

Community Pharmacists' Attitudes and Practice in the Management of Minor Ailments

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Abstract

This study aimed to assess the attitudes and practice of pharmacists regarding the management of minor ailments in Iraqi community pharmacies. A cross-sectional study for 320 community pharmacists was conducted during February 2020 using a newly developed and validated questionnaire. Only 4.4% of pharmacists preferred not to deal with minor ailment cases. Minority (15.6%) of participated pharmacists referred more than half of minor ailment cases they face to the physician. Regarding the assessment of minor ailments using WWHAM technique, "what are the symptoms" was the most commonly asked question by pharmacists. Only 49.1% mentioned that they asked all WWHAM questions. On the other hand, most pharmacists (90%) mentioned that they educated their patients about the dosing regimen. Meanwhile, less than 10% of pharmacists mentioned that they provided their patients with all possible information about their medications. All demographic factors had no effect on the pharmacists' usage of WWHAM technique and in pharmacist's role in patient counseling or education. In conclusion minor ailment services that provided by the Iraqi community pharmacists' who participated in this study was poor at which most pharmacists do not use WWHAM technique appropriately and also fail to provide their patients with the required medication counseling and education.

Keywords: Minor ailments, Community pharmacists, Attitudes and practice.

ممارسات وانطباعات صيادلة المجتمع في علاج الامراض البسيطة

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الخلاصة

هدف هذه الدراسة هو لتقييم انطباعات وممارسات الصيادلة لعلاج الامراض البسيطة في صيدليات العراق. تم اجراء دراسة مقطعية شملت ٣٢٠ صيدلي مجتمعي خلال شباط ٢٠٢٠ باستخدام استبيان تم انشاؤه والتحقق من صحته حديثاً. فقط ٤,٤% من الصيادلة المشاركين فضلوا عدم التعامل مع الحالات المرضية البسيطة. نسبة قليلة من الصيادلة المشاركين بالدراسة (١٥,٦%) يقومون باحالة اكثر من نصف الحالات المرضية البسيطة التي يواجهونها للطبيب. فيما يخص تشخيص الحالات المرضية البسيطة باستخدام طريقة (ووهام)، فإن السؤال عن الاعراض كان أكثر سؤال استخداماً من قبل الصيادلة، ولكن السؤال عن الاجراء المتبع من قبل المريض لعلاج حالته كان الاقل استخداماً. فقط ٤٩,١% من المشاركين ذكروا انهم يقومون باستخدام جميع اسئلة (ووهام). ومن جانب اخر، فإن معظم الصيادلة (٩٠%) يعلمون مرضاهم نظام جرعات العلاج. ولكن اقل من ١٠% من الصيادلة يرفدون المرضى بجميع المعلومات المتوفرة عن الادوية المصروفة للعلاج. جميع العوامل الديموغرافية لم يكن لها تأثير على استخدام الصيادلة لنظام (ووهام) ولا على دور الصيدلي بنصح وتنقيف المرضى. نستنتج من ذلك ان خدمة الحالات المرضية البسيطة المجهزة من قبل معظم صيادلة المجتمع العراقيين المشاركون في هذه الدراسة ضعيفة حيث ان معظم الصيادلة لا يستخدمون نظام (ووهام) بالشكل الامثل وكذلك فان معظم الصيادلة لا يقومون بالتنقيف والنصح الدوائي لمرضاهم.

الكلمات المفتاحية: الامراض البسيطة ، صيادلة المجتمع ، الانطباعات والممارسات .

Introduction

The pharmacist's role in the community pharmacy has changed nowadays from just a dispenser of medication to provider of professional services such as reviewing the appropriateness of prescribed medications, and more commonly management of minor ailments ⁽¹⁾. Minor ailments can be defined as 'common, uncomplicated and/or self-limited conditions which can be managed with over the counter (OTC) medications and without complicated medical interventions ⁽²⁾. Seeking pharmacist's advice about minor ailment is more common than physician consultation since this advice is faster and free of charge ⁽³⁾. Meanwhile, providing minor ailments services by a community

pharmacist can reduce the workload pressure on physicians in their clinics and in hospitals ⁽⁴⁾. Besides that offering nonprescription medication to treat minor ailments enhances individual's confidence to manage their own health and well-being ⁽⁵⁾. Despite all these benefits for management of minor ailments by community pharmacists, this job may be dangerous if inappropriately performed. In this regard, one study showed that approximately 20% of hospital admissions were due to OTC medications-related problems ⁽⁶⁾. Thus to provide minor ailment services appropriately by community pharmacists, the pharmacist must assess each case carefully and refer cases with alarming feature to a physician while manage minor cases only ⁽⁷⁾.

