

Opioid Prescription Practices and Risk Management among Physicians in Morocco

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Abstract

Original Research Article

The opioid crisis represents a major public health challenge globally, notably in the United States where it has resulted in significant morbidity and mortality. In Morocco, the patterns of opioid prescription and the factors influencing these practices are not well documented. This study aims to explore the socio-demographic characteristics, professional backgrounds, and opioid prescription practices among physicians in Morocco. Utilizing a cross-sectional survey design, data were collected from 123 physicians across various regions. The findings indicate that specialist doctors, particularly those in urban public sectors, are more likely to prescribe opioids, with codeine, tramadol, and morphine being the most common. These opioids are primarily prescribed for cancer pain, rheumatic pain, and post-operative pain. The study underscores the necessity of targeted interventions to address gaps in opioid prescription practices and to enhance risk management strategies among physicians.

Keywords: Opioid Crisis, Public Health, Opioid Use Disorders (OUD), Prescription Practices, Physicians, Morocco, Socio-Demographic Factors, Professional Backgrounds, Pain Management, Opioid Misuse, Risk Management.

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I. INTRODUCTION

The opioid crisis has emerged as a critical public health issue globally, particularly in the United States, where it has led to significant morbidity and mortality [1]. Despite various measures to control opioid prescriptions, the prevalence of opioid use, misuse, and opioid use disorders (OUD) remains alarmingly high [2]. Addressing this crisis requires a comprehensive understanding of the factors associated with prescription opioid use and identifying populations at higher risk.

Study Objectives

This study aims to explore the socio-demographic characteristics, professional backgrounds, and opioid prescription practices of physicians in Morocco, providing insights into the factors influencing opioid use and prescription patterns. By examining the practices of a diverse group of physicians, this research seeks to identify potential gaps and areas for intervention to mitigate the risks associated with opioid prescriptions.

Specifically, the study focuses on:

1. Assessing the demographic and professional characteristics of physicians prescribing opioids.

2. Understanding the patterns and criteria for opioid prescription among different medical specialties.
3. Identifying concerns and reluctance among physicians regarding opioid prescriptions.
4. Evaluating the preventive measures and strategies employed to manage opioid misuse and addiction.

II. METHODS

Study Design

This study employed a cross-sectional survey design to evaluate the socio-demographic characteristics, professional backgrounds, and opioid prescription practices of physicians in various regions of Morocco. The survey aimed to gather comprehensive data on the patterns and determinants of opioid use among medical professionals.

Participants

The study sample consisted of 123 physicians, comprising 537% (n=66) women and 463% (n=57) men. The age distribution was diverse, providing a multi-generational representation. The largest age group was 41-50 years old at 26% (n=32), followed by 31-40 and 51-60 years old, each at 195% (n=24). Participants over

60 years old were 179% (n=22), and those under 30 years old were 171% (n=21).

Participants were recruited from various medical institutions across urban and rural areas in Morocco. Inclusion criteria included being a practicing physician with a minimum of one year of professional experience and willingness to participate in the survey.

Data Collection

Data were collected using a structured questionnaire designed specifically for this study. The questionnaire was distributed electronically and in paper format to ensure broad reach and high response rates. It included sections on socio-demographic characteristics, professional background, opioid prescription practices, pain assessment methods, concerns regarding opioid use,

and measures taken to prevent opioid misuse and manage withdrawal and overdose situations

III. RESULTS

1. Socio-Demographic Characteristics of Participants

The study sample comprised a diverse group of medical professionals with various socio-demographic characteristics.

• **The Gender, Age:**

The gender distribution was fairly balanced, with 53.7% women (n=66) and 46.3% men (n=57). Participants' ages spanned multiple decades, providing a multi-generational perspective. The largest age group was 41-50 years (26%, n=32), followed by 31-40 years and 51-60 years, each representing 19.5% of the sample (n=24). Additionally, 17.9% (n=22) were over 60 years old, and 17.1% (n=21) were under 30 years old.

