sections

Abbreviations: COVID-19 indicates coronavirus disease 2019; CPS indicates community pharmacy service.

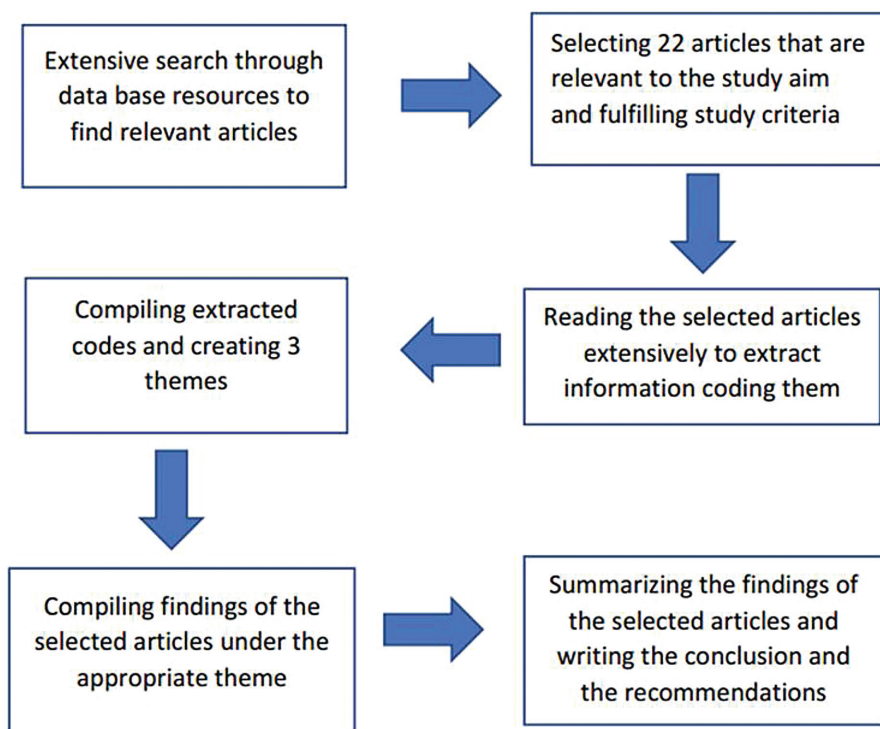
65, 80, and 81%, respectively. Respondents' satisfaction was attributed to many issues, such as pharmacist counseling regarding medication [24], professional appearance of the pharmacy, professionalism of the pharmacy staff, availability of female pharmacists, having more than one pharmacist, and whether the pharmacy is open full time [8], privacy maintenance, pharmacist's communication [21,23], sufficient counseling [9,21], and satisfaction on overall CPS [26].

Areas like medication counseling and encouraging patients to ask questions were indicated in several studies. For example, about 50% of respondents feel embarrassed to ask pharmacists questions; moreover, pharmacists are not delivering sufficient counseling regarding medications. About one-quarter of

participants encountered a dispensing error previously [10]. Around one-third of respondents agreed that the pharmacist gave them enough time to discuss their inquiries and assured that pharmacist was well-knowledged to answer questions [11,22]. Satisfaction with pharmacy services regarding pharmacist counseling was perceived by around 41% of respondents [24].

Public were moderately satisfied with the service provided by community pharmacies, such perception was well related and influenced by different educational levels and the frequency of visiting CP [12]. A Qatari study indicated that 93% of patients showed that the pharmacist should provide them with the direction to use medications. In a Palestinian study, about 50% of

Figure 1



Six steps of the thematic analysis procedure.

Table 2 Summary of the findings extracted from the reviewed studies

I. Public perception toward the current community pharmacy services
a. Perception of public toward the current community pharmacy services
b. Availability of privacy for customers during counseling
c. Public's use of community pharmacies
II. Public perception and expectation about the role of community pharmacists
III. Indicators to improve community pharmacy practice

respondents indicated that pharmacists spoke quietly during counseling [13]. Patients were satisfied with pharmacist's communication during counseling and their friendly behaviors [8,14]. In an Emeriti study, about 74% of respondents agreed that the CPs deliver their medicines in a polite way; about 44% agreed that the instructions were clearly labeled by the pharmacist on each medication; and 24.5% agreed that the CPs provided them with the required information about drug storage [14]. A Saudi study showed that more than one-third of respondents perceived that pharmacist are proactive in delivering counseling (suo moto) and acknowledged their role in solving medication problems [6]. Customers showed satisfaction with pharmacist's communication, and the lowest satisfaction was perceived by non-Arabic

or non-English speakers and participants aged above 60 years [7]. Respondents did not perceive CP as an expert to treat minor ailments [8,14].

