المجلة الإلكترونية الشاملة متعددة التخصصات
العدد الرابع و الخمسون شهر (١٢) ٢٠٢٢

Substance abuse and Misuse of prescription drugs: what the community pharmacist needs to know about drug abuse treatment services and dependence

Abdulaziz Mohamed Al-Ahmed

Medicines and Pharmacology

Pharmacist – Ministry of Health – General Directorate of Health Affairs.

Riyadh - Ksa

Theban Abdullah Al-Ghamdi

Medicines and Pharmacology

Pharmacist – Ministry of Health – General Directorate of Health Affairs.

Riyadh - Ksa

Ali Abdullah Al-Alwan

Medicines and Pharmacology

Pharmacist – Ministry of Health – General Directorate of Health Affairs.

Riyadh - Ksa

Abstract

The most approachable of all medical practitioners, pharmacists are well-positioned to aid in the prevention and treatment of substance use disorders and should train themselves to carry out these duties. The clinical perception that drug dependence is associated with long-lasting neurochemical changes is supported by new research, which also demonstrates effective pharmacological treatments for some types of drug dependencies. New research also advances our understanding of the pharmacological and behavioral risks of drug abuse. The field is developing. The management of patients' illness conditions is one of the new practice habits that pharmacists are implementing. New federal laws and collaborative practice agreements have made it possible for pharmacists to participate in the therapeutic care of opioid and other drug dependence. Pharmacists must be knowledgeable about issues surrounding addiction and ready to not only screen, assess, and refer specific cases, work in partnership with doctors treating patients who are chemically dependent, and be change agents in their communities in the battle against drug usage.

Keywords: *Substance, Substance Use Disorders (SUD), Addiction.*

1. Introduction

Primary care doctors are the entry points to all services in the healthcare system. The effectiveness of the system depends on its capacity to recognize issues, to offer the appropriate prevention and treatment services, or to refer a patient to a specialist. The majority of Americans think that primary care physicians are capable of recognizing and treating patients with substance use disorders (SUD). They believe that those who have SUD could, if they want it, receive assistance from the healthcare system (Haack and Adger, 2002). Numerous people in the general population are impacted by the abuse and dependence of licit (legally consume alcohol and tobacco), illicit, and non-medical prescription drugs (Kenna et al., 2006).

Pharmacists are expected to fulfill a wide range of duties, including maintaining the nation's legal supply of Schedule II drugs, providing clean needles for harm reduction initiatives, dispensing addiction pharmacotherapy, disseminating drug information, and acting as a drug educator, to name just a few. However, few pharmacists are sufficiently knowledgeable or equipped to carry out these many tasks in relation to concerns of substance addiction and chemical dependency (Dole and Tommasello, 2002). A large fraction of the patients that pharmacists at community, hospital, and other healthcare facilities see on a daily basis abuse or are dependent on alcohol, other drugs, or a combination (AOD). Despite this, a recent study on widespread prescription drug misuse in the United States found that many pharmacists lack the necessary skills to deal with alcohol or drug abuse (Kenna et al., 2006).

The complexity of the drug misuse problem has increased as a result of advances in science and clinical practice. We can no longer think of someone as being addicted to one drug or another since they use a variety of drugs, often in combination. The co-existence of substance misuse and mental illness only serves to exacerbate the situation further. When the two illnesses coexist in the same patient, even seasoned physicians struggle to unravel the chain of causality. These illnesses are clearly synergistic in that they each exacerbate the symptoms of the others (Tommasello, 2004).

It has been demonstrated that using clinical screening and assessment methods, it is possible to identify those who are most likely to have the condition and to ascertain if they require treatment. The rates of recovery among different groups of chemically dependent individuals have increased, and treatment methods, including medication, have become more specialized (Miller et al., 2001).

1.1 Study problem and questions

Given the great interest in all Arab and Western societies in the problems of substance abuse and chemical dependence, but unfortunately few pharmacists specialize in health care are educated and trained in this field (Haack and Adger, 2002). And because pharmacists are on the front lines of providing health care, they must be familiar with drug treatment services. Hence the aim of the research came to know what the pharmacist needs to know about drug abuse treatment services and dependence. Therefore, the problem of the study lies in the following main question: **"What the community pharmacist needs to know about drug abuse treatment services and dependence?"**

This main question is subdivided into the following **sub-questions**:

1. What is the clinical impression that drug dependence is associated with long-lasting neurochemical changes?
2. What are effective pharmacological treatments for certain kinds of drug dependencies?