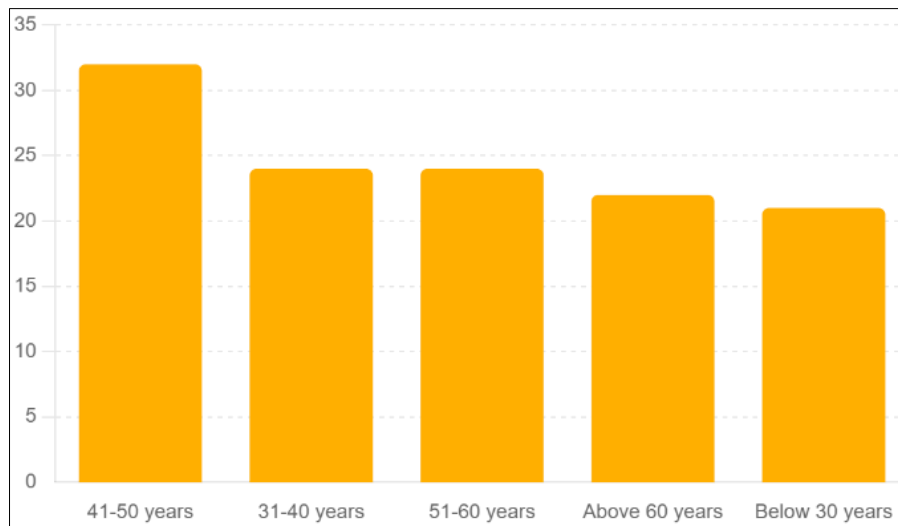


Figure 1: Professional's Age distribution

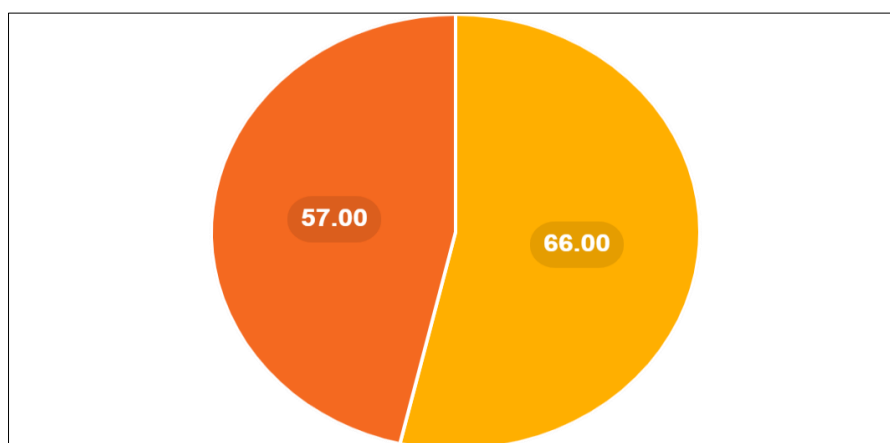


Figure 2: Gender distribution of participants

• **Professional Experience**

In terms of professional experience, the most common range was 11-20 years (28.5%, n=35), followed by 21-30 years (26.8%, n=33). A significant portion had less than 5 years of experience (20.3%, n=25), while

13.8% (n=17) had more than 30 years, and 10.6% (n=13) had 5-10 years of experience.

Regarding professions, the majority of participants were specialist doctors (53.7%, n=66), with

general practitioners making up 35.8% (n=44), and resident doctors accounting for 10.6% (n=13). Among specialties, medical specialties were predominant (47.2%, n=58), followed by surgical specialties (18.7%, n=23).

Most respondents worked in the public sector (61.2%, n=74), while 38.8% (n=47) were employed in the private sector. Practice location was overwhelmingly urban, with 92.7% (n=114) practicing in urban areas and only 7.3% (n=9) in rural areas.

