International Journal of Innovative Technologies in Social Science

e-ISSN: 2544-9435

Operating Publisher
SciFormat Publishing Inc.
ISNI: 0000 0005 1449 8214

2734 17 Avenue SW,
Calgary, Alberta, T3E0A7,
Canada
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ARTICLE TITLE	IMPACT OF OPIOID DEPRESCRIBING AND TAPERING ON MENTAL HEALTH AND SOCIAL FUNCTIONING IN PATIENTS WITH CHRONIC NON – CANCER PAIN: AN OVERVIEW OF CURRENT EVIDENCE
DOI	https://doi.org/10.31435/ijitss.3(51).2026.5934
RECEIVED	19 May 2026
ACCEPTED	21 August 2026
PUBLISHED	28 August 2026
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IMPACT OF OPIOID DEPRESCRIBING AND TAPERING ON MENTAL HEALTH AND SOCIAL FUNCTIONING IN PATIENTS WITH CHRONIC NON – CANCER PAIN: AN OVERVIEW OF CURRENT EVIDENCE

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ABSTRACT

Background. Long-term opioid therapy for chronic non-cancer pain is associated with numerous adverse effects, including psychological distress, dependence, and impaired functioning. In response to growing concerns about opioid-related harms, opioid deprescribing and tapering strategies have gained increasing attention in clinical practice. However, their impact on patients' mental health and social functioning remains incompletely understood.
Aim. This review aimed to evaluate the available evidence on the effects of opioid deprescribing and tapering on mental health and social functioning in patients with chronic non-cancer pain.
Material and methods. A literature review was conducted using major biomedical databases, including PubMed, MEDLINE, Scopus, Web of Science, and the Cochrane Library. Eligible studies included peer-reviewed articles examining opioid deprescribing or tapering in adults with chronic non-cancer pain and reporting outcomes related to mental health, social functioning, or patient-reported functioning
Results. The available evidence suggests that patients undergoing opioid deprescribing frequently present with substantial psychological distress, including depression, anxiety, and pain catastrophizing. Mental health outcomes during tapering are heterogeneous and influenced by the pace of dose reduction, patient involvement in decision making, and access to psychological support. Qualitative studies commonly highlight social factors: stigma, communication with healthcare providers, and availability of alternative pain management strategies.
Conclusions. Opioid deprescribing in patients with chronic non-cancer pain represents a complex clinical process with potential implications for both mental health and social functioning. Individualized tapering strategies, patient involvement in treatment decisions, and adequate psychological and multidisciplinary support appear essential for minimizing adverse outcomes and improving patient experiences during opioid dose reduction.

KEYWORDS

Mental Health; Depression; Chronic Pain; Pain Management; Opioid Crisis

CITATION

Mateusz Wnęk, Michał Adam Łebek, Wiktoria Zofia Komornik, Jakub Jan Piec, Damian Gręboszz, Wojciech Kukiełka, Bartłomiej Andrzej Sałapski, Dominika Weronika Brożyna, Jarosław Dudek, Jakub Dawid Gałwiaczek. (2026) Impact of Opioid Deprescribing and Tapering on Mental Health and Social Functioning in Patients with Chronic Non-Cancer Pain: An Overview of Current Evidence. *International Journal of Innovative Technologies in Social Science*. 3(51). doi: 10.31435/ijitss.3(51).2026.5934

1. Introduction

1.1 Background

1.1.1 Epidemiology of chronic non – cancer pain

Chronic non – cancer pain is widely recognized as a major public health problem with substantial clinical and socioeconomic consequences, "affecting an estimated 20% of people worldwide and accounting for 15% to 20% of physician visits." (Treede et al., 2015) "Chronic pain is typically defined as persistent or recurrent pain that lasts for longer than three months." (Kwon & Lee, 2023)

As mentioned, epidemiological data indicate that chronic pain affects approximately one fifth of the adult population. Chronic non – cancer pain encompasses a wide range of conditions, including neuropathic, musculoskeletal and inflammatory pain syndromes. Beyond physical symptoms, chronic pain is a leading cause of disability and is associated with substantial impairments in daily functioning, work participation, and social relationships (Els et al., 2023; Hooten, 2016).

Chronic pain is also closely linked to adverse psychological outcomes. Evidence suggests a bidirectional relationship between chronic pain and mental health, with persistent pain contributing to the development of depression, anxiety, and reduced psychological well-being (Hooten, 2016). In some cases, chronic pain may be associated with suicidal ideation, potentially through mechanisms such as hopelessness and the desire to escape ongoing suffering through death (Wilson et al., 2013; Hooley et al., 2014). Neurobiological findings further indicate that chronic pain may influence suicidality through alterations in brain circuits involved in emotional regulation and reward processing. (Elman et al., 2013)

Within a biopsychosocial framework, chronic pain may also contribute to social withdrawal, perceived loss of meaning in life, and maladaptive cognitive responses such as pain catastrophizing (Costanza et al., 2021, as cited in Kwon & Lee, 2023). These factors highlight the complex and multidimensional impact of chronic pain on the sufferer's functional and psychosocial well – being". (Els et al., 2023)

1.1.2 Increase in opioid prescribing and the opioid crisis

For several decades, opioid analgesics have been widely prescribed for the management of chronic pain, particularly when other treatments failed to provide adequate relief. However, the expansion of opioid prescribing was accompanied by an increase in opioid – related harms, including opioid use disorder, overdose and mortality.