1.2 Importance of the Study

The importance of this study comes from the significance of topic of substance abuse and Misuse of prescription drugs which represent a major societal issue and an important area of research. Pharmacists, as health care providers, play a vital role in effectively minimizing the negative consequences associated with drug abuse. Pharmacists have unique knowledge about drug safety, management, and control, and are qualified to serve as leaders in initiatives addressing the prevention of Substance abuse and Misuse of prescription drugs. Studies of what the community pharmacist needs to know about substance abuse and dependence treatment services are scarce. Therefore, conducting such a research regarding this topic is expected to have a high positive reflections and significance.

This study will represent a good reference for future studies as long as it will provide subsequent researchers and scientists interested in the field of pharmacy with valuable literature, recommendations and suggestions that are important for their proposed studies in the light of contemporary health-care safety thoughts. Those interested in this study can benefit from its results and recommendations in conducting deeper studies as well as developing their performance and making appropriate scientific recommendations based on the results of the study.

1.3 Study Objectives

The main objective of this study is: **"To improve our knowledge about the pharmacological and behavioral risks of drug abuse."**

This main objective is subdivided into the following **sub-objectives:**

1. To support the clinical impression that drug dependence is associated with long-lasting neurochemical changes.
2. To demonstrate effective pharmacological treatments for certain kinds of drug dependencies.

1.4 Definitions

It's crucial to establish a definition of the term "**addiction**" in order to decide whether addictions should be considered in addition to **SUDs**. The term, which derives from the Latin addicere, which means "bound to" or "enslaved by," was first used without any particular mention of drug use. It has been linked more and more frequently over the past several centuries to diminished control over substance use habits.

Addiction is the compulsion to take drugs, a corresponding lack of control over drug use, and prolonged drug use in the face of challenges, and it is a chronic, primary, deadly disease (The Children's Health Act, 2000).

2. Methodology

Research methodology is considered as a systematic approach, which mainly focused on finding answers for all research inquiries and to produce effective results of a specific study (Cresswell, 2008).

In order to achieve the aims and objectives of this study, the descriptive method will be adopted for this research study. The theoretical framework and previous studies will be utilized in order to provide a complete background with the greatest amount of knowledge that explains the phenomenon (Substance abuse and Misuse of prescription drugs: what the community pharmacist needs to know about drug abuse treatment services and dependence) to lead the researcher to obtain the targeted results (Creswell, 2008).

3. Literature review

3.1 Screening of patients by pharmacists for substadnce use and addiction

Preparing physicians for practice in a complex and challenging therapeutic context is the aim of pharmacy education and training. A definition of pharmaceutical care is: "the responsible, direct administration of medication-related care with the goal of attaining results that enhance a patient's quality of life. The primary components of pharmaceutical care are that the patient receives direct attention, which the care is given to produce clear results, that these results are intended to enhance the patient's quality of life, and that the provider (a pharmacist) takes personal accountability for the results." (Tommasello, 2004)

According to the American Pharmacists Association, the mission of Pharmacy is to serve society as the profession responsible for the appropriate use of medications, devices, and services to achieve optimal therapeutic outcomes (Conlan, 1991). This is a similar stance to that of the American Medical Association. The whole drug history of every patient under their care must be obtained by pharmacists in order to achieve these objectives. Inquiring about prescription and over-the-counter medications from patients is regarded as standard procedure, and in recent years, it has become clear how important it is to use herbal products. It is unusual that pharmacists routinely inquire about patients' use of alcohol or nicotine, and it is even less likely that they inquire about their use of illegal drugs. However, these psychoactive substances have potent pharmacological effects, are known to interact with a variety of drugs, and have the power to alter deeply ingrained behavioral priorities.

An obvious omission in an otherwise thorough medication use history is the neglect to ask patients about certain medications (American Pharmacists Association. , 2013).

Smoking cigarettes is linked to and exacerbates pulmonary and cardiovascular problems. Smoke is obviously a lung irritant, and nicotine is a vasopressor and heart stimulant. Therefore, in the short term, it is important to check the cigarette use of any patient taking prescription medication for a cardiovascular or pulmonary problem. Smokers require clear information regarding the connection between their tobacco usage and any medical issues they may be experiencing. Patients with serious medical conditions should not be the only ones who are questioned about tobacco usage, though (Baldwin, 2013).