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In this regard, WWHAM mnemonic (W stand for: who is the patient; W: what are the symptoms; H: for how long such symptoms being present; A: what action does the patient take to treat the problem; and M: account for what other medications is the patient is already using), is the most commonly and widely used acronym for assessment of minor ailment in community pharmacies⁽⁸⁾. On the other hand, the decision to manage the minor ailment case usually involves dispensing some medications to the patient, followed by providing the patient with suitable education and counseling about the dispensed medication⁽⁹⁾. These actions (assessment of the case and patient counseling) are highly appreciated because inappropriate supply or use of OTC medications can harm patients^(10,11). Only few small pilot studies were conducted to assess the role of Iraqi pharmacists in the management of few minor ailments such as common cold and diarrhea^(12,13). Therefore, the current study was aimed to assess the attitudes and practice of a large sample of pharmacists towards the management of minor ailments in Iraqi community pharmacies.

Methods

Study design

This study was a community based cross-sectional study conducted during February 2020. The study was ethically approved by the ethical

committee at college of pharmacy/University of Baghdad.

Recruitment of pharmacists to participate in this study was performed through sharing the study name and aim with a link to the questionnaire in an official Facebook page for Iraqi pharmacists (AL-Multaqa Al-Saidalani). All pharmacists who accepted to participants in the study were asked to fill in the electronic version of the newly developed and validated questionnaire. The participation in the questionnaire was open for 10 days.

Development and validation of the questionnaire

A questionnaire was developed by the author of this study based on information from symptoms in the pharmacy book⁽¹⁴⁾. The questionnaire consisted from 2 main parts: the first part included 3 questions to assess pharmacists' demographic data, while the second one involved 4 questions to assess pharmacists' attitudes and practice in regard to management of minor ailments, as shown in Table 1.

For content validity, the questionnaire was sent by email to a panel of 5 experts in clinical pharmacy, social pharmacy, and pharmacy practice. The experts were asked to rate each item in the questionnaire using a 3 – point scale: essential; useful but not essential and not necessary. All experts agreed on essentiality of all questionnaire items.

Table 1. Community pharmacist's attitude and practice regarding the management of minor ailments (CPAPP) questionnaire

Part	Questions	The answer
1. Demographic data	1. Your age	20-30 years , 31-40 years 41-50 years , More than 50 years
	2. Gender	Male and Female
	3. How many years are you working in a community pharmacy?	Less than 3 years , 3-10 years , 11-20 years , More than 20 years
2. The pharmacist's attitude and practice in management of minor ailment cases.	4. When a patient asks you for management of his/her complain. In such a case what will be your main focus?	Treatment of the case Assessment of the case To know patient treatment preference Don't try to deal with the case
	5. What is the approximate referral rate to physician for patients who ask you to treat them	Less than 10% , 10-30% , 31-50% More than 50%
	6. When you communicate with the customer (patient) who asks you for treating his/her condition, what do you ask? Note: You can choose more than one answer	Who is the patient? What are the symptoms? How long do you have such symptoms? Do you take any action to treat these symptoms (this case)? Do you use any other medications?
	7. Regarding treatment with OTC medications, on what you always focus while recommending a treatment to the patient? Note: You can choose more than 1 answer	Dosing regimen (e.g., once, twice daily, etc...) Time to take the medication (e.g., morning or night, etc...) Taking the medication in regard to meal Medication storage Possible medication side effects Foods or drugs to avoid while taking the medication Treatment time scale

Statistical analysis

Data input was done using Microsoft excel 2010. Categorical variables were presented as numbers and percentages. Chi square test was used to assess the difference among different demographic variables affecting on the pharmacist's role in diagnosis of minor ailments and in patient counseling. Chi square testing was performed using the following online calculator "<http://www.quantpsy.org/chisq/chisq.htm>". P values less than 0.05 were considered significant.

Results

At the end of the study, 320 pharmacists were completed filling the questionnaire.

Majority of this study participants were females with less than 3 years of working experience. On the other hand, more than half (59.7%) of participants were within the age range of 20-30 years, while only 1.5% of participants were older than 50 years old. Further details about demographic data are given in table 1.