Research highlights a substantial rise in opioid prescribing during the early twenty – first century. In the United States, prescribing rates increased between 1999 and 2010, paralleling a rise in opioid – related harms. Growing awareness of these risks prompted regulatory action, including the publication of opioid prescribing guidelines by the CDC in 2016. Following the introduction of national prescribing policies, opioid prescribing rates began to decline after reaching their peak in 2010, with increasing evidence of opioid deprescribing emerging in recent years. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Policy efforts promoting opioid dose reduction and discontinuation were intended to reduce opioid – related harms. However, emerging evidence suggests that the effects of these policies have been complex. As noted in recent studies, "it was hoped that opioid dose reduction or discontinuation would mitigate opioid – related harms including overdoses. However, rates of opioid – related overdoses involving prescription opioids have remained relatively stable, policy efforts have had modest benefits and there have been concerns that rapid dose reductions and the rush to deprescribe opioids may instead be inducing harms." (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Furthermore, some studies suggest that rapid or inadequately supported opioid tapering may lead to unintended adverse outcomes, including small increases in suicide deaths, suicide attempts and other mental health crises. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

1.1.3 Adverse effects of long – term opioid therapy

Despite their widespread use in chronic pain management, the long – term effectiveness of opioid therapy for non – cancer pain remains uncertain. Evidence synthesized in systematic reviews indicates that the benefits of high – dose opioid therapy are poorly supported by high – quality evidence. According to a Cochrane overview, "there is a critical lack of high – quality evidence regarding the efficacy and safety of high – dose opioids for chronic non – cancer pain." (Els et al., 2023)

Similarly, a Cochrane systematic review investigating strategies for reducing opioid use concluded that the available evidence remains limited and heterogeneous, and that "we do not know the best method of reducing opioids in adults with chronic pain conditions" due to the small number of studies and mixed findings. (Eccleston et al., 2017)

Long – term opioid therapy has also been associated with a range of adverse physical and psychological outcomes. Prolonged opioid use may lead to physiological dependence and tolerance, potentially resulting in dose escalation and an increased risk of opioid use disorder. Psychological comorbidities are also common among patients receiving long – term opioid therapy, with individuals frequently experiencing depression and anxiety, which may further worsen pain perception and functional disability. (Quinlan et al., 2021)

In addition, long – term opioid use may negatively affect cognitive functioning. Patients receiving opioids for extended periods may experience impairments in attention, memory and psychomotor performance, which can adversely influence daily functioning and social participation.

1.1.3.1 Opioid dependence and addiction

Long – term opioid therapy for chronic non – cancer pain may lead to physiological dependence and, in some cases, opioid use disorder. Dependence can develop even when opioids are used as prescribed, reflecting the body's adaptation to prolonged opioid exposure and may complicate attempts to reduce or discontinue treatment. Over time, patients may develop tolerance, requiring higher doses to achieve the same analgesic effect. In a study examining patients preparing for opioid tapering, dependence and addiction were mentioned by 27% of participants, reflecting both personal concerns and perceived judgment from others. (Quinlan et al., 2021)

From a clinical perspective, it is important to distinguish between physiological dependence and opioid use disorder. While dependence represents an expected pharmacological response to long-term opioid use, opioid use disorder is characterized by maladaptive patterns of use, including loss of control, craving, and continued use despite harm. Neurobiological evidence suggests that chronic opioid exposure leads to

alterations in brain reward, stress, and motivational systems, which may increase vulnerability to misuse and complicate opioid tapering processes. Opioid use disorder is therefore increasingly understood as a complex condition involving both physiological and psychological processes, associated with changes in behaviour and motivation that distinguish it from dependence alone. (Strang et al., 2020)

The psychosocial dimension of opioid dependence is also important. Stigma surrounding addiction may discourage patients from seeking help or openly discussing concerns related to opioid use. Some authors describe a state of "complex persistent dependence", positioned between physiological dependence and addiction, which may contribute to worsening pain, functional impairment and psychological distress during opioid tapering. (Quinlan et al., 2021)

In addition, patients with chronic pain may experience fear of withdrawal, concerns about loss of pain control, and challenges related to identity and long-term medication use, which can further complicate attempts to reduce opioid therapy. (Lee et al., 2024)

1.1.3.2 Depression

Mental health disorders are highly prevalent among individuals with chronic pain receiving long – term opioid therapy, with depression representing one of the most common psychiatric comorbidities. Epidemiological evidence indicates a substantial overlap between chronic pain and depressive symptoms, with a significant proportion of patients experiencing both conditions concurrently. (Wołoszyn et al., 2025)

Research examining patients' expectations before opioid tapering found that "over 80% of participants reported clinically significant depressive symptoms before opioid tapering". Consistent with these findings, a cohort study of patients attending an opioid tapering clinic reported clinically significant depressive symptoms in 82% of patients, with 45% meeting criteria for severe depression. (Quinlan et al., 2021)

The relationship between chronic pain and depression appears to be bidirectional. Depression may increase the risk of developing certain pain conditions, while persistent pain can contribute to the onset or worsening of depressive symptoms. (Wołoszyn et al., 2025) Several factors may contribute to this high burden of depression. Patients with mood disorders are more likely to receive opioid prescriptions and transition to long – term opioid therapy. In addition, prolonged opioid exposure may influence brain regions involved in emotional regulation and pain processing, potentially contributing to worsening depressive symptoms and reduced resilience to pain. (Quinlan et al., 2021)

Furthermore, patients undergoing opioid deprescribing may experience worsening psychological distress. A multicentre qualitative study reported that "40% of participants reported that opioid tapering exacerbated previously recognised mental health issues". (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Negriff et al., 2024)

1.1.3.3 Cognitive disturbances

Long – term opioid therapy has also been associated with cognitive impairment, including reduced attention, impaired memory and decreased psychomotor performance, which may negatively affect daily functioning and the ability to cope with chronic pain.

