

Original article

Switching of Prescription Drugs to OTC Status at Benghazi Private Pharmacies

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ABSTRACT

Background and objective. Over-the-counter drug (OTC) is a drug that is sold without a prescription to treat minor illnesses. The use of OTC medications has been repeatedly reported worldwide. This OTC use is increasingly marketed as part of self-medications. The purpose of the present study was to assess the pharmacist's role in switching from prescription drugs to OTC. **Methods.** A structured questionnaire comprised several questions distributed randomly to several pharmacists who worked at 44 private pharmacies in Benghazi, Libya. Data collected from questionnaires were analyzed by the SPSS program. **Results.** Throughout the study, the expert pharmacists were more proactive in the management of inappropriate OTC drugs use than pharmacists with a few years of experience. This might be authorized to improvements in communication skills of the experienced pharmacist and the ability to monitor the patients towards the aimed drugs. The patient's self-medication via the pharmacist was more controlled with the experienced pharmacist than the pharmacist with less experience. **Conclusion.** Considerable attention should be paid to the risks of the future expansion of inappropriate self-medication.

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INTRODUCTION

A prescribed drug should be prescribed by a physician only, like (anti-hypertensive, oral hypoglycemic, psychotic drugs). Many Pharmacists handle and dispense drugs without official prescription and this may lead to life-threatening adverse effects. Dispensing drugs without a prescription is dangerous; because patients may have contraindications or they may administer other drugs treating chronic diseases that could lead to drug-drug interactions (DDI).

Recently, there has been a rising trend in self-medication with over-the-counter medication (OTC), supported by the absence of regulation for the purchase of many drugs without prescription [1]. Benefits of OTC include lower costs than prescription drugs [2], and fewer visits to physicians, leading to lower healthcare costs [3]. However, there are also many risks associated with OTC, including physiological adverse effects (e.g., gastrointestinal bleeding and renal disease) or psychological harm (e.g., opiate addiction) [4]. Other risks include self-misdiagnosis, delay in receiving needed therapy, and increased resistance to antimicrobial agents due to inappropriate use [3].

The patient trusts the pharmacist blindly in terms of prescribing medications, to obtain medicines quickly and at the lowest costs. Additionally, lack of awareness, and the lack of healthy culture in society as a whole, reflected negatively in the pharmacy sector, where the patient takes or buys medicines without prescriptions to obtain financial profit [5]. The WHO has been published information on global medicines usage as part of its World Medicines Situation reports [6,7]. Another requirement for switching to an OTC medication is the appropriate use of labeling. For a medication used for self-treatment by patients, the language must be clear to decrease instances of unsafe dosages and administration [8, 9].

A pharmacist is a bridge between doctors and patients who counsel and advise the patient to maximize the drugs' desired effect and minimize the drug's untoward/adverse effects. Therefore, pharmacists are the first point of contact during the purchase of OTC medications. They are required to monitor OTC medication use among a specific population [10]. The increasing tendency to self-medication sustains the importance of patient counseling for the proper use of medication. [11] Therefore, the pharmacist's responsibility is to optimize the patient's medication therapy [12]. They have the potential to educate patients about the importance of continued therapy and adherence at home also to resolve any uncertainties that

patients may have regarding their medications [13]. Patient medication discharge counseling provides an opportunity for pharmacists to improve patients' therapeutic outcomes [14]. As a result, Pharmacists play a major and mandatory role in directing over-the-counter drug therapy to the patient by the good pharmacy practice guidelines [15].

This study aimed to focus on the role of the pharmacist in the switching of prescription drugs into non-prescription drugs. The role of the pharmacist in dispensing prescription drugs as an OTC drug directly, especially since there is no control measuring the dispensing role of the pharmacist.

