

**ASSESSMENT OF OPIOID DISPENSING PRACTICES AND ABUSE  
PREVENTION STRATEGIES IN COMMUNITY PHARMACY****\*<sup>1</sup>Dr. Padige Srivarsha <sup>2</sup>Sakshitha Mathamshetty <sup>3</sup>Banala Kavya**

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Doi: <https://doi-doi.org/101555/ijarp.6413>**ABSTRACT**

**Background:** Opioid analgesics are frequently prescribed for the management of moderate to severe pain; however, their improper use has contributed to increasing rates of misuse, dependence, and overdose worldwide. Community pharmacists play an important role in ensuring the safe and rational utilization of opioids and in preventing their abuse. {1,2,4,5,}

**Objective:** This study was conducted to assess opioid dispensing practices and abuse prevention strategies followed by community pharmacists.

**Methods:** A cross-sectional observational study was conducted among community pharmacists and pharmacy staff working in selected community pharmacies. Data were gathered using a structured and pre-validated questionnaire designed to evaluate opioid dispensing practices, prescription verification processes, patient counselling activities, awareness of opioid misuse, and strategies for abuse prevention {.,7 8}

**Results:** The results indicated that most pharmacists consistently verified prescriptions prior to dispensing opioids, including evaluation of dosage, treatment duration, and possible drug interactions. Counselling regarding safe use, adverse effects, storage, and disposal of opioids was commonly provided to patients. Pharmacists also reported monitoring repeat prescriptions and detecting suspicious prescribing behaviours. However, several challenges

were identified, such as limited access to Prescription Drug Monitoring Programs (PDMPs), inadequate training, high workload, and insufficient staffing.

**Conclusion:** Community pharmacists play a crucial role in opioid stewardship through prescription monitoring, patient counselling, and implementation of abuse prevention strategies. Enhancing training programs and improving access to prescription monitoring systems may further strengthen efforts to prevent opioid misuse.

**KEYWORDS:** Opioid dispensing; Community pharmacy; Opioid misuse; Patient counselling; Prescription Drug Monitoring Programs (PDMPs); Opioid abuse prevention.

## 1.INTRODUCTION

Opioid medications are extensively prescribed for the management of moderate to severe acute and chronic pain. These drugs produce analgesic effects by binding to opioid receptors located within the central nervous system, thereby influencing the perception and transmission of pain signals. Commonly utilized opioid analgesics include morphine, codeine, tramadol, fentanyl, and oxycodone. Opioids are widely employed in the treatment of postoperative pain, cancer-related pain, palliative care, and trauma-associated painful conditions. However, long-term or inappropriate use of these medications may lead to tolerance, physical dependence, addiction, respiratory depression, and overdose-related complications. {11 12 13}

In recent years, opioid misuse has become a significant global public health challenge. Increasing incidences of inappropriate prescribing practices, non-medical opioid consumption, self-medication, and inadequate prescription monitoring have substantially contributed to opioid-related morbidity and mortality worldwide. According to the World Health Organization, opioid dependence and overdose continue to represent serious healthcare concerns in many regions. Furthermore, misuse of prescription opioids has been associated with elevated healthcare costs, reduced quality of life, accidental poisoning, and substance use disorders. { 1 2 3 4 5 14}

Community pharmacies are recognized as one of the most accessible healthcare settings and serve as the final stage before medications are supplied to patients. Community pharmacists therefore play an important role in ensuring the safe, appropriate, and rational use of opioid medications. Through prescription assessment, dosage evaluation, patient counseling, and monitoring repeated opioid dispensing, pharmacists can contribute significantly toward reducing opioid misuse and medication-related adverse outcomes. {16 17 18}

The implementation of abuse prevention measures within community pharmacy practice is essential for minimizing opioid-related harm and enhancing patient safety. Pharmacists can actively support opioid stewardship by educating patients regarding appropriate medication use, adherence to therapy, secure storage, and safe disposal of unused opioid medications. In addition, early detection of suspicious prescriptions and collaboration with other healthcare professionals may further assist in preventing opioid misuse and dependence.