Anxiety and cognitive disturbances are frequently reported among patients receiving long – term opioid therapy for chronic non – cancer pain. In a cohort of patients preparing for opioid tapering, 63% reported clinically significant anxiety, with 40% meeting criteria for severe anxiety on the GAD – 7 questionnaire. Elevated anxiety levels in patients with chronic pain may contribute to poorer coping strategies and lower pain acceptance, with pain – related fear sometimes becoming more disabling than pain itself. (Quinlan et al., 2021)

Cognitive and emotional processing may be affected by prolonged opioid exposure. Nearly half of patients in the same cohort demonstrated clinically significant catastrophic thinking related to pain. Patients receiving long – term opioid therapy also frequently report symptoms such as sleep disturbances, memory problems and difficulties with concentration. (Quinlan et al., 2021)

1.2 Opioid deprescribing and tapering strategies

1.2.1 Definition of deprescribing

In response to growing concerns regarding the safety and long – term effectiveness of opioid therapy for chronic non – cancer pain, increasing attention has been directed toward strategies aimed at reducing or discontinuing opioid use.

Deprescribing represents one such strategy and is defined as a systematic and supervised process of reducing or discontinuing medications when the potential risks outweigh expected clinical benefits. In the context of opioid therapy, deprescribing may include strategies such as dose reduction, gradual tapering, or discontinuation of treatment. (Langford et al., 2023)

Opioid tapering represents the most commonly used deprescribing strategy in clinical practice and involves the gradual reduction of opioid dosage over time. This approach aims to minimize withdrawal symptoms while maintaining adequate pain control and supporting patients during the transition to alternative pain management strategies. (Langford et al., 2023)

1.2.2 Tapering versus abrupt discontinuation

When discontinuation of long – term opioid therapy is considered, gradual tapering is generally preferred over abrupt cessation. Evidence suggests that rapid or enforced opioid discontinuation may lead to adverse outcomes, including worsening pain, withdrawal symptoms and psychological distress. Previous research has raised concerns about the assumption that opioid tapering is always beneficial, highlighting potential harms associated with forced dose reduction or abrupt cessation. (Quinlan et al., 2021)

Patients' experiences during opioid tapering vary widely. Qualitative studies highlight the importance of communication and shared decision – making between patients and healthcare providers. When tapering decisions are perceived as imposed without adequate explanation or support, patients may experience distress, frustration and reduced trust in healthcare providers. (Quinlan et al., 2021)

Current recommendations emphasize individualized tapering strategies. Updated guidance discourages abrupt mandated opioid discontinuation and instead recommends personalized tapering plans that consider patients' individual circumstances and encourage collaboration between clinicians and patients during the deprescribing process. (Quinlan et al., 2021)

1.2.3 Current clinical guidelines

Current clinical guidelines emphasize that opioid deprescribing should be implemented through individualized and carefully monitored tapering strategies. The CDC Clinical Practice Guideline for Prescribing Opioids for Pain (2022) recommends that clinicians avoid abrupt discontinuation of long – term opioid therapy and instead adopt gradual dose reductions tailored to the patient's clinical condition and treatment goals. The guideline also highlights the importance of shared decision – making, regular monitoring and integration of non – pharmacological pain management strategies during the tapering process. (Dowell et al., 2022)

Similarly, deprescribing guidelines emphasize that opioid dose reduction should be conducted within a structured clinical framework that includes patient education, monitoring of withdrawal symptoms and adjustment of tapering speed according to patient tolerance. These recommendations highlight that opioid deprescribing should be considered part of a broader patient – centred approach to chronic pain management rather than a simple reduction of medication. (Langford et al., 2023)

1.3 Scope of research

In recent years, increasing attention has been directed toward opioid deprescribing as a strategy to reduce harms associated with long – term opioid therapy for chronic non – cancer pain. While clinical guidelines and policy initiatives have encouraged opioid dose reduction and safer prescribing practices, much of the existing research has focused primarily on the clinical and safety aspects of opioid tapering, with comparatively less attention given to its broader psychological and social consequences.

Therefore, the aim of this review is to examine the current evidence on the impact of opioid deprescribing and tapering on mental health and social functioning among individuals with chronic non – cancer pain, with particular attention to psychological outcomes, social functioning and quality of life associated with opioid dose reduction.

2. Methods

2.1 Information sources and search strategy

A literature search was conducted to identify studies examining the impact of opioid deprescribing and tapering on mental health and social functioning in patients with chronic non – cancer pain. The search was performed using major biomedical databases, including PubMed, Scopus, Web of Science, MEDLINE and the Cochrane Library.

The search strategy included combinations of keywords related to opioid deprescribing and psychosocial outcomes, such as *opioid deprescribing*, *opioid tapering*, *chronic non – cancer pain*, *mental health* and *pain management*. The search included studies published between 2013 and 2025. Reference lists of relevant studies and review articles were also screened to identify additional publications.