The Agency for Healthcare Research and Quality's (AHRQ) recommendations emphasize the improvements in public health that may be made by inquiring about tobacco use among all patients and encouraging smokers to give it up (Fiore, 2000). According to recent data, pharmacists' recommendations to stop smoking can significantly enhance smokers' rates of quitting. Therefore, quitting smoking will improve the health of all smokers and the health of their families by removing secondhand smoke from the home, even if the patient's condition is unrelated to tobacco use (DeSimone, 2014).

Literature on nicotine pharmacology, tobacco usage, and quitting smoking is abundant. There is a wealth of information on these aspects of nicotine, and there is compelling justification for pharmacists to inquire about tobacco usage. There are certification programs available for pharmacists who want to focus their practices on helping patients quit smoking (Benowitz, 2000).

Asking about alcohol usage and checking for dependence can yield crucial information for improving the results of medication. Many pharmaceutical drugs should not be taken with alcohol. Can pharmacists presume that supplementary labels alerting patients to drug/alcohol interactions are sufficient to discourage alcohol use, even though pharmacists are likely to offer these labels? The author makes the assumption that the warning is adequate for individuals who use alcohol sometimes and can refrain from drinking without trouble, even if there are no data to explicitly answer this question. This caution could be impossible for the patient who is dependent on alcohol to hear. To prevent potentially dangerous drug/alcohol interactions in a patient who is dependent on alcohol, special treatments will be required (Hansten & Horn, 2001).

The acute issue of drug/alcohol interactions is only the surface level effect of alcohol dependence. Patients who are chemically dependent on alcohol (or any other substance) have different goals in life than people who are not chemically dependent. It should be a top priority for the great majority of patients to take their prescriptions as prescribed by their doctor if they want to effectively manage their sickness. But even in the

general population, non-adherence to prescription medication administration regimens has been estimated to be 50% on average, with a range of 10% to 90%, and is most likely the reason for outpatient prescription drug failure (Tommasello, 2004). Medicine misuse is a contributing factor in prescription drug non-compliance. For example, it is well known that drug misuse and non-adherence to Highly Active Anti-Retroviral Therapy (HAART) are related. It is uncertain to what extent chemical dependence contributes to non-adherence to other prescription prescriptions, but the problem cannot be resolved in any way unless individuals who are at danger of alcohol or other substance dependence are found (Lucas, 2001).

It is challenging to inquire about the use of illegal drugs and check for chemical dependence. In order to overcome hesitancy brought on by the perception that one is prying into a private aspect of another person's life, one must first build a professional belief that these queries are motivated by therapeutic concerns. The same issues with drug interactions and life priorities that were raised in respect to alcohol use apply to illicit drug usage and dependence. However, the stigma attached to using illegal drugs is more severe than the stigma attached to drinking alcohol or smoking cigarettes. The pharmacist must therefore act sensitively, respectfully, and confidentially. Patients should be aware that the inquiries are common and that truthful responses are essential for the safe and efficient use (Gbekle & Caliendo, 2022).

Any drug history should be conducted in a practice setting that is as private as possible. These are fundamental professional problems that the Health Insurance Portability and Accountability Act of 1996 brought to the level of potential legal liability (HIPAA). Facilities for private talk should be offered when it is clear that the therapeutic discourse contains sensitive aspects of a person's background since patients may be reluctant to discuss drug usage in a public setting. Patients' concerns about the sharing of personal information can be allayed by assurances of confidentiality (DeSimone, 2014).

3.2 How can pharmacists screen patients for substance abuse and addiction?

Inquiring about non-therapeutic drug usage and conducting a chemical dependency test are two distinct processes with various therapeutic objectives. If the patient can heed a pharmacist's advice about not combining prescription drugs with alcohol or other substances, a detailed accounting of a person's non-therapeutic drug use can reduce drug interactions. Some patients heed this counsel since they are not obsessive drug users and are capable of exercising restraint when persuaded that abstinence is necessary (Hansten & Horn, 2001).

