

Pharmacists' attitudes and practice about using communication skills question on dispensing treatment in the private sector in Baghdad

Maysaloon Ismail khaleel ^a, Raghad Ezzat Abdul Razaq ^b, Muntadar Saad Jabir ^c, Linh Shamil Mahmood ^d

ABSTRACT

INTRODUCTION: pharmacist-patient communication is the cornerstone of the success and effectiveness of consultation to enhance patient safety and compliance. Good communication skills are needed for drug reviews, motivating people to adhere to medicines, and promoting health.

OBJECTIVE: To measure the practice and attitude of pharmacists working at private pharmacies in Baghdad regarding communication skills questions on dispensing treatment and their association with some demographic features.

METHODS: A cross-sectional self-administered questionnaire was used to measure the practice and attitudes of pharmacists working in the private sector in Iraq-Baghdad.

RESULTS: We found that 242 (66.3 %) participants were in the age group of 25-30 years, 200 (54.8%) males, 315 (86.3%) had bachelor certificates, 273 (74.8%) had less than ten years of practice, and 328 (89.9%) were still working in the governmental health institutions. Of the total, 307 (84.1%) pharmacists asked the patients about drug allergies. We found that 320 (87.7 %) participants did not ask about using herbs without significantly correlating with demographic factors. Similarly, about one-third of the pharmacists in our sample asked patients about using vitamins. Regarding attitude, 300 (82.7%) and 320 (87.7%) pharmacists agreed that they would build a confidence with the patient during the interview and understand the patient's popular phrases and simple language. We found that 239 (65.5%) and 253 (69.4%) agreed to start the interview with open questions and spend time learning about the patient's health problem before dispensing the prescription.

CONCLUSION: Pharmacists working in private pharmacies have good practice in asking patients about drug allergies but inadequate practice regarding asking patients about using herbs, vitamins and dietary supplements. Most participants have a positive attitude towards building intimacy with the patients and understanding their popular phrases and simple language.

Key words: Pharmacist, communication skills, dispensing treatment.

INTRODUCTION

Pharmacist-patient communication is now considered an integral aspect of pharmacist-provided service. The pharmacist's role has been expanding in a patient-centred way, making communication between patients and the community pharmacist a vital component of daily practice.^[1] Patient-centred care communication is essential to building a solid and appropriate interpersonal relationship with the patient.^[2] So, pharmacist-patient communication is the cornerstone of the success and effectiveness of consultation. This communica-

tion enables customers to enhance their safe and active pharmacotherapy drug use through their knowledge and skills.^[3] The World Health Organization (WHO) report identified the pharmacist as a "communicator".^[4] Thus, pharmacists must adapt their communication to the wide variety of patient needs and achieve patient-centred communication.^[5, 6]

Good communication skills are needed for complex activities such as conducting medicine reviews, motivating people to adhere to medicines, and promoting health.^[7] Therefore, Appropriate drug information is critical for proper

a: B pharm. Pharmacist. National Centre for Training and Development, Ministry of Health, Baghdad, Iraq. **b:** CABMS/CM. Community physician. National Centre for Training and Development, Ministry of Health, Baghdad, Iraq. **c:** FACMS/FM, Senior Family Physician, the National Centre for Training and Development, Ministry of Health, Baghdad, Iraq. **d:** BSc, MS Chemistry. Specialist chemist. National Centre for Training and Development, Ministry of Health, Baghdad, Iraq.

Corresponding Author: Linh Shamil Mahmood, E mail: linh.shamil1973@gmail.com.

drug use in pharmacy care practice. Providing patients with education about their prescriptions and proper medication administration has become essential to the pharmaceutical care process. Inadequate patient education on drug therapy can result in therapeutic failure, disease recurrence, drug-induced side effects, and increased costs. Patient understanding of the purpose of their medications and fear of adverse effects can have a significant effect on medication adherence.^[8] In line with this, the standards of professional pharmacy practice in many countries include patient counselling guidelines, highlighting the pharmacists' and pharmacy technicians' responsibility to ensure consumers' safe and effective use of medicines.^[5]

Studies confirm the importance of asking open questions about the patient's medical history during the pharmaceutical interview. The IHS model has been promoted as an effective strategy for patient counselling because it utilizes open-ended questions (3 prime questions) and feedback (final verification) strategies.^[9] According to the Institute of Medicine, several strategies, including patient counselling, can be used to prevent medication errors. In a study, Kuyper indicates that 89% of medication errors can be detected by patient counselling.