Despite the introduction of various regulatory policies and prescription monitoring programs, inappropriate opioid dispensing and misuse continue to remain major healthcare concerns. Therefore, the present study was conducted to evaluate opioid dispensing practices and examine abuse prevention strategies implemented in community pharmacy settings. The study also aims to emphasize the contribution of community pharmacists in promoting responsible opioid use and reducing opioid-related harm within the community. { 2 22 26}

## **2.REVIEW OF LITERATURE**

### **2.1 Opioid Pharmacology**

Opioids are a class of analgesic medications widely employed in the management of moderate to severe pain conditions. These agents produce their therapeutic effects by binding to opioid receptors, specifically mu ( $\mu$ ), kappa ( $\kappa$ ), and delta ( $\delta$ ) receptors, distributed throughout the central and peripheral nervous systems. Activation of these receptors suppresses the transmission of pain signals and alters the perception of pain. Among these receptor subtypes,  $\mu$ -receptor stimulation is chiefly responsible for analgesic activity as well as adverse effects such as respiratory depression, sedation, euphoria, and physical dependence

Commonly prescribed opioid medications include morphine, codeine, tramadol, fentanyl, oxycodone, methadone, and hydrocodone. Based on their origin and chemical synthesis, opioids are categorized as natural, semi-synthetic, and synthetic compounds. Although opioids are highly effective in pain management, prolonged or inappropriate use may lead to tolerance, dependence, addiction, and overdose-associated complications. 11 12 13}

### **2.2 Types of Commonly Dispensed Opioids**

A wide range of opioid analgesics are routinely dispensed in community pharmacy settings for the management of acute and chronic pain disorders. Morphine is considered the gold standard opioid analgesic for severe pain and is extensively used in postoperative and cancer pain management. Codeine and tramadol are commonly prescribed for moderate pain due to their comparatively lower analgesic potency.

Fentanyl is a highly potent synthetic opioid primarily indicated for severe chronic pain and palliative care. Oxycodone and hydrocodone are also frequently prescribed for chronic pain management; however, these medications carry a considerable risk of misuse and dependence. Methadone and buprenorphine are additionally utilized in opioid substitution therapy for the treatment of opioid dependence. The extensive availability of opioid medications has raised concerns regarding inappropriate dispensing practices, misuse, and overdose-related adverse events { 11 12 13 }

### **2.3 Global Opioid Crisis**

The opioid crisis has become one of the most significant global public health concerns in recent decades. Increased prescribing of opioid medications for acute and chronic pain management has substantially contributed to rising incidences of opioid misuse, dependence, addiction, and overdose-related deaths worldwide. According to the World Health Organization, opioid use disorders affect millions of individuals globally, and opioid overdose accounts for a considerable proportion of drug-related mortality.

Countries such as the United States and Canada have reported dramatic increases in opioid-related mortality due to excessive prescribing practices, non-medical use of prescription opioids, and widespread availability of illicit synthetic opioids such as fentanyl. In developing countries, inadequate prescription monitoring systems and insufficient regulatory control have also contributed to increasing rates of prescription opioid misuse.

The opioid epidemic has created major healthcare, social, and economic burdens worldwide. Opioid misuse is associated with increased hospitalization rates, psychiatric illnesses, unemployment, decreased productivity, and reduced quality of life. Therefore, implementation of effective public health interventions and evidence-based preventive strategies is essential to address this escalating crisis. {1 2 4 5 7 14 }

### **2.4 Risk Factors for Opioid Abuse**

Several factors contribute to an elevated risk of opioid misuse and abuse. Patients receiving long-term opioid therapy, high-dose opioid prescriptions, or concomitant sedative medications are at greater risk of opioid dependence and overdose. Individuals with a previous history of substance abuse, psychiatric disorders, chronic pain syndromes, or prior opioid exposure are also more vulnerable to opioid misuse.

Moreover, social and environmental determinants such as unemployment, poor socioeconomic status, limited healthcare access, and inadequate social support may contribute to opioid abuse. Insufficient patient awareness regarding proper opioid use, secure

storage, and appropriate disposal practices may further increase the risk of accidental misuse and medication diversion {4 5 9 10}

## **2.5 Prescription Drug Misuse**

Prescription drug misuse refers to the use of medications in a manner inconsistent with prescribed medical instructions or professional recommendations. Opioid misuse may involve taking higher doses than prescribed, requesting repeated refills, using opioids without a valid prescription, sharing medications with others, or obtaining prescriptions from multiple healthcare providers. Such practices significantly increase the risk of addiction, overdose, hospitalization, and mortality.