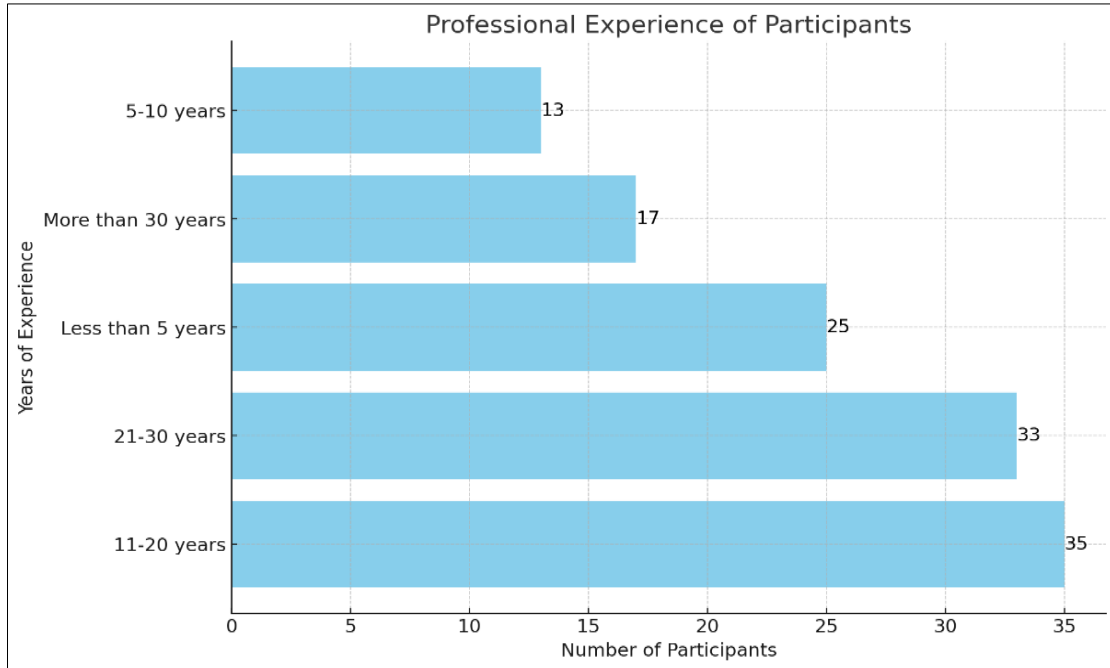


Figure 3: Years of experience of participants

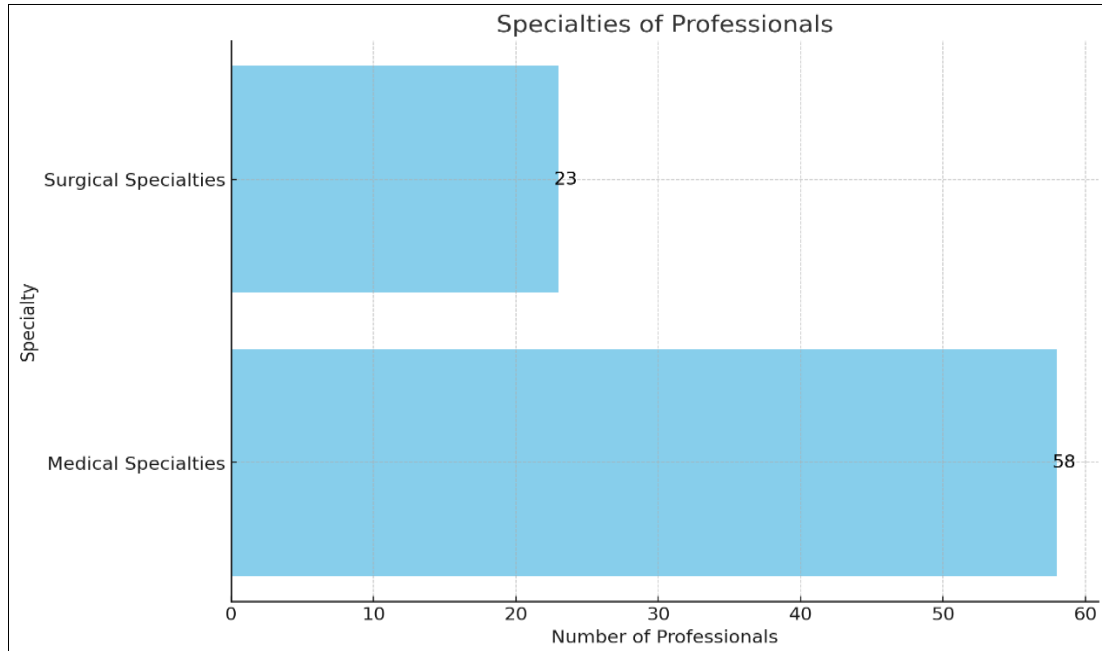


Figure 4: Specialities of participants

2. Opioid Prescription Practices

• The Most Frequently Prescribed Opioid Analgesics by Participants

The vast majority of participants (94.3%, n=116) reported prescribing opioids in their practice. Among the opioids prescribed, codeine was the most common (87.8%, n=108), followed by tramadol (65.9%, n=81), and morphine (15.4%, n=19).

