

# Misuse of Prescription and over the Counter Drug

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**Abstract:** The aim of review is to find out the reasons of misuse of prescription and over the counter drug. A variety of prescription and over-the-counter (OTC) medications have recently come under scrutiny for being taken recreationally, either alone or in combination with other drugs, both legal and illegal, such as novel psychoactive substances (NPS). There have been more and more instances of recreational drug abuse including a variety of OTC and prescription medications. The majority of people who use over-the-counter (OTC) drugs are older folks. More than 50% of significant adverse drug events involving older persons include an over-the-counter medicine. To find out how OTC pharmaceuticals are picked and, in a hypothetical situation, used by older persons, as well as if doing so would be regarded safe. Pharmacists should take part in evidence-based efforts to recognise, comprehend, and prevent drug diversion activities as well as the negative impacts of drug misuse in order to prevent and minimise drug abuse.

**Keywords:** Drug Misuse, Prescribing Drugs, Over the Counter Drugs. Health, Addiction.

## I. INTRODUCTION

The use of a prescribed drug contrary to the prescriber's instructions is known as prescription drug misuse. The term "prescription drug abuse," sometimes known as "prescription drug misuse," refers to a variety of behaviours, from using a friend's prescription painkiller for a backache to snorting or injecting crushed pills to get high. Despite the risks, prescription drug abuse can become compulsive and ongoing. Prescription drug abuse is a major public health concern that not only involves hazards associated with the individual medications but also the environment in which they are used, such as concurrent use of other drugs that have synergistic effects, psychiatric conditions, and social factors [1-5]. Older folks frequently abuse OTCs, so it's crucial for them to seek out resources—like a pharmacist—to guide them in choosing safe OTCs. Data from the United Nations Office on Drugs and Crime (UNODC) show that prescription medication abuse and related mortality are becoming more common across the world. Teenagers and young adults, women, elderly people, healthcare workers, and other vulnerable groups are more likely to misuse drugs.



### Drugs which are Commonly Abused-

- Opioids, including drugs containing oxycodone (Oxycontin, Percocet) and hydrocodone (Norco), are used to relieve pain.
- Alprazolam (Xanax), diazepam (Valium), and zolpidem (Ambien) are just a few examples of the anti-anxiety medications, sedatives, and hypnotics that are used to treat anxiety and sleep problems.
- ADHD and certain sleep disturbances are treated with stimulants including methylphenidate (Ritalin, Concerta, etc.), dextroamphetamine-amphetamine (Adderall XR, Mydayis), and dextroamphetamine (Dexedrine).

### Misuse of Prescription Drugs

Prescription drug addiction has emerged as a worrying epidemic in the modern era [6-8], particularly among young adults and adolescents where it has overtaken all illicit drug usage aside from marijuana [9-10]. Opioids, benzodiazepines, and stimulants have historically been the focus of concern, but other commonly prescribed medicines may also be abused, misused, or diverted for non-medical uses. [11]

### Example-

#### Bupropion

Bupropion's dopaminergic, stimulant-like properties among antidepressants may account for its potential recreational usefulness [1]. It is a second-generation antidepressant that selectively inhibits catecholamine reuptake, including those of noradrenaline and dopamine [12]. It is only approved as a smoking cessation medication in the UK [13]. 975 single drug bupropion instances with "intentional abuse" as the classified cause of exposure in people aged 13 and older were reported to the National Poison Data System (NPDS) over the course of a 14-year retrospective analysis, according to a study [14]. From 2000 to 2012, there was a 75% increase in the prevalence of abuse, primarily affecting young adults and adolescents who experienced tachycardia, seizures, and agitation/irritability as clinical consequences [14].

### Overuse of over-the-counter medications

Worldwide, there have been reports of the potential for OTC drugs that have not yet been determined to have a diversion potential to be misused [15, 16-17]. Their accessibility, low cost, diminished perception of potential harm, and increasing social acceptance appear to facilitate their abuse [18, 19, 20, 21, 22]. Medication accessible for purchase lawfully without a prescription has been thought to be relatively safe compared to both prescribed and illegal drugs [18,19,20,21,22].

They are usually obtained through non-medical sources as well, such as darknet and criminal websites, in addition to pharmacies. They are freely available online, for example, prescription medications may be bought without a prescription. Aside from the OTC products that were previously mentioned [22].

Due to the involvement of codeine in almost all of these patients' initial OTC medications, there were almost always legitimate medical reasons for doing so; there was no unexpected range of pain-related symptoms or conditions, such as headaches and migraine, abdominal and period pain, or hangover treatments.

It should be noted that there was frequently a connection to medically prescribed drugs, either through initial prescription that was discontinued or ongoing prescription.

### Example-

#### (BZY) Benzydamine

BZY is used topically to treat inflammations of the oral and vaginal mucosae and has analgesic and antipyretic properties. The abuse of BZY has been documented in a number of nations, including Brazil, Italy, Romania, Poland, and Turkey [23-29]. High doses of BZY (500–3000 mg) have been reported to produce stimulant effects on the CNS, including euphoria, hyperactivity, insomnia, abnormal behaviour, and psychotic symptoms like paranoia and visual hallucinations. Young persons and concurrent alcohol/cannabis usage may be a factor in BZY diversion concerns [30,]. A central cannabinoidergic mechanism of action has been proposed despite the fact that the chemical mechanism underlying the psychoactive and reinforcing actions of BZY is yet unknown. Online drug forums and social networks' informal self-reporting have contributed. [31,32]

### **Medication misuse in India: a major public health issue in India**

#### **Misuse-related factors-**

Based on the different parties engaged in the distribution of medicines, including healthcare providers, chemists, customers, and patients, one can consider the issues associated to medication misuse and overuse. The community's misuse of medications was also shown to be being facilitated by a variety of underlying aspects of the health system.

