

## **Psychotropic Drug Dispensing Behavior of Libyan Pharmacists in Private Pharmacies at Benghazi City**

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### **I. INTRODUCTION**

It is well known how psychotropic medications affect mood, behavior and can cause drug dependence [1]. Most of these drugs are also known for the withdrawal symptoms they cause after abstinence [2], and therefore they must be strictly prescribed. However, research has shown that these medications are among the most widely misused and abused prescribed medications in Libya and Worldwide [3]. In the United States approximately 2.8% of the population use psychotherapeutic drugs for nonmedical reasons [4]. Comparable results are found by many researchers through the Middle East region [5, 6]. Some countries that had less restrictive laws regarding the prescription and dispensing of some benzodiazepines, especially alprazolam, i.e., Australia, has moved it from Schedule 4 to the more restrictive Schedule 8 (S8) in February 2014. This has been done due to the increasing level of misuse of alprazolam and safety concerns for those who use it [7].

Generally, pharmacists are the most accessible members of the healthcare system. Unfortunately, they also appear to be a major source through which consumers can obtain prescription drugs non-medically [8]. Given that the pharmacist has an important role in dispensing and controlling psychotropic drugs and they can act as gatekeepers [9], therefore their role in misusing and abusing these drugs must be studied.

The Libyan law has a group of rules for controlling the use and dispensing of narcotic and psychotropic drugs. The law Number (7) for the year 1990 about Narcotics and Psychotropic drugs is a national law of the "State of Libya" that controls all aspects regarding these drugs, such as, production, import, export, possession, and others [10]. Wherefore, the pharmacist is in the core of these processes, and hence, should be aware of these laws and have enough knowledge about them.

In a first phase of this study, the knowledge, attitude and practice of Libyan pharmacists towards the rules of psychotropic and narcotic drug dispensing was investigated. It has showed that pharmacists tended not to break the rules regarding psychotropic dispensing without a prescription, but due to the design of the study, the results of this preliminary study were not very conclusive[11]. This emphasized the need for a second study to further study the dispensing behavior of Libyan pharmacists in Benghazi City-Libya.

Therefore the aim of this study was to investigate the dispensing practice of psychotropic drugs (Xanax as an example) in retail pharmacies at Benghazi city.

Key Words: Psychotropic drugs, drug dispensing, drug abuse.

### **II. METHODS**

A sample of retail pharmacies in the city of Benghazi-Libya were randomly visited in the year 2019 by voluntary collaborators. These pharmacies were visited twice. In the first visit the voluntary collaborator played the role of asking for a psychotropic drug, e.g. Xanax® (Alprazolam) without providing a prescription or by mentioning the chief complaint of anxiety due to stress. After leaving the pharmacy the collaborators will fill in a form that codes the behavior of the pharmacists, the name of the pharmacy in special form, that would be linked to the data gathered in the second visit of this study.

Before the first visits the collaborators were trained on how to carry out the study's scenario, as they were recommended not to persist if the medication was not dispensed or if they were asked for a prescription, in order not to influence the pharmacist's decision.

In another second visit, the collaborator would return to the same pharmacy and ask the same pharmacist to complete a simple questionnaire confidentially. This questionnaire has two sections, the first section records the main demographic data like, age, the degree of the dispenser; years of experience. In order to persuade them to answer the questionnaire freely, any other personal information such as: name, etc. was excluded. The second section of the questionnaire consisted of four scenario-based questions. These questions

included different daily situations that may face the pharmacist and what would the pharmacist do to deal with them and how he/she would deal with these situations. The last three questions were about the knowledge of the pharmacist regarding some important rules concerning the dispensing of psychotropic drugs, e.g. keeping the prescription after dispensing, having records for dispensing .....etc. The collected data was analyzed statistically using SPSS© software (version 16.0).