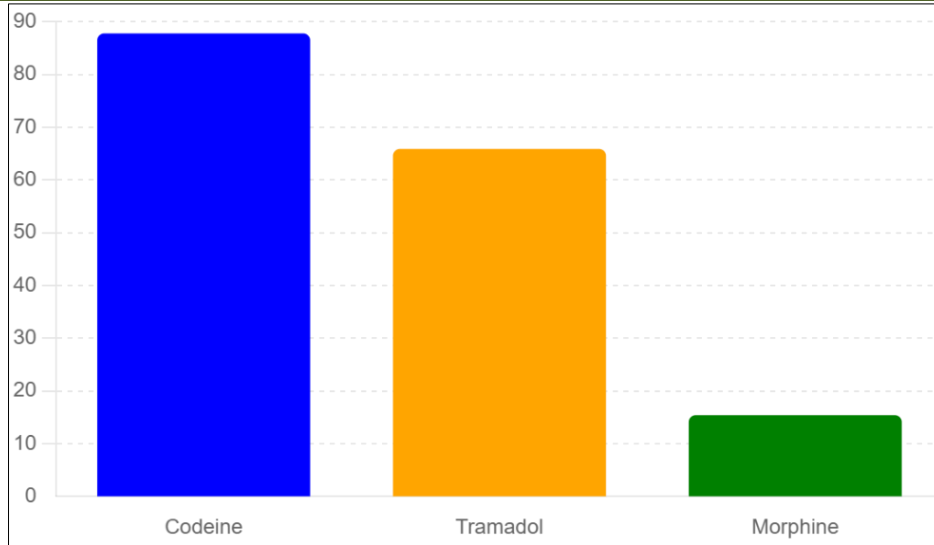


Figure 5: The Most Frequently Prescribed Opioid Analgesics by Participants

Therapeutic Indications for Opioid Analgesics

Opioids were most commonly used to treat cancer pain (26.1%, n=75) and rheumatic pain (22.6%, n=65). Other indications included post-operative pain

(20.9%, n=60), neuropathic pain (20.2%, n=58), and visceral pain (8%, n=23). A small number of respondents reported using opioids for other types of pain (2.1%, n=6).