Community pharmacies play a crucial role in detecting prescription drug misuse through assessment of dispensing patterns, refill frequencies, and suspicious prescriptions. Early identification of inappropriate medication use may assist healthcare professionals in preventing opioid-related complications and improving patient safety.

## **2.6 Opioid Dependence and Addiction**

Prolonged opioid exposure may result in physical dependence and addiction. Physical dependence develops when the body physiologically adapts to continuous opioid use, leading to withdrawal symptoms following abrupt discontinuation of therapy. Addiction is characterized by compulsive drug-seeking behaviour despite knowledge of harmful consequences.

Opioid addiction adversely affects physical health, mental well-being, interpersonal relationships, and occupational functioning. Respiratory depression and overdose continue to remain major causes of opioid-related mortality worldwide. Therefore, early identification, continuous patient monitoring, and evidence-based treatment approaches are essential for minimizing opioid-related harm and improving clinical outcomes {4 5 9 10}

## **2.7 Role of Community Pharmacists**

Community pharmacists play an essential role in ensuring the safe and rational use of opioid medications. As highly accessible healthcare professionals, pharmacists often serve as the final healthcare contact before medications are dispensed to patients. Their responsibilities include prescription verification, dose assessment, identification of potential drug interactions, patient counseling, and monitoring repeated opioid dispensing.

Pharmacists also contribute to identifying suspicious prescribing behaviours and recognizing patients who may be at increased risk of opioid misuse or overdose. Through patient education and collaboration with physicians and other healthcare professionals, community

pharmacists can make substantial contributions to opioid stewardship and public health protection.

### **2.8 Prescription Monitoring Programs**

Prescription Drug Monitoring Programs (PDMPs) are electronic databases established to monitor the prescribing and dispensing of controlled substances. These systems assist healthcare professionals in identifying inappropriate prescribing practices, repeated prescriptions, and doctor-shopping behaviour associated with opioid misuse.

Research studies have demonstrated that implementation of PDMPs contributes to reduced opioid prescribing rates, decreased prescription drug diversion, and improved patient monitoring practices. Pharmacists can utilize these systems to evaluate patient medication histories and identify individuals who may be at increased risk for opioid dependence and overdose. However, challenges such as inadequate training, limited interoperability, and restricted accessibility may reduce the effectiveness of PDMP utilization. { 2 22 26 }

### **2.9 Patient Counseling Practices**

Patient counseling represents an important component of opioid dispensing within community pharmacy practice. Pharmacists educate patients regarding dosage administration, duration of treatment, potential adverse effects, drug interactions, safe storage, and appropriate disposal of unused opioid medications. Counseling also involves informing patients about overdose risks and the dangers associated with concomitant use of opioids with alcohol or sedative medications.

Effective counseling practices improve medication adherence, increase patient awareness, and reduce opioid-related complications. Therefore, pharmacist–patient communication plays a crucial role in promoting safe opioid use and preventing medication misuse. { 16 18 19 20 }

### **2.10 Abuse Prevention Strategies**

Several abuse prevention strategies have been implemented globally to minimize opioid misuse and associated adverse outcomes. These approaches include strict prescription regulations, opioid stewardship programs, patient risk assessment tools, naloxone accessibility initiatives, pharmacist training programs, and public awareness campaigns.

Pharmacist-led interventions such as prescription screening, monitoring suspicious dispensing patterns, patient counseling, and patient education regarding safe medication use have demonstrated favourable outcomes in reducing opioid-related harm. Additional preventive measures include restricting opioid quantities, implementation of electronic prescribing systems, and monitoring repeated opioid prescriptions.

### 2.11 Regulatory Guidelines

Various national and international healthcare organizations have established guidelines to ensure safe prescribing and dispensing of opioid medications. Regulatory measures include prescription limitations, mandatory prescription monitoring systems, electronic prescribing requirements, and controlled substance regulations. Organizations such as the World Health Organization (WHO), centres for Disease Control and Prevention (CDC), and Substance Abuse and Mental Health Services Administration (SAMHSA) have issued recommendations aimed at reducing opioid misuse and overdose-related mortality.