METHODS

This study was carried out on 44 pharmacists who work at private pharmacies in Benghazi-Libya. Surveys were comprised of several questions that were distributed to the pharmacist's sample and they fill it voluntarily. The initial questions were designed to obtain demographic data concerning pharmacists dispensing drugs generally as OTC drugs [demographic data for each respondent were collected to assist with data interpretation and analysis]. The rest part of the questions was concerning special questions to define the frequency of switching from prescription drugs to an OTC, without knowing feedback from the WHO or any changes published via the local health ministry.

The response to all questionnaires was collected and statistically analyzed with the SPSS program (Statistical package for social science students, version 2012).

RESULTS AND DISCUSSION

The OTC drugs availability has been argued to offer benefits in terms of convenient access to, and choice of, medicines as well as involving individuals as active participants in their health and the treatment of illness [16]. This study shows the repetition of dispensing process and evaluates the pharmacist's knowledge about switching from prescription drugs to OTC drugs. The pharmacists were in the age range of 25-55 years, 17 females and 27 males. The female and the male pharmacists were holding a bachelor's degree in pharmaceutical sciences.

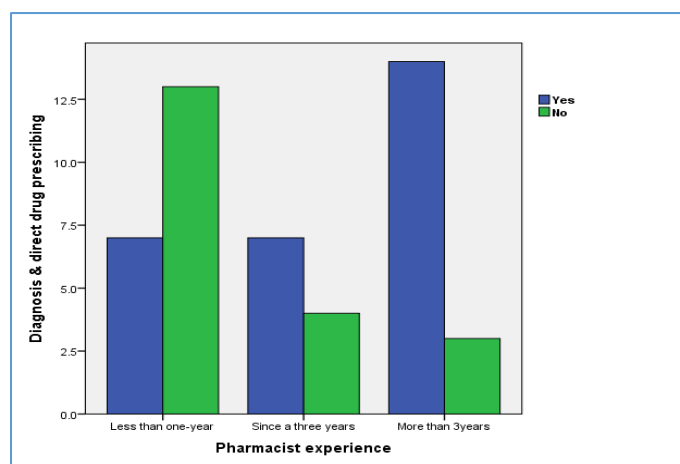


Figure 1. Pharmacist experience related to diagnosis and direct drug dispensing

The direct drug dispensing upon the patient's request increases with the increase of the pharmacist's years of experience. Additionally, the young pharmacists with a low number of experience years had to refuse mostly the drug dispensing upon the patient request [Figure 1]. This indicates that the pharmacist's behavior changes with increasing years of experience. The experience indicates they collect more information and builds striving decisions depending on it. Pharmacists could be more proactive in the management of inappropriate OTC drug use [7].

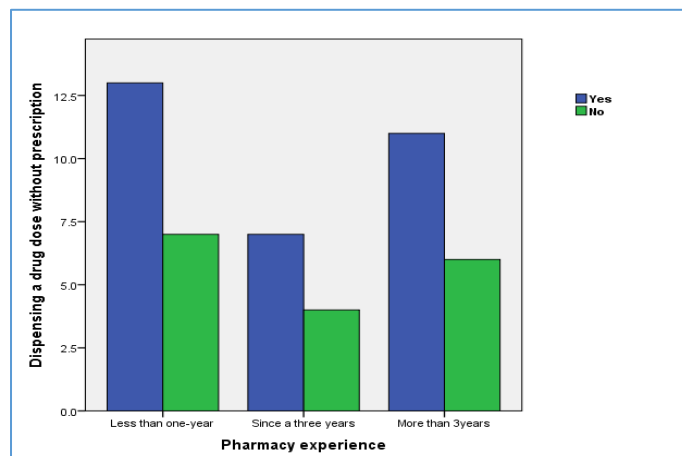


Figure 2. Pharmacist experience and dispensing a drug dose without prescription

Dispensing a drug dose without prescription occurs more frequently with the pharmacists with less than one year of experience, while the pharmacist with 3 years of experience and the pharmacist with more than 3 years of experience dispenses fewer drugs without prescription [Figure 2]. This result comes in disagreement with the previous results [Figure 1]. Hence, the less experienced pharmacists were motivated to dispense drugs without prescription, even though, they were none OTC drugs. Dispensing of prescription medicines by pharmacists, without a prescription is not unusual, especially for the short-term treatment of common diseases [13].