Availability of privacy for customers during counseling

Maintaining customers' privacy during counseling is a paramount element to be considered in assessing customers' perception toward CPS. About 60% of the reviewed studies ($n=14$) had assessed customers' perception regarding privacy during counseling. For instance, in a Saudi study, 92% of customers showed that privacy was not maintained by pharmacists while discussing with patients during medications dispensing [8]. In other Saudi studies, 94 and 64%, respectively, of customers [10,22] indicated the importance of allocating a designated area to maintain patients' privacy during counseling.

Lack of privacy was considered by 50% of respondents as a barrier that prevents customers to seek the help of CPs [11]. In addition, about one-third of respondents in two studies mentioned that they be influenced by the availability of privacy in choosing their favored CP [9,15]. Another two Iraqi studies showed that 17% and about 61%, respectively, of participants were unsatisfied with privacy maintenance during discussion with pharmacists [16,25]. In an Omani

study, about 34% of customers showed disagreement or doubt concerning privacy maintenance during medication dispensing [12].

Other studies have shown that respondent's perception ranged between 35% and up to about 50% [9,17,18], whereas as just about 11% of respondents agreed that pharmacists use a private area during discussing about private matters [13]. In an Emirati study, 38% of respondents agreed that CPs respect patients' privacy during medication dispensing [14]. However, in two Jordanian studies respondents perceived privacy positively by 60 and 73%, respectively, while visiting CP [19,26]. Similarly in Saudi study, 75% of respondents were satisfied with the privacy during counseling [20].

Public's use of community pharmacies

Seven articles ($n=7$) showed that more than 50% of respondents were visiting CP once or more per month. The main common reason that drives public to visit CP was purchasing prescription or over counter medications [9,11,13–16,18,22]. Among other reasons, seeking medical advice, buying para pharmaceuticals items or other items like baby items and cosmetics.

On the contrary, factors influencing publics' preference to visit a particular CP are convenient location (i.e. proximity from home or working place or in the mall) for instances [9,11,13,15,17,18,22,23]. The availability of a wide range of products and the convenient working hours [22,26], trusted and friendly staff [5,15], maintaining confidentiality and privacy [26], availability of a wide range of products [13], price discount and promotions [17,19,22], and lastly the availability of parking area [17].

Public perception and expectation regarding the role of community pharmacists

About 40% of the reviewed articles ($n=7$) showed that participants perceived that CPs concerned more with money making rather than customers' health, that is [11], 27% [10], 34% [13], about 48% [5], 56% [15], 58% [9,18], and 73%. The duration of counseling and giving customers the chance to ask questions is negatively perceived in two studies [8,17]. Public perceived CPs as merely a vendor/dispenser of drugs 50–60%, respectively [5,6,8,10,12,20]. Likewise, in UAE a respondent stated that pharmacists are more oriented toward products with minimal or negligible pharmaceutical care provision [7]. However, in a Saudi study 53% of participants considered CPs as drug experts and health-care providers and spending

enough time in patients' discussion (57%) and willing to answer their inquires (72%) [22].

Concerning public's expectations toward CPs duties, an Iraqi study indicated that 66% of respondents are consulting their pharmacist for minor health problems [15]. Consumers expressed their willingness to include extra services, like monitoring blood pressure, weight, height, cholesterol, and temperature [5,7,11,12,18]. Furtherly in a couple of studies, more than 40% and more than 50% of respondents, respectively, expressed their readiness to pay for the blood pressure and cholesterol monitoring [13,19].

In contrast, respondents in a couple of studies 70% and 64%, respectively, did not expect CPs to do health screening tests or monitor health progress [11,22].

The need to keep patients' medication record was perceived as an expected service by the public [11,13].

Respondents in two studied showed more trust toward physicians than pharmacists; 44 and 59%, respectively [15,22]. However, 72% of respondents trust pharmacists as a source of information [20]. Similarly in a Kuwaiti and Omani studies about 59% and 72%, respectively, of participants trust pharmacists [9,12]. Similarly, 86% of Emirati population described pharmacists as trustworthy [14]. However, in another Emirati study only 37% of population agreed that pharmacists are trustworthy about information regarding medication use [8]. A Lebanese study indicated that about 60% of respondents did not trust CPs [17], whereas a Saudi study showed that 50% of customers feel embarrassed to discuss their health issues with CPs [10].

Indicators to improve community pharmacy practice

Several strategies were suggested by the reviewed studies to improve CP practice. Among them:

Promoting the role of CPs as a health-care professional by raising publics awareness concerning the important role of CPs, which was mentioned in nine articles [9,10,12–16,20,22].

Allocating a designated counseling area to maintain patient's privacy during counseling to assure optimum counseling [5,10,12,13,15,17,18].

Extending the role of CPs by further utilizing their knowledge [5,7,11,13,18,19,22].