### **III. RESULTS**

A total of 154 pharmacists were included in this study. Approximately 60.4% of those pharmacists were male. The majority (71.4%) of them were of the young age group (20-30 years). Most of the pharmacists had a bachelor's degree (63.6%), and (11.7%) had a diploma, while 21.4% had other degrees. The mean age of the pharmacists was 29.6 yrs  $\pm$  4.8. The pharmacists demographics are presented in Table 1.

The majority of the pharmacists (45.8%) gave the medication freely and only 14.4 % asked for a prescription. While the remaining (39.8%) of the pharmacists either exclaimed that the medication was not available (22.9%), refused to dispense the medication (15.6%) and recommended the need of a doctor's visit, and 1.3% pharmacists recommended an alternative medication (usually not a psychotropic medication). The distribution of pharmacists according to their response to the request by the collaborator of a psychotropic drug without a prescription during the first visit are shown in Figure 1.

In the second part of the study, all the pharmacists, agreed to fill-in the questionnaire, and only one pharmacist refused to participate claiming that he has to ask the owner of the pharmacy. In the questionnaire, the majority (48.7%) of the responding pharmacists claimed that they would never give a psychotropic medication without a prescription, while about 21.4% would not hesitate to do so. The distribution of pharmacists according to their answer to the question about giving a psychotropic medication without a prescription are shown in Figure 2.

Almost an equal percentage of the pharmacists declared that they would refill or not refill a prescription for a psychotropic medication that is older than 3 months, with 41.6% and 42.2% respectively. The distribution of pharmacists according to their answer to the question about refilling an old prescription are shown in Figure 3.

About 65.6% of the pharmacists stated that they would return the psychotropic medication prescription to the patient after dispensing, whereas 15.6% would sign, record the date and return it, and only 2.6% would record the date and keep it. The distribution of the pharmacists according to their answer to the question about the fate of the prescription are shown in Figure 4.

The majority of the pharmacists admitted not having a record for dispensed psychotropic medications with about 75.3%. The distribution of the pharmacists according to their answer to the question about having a record for dispensed psychotropic medications are shown in Figure 5.

### **IV. DISCUSSION**

This study has addressed an important issue, that is the dispensing of critical medications such as psychotropics without a prescription. Inappropriate use of drugs is a growing public health problem worldwide [5]. It was not within the scope of this study investigating the abuse of narcotics which is a known topic, rather we concentrated on psychotropic medications which are thought to be more safe and lack the potential of addiction.

Unfortunately, according to the outcome of this study pharmacists in Benghazi's private pharmacies freely dispensed psychotropic medications without a prescriptions (46%). In fact only a small proportion of them requested the prescription (14.4%) for dispensing the medication, though most of the collaborators were young age pharmacy students. As known psychotropic medications, are alleged to be controlled medications, but here they were freely dispensed in most of the visited pharmacies. This flawed dispense of psychotropic medications in this study was similar to the results of a study in Saudi Arabia by Alosaimi et al., where most of the participants could simply get psychotropic medications without a prescription [12].

Results of this study have shown that a small proportion of the surveyed pharmacists were concerned, and only few pharmacists refused to give (15.5%) alprazolam when asked about (Xanax®) by name. And it is well known that Xanax® is indicated for the management of anxiety disorder [13]. Alprazolam is also well known for its high misuse liability [14] which requires more concern when prescribing it. Antidepressants can increase the risk of suicidal thinking and behavior in children, adolescents, and young adults, So, proper diagnosis, by a psychiatrist is a necessity; and this drug is prescribed only after other approaches have failed. Moreover, the FDA had classified this medication as a prescription only medication under the drug's status. The findings of this study point out that any psychotropic drug, in spite of its danger, could be easily bought in Libyan pharmacies without a prescription.

In the second part of the study, according to the answers of the questionnaire, the respondents, tended not to break the rules. This was seen when the respondents were asked if they would give a psychotropic medication without a prescription, only 21.4 % answered "Yes", where (48.7%) stated that they would not do so. In contrast to the first part of the study, where 46% of the pharmacists gave the medication without asking for a prescription.

