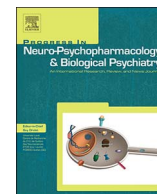




Contents lists available at ScienceDirect

# Progress in Neuropsychopharmacology & Biological Psychiatry

journal homepage: [www.elsevier.com/locate/pnp](http://www.elsevier.com/locate/pnp)

## Chronic pain and suicide risk: A comprehensive review

Mélanie Racine\*

Department of Clinical Neurological Sciences, Schulich School of Medicine &amp; Dentistry, Western University, London, ON, Canada

### ARTICLE INFO

#### Keywords:

Chronic pain  
Suicidality  
Suicidal ideation  
Physical functioning  
Psychosocial factors

### ABSTRACT

Death by suicide is one of the leading causes of mortality worldwide. Because individuals with chronic pain are at least twice as likely to report suicidal behaviors or to complete suicide, it is of utmost importance to target which risk factors contribute the most to increasing suicidality. This comprehensive review aims to provide an update on research advancements relating to the identification of potential risk factors for suicidality in individuals with chronic pain. Supporting the results of prior reviews, we found robust evidence that chronic pain itself, regardless of type, was an important independent risk factor for suicidality. The only sociodemographic factor found to be associated with suicidality in individuals with chronic pain was being unemployed/disabled. Depressive symptoms, anger problems, harmful habits (e.g. smoking, alcohol misuse, illicit drugs), childhood or adulthood adversities, and family history of depression/suicide were all also identified as general risk factors. Regarding pain-related factors, sleep problems, poorer perceived mental health, concurrent chronic pain conditions, and more frequent episodes of intermittent pain, were all found to be predictors of suicidality. Unexpectedly, pain characteristics (e.g. type, duration, and intensity/severity) and physical status (e.g. pain interference or disability) were not related to suicide risk. We also identified promising new psychosocial factors (e.g. mental defeat, pain catastrophizing, hopelessness, perceived burdensomeness and thwarted belongingness) associated with suicidality outcomes. A large number of these factors are amenable to change through targeted intervention, highlighting the importance of comprehensively assessing chronic pain patients at risk for suicide, while also incorporating a suicide prevention component into chronic pain management programs.

### 1. Introduction

Death by suicide is the 17th leading cause of mortality worldwide, accounting for at least 1.4% of all deaths in 2015 (World Health Organization, 2017). Relatively, nationwide lifetime prevalence for suicidal ideation, plans, and attempts has been estimated to be 9.2%, 3.1% and 2.7% respectively (Nock et al., 2008). Suicidal behaviors are often viewed as a continuum, suggesting that there is a progression in suicidality severity over time. In fact, more than 60% of suicidal attempts occur within the first year after the onset of suicidal thoughts, and there is often a progression from reporting suicidal ideation to having plan, and then from having plan to attempting suicide (Nock et al., 2008; Kessler et al., 1999). In this context, early identification of predicting factors associated with increased risk of suicide is of paramount importance.

In 1999, a first literature review (Fishbain, 1999) suggested that chronic pain may be a risk factor for suicidal behaviors (i.e. thoughts, plans, attempts) and suicide completion. Thereafter, another review (Tang and Crane, 2006) demonstrated that individuals with chronic pain were approximately 2 to 3 times more at risk of reporting suicidal

behaviors or to die by suicide. Tang and Crane (2006) also identified potential general risk factors (i.e. being a woman, family history of suicide, previous suicidal attempt(s) and co-occurring depression) and pain-related risk factors (i.e. location and type of pain, higher pain intensity, longer pain duration, sleep-onset insomnia) of suicidality. Furthermore, these authors (Tang and Crane, 2006) hypothesized that other psychological factors, such as feeling helplessness and hopelessness towards pain, desire to escape from pain, pain-related catastrophizing and avoidance, and problem-solving deficits might be important determinants for suicide outcomes. Recently, a narrative review (Fishbain et al., 2014) and a meta-analysis (Calati et al., 2015) found robust evidence confirming the link between chronic pain and suicidal ideation, attempts and completed suicide.

Based on these findings, several clinical practice guidelines highlight the importance of considering chronic pain as a potential risk factor for suicidality (American Psychiatric Association, 2003; National Collaborating Centre for Mental Health, 2011; Magellan Health Services, 2014; Wasserman et al., 2012). Likewise, the World Health Organization (WHO) has acknowledged chronic pain as an individual key risk factor for suicide (World Health Organization, 2010, 2014). As

\* 1635 Mégantic St., Saint-Hubert, QC J3Y 7H7, Canada.  
E-mail address: [research@melanieracine.com](mailto:research@melanieracine.com).

<http://dx.doi.org/10.1016/j.pnpbp.2017.08.020>

Received 9 June 2017; Received in revised form 7 August 2017; Accepted 23 August 2017  
0278-5846/ © 2017 Elsevier Inc. All rights reserved.

part of their global initiative, the WHO recommends that a comprehensive clinical assessment of suicidal behaviors be routinely performed on all individuals of 10 years of age or older who reported having chronic pain (World Health Organization, 2010, 2014). Based on prior groundwork and available clinical recommendations, an emergent and now growing body of research (Hassett et al., 2014; Hooley et al., 2014; Newton-John, 2014) has become interested in better understanding what the specific factors associated with greater risk of suicidality are in persons with chronic pain.