Adherence to these regulatory guidelines is essential for minimizing inappropriate opioid use and improving patient safety within healthcare settings. Continuous implementation of policies and monitoring strategies remains important in controlling the global opioid crisis. { 1 2 3 24 25 }

### 2.12 Previous Research Studies

Several previous investigations have examined opioid dispensing practices and abuse prevention strategies within community pharmacy settings. Bach and Hartung reported that community pharmacists contribute significantly to opioid misuse prevention through prescription monitoring, patient counseling, and identification of high-risk behaviours. Rickles et al. developed an opioid misuse prevention algorithm intended to enhance opioid safety in community pharmacy practice.

Cochran et al. demonstrated that screening patients for opioid misuse risk within community pharmacies assists in identifying individuals who may be vulnerable to dependence and overdose. Green et al. emphasized the importance of pharmacist-based naloxone distribution initiatives in reducing opioid-related mortality and improving patient awareness regarding overdose prevention.

Recent evidence indicates that pharmacist-led opioid stewardship programs improve medication adherence, reduce inappropriate opioid dispensing, and enhance patient safety outcomes. However, barriers such as inadequate pharmacist training, limited access to prescription monitoring systems, insufficient staffing, and absence of standardized protocols continue to affect the effectiveness of opioid abuse prevention strategies in community pharmacy practice. {17 18 29 30 }

### Commonly Dispensed Opioid Analgesics in Community Pharmacy

S.No.	Opioid Drug	Class	Common Clinical Use	Abuse Potential
1	Morphine	Natural opioid	Severe pain, cancer pain, postoperative pain	High
2	Codeine	Natural opioid	Mild to moderate pain, cough suppression	Moderate
3	Tramadol	Synthetic opioid	Moderate pain	Moderate
4	Fentanyl	Synthetic opioid	Severe chronic pain, anesthesia, palliative care	Very high
5	Oxycodone	Semi-synthetic opioid	Moderate to severe pain	High
6	Hydrocodone	Semi-synthetic opioid	Moderate to severe pain	High
7	Methadone	Synthetic opioid	Opioid dependence therapy, chronic pain	High
8	Buprenorphine	Partial agonist	Opioid substitution therapy, dependence treatment	Moderate

### 3. MATERIAL AND METHOD

#### 3.1 Study Design

The present study was designed as a cross-sectional observational study to evaluate opioid dispensing practices and abuse prevention strategies adopted in community pharmacy settings. The study primarily aimed to assess the role of community pharmacists in promoting the safe and rational use of opioid medications and in preventing opioid misuse within the community.

#### 3.2 Study Site

The study was conducted in selected community pharmacies located within the designated study area. Pharmacies involved in dispensing opioid medications for pain management and other related therapeutic indications were included in the study.

#### 3.3 Study Population

The study population consisted of registered community pharmacists and pharmacy staff involved in dispensing opioid medications and providing pharmaceutical care services to patients in community pharmacy settings {27-28}

#### 3.4 Inclusion Criteria

The following participants were included in the study:

- \* Registered pharmacists working in community pharmacies
- \* Pharmacy staff involved in opioid dispensing practices

- \* Pharmacies routinely dispensing opioid analgesics
- \* Participants willing to participate and provide informed consent

### **3.5 Exclusion Criteria**

The following participants were excluded from the study:

- \* Pharmacists unwilling to participate in the study
- \* Pharmacies not involved in dispensing opioid medications
- \* Incomplete or improperly completed questionnaires

### **3.6 Sample Size**

A total of 30 community pharmacists/pharmacy staff from selected community pharmacies were included in the study.

### **3.7 Study Duration**

The study was conducted over a period of 5 months from December 2025 to April 2026

### **3.8 Data Collection Method**

Data were collected using a structured and pre-validated questionnaire developed to assess opioid dispensing practices and abuse prevention strategies in community pharmacy settings. The questionnaire consisted of both closed-ended and multiple-choice questions related to opioid dispensing practices and patient safety measures.

The questionnaire included sections related to:

- \* Commonly dispensed opioid medications
- \* Prescription verification practices
- \* Monitoring of repeated opioid prescriptions
- \* Patient counseling practices
- \* Awareness regarding opioid misuse and dependence
- \* Opioid overdose prevention measures
- \* Abuse prevention strategies implemented in pharmacy practice

Participants were informed about the objectives and purpose of the study prior to data collection. Confidentiality and anonymity of all participants were maintained throughout the study period.