In the case of refilling an old prescription, a comparable percentage of the responding pharmacists have shown that they may refill an old prescription or may not. Another study conducted in Bangalore by Murthy, Swaroop & Ananya 2016, have shown that 90% of participants reported that they had obtained their medications at the chemist's stores in the previous 12 months by showing an outdated prescription [8].

The majority (65.6%) of the respondents were likely not to comply to the rule of keeping the prescription after filling it. This could be due to lack of knowledge and may indicate a "loose" attitude of those pharmacists towards this rule. This was seen also in another study conducted in Indonesia, where about (39%) of the pharmacies not only dispensed the medicines but also returned prescription back to patients (Puspitasari, 2011) [15]

It seems that, the majority of the respondents (75.3%) do not register any information of the psychotropic or narcotic drugs they dispense, as they stated "not having a record " for such drugs. This is similar to what has been found by a study in Pakistan about the compliance with legal requirements at community pharmacies. It showed that none of the pharmacies completely complied with the legal requirements in terms documentation in the narcotics section .(Hussain, 2011) [16].

In Benghazi city the majority of pharmacists (approximately 1100 registered pharmacists) work in community pharmacies, which are considered the most accessible primary health care facility, with over 360 registered pharmacies distributed throughout the city [Pharmacists Syndicate/personal contact]. This fact has been a factor to the responsibility of community pharmacists towards the control of drug supply to the public, as well to the prevention, identification and management of drug abuse and misuse in their pharmacies. As seen pharmacists who permit self-prescription of these medications are failing to support professional standards. Such unprofessional behavior can cause harm to patients, especially with the known possible effects of psychotropic medications, when they are inappropriately used.

This study had some shortage, that is in the small number of surveyed pharmacists (154) in comparison to the number of registered pharmacists in Benghazi city. But it had the advantage of giving more reliable results about the attitudes of pharmacists in Benghazi city towards the rules psychotropic drugs dispensing. This is because the reaction of the pharmacists was spontaneous, when asked for psychotropic medications without a prescription during the first visit. Another limitation of this study was the difficulty that faced the volunteers in persuading the pharmacists to fill in the questionnaire, and the questionable reliability of the answers to the survey.

Overall, this study designated that a potential problem of abuse/misuse of psychotropic drugs, where these medications can be purchased with no prescription, is found in Benghazi city-Libya. Many factors may cause this practice to be common, but mainly it happens due to absence of law enforcement in Libya in the last years. So as to control OTC-purchase and dispensing of such drugs, the start should be with law enforcement in community pharmacies by inspectors from the ministry of health in association with the Libyan Pharmacists Syndicate. Furthermore, it is crucial to establish and implement practice guidelines regarding the dispensing of these medications. Pharmacy faculties in Libya should participate more actively in training pharmacists in issues related to the management of drug abuse/misuse by adopting programs that raise the awareness of young pharmacist to this problem and make then a more positive attitude towards rules of psychotropic drugs` dispensing. The responsibility of pharmacists in the management of this problem is important and Libyan pharmacists should have a proactive role in preventing drug abuse/misuse. This should be encouraged by the implementation of practice-relevant guidelines where pharmacists collaborate with regulatory agencies and other healthcare professionals in decreasing the potential abuse/misuse of these medications. Other healthcare professionals should also be concerned of the abuse/misuse as a potential problem, and additional investigation of other methods for identification, quantification, and treatment should be accomplished in this regard. In conclusion, OTC-prescription of psychotropic medications seems to be a routine practice in retail pharmacies in Benghazi city.