Every time a patient is seen, the AHRQ advises inquiring about their use of cigarettes. In essence, smoking should be considered a vital sign, and at the initial appointment, the patient's smoking status should be determined as "non-smoker," "former smoker," or "present smoker." On the pharmacy computer's medication history form, these options have to be available as checkboxes (Morgan, 2000). Since it is unlikely that adult

non-smokers will start smoking in the future, this group doesn't need to be questioned repeatedly. Former smokers should routinely have their status checked and receive encouragement for maintaining their abstinence because they are always at risk of relapsing. Every time they visit, smokers should be counseled to give up for the sake of their health and directed toward efficient treatments (Lucas, 2001).

The topic of addiction screening as a realistic task for the dispensing pharmacist may spark a lot of discussion. There is little time in the bustling environment of the neighborhood pharmacy to complete the necessary components of dispensing, much less to take on extra tasks. The same has been claimed of the majority of other healthcare practice settings, though. For usage in the frenetic, quick-paced environment of today's health care delivery, screening procedures have been devised. CAGE is an excellent illustration of how well inquiries may identify alcoholism (American Pharmacists Association. , 2013).

3.3 Pharmacy roles and collegial response

The entire industry suffers when a pharmacist develops a drug dependency. Because we are a part of a professional community, how other pharmacists act has an impact on how we see ourselves. In some ways, our reputation is in the hands of others. Professionals are obligated to self-regulate. To maintain the safety of the general public and the continued sustainability of the profession, individual pharmacists and the licensing bodies that oversee the profession have moral, legal, and ethical obligations (Baldwin, 2013).

The problem of employee impairment and lost productivity has been determined to be primarily caused by alcohol and other drug addiction in the workplace over the past 25 years. The employee assistance program (EAP) was initially a workplace-based alcoholism program. Since then, it has expanded in size and scope to address a wide range of employee issues. The EAP's effectiveness is linked to the fact that it provides helpful methods for resolving employee issues in ways that are focused on reducing workplace conflict. With the backing of both management and labor, the EAP has established itself as a friend to both employer and employee (Levinson, 2001).

The American Pharmaceutical Association first established guidelines in 1982, saying that pharmacists "should not practice while subject to physical or mental impairment due to the influence of drugs, including alcohol, or other causes that might adversely affect their abilities to function properly in their professional capacities" and favoring a rehabilitative approach to the issue of impaired pharmacists. The understanding that substance abuse and addiction issues are at least as widespread in the health professions, including pharmacy, as they are in the general community, is reflected in these regulations (Tommasello A. , 2000). A pharmacist has an ethical obligation to take action when they see a colleague operating equipment while inebriated (ASHP, 2016).

This necessitates filing a report with the Board of Pharmacy in several states. In some states, the report is sent to a collaborative support system, most frequently known as the Pharmacist Recovery Network (PRN), or to a support system that covers some or all of the health professionals. The

EAP paradigm has served as the foundation for these programs. In the identification and care of impaired pharmacists, a rehabilitative strategy is preferable to a punishing approach (Tommasello A. , 2000). By ignoring the issue, the public's health is put in peril and the impacted pharmacist's term of dysfunction is prolonged. These programs may use recovery contracts, which frequently involve drug misuse urine testing, to aid in recovery. Anecdotally, recovery rates of more than 80% have been noted for such regimens (Gbekle & Caliendo, 2022).

Pharmacists can talk to groups in need of substance addiction education in schools, churches, and other community organizations in addition to providing the categories of therapeutic techniques outlined in this book. Additionally, pharmacists are qualified academically to instruct courses on substance addiction pharmacology at community colleges and universities. In order to improve their therapeutic relationships with those organizations, they can also give staff training on this subject at local addiction treatment facilities. The pharmacist can apply this expertise into a consult service to these same centers where staff members struggle to comprehend the complexity of addiction pharmacotherapy as his or her understanding of drug abuse grows and becomes more polished (Tommasello, 2004).