#### **Factors affecting the provision, regulation, and enforcement of healthcare-**

Numerous studies included in this review discovered that high accessibility to a variety of medications affected medication use. Some doctors and chemists expressed concern about the oversupply of some medications at public dispensaries due to the fact that availability was influencing medication decisions more so than evidence-based recommendations.[33,34]

In addition, the lack of enforcement of laws allowed chemists to distribute medicines even when a prescription was inadequate or expired.[33]

#### **An Initial Analysis of Over-the-Counter Drug Abuse Rates in Older Adults-**

The majority of people who buy over-the-counter (OTC) medications are older adults, or those who are 65 or older. Although they make up 13% of the population in the United States, older adults use 30% of all OTC medications.[35] One-fourth of all older persons take 10 or more prescription and over-the-counter drugs together.[36] Ibuprofen, aspirin,

acetaminophen, and diphenhydramine are four of the top ten most commonly used medications.[37] Utilising the 2012 American Geriatrics Society Beers Criteria for Potentially Inappropriate Medication Use in Older Adults due to Drug-Disease or Drug-Syndrome Interactions that May Exacerbate the Disease or Syndrome, the drug-disease interaction was identified.[38]

If the OTC medication chosen appeared on the list, the drug-age interaction was classified as misuse: Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, 2012 American Geriatrics Society. Non-Beers List drug-age interactions were regarded as safe to use.[38] A total of 39 instances of drug-drug interaction abuse were observed among the pain medications chosen, affecting 60% of the individuals. 80% of participants chose an OTC that, when combined with their existing medication regimen, would result in a possible drug interaction. It was challenging for older persons to choose a sleep medicine that would be regarded as safe for them to take because the majority of sleep pills contain doxylamine or diphenhydramine, both of which are classified on the Beers List as dangerous prescriptions for older adults. Many older adults expressed some trepidation about taking sleeping pills and said that doing so would not be their preferred option. Instead, they said they would try reading or drinking a cup of tea. A few people were aware of the potential for negative consequences including dizziness or morning hangovers. The categories of abuse of over-the-counter medicines were examined using descriptive statistics. To better comprehend the data, analysis was carried out at both the patient- and medication-levels. R was used to do all statistical analyses.[39]

#### **Viewpoints from society on over-the-counter (OTC) drugs –**

Self-medication provides benefits for healthcare systems as well since it makes it easier for chemists to apply their clinical expertise, promotes access to medicine, and might help cut the cost of prescription drugs for publicly supported health initiatives.[40]

Such medications raise the risk of interactions, bad reactions, and self-treatment when medical help should have been sought, which can delay or hide the detection of serious illnesses.[41]

The proportion of participants who said they went to a pharmacy at least once a month was slightly higher than previously reported,[42,43] highlighting the accessibility and significance of neighbourhood pharmacies within the National Health Service of the UK.19 Additionally, more people (32.2%) than previously reported [42,43] purchased OTC medications on a regular basis, which may be an indication of the public's rising self-confidence.

High levels of concurrent prescription and non-prescription drug use among respondents in a sizable, nationally representative survey in the US raised concerns about unintended interactions; this confirmed findings similar to those reported by Finnish researchers using data from a population-based interview survey on health care.[44]

Polypharmacy and any over-the-counter medications that the patient may be taking must be disclosed to both the doctor and the chemist.[45]

### **What Causes Prescription Drug Abuse in Adults?**

According to research, many Americans believe that because prescription medications are controlled medicines with approved medical purposes, misusing them carries no danger. The drugs evaluated in NSDUH have been labelled as having abuse potential by the DEA.[46]

### **The aid, education, and prevention of drug misuse by Pharmacist:**

Almost 74.6 percent of interviewees said they go to the neighbourhood pharmacy at least once a month. Females and those over 60 years old used community pharmacies more frequently than men or people in other age groups ( $P < 0.001$ ). When they discover a bogus prescription, some pharmacies have created hotlines to notify other pharmacies in the area. In addition to doctors, chemists can utilise PDMPs to track patients' opioid prescribing and dispensing behaviours.

In order to better serve their patients during and after pandemics, chemists have long accepted responsibility for playing a significant role in drug usage prevention, education, and service enhancement [48]. Particularly with disadvantaged groups who might be less uncomfortable in discussing diversion/misuse concerns with healthcare providers, chemists should engage in open dialogue to reassure patients and build trust. Pharmacists may be able to recognise patients who may be struggling with issues connected to substance usage and direct them to the appropriate treatment, such as mental health or addiction services.[49,50,51,52]

Patients can consult a chemist for guidance quickly and for no cost. Pharmacists may readily address a variety of patient concerns, such as product selection, OTC brand name ambiguity, proper product use, and when to take drugs. As a result, chemists have a big say on what OTC medications people choose to buy.

In the past, a number of strategies used by chemists to decrease OTC medicine addiction have been proposed.[53] Keep the involved items out of sight, inquire about pharmacist purchases of these products, and refuse to sell the implicated product were the top three strategies employed by pharmacists to combat OTC medicine misuse.[54,55]

### **Hurdles that chemists must overcome to combat OTC drug abuse**

Monitoring OTC misuse presents a number of difficulties for chemists and their businesses. Drug-related issues may be difficult to identify due to a lack of reliable data about OTC drugs. There is a gap in the information needed to make informed counselling decisions since chemists often never record or track patient medication profiles for OTC drug usage citation.[56]

## **II. CONCLUSION**

Drug misuse, both of prescription and over-the-counter varieties, is a growing global societal problem. The misuse is increased during the Covid-19 situation. Misuse of prescription medications can have negative health effects. In fact, chemists are crucial in-patient counselling. The misuse of OTC drugs can be decreased with chemist attention.

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