In a patient medication interview, the pharmacist should inquire about the patient's current medications: prescription medications, over-the-counter (OTC) drugs, vitamins, herbals, vitamins and dietary supplements.^[10] Most pharmacists' work is related to patient safety, so a pharmacist should ensure the patient is not prescribed a medication that he might be allergic to.^[11] Dispensing drugs without proper counselling might lead to undesirable harm to patients; therefore, the pharmacist's role in the community setting is to provide services and comprehensive patient counselling using questioning skills, resulting in the anticipated desirable outcomes of the medications and preventing unwanted adverse events.^[12]

Researchers have established that pharmacist-patient communication is important for improving appropriate medication use and achieving desired patient outcomes.^[13]

So, effective communication with patients is essential and improves health outcomes.^[14] According to the International Pharmaceutical Federation (FIP), "The mission of pharmacy practice is to provide medications and other health care products and services and to help people and society to make the best use of them."^[5] The importance of communication skills for pharmacists has been widely acknowledged. Research has shown that good communication skills can improve patient health outcomes, but little research has focussed on communication within new consultation-based roles of pharmacists.^[15]

This study aims to measure the practice and attitude of the pharmacists working in Al-Karkh and Al-Rusafa private pharmacies and find a correlation between them and some of the participants' demographic features.

METHODS

Setting and study design: A questionnaire-based cross-sectional study was conducted on 365 pharmacists working in private pharmacies in Al-Karkh and Al-Risafa in Baghdad between July 2022 and July 2023.

Ethical consideration: The research ethical committee at the National Centre for Training and Human Development approved the research protocol under the code of ethics in research adopted by the Ministry of Health in Iraq. Verbal consent was obtained from each participant after the purpose of the study was explained to them.

Eligibility Criteria: Pharmacists who work in private pharmacies in Al-Karkh and Al-Rasafa in Baghdad were the targets of this study. Pharmacists who refused to participate or have attended and passed training courses about communication skills and ethics in pharmaceutical practices were excluded from the study.

Sample Size: We calculated the sample size based on the total number of pharmacists working in the private pharmacies in Al-Karkh and Al-Rasafa districts in Baghdad, which was 6609 according to the statistics of the Ministry

of Health in Iraq.

The sample size was determined using: $n = \frac{Z^2 p(1-p)(D)}{E^2}$. Where "n" is the sample size, "Z" is the statistic for a level of confidence (1.96 for 95% confidence level), "E" is the sampling error, and here we used 5%, "P" is the expected proportion in the population based on pilot studies or previous studies, and "D" is the design effect, which equals two (Precision). We added 5 % to the sample size to compensate for the expected non-respondent. Thus, the sample size of this study was 364 participants.

Sampling: We conveniently selected three areas from Al-Karkh (Al-Harithiya, Al-Yarmouk, and Al-Mansour) and three from Al-Rusafa (Al-Karrada, Al-Maghrib Street, and Palestine Street). The selection was based on choosing areas of high density with private clinics that the authors can easily access. We conveniently chose 60-62 pharmacies from each area, and the questionnaire forms were distributed among all pharmacists from the selected pharmacies.

The questionnaire: The authors designed the questionnaire in English based on the list of medication information on conducting patient medication interviews according to the Medications at Transitions and Clinical Hand-offs (MATCH) toolkit. The final draft was reviewed by three experts in pharmacy, designing medical research and questionnaires. A pilot study was conducted on 36 pharmacists from Al-Adhamiya area in Al-Rasafa district to test the understandability and clearness of the questions. We did not include the pilot data in the study's final analysis. The authors explained the study's objectives and the questions to all participants who filled out the forms under the authors' supervision.

The questionnaire form included three parts. The first contained questions about the demographic features of the pharmacists, including age, sex, educational level, duration of the practice, and the current position in the governmental service. Part two included five questions designed to determine whether the participants do or not during the interview on dispensing medications. For each question, the

participant should answer "Yes" if he asked the patients during the interview or "No" if he do not. These questions were about having other health problems, using any medications, having drug allergies, using herbal medicines, and using vitamins or supplements. The third part included five questions to measure the participants' attitudes about delivering patient interviews on dispensing medications. The answers were rated as "agree" or "disagree". These questions are: using open questions, building intimacy, taking adequate time to learn about the patient's health problem before dispensing medications, using simple language to explain the prescribed treatment, and asking patients to repeat information about the medicines.