### **3.9 Ethical Considerations**

Participation in the study was entirely voluntary. Informed consent was obtained from all participants before data collection. Confidentiality of participant information was strictly maintained, and the collected data were utilized solely for academic and research purposes.

### 3.10 Statistical Analysis

The collected data were compiled, organized, and analysed using appropriate statistical methods. The findings were presented in the form of frequencies, percentages, tables, and graphical representations to facilitate interpretation and analysis of the study results.

Here is a polished and research-oriented rephrased version of your **\*\*Results\*\*** section without changing the original meaning.

## 4. RESULT

### 4.1 Demographic Characteristics of Participants

A total of 30 community pharmacists/pharmacy staff participated in the present study. Demographic information including age, gender, educational qualification, and years of professional experience was collected and analysed to assess the characteristics of the study participants.

**Table 4.1:Table 4.1: Demographic Characteristics of Participants. (n = 30)**

Variable	Frequency (n=30)	Percentage (%)
<b>Gender</b>		
Male	18	60.0
Female	12	40.0
<b>Age Group (Years)</b>		
20–30	14	46.7
31–40	10	33.3
41–50	4	13.3
>50	2	6.7
<b>Educational Qualification</b>		
D.Pharm	10	33.3
B.Pharm	14	46.7
Pharm.D	4	13.3
M.Pharm	2	6.7
<b>Professional Experience</b>		
<5 years	12	40.0
5–10 years	10	33.3
11–15 years	5	16.7
>15 years	3	10.0

**Interpretation:** Of the 30 participants included in the study, males constituted the majority (60.0%), while females accounted for 40.0% of the respondents. Most participants were

within the 20–30 years age group (46.7%), followed by those aged 31–40 years (33.3%). In terms of educational qualifications, B.Pharm graduates formed the largest group (46.7%), with D.Pharm holders representing 33.3% of the participants. Regarding professional experience, the highest proportion of participants had less than 5 years of experience (40.0%), followed by those with 5–10 years of experience (33.3%). These findings indicate that the study population primarily consisted of younger pharmacy professionals possessing undergraduate pharmacy qualifications and varying levels of early to moderate professional experience.

#### 4.2 Commonly Dispensed Opioid Medications

The study identified various opioid medications that were frequently dispensed in community pharmacy settings. Tramadol, codeine, morphine, fentanyl, oxycodone, methadone, and buprenorphine were among the most commonly dispensed opioids for the management of acute pain, chronic pain, cancer-related pain, and opioid substitution therapy.

**Table 4.2: Commonly Dispensed Opioid Medications in Community Pharmacies.**

S.No	Opioid Drug	Class	Common Clinical Use	Abuse Potential
1	Morphine	Natural opioid	Severe pain, cancer pain	High
2	Codeine	Natural opioid	Mild to moderate pain	Moderate
3	Tramadol	Synthetic opioid	Moderate pain	Moderate
4	Fentanyl	Synthetic opioid	Severe chronic pain	Very High
5	Oxycodone	Semi-synthetic opioid	Moderate to severe pain	High
6	Hydrocodone	Semi-synthetic opioid	Moderate to severe pain	High
7	Methadone	Synthetic opioid	Opioid dependence therapy	High
8	Buprenorphine	Partial agonist	Dependence treatment	Moderate

#### Interpretation

Tramadol, codeine, morphine, fentanyl, oxycodone, methadone, and buprenorphine were among the most commonly dispensed opioids. Several of these medications possess a high potential for misuse and dependence, emphasizing the need for careful dispensing practices.

#### 4.3 Prescription Verification Practices

Most pharmacists reported verifying prescription authenticity, appropriateness of dosage, duration of therapy, and potential drug interactions prior to dispensing opioid medications. Monitoring repeated opioid prescriptions and identifying suspicious prescriptions were also commonly practiced among pharmacists.

#### 4.4 Patient Counseling Practices

The majority of participants stated that they routinely counselled patients regarding dosage administration, treatment duration, possible adverse effects, safe storage, and proper disposal of unused opioid medications. Pharmacists also educated patients about overdose risks and the dangers associated with concurrent use of opioids with alcohol or sedative medications.

#### 4.5 Awareness Regarding Opioid Misuse and Dependence

The findings demonstrated that most pharmacists possessed adequate knowledge regarding opioid misuse, dependence, addiction, and overdose-related complications. Pharmacists acknowledged the importance of monitoring opioid use and educating patients regarding safe medication practices.