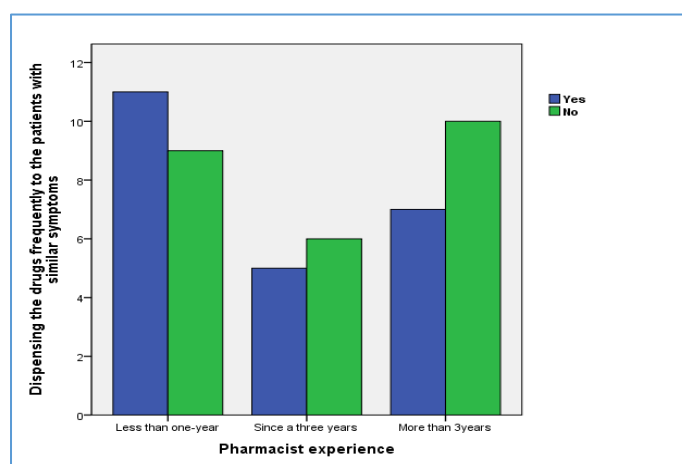
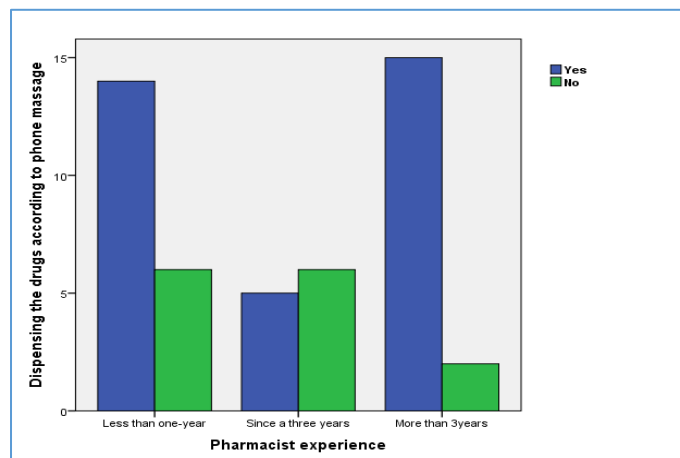
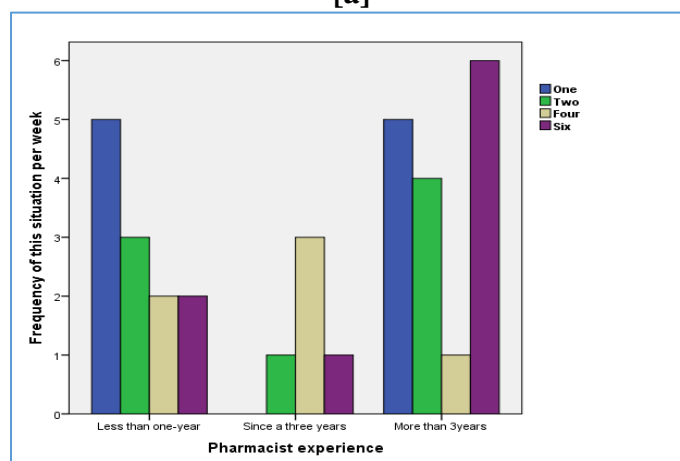


Figure 3. Pharmacist experience and frequent drug dispensing to patients with similar symptoms

Dispensing the drugs to other patients who visit the pharmacy with similar symptoms occurs more frequently with young pharmacists than experienced pharmacists. Those results come with reverse to the results before, which might be related to less experience of that group of pharmacists and how they behave without thinking on the expected drug side effects or adverse effects that might harm the patient's life. [Figure 3] There has been relatively little systematic research on this point, partly due to the perception that self-medication misuse is not as problematic as other types of drug abuse [17]. Misuse has been defined as the incorrect use of an OTC product for a medical purpose, usually in terms of dosage or duration of use [14].