Equipping CPs with the appropriate knowledge and training to increase their confidence and make them fully responded toward the growing customers' needs. CPs need to boost their clinical skills and play a proactive role and be an effective part of the health-care team [6,8,9,17,21,24]. Moreover, pharmacists should dedicate a sufficient time for counseling [8] and make sure that customers understand well and comprehend their instructions and advice. Also, customers should gain the chance to ask their inquiries.

Ensuring the availability of sufficient staff in the pharmacy, particularly female pharmacists was a suggestion perceived by customers [25]. Furtherly, opening hours of CPs need to be extended.

Finally, keeping patients' medical records in CP [19] and the implementation of online services and domiciliary services [22,26].

Limitations

Bias in the results of the reviewed articles might have happened due to several expected factors, for instance, sample size of different studies was varying greatly (100–1699 participants), variation in the age groups proportion of different studies, for example, a couple of studies [5,18] included people starting from the age of 15 years, while another study included patients aged 16 and above [11], the remaining included people aged 18 years and above. Moreover, the disproportion percentages of sexes in the majority of studies might produce some bias in some way on the result, for instances, in 11 articles females were overrepresented [7,11,13,14,17,19,20,22–24,26], while in seven articles males were overrepresented [5,6,9,15,16,18,21]. However, sex is equally proportionate (50 : 50) in two articles only [8,12]. Sex was not reported in one study [10]. In addition, it is observed that in most studies the percentage of correspondents aged 60 years and above was underrepresented.

Normally, it is expected that old age people are more prone to use medicines than younger people, as they are more likely to be chronically ill. And their perception is important to be assessed. The underrepresentation of the elderly is probably due to collection of their medicines by their relatives. In this case, the perception of the elder patients was masked and not been accounted in the study. Moreover, some people might give their feedback and do not have any previous experience about CPS, for instance, some studies indicated that 54% of participants have no knowledge regarding the pharmaceutical care concept [19]. Some people were medically covered by government sector, and are not well familiar with

CPS, and hence their feedback might not well reflect the real image.

Convenient sampling followed in some studies might not appropriately represent the public in that particular country. In addition, correspondents have been selected from different places, for instances; in some studies, population were approached in CP or public places. Moreover, face to face interviews or self-administrated questionnaires or online survey might also influence correspondents understanding the questions and might result in bias. Some studies translated questions taken from another similar studies, translation might affect the meaning and consequently results in bias.

Lastly, variation in the educational background of respondents might further affect their comprehension and understanding of the questionnaire and consequently their reply, as well as the respondents might forget some information and could not call them back. Hence their feedback might not truly reflect their real experience and knowledge. A couple of reviewed articles done after the pandemic of COVID-19. The pandemic and its precautionary advices such as social distancing, mask wearing, lockdown, and other restrictions have, no doubt, influenced public's perception in some way toward CPS and result in bias in some way.

Conclusion

Overall, public in the MEACs has a good understanding concerning traditional (dispensing). Moreover, they welcomed for further extension in their professional role. However, elevating the awareness of public regarding the role of CPs is essential and should be parallel with the effort of health authority in expanding the role of community pharmacists.

Decision-makers in the MEACs need to implement the needed strategies to develop the CP profession and extending the role of CPs. Also, CPs need to develop their knowledge and be more proactive in providing health service advice to the population.