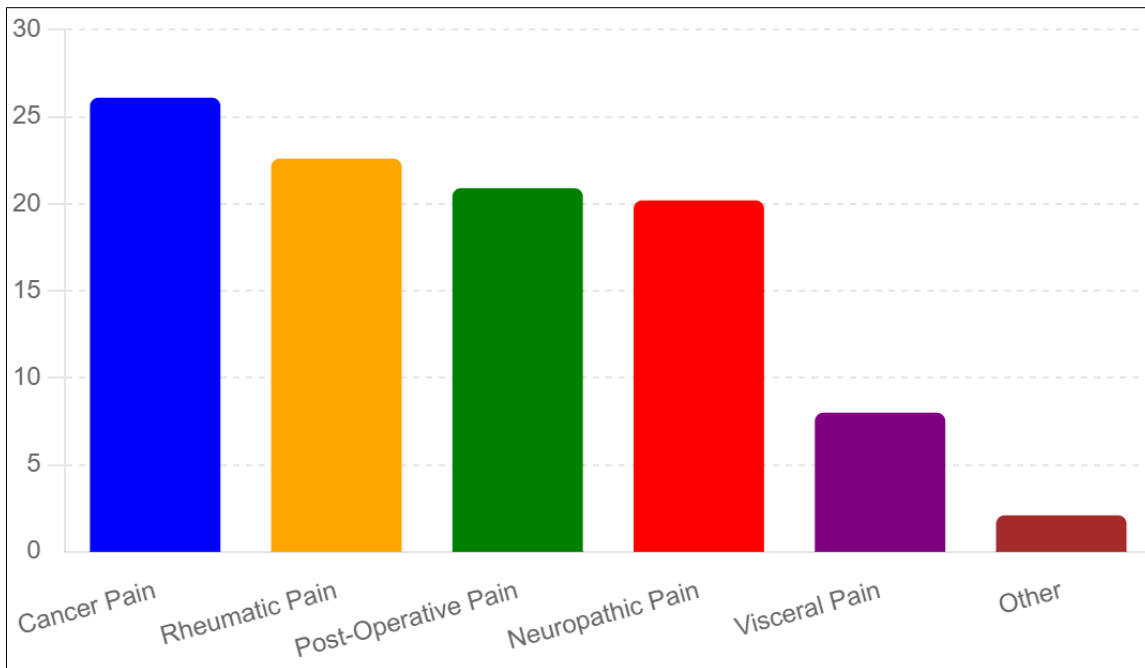


Figure 6: Therapeutic Indications for Opioid Analgesics

Route of Administration for Opioids

The preferred route of administration for opioids was oral (92.7%, n=114), with subcutaneous (4.1%, n=5) and intravenous (3.3%, n=4) routes being less common.

Side Effects of Opioid Use

Participants identified several feared side effects of opioid use, with dependence (64.2%, n=79) and respiratory depression (57.7%, n=71) being the most concerning. Other side effects included somnolence (50.4%, n=62), dizziness (44.7%, n=55), confusion (32.5%, n=40), nausea (39%, n=48), constipation (35%, n=43), and overdose (37.4%, n=46). A small percentage (4.9%, n=6) reported not fearing any side effects.

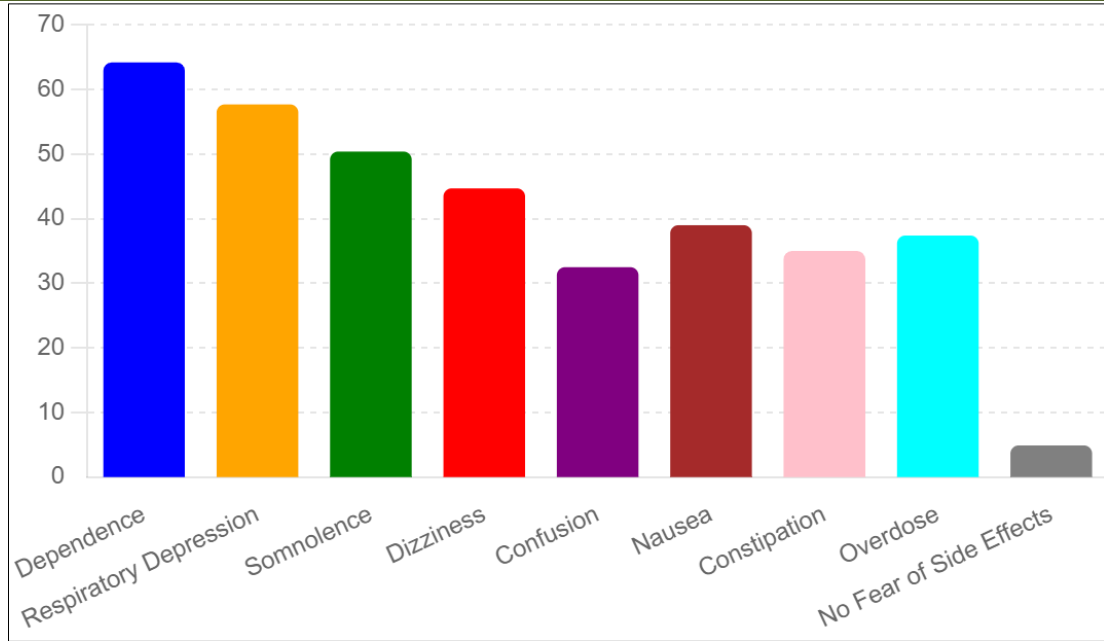


Figure 7: Side effects of opioid use identified by participants (n=123)

Withdrawal Syndrome Symptoms

Withdrawal syndrome symptoms, such as anxiety (69.1%, n=85) and craving (65.9%, n=81), were also significant concerns. Insomnia (61%, n=75),

depression (52%, n=64), sweating (26.8%, n=33), muscle pain (14.6%, n=18), and other symptoms (5.7%, n=7) were noted, while 24.4% (n=30) did not fear any withdrawal symptoms.