Outcomes and Procedures: we showed the frequency of the participants' answers "yes" or "no" about the practice part of the questionnaire and "agree" and "disagree" for the attitude part as percentages. Then, we measured the relationship between the answers to each question in both parts with age group, sex, educational level, duration of practice, and current status of working in the governmental service.

Statistical Analysis: The collected data were cleared, entered, and analyzed using the Statistical Package for Social Sciences (SPSS) version 26.0. Demographic and background information were described in terms of frequencies.

RESULTS

In this study, the response rate was 100 %. The sample included 183 pharmacists from al-Karkh and 182 from Al-Rusafa: Sixty pharmacists from each of Al-Mansor, Al-Karrada and Al-Maghrib street. Sixty-one from Al-Yarmouk and sixty-two from each of Al-Harithiya and Palestine street.

Table 1 shows some demographic features of the participants. We found that 242 (66.3 %) participants were in the age group of 25-30 years, 200 (54.8%) males, 315 (86.3%) had bachelor certificates, 273 (74.8%) had less than ten years of practice, and 328 (89.9%) were still working in the governmental health institutions.

Table 1 | Demographic characteristics of the pharmacists working in Baghdad's private pharmacies (n=365).

Demographic features	R	N	%
Age	25-30 Y	242	66.3
	31-40 Y	79	21.6
	41-50 Y	28	7.7
	> 50Y	16	4.4
Gender	Male	200	54.8
	Female	165	45.2
Educational level	Bachelor	315	86.3
	Higher diploma	13	3.6
	Master	27	7.4
	Board Fellows	2	0.5
Duration of practice (Yrs)	PhD	8	2.2
	<10y	273	74.8
	10-20y	69	18.9
	>20y	23	6.3
Governmental service	Continued	328	89.9
	Resigned	23	6.3
	Long term leave	11	3.0
	Retired	3	8.0
total		365	100.0

During the pharmacist-patient interview, 307 (84.1%) pharmacists asked the patients about drug allergies. Meanwhile, only 45 (12.3%) and 109 (29.9%) participants asked about using herbs and vitamins and supplements, respectively. For other questions, see [table 2](#). The participants' answers by "Yes" or "No" to question number 1 have a statistically significant correlation with their age and educational level, with a p-value of 0.000 and 0.007, respectively. Meanwhile, the answers to question 2 have a statistically significant association with only the age groups with a p-value of 0.036. Answers to question 5 have a statistically significant correlation with the current position of the governmental services and sex with a p-value of 0.002 and 0.025, respectively.

Table 2 | Frequency distribution of the pharmacists' knowledge about questions asked to the patients during the interview on dispensing treatment

Questions	Yes	%	No	%
Q1: Do you have other health problems.	191	52.3	174	47.7
Q2: Do you currently using any medication?	227	62.2	138	37.8
Q3: Do you suffer from a drug allergy?	307	84.1	58	15.9
Q4: Do you use herbal medicine?	45	12.3	320	87.7
Q5: Do you use vitamins or supplements?	109	29.9	256	70.1

ly. For correlation to other demographic features, see [table 3](#).

[Table 4](#) shows the pharmacists' attitudes about the use of communication skills questions. Of the total, 320 (87%) participants agreed they should try to understand patients' popular phrases and simple language during the interview. In contrast, only 152 (41.6 %) agreed about asking the patients to repeat medication information during the interview. The answer to Q3 (taking time to learn about the patient's health problem before dispensing the prescription) showed a statistically significant association with sex, with a p-value of 0.002. On the same line, answers to Q5 (Asking the patient to repeat the information about the medication) showed a statistically significant association with age group and duration of practice after graduation, with p-values of 0.000 and 0.003, respectively. For details of other associations, see [table 5](#).