2.2 Study eligibility criteria

Studies were included if they:

- involved adult patients with chronic non – cancer pain receiving long – term opioid therapy,
- examined opioid deprescribing, dose reduction, or tapering,
- reported outcomes related to mental health, social functioning or quality of life.

Studies focusing on cancer – related pain or pediatric populations were excluded.

2.3 Data extraction and synthesis

Relevant data were extracted from each included study, including author and year of publication, study design, country, study population and reported outcomes related to mental health and social functioning. The findings were synthesized narratively to provide an overview of current evidence regarding the psychological and social consequences of opioid deprescribing and tapering in patients with chronic non – cancer pain. Table 1 presents the main characteristics of the studies included in this review.

Table 1. Characteristics of Studies Included in the Review

Author	Year	Country	Study design	Study population / sample size	Main focus of the study	Key findings
Quinlan et al.	2021	United Kingdom	Mixed – methods study	Patients with chronic non – cancer pain undergoing opioid tapering (n=60)	Expectations and psychological status before opioid tapering	High prevalence of depressive and anxiety symptoms prior to tapering; substantial levels of pain catastrophizing.
Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al.	2024	United States	Qualitative study	Patients undergoing opioid deprescribing across healthcare systems (n=176) and family members of suicide decedents (n=16)	Patient perspectives on support during opioid tapering	Many patients reported insufficient psychological and clinical support during tapering.
Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Negriff et al.	2024	United States	Observational study	Patients experiencing opioid dose reductions	Relationship between dose reductions and mental health outcomes	Dose reductions may be associated with increased risk of mental health crises when not patient – centred.
McNeilage et al.	2022	Australia	Longitudinal qualitative study	Patients with chronic non – cancer pain undergoing opioid tapering (n=21)	Patient experiences during tapering	Identified four tapering trajectories: thriving, resilient, surviving and distressed.
Benintendi et al.	2021	United States	Qualitative study	Patients with chronic pain undergoing opioid tapering (n=41)	Structural stigma associated with opioid tapering	Patients reported experiences of stigma and reduced trust in healthcare providers.
Hamilton et al.	2022	Australia	Qualitative study	Patients receiving long – term opioid therapy (n=19)	Patient perspectives on opioid deprescribing	Fear of worsening pain and loss of functional independence were common barriers to tapering.
Eccleston et al.	2017	International	Systematic review	Studies examining interventions reducing opioid use in chronic pain	Effectiveness of opioid reduction interventions	Multidisciplinary interventions may support opioid reduction and improve functioning.
Els et al.	2023	International	Overview of systematic reviews	Studies evaluating high – dose opioids for chronic pain	Effectiveness and risks of long – term opioid therapy	Multidisciplinary interventions may support opioid reduction and improve functioning.

3. Results of the literature review

A total of eight studies examining the impact of opioid deprescribing or tapering on mental health and psychosocial outcomes in patients with chronic non – cancer pain were included in this review. The included studies comprised qualitative research (n=4), a mixed – methods study (n=1), an observational cohort study (n=1) and two systematic reviews. Sample sizes ranged from 19 to 176 participants in qualitative studies, while observational analyses involved larger healthcare cohorts. Most studies were conducted in the United States, Australia and the United Kingdom.

Across the included studies, several recurring themes emerged regarding the psychological consequences of opioid deprescribing, including depressive symptoms, anxiety, suicidal ideation and broader psychological distress associated with opioid dose reduction. The following sections summarize the available evidence regarding these outcomes.

3.1 Effects of opioid deprescribing on mental health

Evidence from both quantitative and qualitative studies indicates that opioid deprescribing and tapering may significantly influence patients' mental health. Several studies reported high baseline levels of psychological distress among individuals receiving long – term opioid therapy, while others described changes in mood, anxiety and psychological well – being occurring during the tapering process. The available evidence suggests that mental health outcomes during opioid deprescribing are heterogeneous and influenced by multiple clinical and psychosocial factors.

3.1.1 Depression

Depressive symptoms appear to be highly prevalent among patients receiving long – term opioid therapy and may persist or worsen during opioid tapering. In a mixed – methods study involving 60 patients undergoing opioid tapering assessment, Quinlan et al. reported that over 80% of participants presented with clinically significant depressive symptoms prior to tapering, while 45% met the criteria for severe depression. The same study also found substantial comorbid psychological distress, with 63% of patients reporting clinically significant anxiety and 48% demonstrating elevated levels of pain catastrophizing. These findings indicate that opioid deprescribing frequently occurs in a population already experiencing substantial psychological burden. (Quinlan et al., 2021)

Qualitative research further suggests that depressive symptoms may fluctuate during opioid tapering. In a prospective study involving 21 patients undergoing voluntary opioid tapering, McNeilage et al. identified four distinct trajectories of tapering experiences: thriving, resilient, surviving and distressed. Participants within the "distressed" trajectory reported worsening mood, increased emotional distress and reduced ability to cope with pain during the tapering process. (McNeilage et al., 2022)

Observational analyses also indicate that opioid dose reductions may be associated with adverse mental health outcomes in certain contexts. Studies examining patient – reported outcomes have identified increased psychological distress during tapering, particularly when dose reductions are implemented rapidly or without adequate patient involvement in decision – making. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Negriff et al., 2024)

Qualitative studies further highlight psychosocial factors influencing depressive symptoms during opioid deprescribing. Interviews with 19 patients with chronic non – cancer pain identified barriers to successful opioid deprescribing, including fear of worsening pain, lack of alternative pain management strategies and insufficient clinical support. (Hamilton et al., 2022) Experiences of stigma related to opioid therapy may also contribute to emotional distress and depressive symptoms; in a qualitative study involving 41 patients undergoing opioid tapering, participants described feelings of marginalization and mistrust toward healthcare systems and perceived stigmatization associated with opioid use and deprescribing initiatives. (Benintendi et al., 2022)

Depressive symptoms appear to be common among patients undergoing opioid deprescribing and may both precede and accompany opioid dose reductions. These findings highlight the need for careful psychological assessment and monitoring throughout the tapering process, particularly in patients with pre – existing mental health burden.