4. Conclusion and Recommendations

Health practitioners that are approachable, knowledgeable, and respected are pharmacists. Clinical pharmacotherapy, information services, disease state management, and other distinctive niches in the delivery of health services are just a few of the areas where the frontier of practice has been rapidly expanding. However, the community pharmacist still has the most direct daily contact with the general people among all pharmacy professionals. Community pharmacists are a significant and largely unutilized public health resource. With regulations and programs that will increase access to drug misuse treatment treatments, the nation is moving forward quickly. Pharmacists will play a direct role in the treatment of these issues as it moves into primary care settings. The time has come for the pharmacy industry to take advantage of the opportunities that are arising as a result of these changes. At the end of this article the pharmacist will be better **able to:**

1. Explaination the concept of chemical dependence disease
2. Gathering the information needed to conduct a chemical dependency test
3. Inform patients of treatment options for chemical dependence
4. Determination resources to answer questions about the effects of common drug use (alcohol, marijuana, narcotics, 'ecstasy', cocaine)
5. Developing a list of local resources for drug abuse treatment
6. Counseling parents worried about their children's drug use
7. Counseling people concerned about your family member's drug use.
8. Counseling individuals concerned with their drug use

References

American Pharmacists Association. . (2013). Addiction and substance abuse in the pharmacy professions: from discovery to recovery. Pharm Today. ; 19:62–72.

ASHP. (2016). ASHP Statement on the Pharmacist's Role in Substance Abuse Prevention, Education, and Assistance, American Journal of Health-System Pharmacy, Volume 73, Issue 9, , Pages e267–e270, https://doi.org/10.2146/ajhp150542.

Baldwin, J. (2013). Substance abuse care. In: Allen LV, ed. Remington: the science and practice of pharmacy. 22nd ed. London, UK: Pharmaceutical; :2613–9.

Benowitz, N. (2000). Nicotine addiction. Primary Care Clinics in Office Practice. , 26 (3): 611-31.

Conlan, M. (1991). APhA forges ahead with mission statement for all of pharmacy. Drug Topics. , 135: 74-75.

Cresswell, J. W. (2008). *Educational research: Planning, conducting and evaluating qualitative and quantitative research. Upper Saddle River, NJ: Merrill & Prentice Hall.*

DeSimone, E. K. (2014). Curricular guidelines for pharmacy: substance abuse and addictive disease. www.aacp.org/resources/education/ Documents/CurricularGuidelinesforPharmacy-Substan ceAbuseandAddictiveDisease.pdf.

Dole, E. J., & Tommasello, A. (2002). Recommendations for implementing effective substance abuse education in pharmacy practice. Substance abuse, 23(S1), 263-271.

Fiore, M. B. (2000). Treating Tobacco Use and Dependence. Clinical Practice Guideline. Rockville, Md.: U.S. Department of Health and Human Services. Public Health Service. .

Gbekle, M., & Caliendo, T. (2022). Assessing Substance Use Disorder in Pharmacy Practice.

Haack, M. R., & Adger Jr, H. (2002). Executive summary: Strategic plan for interdisciplinary faculty development: Arming the nation's health professional workforce for a new approach to substance use disorders.

Hansten, P., & Horn, J. (2001). Drug Interactions: Analysis and Management. Applied Therapeutics Vancouver, WA. , (updated regularly).

Kenna, G. A., Erickson, C., & Tommasello, A. (2006). Understanding substance abuse and dependence by the pharmacy profession. US Pharm, 31, HS-21.

Levinson, W. C. (2001). To Change or Not To Change: "Sounds Like You Have a Dilemma.". Annals of Internal Medicine. , 135 (5): 386-391.

Lucas, G. C. (2001). Detrimental Effects of Continuous Illicit Drug Use on the Treatment of HIV-1 Infection. Journal of Acquired Immune Deficiency Syndromes. , 27 (3): 251-259.

Miller, W. R., Walters, S. T., & Bennett, M. E. (2001). How effective is alcoholism treatment in the United States?. Journal of studies on alcohol, 62(2), 211-220.

Morgan, M. (2000). Ecstasy (MDMA) A Review of its Possible Persistent Psychological Effects. Psychopharmacology. , 152: 230-248. 10.1007/s002130000545.

The Children's Health Act of 2000 Title 35, Section 3501 the Drug Addiction Treatment Act of 2000. H.R. 4365 of the 106th Congress, January 2000.

Tommasello, A. (2000). The Effects of State Policies on Addiction Intervention in the Health Professions: The Case of Pharmacy. Dissertation, University of Maryland. .

Tommasello, A. (2004). Substance abuse and pharmacy practice: what the community pharmacist needs to know about drug abuse and dependence. Harm Reduct J 1, 3 (). https://doi.org/10.1186/1477-7517-1-3

Tommasello, A. C. (2004). Substance abuse and pharmacy practice: what the community pharmacist needs to know about drug abuse and dependence. Harm reduction journal, 1(1), 1-15.