DISCUSSION

Many studies confirmed the importance of asking open questions to acquire a patient's medical history in the pharmaceutical interview. Patient counselling on dispensing medicines has an essential role in providing healthcare. In the USA, the Institute of Medicine has stated that several strategies, including patient counselling, can be used to prevent medication errors.^[16] Kuyper indicates that 89% of medication errors can be detected by patient counselling.^[17]

Patient counselling is an excellent opportunity for briefing instructions, taking a patient commitment to follow those instructions^[18] and searching for drug-drug interactions (DDIs), which have gained much interest from the regulatory, scientific, and healthcare communities worldwide.^[19] Inadequate patient education on drug therapy can result in therapeutic failure, disease recurrence, drug-induced side effects, increased costs, and affect adherence.^[8] Pharmacists work integrally with physicians and nurses to prevent medication errors and potential harm to the patient.^[10] They are the bridge and the final link between doctors and patients

Table 3 | the correlation of practice questions with some demographic features

Factor	Total	Q1		Q2		Q3		Q4		Q5		
		yes (%)	no (%)	yes (%)	no (%)	yes (%)	no (%)	yes (%)	no (%)	yes (%)	no (%)	
Age (yrs):												
25-30	242	121(50.0)	121(50.0)	144 (59.5)	98 (40.5)	198 (81.8)	44 (18.2)	33 (13.6)	209 (86.4)	79 (32.6)	163 (67.4)	
31-40	79	34 (43.0)	45(57.0)	47 (59.5)	32 (40.5)	68 (86.1)	11 (13.9)	7 (8.9)	72 (91.1)	22 (27.8)	57 (72.2)	
41-50	28	24 (85.7)	4 (14.3)	22 (78.6)	6 (21.4)	26 (92.9)	2 (7.1)	3 (10.7)	25 (89.3)	4 (14.3)	24 (85.7)	
>50	16	12 (75.0)	4 (25.0)	14 (87.5)	2 (12.5)	15 (93.8)	1 (6.3)	2 (12.5)	14 (87.5)	4 (25.0)	12 (75.0)	
P value		0.000		0.036		0.273		0.722		0.215		
Sex:												
Male	200	109 (54.5)	91(45.5)	119 (59.5)		81 (40.5)	169 (84.5)	31 (15.5)	21 (10.5)	179 (89.5)	50 (25.0)	150 (75.0)
Female	165	82 (49.7)	83 (50.3)	108 (65.5)	57 (34.5)	138 (83.6)	27 (16.4)	24 (14.5)	141 (85.5)	59 (35.8)	106 (64.2)	
P value		0.361		0.243				0.242		0.025		
Educational level:												
Bachelor	315	156 (49.5)	159 (50.5)	193 (61.3)	122 (38.7)	265 (84.1)	50 (15.9)	37 (11.7)	278 (88.3)	99 (31.4)	216 (68.6)	
Higher certificates	50	35 (70.0)	15 (30)	34 (68.0)	16 (32.0)	42 (84.0)	8 (16.0)	8 (16.0)	42 (84.0)	10 (20.0)	40 (80.0)	
P value		0.007		0.362		0.982		0.395		0.101		
duration of practice after graduation:												
<10y	273	139 (50.9)	134 (49.1)	165 (60.4)	108 (39.6)	225 (82.4)	48 (17.6)	34 (12.5)	239 (87.5)	86 (31.5)	187 (68.5)	
10-20y	69	37 (53.6)	32 (46.4)	47 (68.1)	22 (31.9)	62 (89.9)	7 (10.1)	11 (15.9)	58 (84.1)	21 (30.4)	48 (69.6)	
>20y	23	15 (65.2)	8 (34.8)	15 (65.2)	8 (34.8)	20 (87.0)	3 (13.0)	0 (0.0)	23 (100.0)	2 (8.7)	21 (91.3)	
P value		0.407		0.478		0.297		0.131		0.071		
Current position in governmental sector:												
governmental	328	169 (51.5)	159 (48.5)	202 (61.6)	126 (38.4)	275 (83.8)	53 (16.2)	43 (13.1)	285 (86.9)	106 (32.3)	222 (67.7)	
Non governmental	37	22 (59.5)	15 (40.5)	25 (67.6)	12 (32.4)	32 (86.5)	5 (13.5)	2 (5.4)	35 (94.6)	3 (8.1)	34 (91.9)	
P value		0.360		0.892		0.677		0.177		0.002		
Total	365	191 (52.3)	174 (47.7)	227 (62.2)	138 (37.8)	307 (84.1)	58 (15.9)	45 (12.3)	320 (87.7)	109 (29.9)	256 (70.1)	

in this process.^[11, 20]

In our sample, 307 (84.1%) pharmacists asked the patients about drug allergies, a practice that is important to prevent fatal outcomes on some occasions. The pharmacist should ask the patient about his health history during the interview, such as all current and past medical conditions, pregnancy or breastfeeding status for a woman of childbearing age, and sensitivities and allergies with their reactions.^[18] Patient safety is the core of pharmacists' concerns. He should explore and explain any potential drug-drug or drug-food interactions, especially in patients with comorbidities and using multidrugs. Although preventing dangerous drug interactions is primarily a physician's responsibility, pharmacists provide a check against this possibility.^[11]

The most ignored question during the interview on dispensing medications was asking about using herbs. We found that 320 (87.7%) participants did not ask about using herbs without a significant correlation with any demographic factors, **table 3**. Similarly, about one-

third of the pharmacists in our sample asked patients about using vitamins. This low level needs to be enhanced to enable pharmacists to provide safe and effective advice about using vitamins and supplements with other medicines.