3.1.2 Anxiety

Anxiety is another frequently reported psychological outcome among patients undergoing opioid deprescribing or tapering. Similar to depressive symptoms, anxiety often occurs prior to the initiation of opioid dose reduction. In a mixed – methods study involving 60 patients with chronic pain receiving long – term opioid therapy, clinically significant anxiety symptoms were identified in 63% of participants, while 40% met

criteria for severe anxiety before the tapering process began. These findings indicate that many patients enter opioid tapering with substantial pre – existing psychological distress. (Quinlan et al., 2021)

Qualitative longitudinal research further demonstrates that anxiety may fluctuate during the course of opioid tapering. In a study examining 21 patients undergoing voluntary opioid tapering, McNeilage et al. reported that psychological distress, including anxiety, varied across four distinct tapering trajectories: thriving, resilient, surviving and distressed. Participants within the distressed trajectory frequently reported heightened emotional distress and fear related to worsening pain and functional decline during dose reduction. (McNeilage et al., 2022)

The clinical context of opioid tapering also appears to influence anxiety levels. Interviews with 176 patients undergoing opioid deprescribing across six healthcare systems revealed that many participants felt insufficiently supported during the tapering process, with 56% reporting a need for greater support from healthcare providers, including emotional support and clearer communication about the tapering process. Lack of adequate support and limited patient involvement in tapering decisions were frequently associated with increased psychological distress. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Additional qualitative studies highlight concerns about worsening pain and uncertainty regarding alternative pain management strategies as important contributors to anxiety during opioid deprescribing. Interviews with 19 patients with chronic non – cancer pain indicated that limited access to alternative treatments and fear of increased pain were among the most commonly reported barriers to successful opioid dose reduction. (Hamilton et al., 2022)

3.1.3 Suicidal ideation

Suicidal ideation and suicide – related outcomes represent one of the most serious mental health concerns associated with opioid deprescribing and tapering in patients with chronic non – cancer pain. Evidence from observational and qualitative studies suggests that opioid dose reductions may, in some circumstances, be associated with increased risk of psychological distress and suicide – related outcomes, particularly when tapering occurs rapidly or without adequate clinical support.

In a qualitative interview study examining opioid deprescribing across six healthcare systems, Yarborough et al. analysed interviews with 176 patients undergoing opioid tapering and 16 family members of individuals who died by suicide. The study found that 56% of patients reported needing greater clinical support during the tapering process, while only 24% reported that clinicians regularly checked in regarding their tapering experience and 41% stated that clinicians did not check in at all, indicating potential gaps in monitoring patients' mental health during opioid dose reductions. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Observational analyses examining the relationship between opioid dose reductions and mental health outcomes have also identified potential associations between tapering and suicide – related behaviour. In an analysis evaluating patient – reported outcomes following opioid dose reductions, Yarborough et al. reported that reductions in opioid dosage were associated with increases in certain mental health crises, including suicide attempts and suicidal ideation, although these outcomes appear to depend strongly on the context in which tapering occurred. Importantly, the study emphasized that tapering conducted collaboratively with patients and adjusted according to patient preference appeared to be associated with more favourable mental health outcomes. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Negriff et al., 2024)

Qualitative longitudinal research also illustrates how suicidal ideation may emerge in the context of broader psychological distress during tapering. In a prospective study involving 21 patients undergoing voluntary opioid tapering, McNeilage et al. documented cases in which participants reported severe emotional distress, including suicidal thoughts, particularly when tapering occurred alongside major life stressors and limited psychosocial support. (McNeilage et al., 2022)

3.1.4 Pain catastrophizing

Pain catastrophizing represents an important psychological factor influencing both the perception of pain and patients' responses to opioid tapering. It refers to maladaptive cognitive and emotional responses to pain characterized by rumination, magnification of pain – related threats and feelings of helplessness.

In a mixed – methods study conducted by Quinlan et al. involving 60 patients receiving long – term opioid therapy for chronic pain, 48% of participants demonstrated clinically elevated levels of pain catastrophizing prior to the initiation of opioid tapering, indicating that many patients enter dose reduction with cognitive patterns that may amplify perceived pain severity. (Quinlan et al., 2021)

High levels of catastrophizing may contribute to emotional distress and negative expectations regarding opioid dose reduction. In the same study, participants frequently expressed concerns that tapering opioids would inevitably lead to worsening pain and loss of functional ability. (Quinlan et al., 2021)

Qualitative research further suggests that catastrophic thinking may influence patients' experiences during tapering. In longitudinal interviews with 21 patients undergoing voluntary opioid tapering, participants described heightened worry about their ability to manage pain without opioids and pessimistic expectations regarding treatment outcomes. (McNeilage et al., 2022)

Similarly, qualitative studies examining barriers to deprescribing have identified fear of worsening pain as a key factor influencing patients' willingness to reduce opioid therapy. Interviews with 19 patients with chronic non – cancer pain indicated that concerns about severe pain and loss of daily functioning often discouraged attempts at opioid tapering. (Hamilton et al., 2022)

3.2 Social and functional consequences of opioid deprescribing

3.2.1 Social relationships and stigma

Beyond its impact on mental health, opioid deprescribing may also influence patients' social functioning and everyday participation. Changes in opioid therapy may affect social relationships, access to support and engagement in daily activities.