#### **Conflict of interest**

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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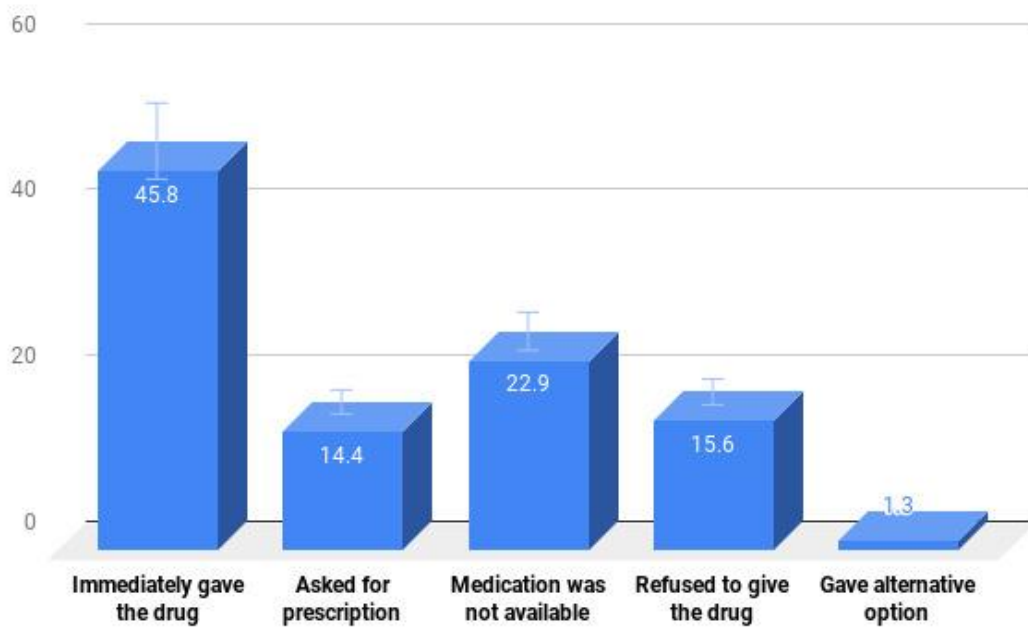
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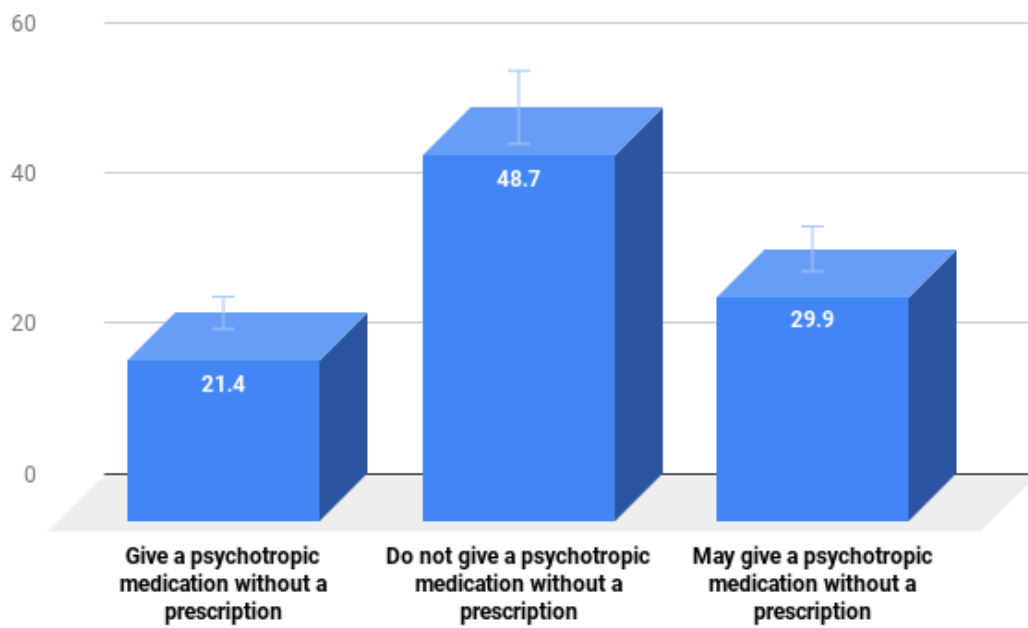
**Tables:**