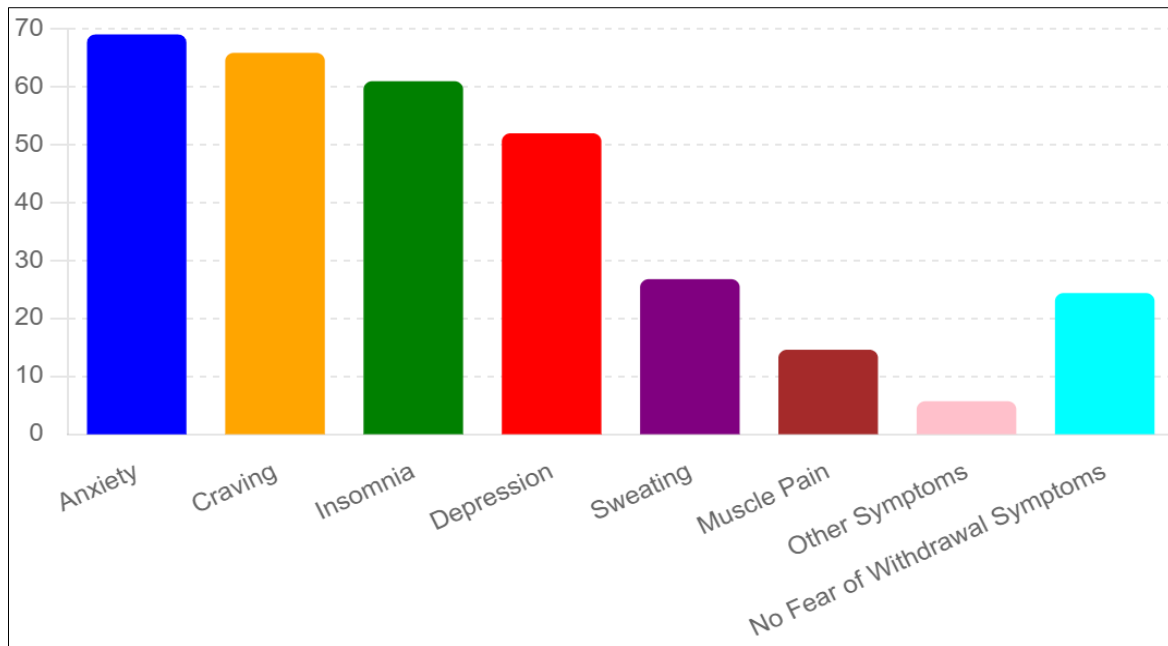


Figure 8: The withdrawal syndrome symptoms as identified by participants

The Risk of Opioid Misuse

When assessing the risk of opioid misuse, 82.1% (n=101) of participants reported investigating the

psychological profile of patients before prescribing, while 17.9% (n=22) did not.