Changes in opioid therapy may significantly affect patients' social relationships and perceived social support. Qualitative studies examining patients' experiences with opioid deprescribing indicate that tapering is often accompanied by changes in interactions with healthcare providers, family members and broader social networks.

As discussed by Hickling et al., stigma was defined by Goffman as a phenomenon in which a person is "discredited, considered less desirable, dangerous, or weak because of an attribute or stereotype perceived by others… This concept has since been expanded by Link and Phelan to include processes such as labelling differences, associating them with negative stereotypes, separating individuals into distinct social categories, and ultimately leading to status loss and discrimination."(Goffman, 1986, Link & Phelan, 2001, as cited in Hickling et al., 2024)

Evidence from qualitative research suggests that many patients perceive opioid tapering as a socially stigmatizing experience. In a study involving 41 patients with chronic non – cancer pain who had undergone opioid tapering, participants described recurrent experiences of structural stigma related to opioid use and deprescribing. Many reported feeling judged or labelled by healthcare providers and society, as well as a loss of trust in healthcare systems. (Benintendi et al., 2022)

Similar findings were reported in research examining patient experiences across multiple healthcare systems. In a qualitative study including 176 patients undergoing opioid tapering, many participants described insufficient support during the tapering process and concerns regarding limited communication with healthcare providers. Notably, 56% of patients reported needing greater support from clinicians, while only 24% reported that clinicians regularly checked in regarding their tapering experience. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Longitudinal qualitative research further suggests that the quality of social support may influence patients' experiences during tapering. In a study involving 21 patients undergoing voluntary opioid tapering, stronger support networks and collaborative relationships with healthcare providers were associated with more adaptive tapering trajectories, whereas social isolation and limited support were linked to greater distress during dose reduction. (McNeilage et al., 2022)

3.2.2 Daily functioning and participation

Opioid deprescribing may influence patients' ability to maintain everyday functioning and participation in daily activities. Qualitative studies examining opioid tapering highlight considerable variability in patients' experiences during dose reduction.

Longitudinal qualitative research conducted by McNeilage et al. followed 21 patients with chronic non – cancer pain undergoing voluntary opioid tapering over approximately twelve weeks. The study identified four trajectories of patient experiences during tapering: thriving, resilient, surviving and distressed. Participants in the "thriving" trajectory reported improved coping strategies and increased engagement in daily activities, whereas those in the "distressed" trajectory described worsening pain, reduced functional capacity and difficulties maintaining daily routines during dose reduction. (McNeilage et al., 2022)

Psychosocial context also appeared to influence daily functioning. Participants experiencing additional life stressors, such as family responsibilities or financial strain, reported greater challenges in maintaining daily

activities during tapering, while stronger support networks and higher self – efficacy were associated with more stable functioning. (McNeilage et al., 2022)

Qualitative interviews with 19 patients with chronic non – cancer pain receiving long – term opioid therapy further highlighted concerns that opioid dose reduction might impair the ability to perform everyday tasks, including household activities, work – related responsibilities and self – care. (Hamilton et al., 2022)

Similarly, interviews conducted across six healthcare systems with 176 patients undergoing opioid tapering indicated that many participants perceived limited access to alternative pain management strategies and insufficient guidance on maintaining daily functioning during dose reduction. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

3.3 Quality of life and physical functioning

Evidence regarding the impact of opioid deprescribing on overall quality of life among patients with chronic non – cancer pain remains limited and heterogeneous. Systematic reviews examining interventions aimed at reducing long – term opioid therapy indicate that while opioid dose reduction may be achievable, its effects on broader patient – reported outcomes such as quality of life are less consistently reported. (Eccleston et al., 2017)

Similarly, an overview of Cochrane reviews found limited high – quality evidence supporting the long – term effectiveness of high – dose opioid therapy in improving patient – centred outcomes such as functioning or quality of life. (Els et al., 2023) Qualitative studies suggest that patients' experiences vary, with some individuals reporting improvements in coping and engagement in daily activities during tapering, while others experience temporary functional challenges. (McNeilage et al., 2022; Hamilton et al., 2022)

3.4 Factors influencing tapering outcomes

3.4.1 Tapering strategies and pace

The manner in which opioid tapering is implemented appears to be an important factor influencing patient outcomes during opioid deprescribing. Several studies suggest that both the pace of dose reduction and the extent to which patients are involved in tapering decisions may significantly affect psychological and functional outcomes.