#### 4.6 Abuse Prevention Strategies

Several abuse prevention strategies were implemented in community pharmacy settings. Commonly adopted measures included prescription screening, monitoring refill frequency, maintaining dispensing records, patient counseling, and collaboration with physicians and other healthcare professionals to minimize opioid misuse.

#### 4.7 Barriers Faced by Pharmacists

The study identified several barriers affecting effective opioid misuse prevention in community pharmacy practice. These barriers included inadequate pharmacist training related to opioid stewardship, limited access to prescription monitoring systems, insufficient staffing, time constraints, and lack of standardized opioid dispensing protocols.

#### 4.8 Overall Findings

The findings of the present study indicate that community pharmacists play a crucial role in promoting safe opioid use and preventing opioid misuse through prescription verification, patient counseling, patient education, and implementation of opioid abuse prevention strategies. However, strengthening pharmacist training programs and improving accessibility to prescription monitoring systems may further enhance opioid stewardship practices within community pharmacy settings.

### Opioid Dispensing and Abuse Prevention Practices Among Community Pharmacists(n=30)

Practice Evaluated	Frequency (n=30)	Percentage (%)
Prescription authenticity verification	28	91.7
Dosage and duration assessment	26	86.7
Monitoring repeated opioid prescriptions	25	83.3

Practice Evaluated	Frequency (n=30)	Percentage (%)
Patient counselling provided	28	93.3
Education regarding overdose risks	24	80.0
Safe storage and disposal counselling	23	75.0
Identification of suspicious prescriptions	21	70.0
Maintenance of dispensing records	23	78.3
Collaboration with physicians for opioid safety	20	66.7

**Interpretation:** Patient counselling was the most frequently reported practice among participants (93.3%), followed by prescription authenticity verification (91.7%) and assessment of dosage and treatment duration (86.7%). Monitoring of repeated opioid prescriptions was performed by 83.3% of the pharmacists. Additionally, education on overdose risks, maintenance of dispensing records, and counselling regarding the safe storage and disposal of opioids were commonly implemented practices. Collaboration with physicians to promote opioid safety was reported by 66.7% of participants, highlighting the potential for further enhancement of multidisciplinary efforts in opioid stewardship.

## 5. DISCUSSION

The present study was conducted to evaluate opioid dispensing practices and abuse prevention strategies adopted by community pharmacists. The findings indicate that community pharmacists play a crucial role in ensuring the safe and rational use of opioid medications through prescription verification, patient counselling, monitoring of repeat prescriptions, and implementation of various strategies aimed at preventing misuse.

In this study, the majority of pharmacists reported reviewing prescriptions prior to dispensing opioids, including assessment of dosage, treatment duration, and possible drug interactions. This demonstrates a strong sense of professional responsibility among community pharmacists in minimizing medication errors and preventing inappropriate opioid use. Similar findings have been reported in previous studies, where pharmacists were identified as key healthcare professionals in ensuring prescription accuracy and patient safety in controlled substance dispensing. { 16 18 }

The study further revealed that most pharmacists routinely provided counselling to patients regarding opioid use, potential adverse effects, safe storage, and proper disposal practices. This is an important finding, as patient counselling is a key intervention in reducing opioid misuse and improving adherence to therapy. Proper counselling enhances patient awareness regarding overdose risks and the dangers associated with concurrent use of opioids with

alcohol or sedative medications. This observation is consistent with earlier research demonstrating that pharmacist-led counselling effectively reduces medication misuse and improves patient understanding of opioid therapy {4 16 17}

Another important finding of this study is that pharmacists actively monitor repeat prescriptions and identify suspicious prescribing patterns. This highlights their role in the early detection of potential drug-seeking behaviour and prescription misuse. However, the effectiveness of such monitoring may be limited due to the absence of integrated prescription monitoring systems and restricted access to complete patient medication histories in some healthcare settings.