Table 4 | Answers about attitude's questions

Questions		N	%
Q1: Start the interview with open questions	Disagree	126	34.5
	Agree	239	65.5
Q2: My conversation with the patient includes building intimacy before entering into his health problem	Disagree	65	17.3
	Agree	300	82.8
Q3: In my interactions with the patient, I take time to learn about the patient's health problem before dispensing the prescription	Disagree	112	30.7
	Agree	253	69.4
Q4: I try to understand the patient's popular phrases and use simple language when explaining the prescribed treatment	Disagree	45	12.4
	Agree	320	87.7
Q5: A request to repeat the information about the medication by the patient	Disagree	213	58.4
	Agree	152	41.6

Table 5 | the correlation of attitudes questions with some demographic features

Factor	Total	Q1		Q2		Q3		Q4		Q5	
		Agree (%)	Disagree (%)	Agree (%)	Disagree (%)	Agree (%)	Disagree (%)	Agree (%)	Disagree (%)	Agree (%)	Disagree (%)
Age (yrs)											
25-30	242	161 (66.5)	81 (33.5)	202 (83.5)	40 (16.5)	167 (69.0)	75 (31.0)	215 (88.8)	27 (11.2)	99 (40.9)	143 (59.1)
31-40	79	44 (55.7)	35 (44.3)	64 (81.0)	15 (19.0)	53 (67.1)	26 (32.9)	67 (84.8)	12 (15.2)	25 (31.6)	54 (68.4)
41-50	28	21 (75.0)	7 (25.0)	23 (82.1)	5 (17.9)	21 (75.0)	7 (25.0)	24 (85.7)	4 (14.3)	13 (46.4)	15 (53.6)
>50	16	13 (81.3)	3 (18.8)	13 (81.3)	3 (18.8)	12 (75.0)	4 (25.0)	14 (87.5)	2 (12.5)	15 (93.8)	1 (6.3)
P value		0.096		0.962		0.834		0.800		0.000	
Sex											
Male	200	129 (64.5)	71 (35.5)	160 (80.0)	40 (20.0)	125 (62.5)	75 (37.5)	172(86.0)	28(14.0)	85 (42.5)	115 (57.5)
Female	165	110 (66.7)	55 (33.3)	142 (86.1)	23 (13.9)	128 (77.6)	37 (22.4)	148(89.7)	17(10.3)	67 (40.6)	98 (59.4)
P value		0.665		0.127		0.002		0.285		0.715	
Educational level											
Bachelor	315	204 (64.8)	111 (35.2)	259 (82.2)	56 (17.8)	218 (69.2)	97 (30.8)	278 (88.3)	37 (11.7)	133 (42.2)	182 (57.8)
Higher certificates	50	35 (70.0)	15 (30.0)	43 (86.0)	7 (14.0)	35 (70.0)	15 (30.0)	42 (84.0)	8 (16.0)	19 (38.0)	31 (62.0)
P value		0.469		0.511		0.910		0.395		0.574	
duration of practice after graduation											
<10y	273	183 (67.0)	90 (33.0)	228 (83.5)	45 (16.5)	186 (68.1)	87 (31.9)	243 (89.0)	30 (11.0)	112 (41.0)	161 (59.0)
10-20y	69	40 (58.0)	29 (42.0)	55 (79.7)	14 (20.3)	48 (69.6)	21 (30.4)	57 (82.6)	12 (17.2)	23 (33.3)	46 (66.7)
>20y	23	16 (69.6)	7 (30.4)	19 (82.6)	4 (17.4)	19 (82.6)	4 (17.4)	20 (87.0)	3 (13.0)	17 (73.9)	6 (26.1)
P value		0.336		0.336		0.351		0.350		0.003	
Current position in governmental sector											
governmental	328	215 (65.5)	113 (34.5)	271 (82.6)	57 (17.4)	228 (69.5)	100 (30.5)	288 (87.8)	40 (12.2)	133 (40.5)	195 (59.5)
Non governmental	37	24 (64.9)	13 (35.1)	31 (83.8)	6 (16.2)	25 (67.6)	12 (32.4)	32 (86.5)	5 (13.5)	19 (51.4)	18 (48.6)
P value		0.934		0.859		0.808		0.817		0.206	
Total	365	239 (65.5)	126 (34.5)	302 (82.7)	63 (17.3)	253 (69.3)	112 (30.7)	320(87.7)	45(12.3)	152(41.6)	213(58.4)