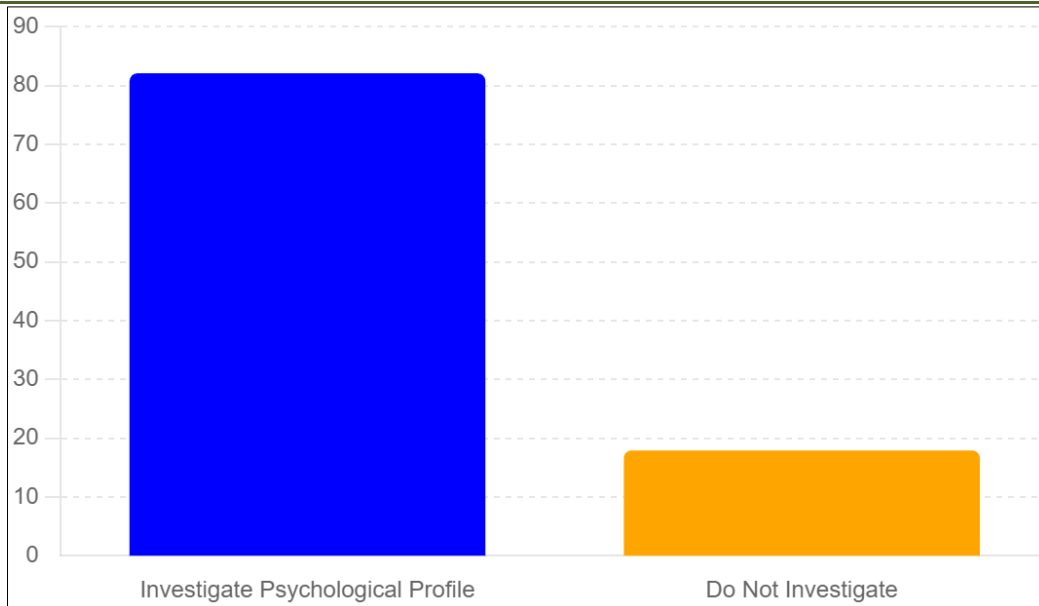


Figure 9: The risk assessment practices for opioid misuse among participants.

• **Preventive Measures to Avoid Opioid Misuse**

Preventive measures to avoid opioid misuse included limiting the duration of prescriptions (83.7%, n=103), informing patients about the risks (70.7%,

n=87), prescribing low doses (64.2%, n=79), closely monitoring patients (49.6%, n=61), and alternating opioids with other analgesics (40.7%, n=50). Only 2.4% (n=3) did not take any preventive measures.

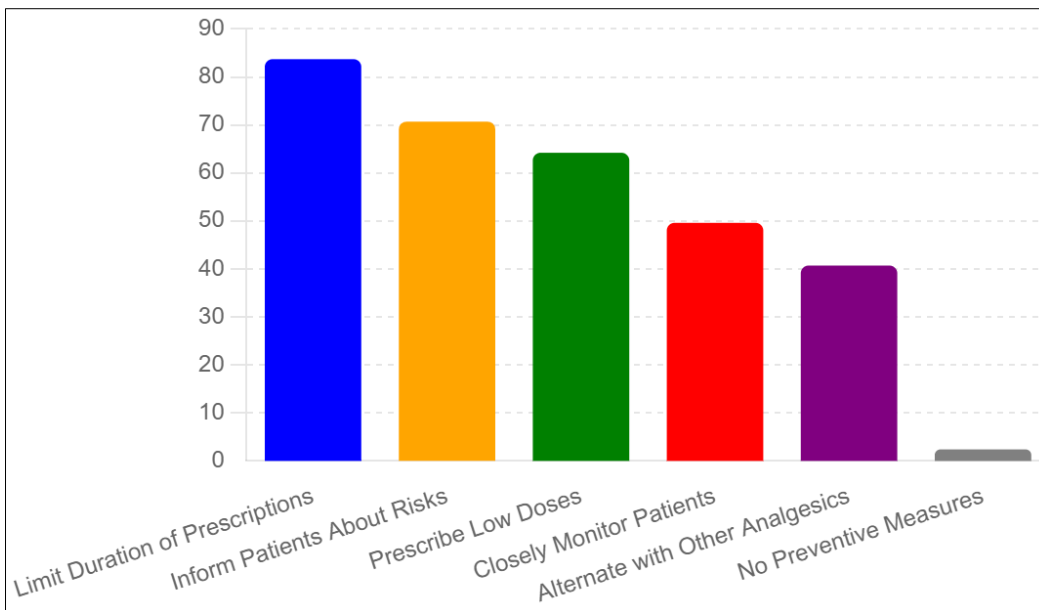


Figure 10: preventive measures taken by participants to avoid opioid misuse

IV. DISCUSSION

This study aimed to explore the socio-demographic characteristics, professional backgrounds, and opioid prescription practices of physicians in Morocco, offering insights into factors influencing opioid use and identifying high-risk populations. The findings indicate that specialist doctors, predominantly working in urban areas and the public sector, were more likely to prescribe opioids. Codeine, tramadol, and morphine were the most frequently prescribed opioids,

primarily for cancer pain, followed by rheumatic and post-operative pain.