Acknowledgment

The author acknowledges the late professor Dr Mohamed Azmi Ahmad Hassali for his effort and support.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- 1 Curley LE, Moody J, Gobarani R, Aspden T, Jensen M, McDonald M, *et al.* Is there potential for the future provision of triage services in community pharmacy?. *J Pharm Policy Pract* 2016; 9:1–22.
- 2 Adepu R, Nagavi BG. General practitioners' perceptions about the extended roles of the community pharmacists in the state of Karnataka: a study. *Indian J Pharm Sci* 2006; 68:36.
- 3 Connolly J, McGillivray S, Munro A, Mulherin T, Anderson J, Gray N, Toma M. How co-production and co-creation is understood, implemented and sustained as part of improvement programme delivery within the health and social care context in Scotland. *Univ West Scotland* 2020.
- 4 Azhar S, Hassali MA, Ibrahim MI, Ahmad M, Masood I, Shafie AA. The role of pharmacists in developing countries: the current scenario in Pakistan. *Hum Resour Health* 2009; 7:1–6.
- 5 Bawazir SA. Consumer attitudes towards community pharmacy services in Saudi Arabia. *Int J Pharma Pract* 2004; 12:83–89.
- 6 Al-Arifi MN. Patients' perception, views and satisfaction with pharmacists' role as health care provider in community pharmacy setting at Riyadh, Saudi Arabia. *Saudi Pharma J* 2012; 20:323–330.
- 7 Alhomoud FK, Kunbus A, Ameer A, Alhomoud F. Quality assessment of community pharmacy services provided in the United Arab Emirates: patient experience and satisfaction. *J Appl Pharma Sci* 2016; 6:017–023.
- 8 Ali HS, Aldahab AS, Mohamed EB, Prajapati SK, Badulla WF, Alshakka M, Baig MR. Patients' perspectives on services provided by community pharmacies in terms of patients' perception and satisfaction. *J Young Pharma* 2019; 11:279.
- 9 Awad AI, Al-Rasheedi A, Lemay J. Public perceptions, expectations, and views of community pharmacy practice in Kuwait. *Med Princip Pract* 2017; 26:438–446.
- 10 Alotaibi HS, Abdelkarim MA. Consumers' perceptions on the contribution of community pharmacists in the dispensing process at Dawadmi. *Saudi Pharma J* 2015; 23:230–234.
- 11 El Hajj MS, Salem S, Mansoor H. Public's attitudes towards community pharmacy in Qatar: a pilot study. *Patient Prefer Adherence* 2011; 5:405–422.
- 12 Jose J, Al Shukili MN, Jimmy B. Public's perception and satisfaction on the roles and services provided by pharmacists – cross sectional survey in Sultanate of Oman. *Saudi Pharma J* 2015; 23:635–641.
- 13 Khmour MR, Hallak HO. Societal perspectives on community pharmacy services in West Bank-Palestine. *Pharma Pract* 2012; 10:17–24.
- 14 El Sharif SI, Abd Alrahman N, Khaled N, Sayah N, Gamal E, Mohamed A. Assessment of patient's satisfaction with pharmaceutical care services in community pharmacies in the United Arab Emirates. *Arch Pharma Pract* 2017; 8:1.
- 15 Sharrad AK. Attitude of consumers towards community pharmacists and their interest in expanding community pharmacist services in Basra, Iraq: a pilot study. *Al Mustansiriyah J Pharm Sci* 2017; 17:11.
- 16 Ibrahim IR, Al Tukmagi HF, Wayyes A. Attitudes of Iraqi society towards the role of community pharmacists. *Innov Pharma* 2013; 4:2.
- 17 Iskandar K, Hallit S, Raad EB, Droubi F, Layoun N, Salameh P. Community pharmacy in Lebanon: a societal perspective. *Pharm Pract* 2017; 15:893.
- 18 Al Akshar SA, Shamsain M, Metwaly Z. Pharmacists perceptions of community pharmacy practice in UAE: an overview. *IOSR J Pharm* 2014; 4:47–56.
- 19 Basheti IA, Nassar R, Barakat M, Alqudha R, Abufarha R, Mukattash TL, Saini B. Pharmacists' readiness to deal with the coronavirus pandemic: assessing awareness and perception of roles. *Res Soc Administr Pharma* 2021; 17:514–522.
- 20 Alotaibi NH, Alzarea AI, Alotaibi AM, Khan YH, Mallhi TH, Alharbi KS, *et al.* Exploring satisfaction level among outpatients regarding pharmacy facilities and services in the Kingdom of Saudi Arabia; a large regional analysis. *PLoS ONE* 2021; 16:e0247912.
- 21 Almohammed OA, Alsanea S. Public perception and attitude toward community pharmacists in Saudi Arabia. *Saudi J Health Syst Res* 2021; 1:67–74.
- 22 El-Kholy AA, Abdelaal K, Alqhtani H, Abdel-Wahab BA, Abdel-Latif MM. Publics' perceptions of community pharmacists and satisfaction with pharmacy services in Al-Madinah City, Saudi Arabia: a cross sectional study. *Medicina* 2022; 58:432.
- 23 Panda DS, Alotaibi NH, Nagarajappa AK, Mohamed RN, Mohamed MS, Malhi TH, *et al.* Public perceptions concerning community pharmacy services in Jouf Region, Kingdom of Saudi Arabia in Reference to COVID-19 Pandemic. *Indian J Pharma Educ Res* 2022; 56(1s):s115–s120.
- 24 Al-Tannir M, Alharbi AI, Alfawaz AS, Zahran RI, AlTannir M. Saudi adults satisfaction with community pharmacy services. *Springerplus* 2016; 5:774.
- 25 Al-Jumaili AA, Ameen IA, Alzubaidy DA. Influence of pharmacy characteristics and customer quality of life on satisfaction of community pharmacy customers. *Innov Pharma* 2020; 11:1.
- 26 Farajat M, Alkalaldeh J, Sharari S, Elayan N, Alyazjeen A. Customers perception towards the quality of services in community pharmacies in Amman-Jordan. *Zagazig J Pharma Sci* 2017; 26:13–31.
- 27 Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3:77–101.