Observational research examining patient – reported outcomes following opioid dose reductions indicates that tapering strategies characterized by rapid dose reductions or limited patient involvement may be associated with poorer mental health outcomes. In a study analysing the relationship between opioid dose reductions and suicide – related outcomes, Yarborough et al. reported that adverse mental health outcomes were more likely to occur when tapering was implemented without sufficient patient participation in decision – making. These findings suggest that collaborative tapering approaches that incorporate patient preferences may reduce the risk of psychological distress during opioid dose reduction. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Negriff et al., 2024)

Additional insights are provided by qualitative research examining patient experiences during opioid deprescribing. In interviews conducted with 176 patients undergoing opioid tapering across multiple healthcare systems, many participants emphasized the importance of flexible tapering plans and the ability to adjust the pace of dose reduction in response to individual needs. Participants frequently reported that rigid tapering protocols and insufficient communication with healthcare providers contributed to distress during the tapering process. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Longitudinal qualitative research also suggests that tapering pace may influence patients' ability to adapt to opioid dose reductions. In a study involving 21 patients undergoing voluntary opioid tapering, McNeilage et al. observed that participants who reported greater readiness to taper and who experienced gradual dose reductions were more likely to demonstrate adaptive coping strategies and more favourable tapering trajectories. In contrast, patients facing additional psychosocial stressors or rapid dose reductions were more likely to report distress and functional difficulties during the tapering process. (McNeilage et al., 2022)

3.4.2 Psychological support and multidisciplinary care

The availability of psychological support and access to multidisciplinary pain management strategies appear to play an important role in shaping patient outcomes during opioid deprescribing. Several studies highlight that opioid tapering is more successful when accompanied by adequate clinical support and alternative approaches to pain management.

Evidence from qualitative interviews suggests that many patients undergoing opioid tapering perceive a lack of sufficient psychological and clinical support during the deprescribing process. In a qualitative study

involving 176 patients undergoing opioid tapering across six healthcare systems, Yarborough et al. reported that 56% of participants indicated a need for greater support from healthcare providers, particularly regarding mental health and pain management strategies. Patients frequently emphasized the importance of clear communication, emotional support and collaborative decision – making during opioid dose reductions. (Yarborough, Stumbo, Schneider, Ahmedani, Daida, Hooker, Lapham et al., 2024)

Qualitative research exploring patient experiences with opioid deprescribing has also highlighted the importance of supportive clinical relationships. Interviews with 19 patients with chronic non – cancer pain receiving long – term opioid therapy revealed that strong doctor–patient relationships and supportive healthcare environments were perceived as key facilitators of successful tapering. Conversely, limited access to alternative pain management strategies and insufficient clinical guidance were often identified as barriers to opioid dose reduction. (Hamilton et al., 2022)

Systematic evidence also suggests that multidisciplinary pain management programs may facilitate opioid reduction while supporting patient functioning. A Cochrane systematic review examining interventions for reducing prescribed opioid use in chronic non – cancer pain reported that interdisciplinary approaches combining psychological therapies, physical rehabilitation and pain education may contribute to reductions in opioid use and improvements in patient functioning. (Eccleston et al., 2017)

4. Discussion

4.1 Interpretation of findings

The findings of this review suggest that the relationship between opioid deprescribing and mental health outcomes in patients with chronic non – cancer pain is complex and cannot be interpreted in a uniformly positive or negative way. Rather than directly determining psychological outcomes, opioid tapering appears to interact with multiple clinical and psychosocial factors that influence patients' experiences during the deprescribing process.

One important observation emerging from the reviewed studies is that many patients undergoing opioid deprescribing present with a substantial psychological burden before the tapering begins. High rates of depression, anxiety and maladaptive pain – related beliefs have been reported among individuals receiving long – term opioid therapy. This indicates that opioid tapering often occurs within a population that is already vulnerable to psychological distress. Consequently, changes in mental health observed during tapering may reflect not only the effects of dose reduction itself but also the broader clinical context of chronic pain and long – term opioid use.

The reviewed evidence also suggests that the outcomes of opioid deprescribing depend strongly on how tapering is implemented. Studies examining patient experiences indicate that tapering strategies characterized by collaboration, gradual dose reductions and supportive clinical relationships are more likely to be associated with adaptive coping and stable functioning. In contrast, rapid or poorly supported tapering may contribute to increased psychological distress and, in some cases, suicide – related outcomes. These findings emphasize that the process of deprescribing may be as important as the dose reduction itself.

Another important insight concerns the role of social and contextual factors in shaping patients' responses to opioid tapering. Experiences of stigma, limited communication with healthcare providers and insufficient access to alternative pain management strategies have been identified as important sources of distress among patients undergoing deprescribing. Conversely, supportive clinical relationships and access to multidisciplinary pain management approaches appear to facilitate more positive experiences during opioid dose reduction.

The findings of this review suggest that opioid deprescribing should not be viewed solely as a pharmacological intervention but rather as a complex clinical process requiring careful consideration of psychological, social and contextual factors. When implemented within a patient – centred framework that includes gradual tapering, adequate psychological support and access to alternative pain management strategies, opioid deprescribing may be achieved without necessarily worsening patients' mental health outcomes.

4.2 Clinical implications

The findings of this review have several important implications for clinical practice. First, they suggest that opioid deprescribing in patients with chronic non – cancer pain should be approached as a carefully managed clinical process rather than a simple reduction of medication dose. Because many patients undergoing tapering present with significant psychological distress and complex pain – related challenges, opioid dose reduction should be implemented within a broader patient – centred framework that includes psychological assessment and appropriate clinical support.

An important implication concerns the role of clinician – guided tapering. The reviewed evidence indicates that tapering strategies characterized by gradual dose reductions, clear communication and shared decision – making between clinicians and patients are more likely to result in favourable outcomes. Collaborative approaches may reduce patient anxiety, improve treatment adherence and mitigate potential psychological distress associated with opioid dose reductions.