The study also showed that pharmacists possess an adequate level of awareness regarding opioid misuse, dependence, and overdose risks. This awareness is essential for identifying high-risk patients and implementing preventive strategies. However, awareness alone is not sufficient in the absence of structured guidelines, continuous professional development, and access to real-time prescription monitoring systems. {22 26}

With regard to abuse prevention strategies, the results indicated that pharmacists commonly implement measures such as prescription screening, maintenance of dispensing records, patient counselling, and collaboration with physicians. These strategies collectively contribute to reducing opioid-related harm in community pharmacy practice. Nevertheless, the study also identified several challenges, including inadequate training in opioid stewardship, high workload, insufficient staffing, and limited access to Prescription Drug Monitoring Programs (PDMPs), which may hinder the effective implementation of these practices.

The findings of this study are consistent with existing literature, which highlights the significant role of community pharmacists in opioid stewardship programs. Pharmacist-led interventions have been shown to reduce inappropriate opioid dispensing and improve patient safety outcomes. However, previous studies have also reported that the lack of standardized protocols and limited regulatory support remain major obstacles to effective opioid management at the community level.

Overall, the present study suggests that community pharmacists are well positioned to play a key role in preventing opioid misuse. Strengthening pharmacist training, improving access to prescription monitoring systems, and implementing standardized opioid dispensing guidelines may further enhance their contribution to addressing the global opioid crisis. {16 24 29}

### 5.1 Limitations of the Study

The present study has certain limitations that should be considered while interpreting the results. The relatively small sample size (n = 30) may affect the generalizability of the findings. Since the study was carried out in selected community pharmacies, the results may not accurately reflect practices in all community pharmacy settings. Furthermore, the data were obtained through self-reported responses, which may be influenced by response bias. Additionally, the cross-sectional nature of the study provided information at a single point in time and did not allow evaluation of changes in dispensing practices over an extended period.

### 5.2 Recommendations

Based on the findings of the present study, the following recommendations are proposed:

1. Continuous educational and training programs should be conducted to enhance pharmacists' knowledge and skills regarding opioid stewardship, misuse prevention, and overdose management.
2. Access to Prescription Drug Monitoring Programs (PDMPs) and other electronic prescription monitoring systems should be improved to facilitate the identification of inappropriate opioid use and repeated prescriptions.
3. Standardized guidelines and protocols for opioid dispensing should be implemented across community pharmacies to ensure consistent and safe dispensing practices.
4. Community pharmacists should be encouraged to provide comprehensive patient counselling on the safe use, storage, disposal, and potential risks associated with opioid medications.
5. Collaboration between pharmacists, physicians, and other healthcare professionals should be strengthened to promote effective opioid stewardship and patient safety.
6. Adequate staffing and resource allocation should be ensured in community pharmacies to reduce workload and allow pharmacists sufficient time for patient education and prescription review.
7. Future studies involving larger sample sizes and multiple geographical locations are recommended to obtain more comprehensive information regarding opioid dispensing practices and abuse prevention strategies. {16 18 24 29}

## 6. CONCLUSION

The present study demonstrates that community pharmacists play a crucial and multidimensional role in ensuring the safe and rational use of opioid medications. Their

involvement in prescription verification, patient counselling, monitoring of repeat prescriptions, and implementation of abuse prevention strategies highlights their importance in reducing opioid misuse and enhancing patient safety within community pharmacy settings. The findings indicate that pharmacists generally possess good awareness regarding opioid-related risks, including misuse, dependence, and overdose. This awareness is reflected in their routine practices such as careful prescription screening, patient education, and monitoring of dispensing patterns. These activities contribute significantly to early identification of potential abuse and prevention of medication-related harm.

However, the study also identifies important challenges that may limit the effectiveness of these interventions. These include inadequate training in opioid stewardship, workload pressures, insufficient staffing, and limited access to Prescription Drug Monitoring Programs (PDMPs). Such barriers can restrict the full implementation of safe opioid dispensing practices in community pharmacies.

In addition, the absence of standardized protocols and real-time prescription monitoring systems further affects the ability of pharmacists to consistently detect and prevent opioid misuse. Despite these limitations, pharmacists continue to play an essential frontline role in safeguarding appropriate opioid use at the community level.

Overall, the study emphasizes that community pharmacists are strategically positioned to contribute significantly to opioid misuse prevention and public health protection. Strengthening pharmacist education and training, improving digital prescription monitoring infrastructure, and implementing standardized guidelines for opioid dispensing are necessary measures to enhance their effectiveness in addressing the growing concerns associated with opioid use. { 16 24 29 }

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