**Table 1** Demographic data of pharmacists

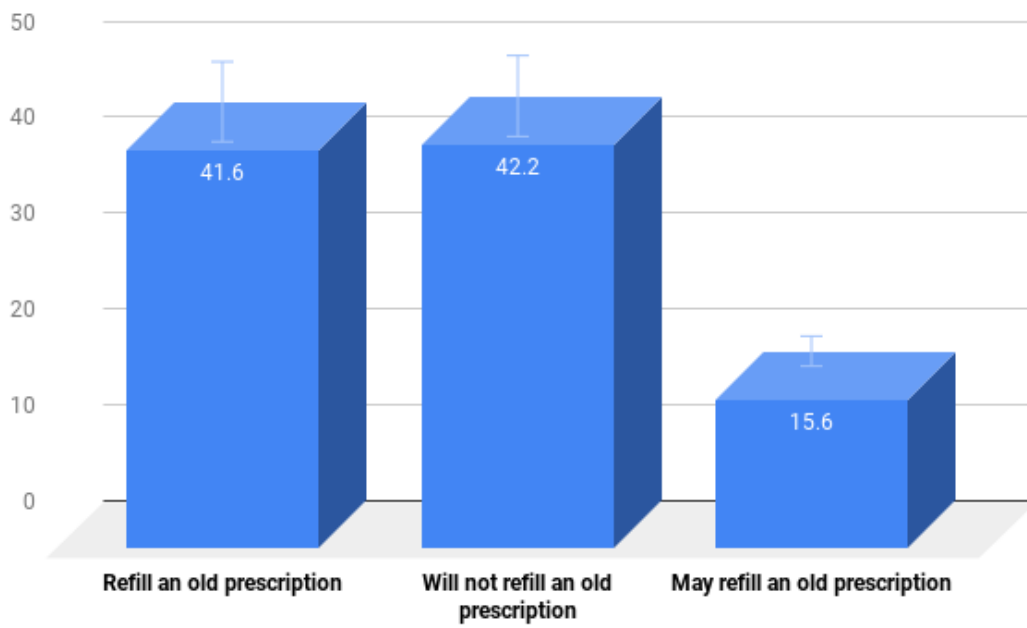
		Number (Percentage)
Gender	Male	93 (60.4%)
	Female	61 (36.6%)
Age	20-30 yrs	110 (71.4%)
	30-40 yrs	32 (20.8%)
	40-50 yrs	4 (2.6%)
	Older than 50 yrs	1 (0.6%)
Degree	Bachelor	98 (63.6%)
	Diploma	18 (11.7%)
	Master	4 (2.6%)
	Other	33 (21.4%)
Experience	0-6 yrs	106 (68.8%)
	7-13 yrs	38 (24.7%)
	14-20 yrs	4 (2.6%)
	21-27 yrs	2 (1.3%)