It has been stated that patients may not consider using vitamins, topical products, and nutritional and herbal supplements as medication;^[21] Therefore, pharmacists should inquire about them actively. The use of complementary alternative medicines (CAMs) has risen globally recently, and various studies worldwide have reported that pharmacists have poor knowledge about these drugs.^[22-24] Many studies have measured the use of herbs in the communities. A study has shown that patients with multiple chronic diseases use a slightly higher percentage of natural products.^[8] Rashrash found that 35% of adults in the United States used herbal medicines in 2015, with an average of 2.6 herbal supplements.^[9] Patients with DM, heart disease, and arthritis use herbs at a higher rate than those without, and 65 % of the population use herbs in addition to other prescription or over-the-counter medicines; however, this study has limited generalizability.^[25]

A dietary supplement is defined by the Food and Drug Administration (FDA) as a product intended to supplement the diet by increasing the total daily intake, (FDA, 2022). Currently, the dietary supplement industry is one of the

fastest-growing industries. In 2018, 32 million Italians, mostly adults and women, consumed dietary supplements.^[26] Based on the results, it is recommended to organize continuing education programs to improve pharmacists' awareness and practice about the potential interaction between dietary supplements and other drugs and establish a pharmacy communication network system to enhance patient monitoring and pharmacists' vigilance.

Acquiring effective communication skills is essential for the pharmacists.^[27] These skills help pharmacists and other health professionals in patient-counselling process especially in limited time environment of work.^[18] This can be made effectively by offering training programs about the communication skills^[28,29] and establishing high standards of work.^[30-31] Regarding the attitude of pharmacists, our study's results have shown that 300 (82.7%) and 320 (87.7%) pharmacists agreed with the concept of building intimacy with the patient during the interview and understanding the patient's popular phrases and simple language, respectively. However, none of the sociodemographic features studied have shown any significant statis-

tical association with these two questions.

Studies indicate the importance of developing relationships and maintaining rapport during patient interviews.^[21] Effective, open-ended questioning and active listening are essential skills for obtaining information from and sharing information with patients. Pharmacists must adapt messages to fit patients' language skills and primary languages through teaching aids, interpreters, or cultural guides if necessary.^[32]

We found that 239 (65.5%) and 253 (69.4%) agreed to start the interview with open questions and spend time learning about the patient's health problem before dispensing the prescription, respectively. Open-ended questions provide more effective communication and are essential skills for obtaining information, helping close gaps, increasing patient adherence, improving medication use, and reducing medication errors.^[21,32] The Negative attitude of some pharmacists towards these questions is a barrier to patient-pharmacist interactions, which may be related to patients, pharmacy professionals, and health institutions (place of work).^[33] Overcrowding in the pharmacy with insufficient time for the interview, poor cooperation of some patients who believe that physicians alone have the right to discuss these issues with them, and unavailability of suitable places in the pharmacy for a private interview might be the reasons for this negative behaviour.

Effective communication skills help the practitioners collect accurate and comprehensive information from the patient and help them provide successful patient-related pharmaceutical education. Strong communication skills will enable a pharmacist to establish the necessary rapport to build a trusting relationship and ensure an effective exchange of information.^[27] To communicate effectively, requesting a patient to repeat information about the medication is important. However, in our sample, only 152 (41%) pharmacists agreed to ask patients to repeat medication information. This has shown a statistically significant association with the age of the pharmacist and the duration of work since graduation, with p-values

of 0.000 and 0.003, respectively. Such association is expected as pharmacists would have more chances to engage in training courses and build more experience with increasing age and duration of work after graduation.

The results of this study highlighted the need to allocate more time for communication skills needed in pharmacist-patient interviews in the undergraduate curricula of pharmacy colleges, and more accredited training courses and workshops in this field are needed for postgraduate pharmacists. Teamwork with other healthcare providers should be encouraged to minimize medical errors and adverse effects expected during drug prescriptions.