Table 1. demographic data of participants

Parameter	Number (percent)
Age	
20-30	191 (59.7%)
31-40	100 (31.3%)
41-50	24 (7.5%)
More than 50 years	5 (1.5%)
Gender	
Male	151 (47.2%)
Female	169 (52.8%)
Working experience	
Less than 3 years	155 (48.4%)
3-10 years	113 (35.3%)
11-20 years	42 (13.1%)
More than 20 years	10 (3.1%)

Regarding the attitudes of Iraqi community pharmacists toward management of minor ailment cases, only 4.4% of pharmacists mentioned that they preferred not to deal with minor ailment cases, while others (56.6%) mentioned that they dealt with such cases and mainly focused on assessment of the case before managing it. The greatest percentage of participated pharmacists (40%) referred 10-30% of minor ailment cases they face to the physician. Meanwhile, few (15.6%) of the participants mentioned that they referred more than half of minor ailment cases they face to the physician. Further details are given in table 2.

Table 2. The attitudes of community pharmacists towards the management of minor ailments.

Parameter		Values Number (%)
The main focus of the pharmacist while dealing with cases of minor ailments	Assessment	181 (56.6%)
	Treatment	98 (30.6%)
	Knowing patient preference	27 (8.4%)
	Don't try to deal with such cases	14 (4.4%)
Referral to physicians	Less than 10%	50 (15.6%)
	10-30%	128 (40%)
	31-50%	92 (28.8%)
	More than 50%	50 (15.6%)

Regarding the assessment of minor ailments using WWHAM technique, "what are the symptoms" was the most commonly asked question by pharmacists (95.6%), while questioning about the action that was taken by the patient was the least (68.1%). Only 49.1% mentioned that they asked all WWHAM questions. Further details are given in Table 3.

Table 3. The role of community pharmacists in diagnosis of minor ailments

Question	Usually asked by the pharmacist
Who is the patient?	254 (79.4%)
What are the symptoms?	306 (95.6%)
How long?	287 (89.7%)
Action taken	218 (68.1%)
Medications	250 (78.1%)
All WWHAM questions	157 (49.1%)

On the other hand, most pharmacists (90%) mentioned that they educated their patients about the dosing regimen, whereas only 21.6% of pharmacists mentioned that they reminded their patients about the method of medication storage. About 2/3 of participated pharmacists counseled their patient about the best way to take their medications. Meanwhile, less than 10% of pharmacists mentioned that they provided their patients with all possible information about their medications. Further details are given in Table 4.

Table 4. The role of community pharmacists in patient education about medications for management of minor ailments

Education parameter	Usually performed by the pharmacist
Dosing regimen (e.g., once, twice daily, etc...)	288 (90%)
Time to take the medication (e.g., morning or night, etc...)	226 (70.6%)
Taking the medication in regard to meal	217 (67.8%)
Medication storage	69 (21.6%)
Possible medication side effects	141 (44.1%)
Foods or drugs to avoid while taking the medication	162 (50.6%)
Treatment time scale	176 (55%)
Educating the patient with all possible information	30 (9.4%)

All studied factors including pharmacists' gender, age, working experience, and their main focus while dealing with cases of minor ailments had no significant effect on the pharmacists' usage of WWHAM technique in assessment of minor ailments. Details are given in table 5.

All demographic factors including pharmacists' gender, age, working experience had no significant effect on the pharmacists' role in patient education and counseling about medications (Table 6).

Table 5. Factors affecting pharmacist's usage of the WWHAM technique

Parameter		Asking all WWHAM questions	Asking some of WWHAM questions	P value
Gender	Male	78 (49.7%)	73 (44.8%)	0.3805*
	Female	79 (50.3%)	90 (55.2%)	
Age	20-30	92 (58.6%)	99 (60.7%)	0.531*
	31-40	53 (33.8%)	47 (28.8%)	
	41-50	9 (5.7%)	15 (9.2%)	
	More than 50 years	3 (1.9%)	2 (1.2%)	
Working experience	Less than 3 years	69 (43.9%)	86 (52.8%)	0.150*
	3-10 years	60 (38.2%)	53 (32.5%)	
	11-20 years	25 (15.9%)	17 (10.4%)	
	More than 20 years	3 (1.9%)	7 (4.3%)	
The main focus of the pharmacist while dealing with cases of minor ailments	Assessment	96 (61.1%)	85 (52.1%)	0.249*
	Treatment	45 (28.7%)	53 (32.5%)	
	Knowing patient preference	12 (7.6%)	15 (9.2%)	
	Don't try to deal with such cases	4 (2.5%)	10 (6.1%)	

*= Non significant effect (P value>0.05)