The findings also highlight the importance of providing patients with access to alternative pain management strategies during the deprescribing process. Multidisciplinary approaches that combine psychological interventions, physical rehabilitation and patient education may help patients maintain functioning and cope more effectively with pain during opioid tapering. Such approaches may also address patients' concerns about loss of pain control, which has been identified as one of the primary barriers to opioid dose reduction.

4.3 Challenges of opioid deprescribing

4.3.1 Withdrawal symptoms

One of the most significant challenges associated with opioid deprescribing is the occurrence of withdrawal symptoms during dose reduction. Physiological withdrawal symptoms such as anxiety, insomnia, irritability and increased pain sensitivity may occur when opioid doses are reduced too rapidly. These symptoms can complicate the tapering process and contribute to patients' fear of opioid discontinuation. Consequently, gradual and individualized tapering strategies are generally recommended in order to minimize withdrawal – related distress and improve treatment adherence.

4.3.2 Patient resistance

Patient resistance to opioid tapering represents another important challenge in clinical practice. Many individuals receiving long – term opioid therapy express concerns about losing effective pain control or experiencing worsening functional limitations following dose reduction. Qualitative studies have shown that patients may be reluctant to initiate tapering when they perceive opioids as essential for maintaining daily functioning. In addition, previous negative experiences with opioid reduction or insufficient communication with healthcare providers may further contribute to resistance toward deprescribing.

4.3.3 Limited availability of alternative pain treatments

A further challenge concerns the limited availability of effective alternative pain management strategies. Patients undergoing opioid tapering frequently report uncertainty regarding how their pain will be managed without opioid medications. In many healthcare settings, access to multidisciplinary pain management programs, psychological therapies, or rehabilitation services remains limited. As a result, opioid deprescribing may be more difficult to implement when patients lack adequate support and alternative treatment options.

4.4 Research gaps

4.4.1 Lack of long – term studies

One of the main limitations of the existing literature on opioid deprescribing is the limited availability of long – term follow – up studies. Most studies examining opioid tapering outcomes focus on relatively short observation periods, which makes it difficult to assess the long – term effects of dose reduction on patients' mental health, pain management and functional outcomes. As a result, the long – term sustainability of opioid deprescribing strategies remains insufficiently understood.

4.4.2 Small study samples

Another important limitation concerns the relatively small sample sizes in many of the available studies. Several qualitative and mixed – methods studies examining patient experiences during opioid tapering involve limited numbers of participants. While such studies provide valuable insights into patient perspectives, small samples may reduce the generalizability of the findings and limit the ability to draw broader conclusions about opioid deprescribing outcomes.

4.4.3 Limited research on quality of life

Despite the increasing interest in opioid deprescribing, relatively few studies have comprehensively examined its impact on patients' overall quality of life. Existing research often focuses primarily on clinical outcomes such as pain intensity, opioid dose reduction, or withdrawal symptoms, while broader aspects of daily functioning receive less attention. In particular, there is limited evidence regarding how opioid tapering affects real – world outcomes such as return to work, social participation and long – term functional independence. Further research addressing these aspects of patients' everyday lives would provide a more comprehensive understanding of the consequences of opioid deprescribing.

4.5 Limitations of the review

Several limitations should be considered when interpreting the findings of this review. Firstly, the studies included in the review were heterogeneous with respect to study design, patient populations and tapering approaches. The literature includes a mixture of qualitative studies, observational analyses and systematic reviews, which makes direct comparison of findings challenging.

Secondly, considerable variability exists in the methods used to implement opioid tapering across studies. Differences in tapering speed, clinical support and access to alternative pain management strategies may influence patient outcomes and limit the ability to generalize findings across different healthcare settings.

Finally, many of the available studies rely on relatively small samples or qualitative methodologies. Although these approaches provide valuable insights into patient experiences, they may limit the generalizability of the findings and highlight the need for larger, well – designed studies examining the long – term outcomes of opioid deprescribing.

5. Conclusions

This review highlights that opioid deprescribing in patients with chronic non – cancer pain is a complex clinical process that may influence both mental health and social functioning. The available evidence suggests that opioid dose reduction does not necessarily exacerbate psychological outcomes and, when implemented within a supportive clinical framework, may be associated with improved coping strategies and better functional adaptation. Importantly, the outcomes of opioid tapering appear to depend largely on how the deprescribing process is conducted.

Gradual, clinician – guided tapering strategies that incorporate shared decision – making, clear communication and appropriate psychological support appear to be associated with more favourable patient experiences. These findings emphasize that opioid deprescribing should be considered part of a broader, patient – centred approach to chronic pain management rather than a purely pharmacological intervention. Access to multidisciplinary pain management strategies, including psychological interventions and rehabilitation, may play a key role in supporting patients throughout the tapering process.

Despite the growing interest in opioid deprescribing, important gaps remain in the current literature. Existing studies are often characterized by heterogeneous methodologies, relatively small sample sizes and limited follow – up periods. Moreover, there is still insufficient evidence addressing broader real – world outcomes such as quality of life, social participation and return to work among patients undergoing opioid tapering. Future research should therefore focus on well – designed longitudinal studies that evaluate both clinical and functional outcomes of opioid deprescribing in order to better guide clinical practice.

Funding statement: This research received no external funding.

Conflict of interest: The authors declare no conflict of interest.

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