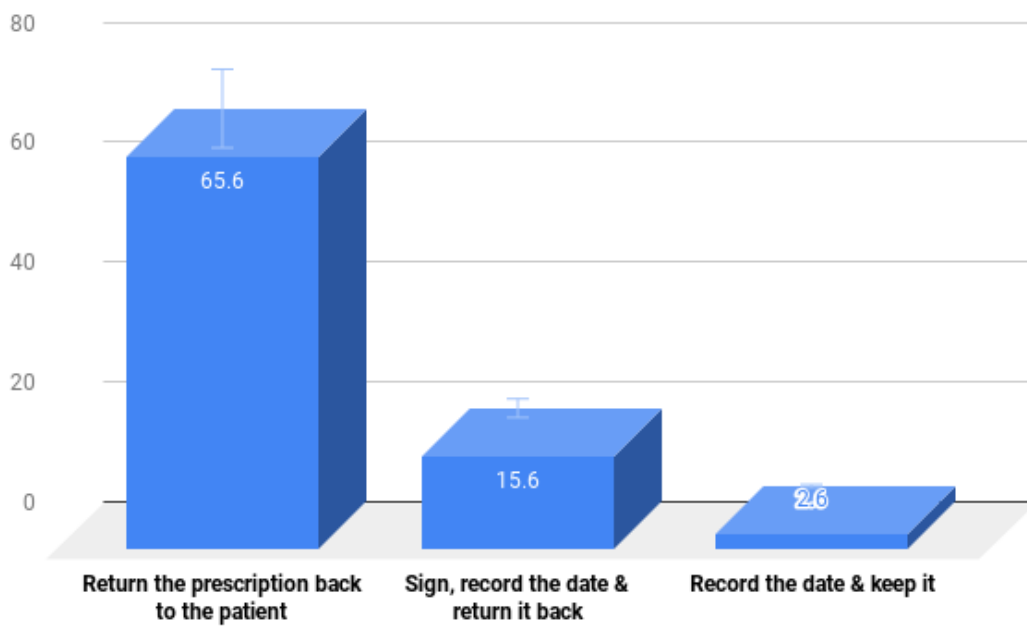
**Fig. 1.** Distribution of Pharmacists according to their response to a request by the collaborator of a psychotropic drug without a prescription during the first visit.



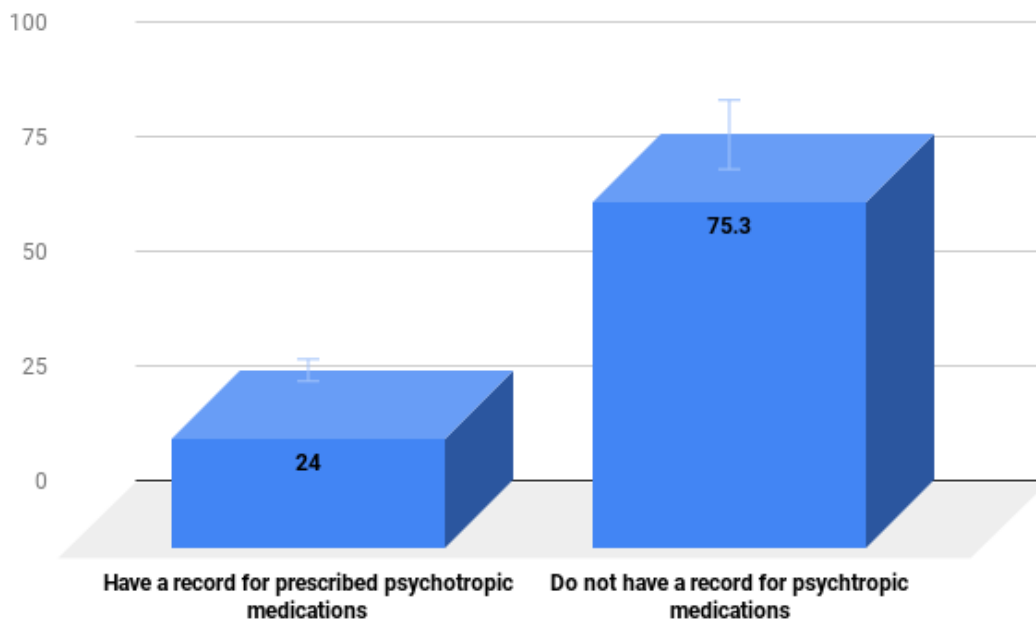
**Figure 2.** Distribution of pharmacists according to their answer to the question about giving a psychotropic medication without a prescription.



**Figure 3.** Distribution of pharmacists according to their answer to the question about refilling an old prescription.



**Figure 4.** Distribution of the pharmacists according to their answer to the question about the fate of the prescription.



**Figure 5.** Distribution of the pharmacists according to their answer to the question about having a record for dispensed psychotropic medications.

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