CONCLUSION

Pharmacists working in private pharmacies in Al-Karkh and Al-Rasafa districts of Baghdad have good practice of asking patients about drug allergies during the interview of drug dispensing, Fair practice about asking for other health problems and using any medications. However, the practice was inadequate regarding asking patients about using herbs, vitamins and dietary supplements.

Most participants have a positive attitude towards building intimacy with the patients and understanding their popular phrases and simple language. About two-thirds of the participants agreed with using open questions and taking enough time to learn about the patient's health problem before dispensing treatments. However, less than 50 % of the participants agreed about asking patients to repeat the information about medication to improve effective communication, and this has shown a statistically significant association with age and duration of practice after graduation.

REFERENCES

1. Wallman A, Vaudan C, Sporrang SK. Communications training in pharmacy education, 1995-2010. *Am J Pharm Educ.* 2013;77(2):36.
2. Ilardo M L, & Speciale A. The Community Pharmacist: Perceived Barriers and Patient-Centered Care Communication. *International Journal of Environmental Research and Public Health.* 2020;17(2):536.

3. Alshahrani A M, Alshelawi F, Alrobaie N. Community Pharmacists' Attitude and Practice in Providing Personal Care Products Services: A Comparison between Southern and Eastern Regions of Saudi Arabia. *Universal Journal of Public Health*, 2022;10(2): 176-195.
4. Report of a third WHO consultative group on the role of the pharmacist. The role of the pharmacist in the health care system: preparing the future pharmacist. Vancouver, Canada 1997:27-29.
5. Blom L, Krass I. Introduction: the role of pharmacy in patient education and counseling. *Patient Educ Couns*. 2011;83(3):285-287.
6. Stone P, Curtis SJ. Pharmacy Practice 3rd ed. London: Pharmaceutical Press; 2002.
7. Aina B, Ogunbiyi O. Assessment of communication skills among pharmacy students of the University of Lagos, Lagos, Nigeria. *J Basic Clin Pharm*. 2011;3(1):215-8.
8. Alfadly S, Anaam M, Alshammari M, Alshahali S, Ahmed E, Mubarak A B, Aldahouk A, Aljameeli M. Drug Information Sources for Patients with Chronic Conditions in the Qassim Region, Saudi Arabia. *Pharmacy* 2023; 11(2):57.
9. McDonough RP, Bennett MS. Improving communication skills of pharmacy students through effective precepting. *Am J Pharm Educ*. 2006 Jun 15;70(3):58. doi: 10.5688/aj700358. PMID: 17136179; PMCID: PMC1636963.
10. Gleason KM, Brake H, Agramonte V, Perfetti C. Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation, AHRQ Publication No. 11(12)-0059 Revised August 2012
11. Sinha HK. Role of pharmacists in retailing of drugs. *J Adv Pharm Technol Res*. 2014 Jul;5(3):107. doi: 10.4103/2231-4040.137383. PMID: 25126530; PMCID: PMC4131399.
12. Almaghaslah D. Knowledge, Attitude and Practice of Community Pharmacists Toward Non-pharmaceutical Products in Saudi Arabia. *Frontiers in Public Health*, April 2022;10, Article 771308. file:///C:/Users/hp/Downloads/fpubh-10-771308.pdf.
13. Shah B, Chewing B. Conceptualizing and measuring pharmacist-patient communication: a review of published studies. *Res Social Adm Pharm*. 2006 Jun;2(2):153-85. doi: 10.1016/j.sapharm.2006.05.001. PMID: 17138507.
14. Stewart M, Brown J, Donner A, McWhinney I, Oates J, Weston W, Jordan J. The impact of patient-centered care on outcomes. *J Fam Pract*. 2000;49:796-804.
15. Greenhill N, Anderson C, Avery A, Pilnick A. Analysis of pharmacist-patient communication using the Calgary-Cambridge guide. *Patient Educ Couns*. 2011 Jun;83(3):423-31. doi: 10.1016/j.pec.2011.04.036. Epub 2011 Jun 2. PMID: 21640542.
16. Aspden P, Wolcott JA, Bootman L, et al. eds. Preventing Medication Errors. Washington, DC: The National Academy Press; 2007.