[a]



[b]

Figure 4. [a] Pharmacist experience and drug dispensing according to phone message. [b] Pharmacist experience and frequency of that situation per week

Dispensing the drugs according to phone message occurs more frequently with experienced pharmacists than those pharmacists with medium years of experience. Additionally, the young pharmacist with less than one year of experience take this message as ordered and directly dispense the drugs, which comes in agreement with previous results and suggest an uncontrolled behavior of those group of pharmacists and they need more supervision during the dispensing process. [Figure 4,a] This result presents the need for more pharmacotherapeutic courses in the undergraduate study for those young pharmacists.

The frequency of dispensing drugs upon phone message varies from 1-6 times per week as shown in [Figure 4, b]. This frequency reaches up to six times per week with experienced pharmacists who have more than 3 years of experience and decreases with pharmacists with work experience of 3 years or less. Although that the results of this diagram come against the result the Figure 4, [a].

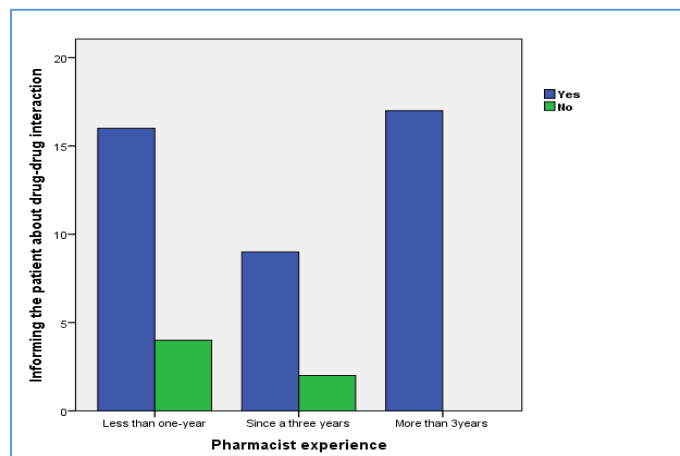


Figure 5. Pharmacist experience related to their ability to inform patients about drug-drug interaction

The ability to inform patients about drug-drug interaction dependence mainly on the communication skills that the pharmacists have which improved via the pharmacist's increased experience (As most patients are unaware of the risks associated with OTC medications). Drug-drug interaction may be life-threatening, require medical intervention to minimize or prevent serious adverse events, or both. Figure 5 shows that the more experienced pharmacists are well tolerated to tell the patient about the expected drug-drug interaction that might occur if they administer the OTC drug and the other drugs used continuously via the patient. Pharmacists with medium experience show hesitation mode to tell the patients about drug-drug interaction. Inversely the young pharmacists with less than a year of experience tend to talk to the patients about the expected drug-drug interaction directly. [Figure 5]

A large representative survey in the US revealed high levels of concurrent prescription and non-prescription drug use in respondents, leading to concerns about unintended interactions [6]. Doctors and pharmacists must be aware of polypharmacy and any non-prescribed remedies that the patient may be taking [10].

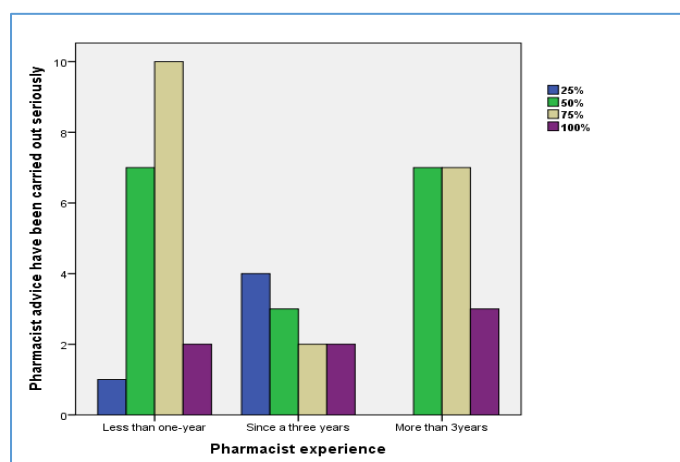


Figure 6. Pharmacist experience and seriousness of applying the pharmacist advice