Table 6. Factors affecting pharmacist's counseling role

Parameter		Providing the patient with full medication education	Providing the patient with partial information about the medication	P value
Gender	Male	16 (53.3%)	135 (46.6%)	0.479*
	Female	14 (46.7%)	155 (53.4%)	
Age	20-30	16 (53.3%)	175 (60.3%)	0.663*
	31-40	12 (40%)	88 (30.3%)	
	41-50	2 (6.7%)	22 (7.6%)	
	More than 50 years	0 (0%)	5 (1.7%)	
Working experience	Less than 3 years	14 (46.7%)	141 (48.6%)	0.340*
	3-10 years	8 (26.7%)	105 (36.2%)	
	11-20 years	7 (23.3%)	35 (12.1%)	
	More than 20 years	1 (3.3%)	9 (3.1%)	

*= Non significant effect (P value>0.05)

Discussion

Participants of this study were mainly young females with less than 3 years of working experience. This finding highly reflects the reality in Iraq, since the number of pharmacy colleges had been tripled in the last decade, besides that most of Pharmacy College students in Iraq were females⁽¹⁵⁾. This study showed that only minority (4.4%) of community pharmacists preferred not to deal with minor ailment cases, while the majority of them managed such cases. Lack of competence and training may be the expected reason for those who did not prefer to deal with minor ailment cases⁽¹⁶⁾. This study demonstrated that 40% of participated pharmacists mentioned that the referral rate of minor ailment cases ranged between 10-30%. Referral rate in other studies that assessed the role of community pharmacists in management of diarrhea and ocular allergy was very close to that in the current study and ranged between 14-31%^(17,18).

Regarding the assessment of minor ailments using WWHAM technique, asking about symptoms was mentioned by 90% of pharmacists, while questioning about the action taken by the patient was the least asked question by pharmacists (68.1%). Two other studies, one conducted in Iraq and the other in Slovakia, that assessed the role of the community pharmacists in the management of common cold also found that asking for symptoms was commonly asked question by 40% and 49.3% of pharmacists, respectively^(12,19). Additionally, the current study found that only 49.1% of pharmacists mentioned that they ask all WWHAM questions; whereas Al Hassan WS and colleagues found that only 11% of community pharmacists in Duhok, an Iraqi governorate, use WWHAM technique appropriately⁽²⁰⁾. Despite the general similarity of the aforementioned studies with the current study, the results obtained in these studies were lower than that reported in the current study^(12,19,20). This may be due to the use of a different method to assess the pharmacist's role in diagnosing minor ailments in these studies (a direct method through simulated patient technique) from that used in the current study (indirect method through filling in a self-reported questionnaire). In this regard, results obtained from self-reported questionnaires are usually biased and exaggerated⁽²¹⁾.

This study also found that most pharmacists (90%) educated their patients about the dosing regimen of the dispensed medication(s) for management of minor ailment cases. Similarly, information about medication dose and dosing regimen was the most common information that was given to patients by the Ethiopian community pharmacists^(22,23).

Meanwhile, less than 10% of pharmacists provided their patients with all possible information about their medications. Similarly, only 15% of community pharmacists in Duhok, an Iraqi governorate, provided their patients with

appropriate counseling and education about the dispensed medication for treatment of minor ailments⁽²⁰⁾. Additionally, two other pilot studies that were conducted in Baghdad (the capital of Iraq) found that pharmacists provided their patients with counseling on dosing frequency mainly while neglecting other information about medication usage⁽¹³⁾.

This study demonstrated that all demographic factors including pharmacists' gender, age and working experience had no effect on the pharmacist role in assessing minor ailment case and in educating and counseling patients about the dispensed medications. Similarly, a Malaysian study found that gender and educational experience had no effect on perceptions and attitudes of the pharmacist toward management of minor ailments⁽¹⁶⁾. On the other hand, the lack of educational and training programs to the graduated pharmacists in Iraq, in addition to the lack of sufficient incentives toward providing minor ailment services may be the main reasons behind the poor practice of managing minor ailments by all Iraqi community pharmacists, without regard to their gender, age or working experience.

Despite the fact that this study involved a large sample size, but lack of information about the governorate at which each pharmacist work may be a limitation for this study.

Conclusion

Majority of participated pharmacists preferred dealing with minor ailment cases. However, minor ailment services that provided by the Iraqi community pharmacists' who participated in this study was poor at which most pharmacists did not use WWHAM technique appropriately and also failed to provide their patients with the required medication counseling and education. So, it is highly recommended for Iraqi pharmacists to join continuous medical educational programs and training workshops regarding the management of minor ailments.