17. Kuyper AR. Patient counseling detects prescription errors. *Hosp Pharm*. 1993;28(12):1180-1181, 1184-1189.
18. Mohiuddin AK. Patient Counseling: A complete Guide For Compliance. *Journal of Applied Pharmaceutical Sciences and Research*, 2018;1(4):1-10. doi:10.31069/japsr.v1i4.1.
19. Farkas D, Shader RI, von Moltke LL, Greenblatt DJ. Mechanisms and consequences of drug-drug interactions. In: Gad SC, editor. Preclinical Development Handbook: ADME and Biopharmaceutical Properties. Philadelphia: Wiley; 2008. pp. 879-917.
20. Kumud K, Farai C, Suryaward S. Role of dispensers in promoting rational drug use. *Ensuring good dispensing practice Sep*. 1996;11(3):1-21.
21. McConaha J L, Prosser T R. Communication Strategies in Pharmacy. Duquesne University, Pittsburgh, Pennsylvania, 2017. Available from: chrome-extension://efaidnbmninnibpcjpcgiclfndmkaj/https://www.accp.com/docs/meetings/UT17/handouts/02_Communication_Strategies_in_Pharmacy.pdf.
22. Chang ZG, Kennedy DT, Holdford DA, Small RE. Pharmacists' knowledge and attitudes toward herbal medicine. *Ann Pharmacother*. 2000;34(6):710-5.
23. Bacchini M, Cuzzolin L, Camerlengo T, Velo G, Benoni G. Phytotherapeutic compounds: the consumer-pharmacist relationship. *Drug Saf*. 2008;31(5):424-7.
24. Nathan JP, Cicero LA, Koumis T, Rosenberg JM, Feifer S, Maltz F. Availability of and attitudes toward resources on alternative medicine products in the community pharmacy setting. *Journal of the American Pharmacists Association*, 2005;45(6):734-9.
25. Ashlyn Carr, PharmD; Catherine Santanello, PhD Southern Illinois University Edwardsville, Pharmacists' Knowledge, *Perceptions, and Practices Regarding Herbal Medicine*, 2019; 10(3): 10.24926/iip.v10i3.2059.
26. Brunelli L, Arnoldo L, Mazzilis G, d'Angelo M, Colautti L, Cojutti PG, Parpinel M. The knowledge and attitudes of pharmacists related to the use of dietary supplements: An observational study in northeastern Italy. *Prev Med Rep*. 2022 Sep 19;30:101986.
27. Thamby S A. Seven-star pharmacist concept by World Health Organization. *Journal of Young Pharmacists*, Apr-Jun 2014;6(2).
28. Greenhill N, Anderson C, Avery A, Pilnick A. Analysis of pharmacist-patient communication using the Calgary-Cambridge guide. *Patient Educ Couns*. 2011;83(3):423-31.
29. Mesquita AR, Lyra DP, Brito GC, Balisa-Rocha BJ, Aguiar PM, de Almeida Neto4 AC. Developing communication skills in pharmacy: a systematic review of the use of simulated patient methods. *Patient Educ Couns*. 2010;78(2):143-8.
30. The Pharmaceutical Society of Ireland, Accreditation Standards for the Five Year Master's Degree Programmes in Pharmacy, 2019.
31. General Pharmaceutical Council. Guidance to support the implementation of the standards for the education and training of pharmacist independent prescribers, October 2022. Available from: <chrome-extension://efaidnbmninnibpcjpcgiclfndmkaj/https://www.pharmacyregulation.org/sites/default/files/document/guidance-to-support-the-implementation-of-the-standards-for-the-education-and-training-of-pharmacist-independent-prescribers-october-2022.pdf>
32. American Society of Health-System Pharmacists. ASHP guidelines on pharmacist conducted patient education and counseling. *Am J Health-Syst Pharm*. 1997; 54:431-4
33. Yimer Y S, Mohammed S A & Demerew Hailu A D. Patient-Pharmacist Interaction in Ethiopia Systematic Review of Barriers to Communication. *Patient Prefer Adherence*. 2020 Jul 28;14:1295-1305.



Abbreviations list: Complementary alternative medicines (CAMs), Drug-drug interactions (DDIs), Food and Drug Administration (FDA), International Pharmaceutical Federation (FIP), Medications at Transitions and Clinical Handoffs (MATCH), Over-the-counter (OTC), Statistical Package for Social Sciences (SPSS), United State of America (USA), World Health Organization (WHO).

Conflict of interest: Author has nothing to declare. **Funding:** Author received no funds to complete this study a part from self funding.