The socio-demographic characteristics of the physicians in this study align with findings from similar studies in other countries. For instance, in the United States, studies have shown that opioid prescribing practices can be influenced by the physician's gender and years of experience [3]. Male physicians and those with more years of professional experience were more likely to prescribe opioids [4, 5]. This is consistent with our

findings that experienced male physicians in Morocco are also more inclined to prescribe opioids.

The Most Frequently Prescribed Opioid Analgesics by Participants

The data from the study reveal that a significant majority (94.3%, n=116) of healthcare practitioners prescribe opioids. Codeine is the most frequently prescribed opioid (87.8%, n=108), followed by tramadol (65.9%, n=81), and morphine (15.4%, n=19). This finding is consistent with other studies that highlight codeine's wide use due to its effectiveness and relatively lower risk profile compared to stronger opioids like morphine [6-8].

Therapeutic Indications for Opioid Analgesics

The primary indications for prescribing opioids are cancer pain (26.1%, n=75) and rheumatic pain (22.6%, n=65). This aligns with guidelines recommending opioids for severe, chronic pain conditions. Opioids are also prescribed for post-operative pain (20.9%, n=60), neuropathic pain (20.2%, n=58), and visceral pain (8%, n=23). [9-7]. The data suggests a reliance on opioids for managing both acute and chronic pain conditions, reflecting their critical role in pain management despite their associated risks.

Side Effects of Opioid Use

Participants in the study identified several side effects of opioid use, with dependence (64.2%, n=79) and respiratory depression (57.7%, n=71) being the most concerning. Other notable side effects include somnolence (50.4%, n=62), dizziness (44.7%, n=55), confusion (32.5%, n=40), nausea (39%, n=48), constipation (35%, n=43), and overdose (37.4%, n=46) [7]. These side effects are well-documented in the literature and underscore the importance of cautious opioid prescribing and monitoring practices [10, 11].

Withdrawal Syndrome Symptoms

Withdrawal symptoms such as anxiety (69.1%, n=85) and craving (65.9%, n=81) are significant concerns among practitioners. Other symptoms include insomnia (61%, n=75), depression (52%, n=64), sweating (26.8%, n=33), and muscle pain (14.6%, n=18) [12, 13]. The prevalence of these symptoms highlights the challenges of managing opioid dependency and the need for effective withdrawal management protocols.

The Risk of Opioid Misuse

A majority of practitioners (82.1%, n=101) assess the psychological profile of patients before prescribing opioids, indicating a proactive approach to mitigating misuse risks. However, 17.9% (n=22) do not conduct such assessments, pointing to a potential area for improvement in prescribing practices [7 -14].

Preventive Measures to Avoid Opioid Misuse

Preventive measures include limiting the duration of prescriptions (83.7%, n=103), informing

patients about risks (70.7%, n=87), prescribing low doses (64.2%, n=79), closely monitoring patients (49.6%, n=61), and alternating opioids with other analgesics (40.7%, n=50). Only a small percentage (2.4%, n=3) do not implement any preventive measures [15-2]. These strategies are crucial for minimizing the risk of opioid misuse and ensuring patient safety.

V. CONCLUSION

This study provides a comprehensive analysis of opioid prescription practices among physicians in Morocco, highlighting the socio-demographic and professional factors influencing these practices. The findings reveal that specialist doctors, particularly those working in urban public sectors, are more inclined to prescribe opioids, with codeine, tramadol, and morphine being the most frequently prescribed. These opioids are primarily used for managing cancer pain, rheumatic pain, and post-operative pain.

The study underscores significant concerns about the side effects of opioids, including dependence and respiratory depression, and highlights the importance of assessing the psychological profiles of patients to mitigate the risk of misuse. Preventive measures such as limiting prescription durations, informing patients about risks, and closely monitoring patients are crucial in managing opioid misuse and ensuring patient safety.

Overall, the study identifies critical areas for intervention to improve opioid prescription practices and risk management strategies among physicians in Morocco. It calls for enhanced training and awareness programs for healthcare providers, better monitoring systems, and the development of comprehensive guidelines tailored to the Moroccan context. Addressing these gaps is essential to mitigate the risks associated with opioid prescriptions and to improve patient outcomes in pain management.

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