Reference

1. Melton BL, Lai Z. Review of community pharmacy services: what is being performed, and where are the opportunities for improvement?. *Integr Pharm Res Pract.* 2017;6:79–89.
2. Fielding S, Porteous T, Ferguson J, *et al.* Estimating the burden of minor ailment consultations in general practices and emergency departments through retrospective review of routine data in North East Scotland. *Fam Pract.* 2015;32(2):165-72.
3. Porteous T, Ryan M, Bond CM, Hannaford P. Preferences for self-care or professional advice for minor illness: a discrete choice experiment. *Br J Gen Pract.* 2006;56:911–917.

4. Hall G, Cork T, White S, Berry H, Smith L. Evaluation of a new patient consultation initiative in community pharmacy for ear, nose and throat and eye conditions. [BMC Health Serv Res](#). 2019;19(1):285.
5. Bourbeau J, Collet J, Schwartzman K, Ducruet T, Nault D, Bradley C. Economic benefits of self-management education in COPD. *CHEST J*. 2006;130:1704–1711.
6. Caranasos G J, Steward RB, Cluft LE. Drug-induced illness leading to hospitalization. *JAMA*,1974; 228, 713-717.
7. Curley LE, Moody J, Gobarani R, *et al*. Is there potential for the future provision of triage services in community pharmacy? *J Pharm Policy Pract*. 2016;9:29.
8. Sarriff A, Nordin N, Hassali MA. STARZ-DRP: A Step-by-step Approach for Pharmacy Triage Services. *Malaysian J Phar*. 2011;1(9):311-325.
9. Aly M, Williams KA, Garcia-Cardenas V, Benrimoj SI. A review of international pharmacy-based minor ailment services and proposed service design model. [Res Social Adm Pharm](#). 2018;14(11):989-998.
10. Hughes CM, McElnay JC, Felming GF. Benefits and risks of self medication. *Drug Saf*. 2001;24:1027-1037.
11. International Pharmaceutical Federation (FIP). Patient safety. Pharmacists' role in medication without harm. The Hague: International Pharmaceutical Federation (FIP); 2020.
12. Mikhael EM. Evaluating the Rationality of Antibiotic Dispensing in Treating Common Cold Infections among Pharmacists in Baghdad – Iraq. *Br J Pharm Res*. 2014;4(23):2653-2661.
13. Ibrahim IR, Palaian S, Ibrahim MIM. Assessment of diarrhea treatment and counseling in community pharmacies in Baghdad, Iraq: A simulated patient study. *Pharm Pract*. 2018;16(4):1313.
14. Blenkinsopp A, Paxton P, Blenkinsopp J. *Symptoms in the pharmacy: a guide to the management of common illness*. 7th ed. UK: John Wiley & Sons, 2014.
15. Al-lela OQ, Al Tukmagi HF, Salih MRM, *et al*. Pharmacy education in Iraq: History and developments 1936-2012. *Am J Pharm Pharmacol*. 2014; 1(4): 51-55.
16. Selvaraj, A., Redzuan, A.M. & Hatah, E. Community pharmacists' perceptions, attitudes and barriers towards pharmacist-led minor ailment services in Malaysia. *Int J Clin Pharm*. 2020; 42(2): 777–785.
17. Bilkhu P, Wolffsohn JS, Taylor D, Gibson E, Hirani B, Naroo SA. The management of ocular allergy in community pharmacies in the United Kingdom. *Int J Clin Pharm*. 2013;35(2):190–4.
18. Driesen A, Vandenplas Y. How do pharmacists manage acute diarrhoea in an 8-month-old baby? A simulated client study. *Int J Pharm Pract*. 2009;17(4):215–20.
19. Mináriková D, Fazekas T, Minárik P, Jurišová E. Assessment of patient counselling on the common cold treatment at Slovak community pharmacies using mystery shopping. *Saudi Pharm J*. 2019; 27(4):574-583.
20. Al Hassan WS, Al Habeeb QS. Self-medication needs and practice of community pharmacies in Duhok. *Edorium J Public Health* 2019;6:100023P16WH2019.
21. Rosenman R, Tennekeoon V, Hill LG. Measuring bias in self-reported data. *Int J Behav Healthc Res*. 2011; 2(4): 320–332.
22. Ayele AA, Mekuria AB, Tegegn HG, Gebresillassie BM, Mekonnen AB, Erku DA. Management of minor ailments in a community pharmacy setting: Findings from simulated visits and qualitative study in Gondar town, Ethiopia. [PLoS One](#). 2018; 13(1): e0190583.
23. Surur AS, Getachew E, Teressa E, Hailemeskel B, GetawNS, Erku DA. Self-reported and actual involvement of community pharmacists in patient counseling: a cross-sectional and simulated patient study in Gondar, Ethiopia. *Pharm Pract (Granada)*. 2017;15(1):890.