To ensure that the pharmacist advice has been carried out seriously, the pharmacist sample in this study was questioned about that [Figure 6]. The young pharmacists with less than one year of experience mean that the advice was taken up to 75% seriously, while the pharmacists with 3 years pharmacist mean that 25% of advice was taken seriously. On the other hand, the experienced pharmacists mean that 50-75% of the advice was taken seriously.

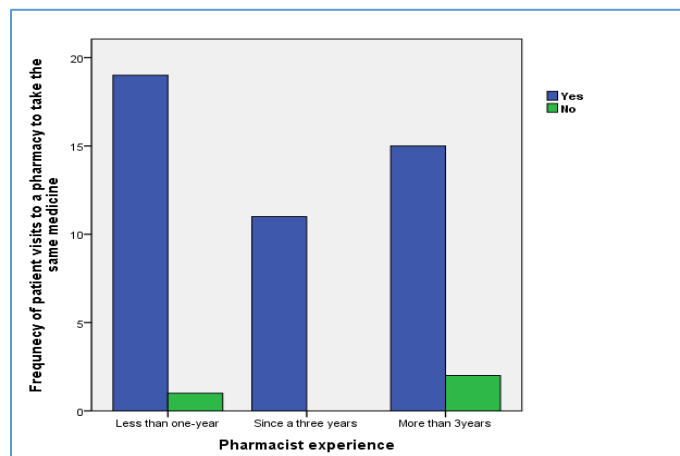


Figure 7. Pharmacist experience and several patients visit the pharmacy frequently to buy the same drug

The frequency of patients' visits to the pharmacy to buy the same drug without prescription related to pharmacist experience was shown in [Figure 7]. The young pharmacists with less than a year of experience mention the highest frequency of patient visits to the pharmacy, while the pharmacists with 3 years of experience mean a smaller number of patient visits. Additionally, the experienced pharmacists mean that frequency of patient visits is higher. This might be depending on the trust between the pharmacist and the patient and the results of using the non-prescription drug as an OTC drug. Additionally, this improved relation between the pharmacists and the patients may reflect the patient's growing confidence in self-care via the pharmacist. This study revealed that participants in this survey of community pharmacy services for self-medication purposes are high, although they might be subjected to OTC drug abuse [7].

This manner of switching from prescription medicine to OTC occurs daily at Benghazi private pharmacies. This study attempts to describe the extent of this switching and reflects heterogeneous participant groups and data. The health ministry must present harsh regulations to manage the situation and enforce the pharmacists to play their role and avoid drug misuse. Several studies discuss problems related to OTC misuse not the prescription drug as an OTC abuse worldwide [18].

CONCLUSION

Throughout the study, the expert pharmacists could be more proactive in the management of inappropriate OTC drug use than pharmacists of low years of experience. Considerable attention should be paid to the risks of the future expansion of inappropriate self-medication. The switch from Rx to OTC status is not known at Libyan private pharmacies. There is an urgent need for a connection system between the private sector and even the community pharmacy sector under the supervision of an organization that follows the government to decide which steps are done to protect the Libyan population from drug hazards. In addition, policymaking should be implemented in Libya to restrict sales of prescription medications without prescription.

Disclaimer

The article has not been previously presented or published, and is not part of a thesis project.

Conflict of Interest

There are no financial, personal, or professional conflicts of interest to declare.

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