Considering that suicidality has always been a very sensitive topic to touch upon — even more so for health-care professionals who routinely assess, manage and intervene with patients that may present a suicidal at-risk profile — this comprehensive review aims to provide an insightful update on current research advancement with regards to the identification of potential general and pain-related risk factors for suicidality in individuals with chronic pain. More specifically, our objective is twofold: (1) to examine what progress has been made in the last decade, since influential reviews (Fishbain, 1999; Tang and Crane, 2006) on chronic pain and suicidality were published and (2) to identify new promising suicidality risk factors (e.g. harmful health habits, anger problems, health-related quality of life, mental defeat, pain catastrophizing, hopelessness, perceived burdensomeness and thwarted belongingness) in persons with chronic pain. In addition, clinical implications and recommendations will be discussed.

## 2. Prevalence of suicidality in chronic pain

Chronic pain is a serious, long-standing and debilitating condition affecting approximately 1 person out of 5 worldwide (Boulanger et al., 2007; Gureje et al., 1998; Moulin et al., 2002; World Health Organization, 2004). It is also known to be associated with higher economic burden, poorer quality of life, worse mental well-being and lower physical functioning (Choiniere et al., 2010; Eriksen et al., 2003; Guerriere et al., 2010; Mantyselka et al., 2003; Ohayon, 2004; Phillips, 2009). Additionally, individuals with painful illnesses are at greater risk of suicide compared to those with non-painful illnesses (Juurlink et al., 2004; Stenager and Stenager, 2009; Stenager et al., 1994). Tang and Crane (2006) estimated that around 20% of individuals with chronic pain showed suicidal ideation, that lifetime suicidal attempts varied between 5% and 14%, and that the risk of death by suicide more than doubled in this population. In a more recent narrative review, Fishbain et al. (2014) found that when individuals with chronic pain were compared to a control group, the prevalence of suicidal ideation was between 8% to 41%, and the prevalence of suicide attempts varied between 14% and 38%. Lately, a meta-analysis (Calati et al., 2015) (adjusted for publication biases (Calati et al., 2016; Stubbs, 2016)), showed that death wishes (24.9%), suicidal ideation (current: 14%, lifetime: 23%), plans (current: 2%, lifetime: 9%), attempts (current: 5%, lifetime: 15%) and death by suicide (2%) were more prevalent in people with pain than in those without. The aforementioned work is based on nearly all the available literature, and highlights the importance of chronic pain as a risk factor for suicidality. The following section aims to further describe some of the most recent findings in this regard, while drawing the reader's attention upon the unique and independent contribution that chronic pain has on suicide risk, beyond one's socio-demographic, physical or mental characteristics.

### 2.1. Epidemiologic studies

In the last decade, several epidemiologic studies have examined chronic pain as an independent risk factor for suicide outcomes. Using a Canadian national survey, Ratcliffe et al. (2008) found that, irrespective of their sociodemographic characteristics or the presence of mental health disorders, individuals reporting at least one chronic pain condition were more likely to endorse having serious suicidal thoughts or having attempted to take their own life within the last 12-month.

Likewise, a national U.S. study (Braden and Sullivan, 2008) reported that beyond sociodemographic, medical and psychiatric factors, the lifetime (but not 12-month) prevalence for suicidal thoughts, plans, and attempt was twice as high in individuals with chronic pain in comparison to the general population. In accordance with earlier findings, a large cross-national study (Scott et al., 2010) found evidence that, along with other physical conditions, almost all chronic pain conditions were associated with lifetime suicidal thoughts and attempts, independent of the effect of relevant clinical factors. Also supporting prior findings, an Australian population study (Campbell et al., 2015) showed that, even after controlling for other covariates, having chronic pain was a significant predictor of suicidal behavior endorsement, while the estimated lifetime and 12-month prevalence of serious suicidal thoughts, plans, and attempts were 2 to 3 times greater than in the general population. In addition, van Tilburg et al. (2011) examined suicidal behaviors in U.S. adolescents and obtained results comparable to those of in adults — i.e. most chronic pain conditions were associated with a greater risk of suicidal ideation and attempts in the last 12-month, and also with an increased likelihood of suicidal behaviors 1 year later. Similar results also emerged in another study (Koenig et al., 2015) in German adolescents. These authors found that teens with chronic pain were more at risk of suicidal attempts compared to those without chronic pain.

With respect to completed suicide, a recent prospective cohort study (Kikuchi, 2009) found that self-reported pain in the last month before death was a strong predictor of committing suicide in Japanese men, irrespective of having (or not) a good health status. Relatedly, a matched case-control study (Manoranjitham et al., 2010) conducted in South India found that chronic pain was a significant determinant of death by suicide, even in the presence of other relevant clinical factors. Similar results were also obtained in a larger matched case-control study (Juurlink et al., 2004) in a population of elderly Canadians, indicating that even after controlling for various illnesses, having moderate or severe pain predicted suicide completion.

### 2.2. Community, primary care and tertiary care studies

The prevalence estimated in clinical studies seems to abound in the same direction. Chronic tertiary care studies evidenced that current passive suicidal ideation in patients with chronic pain was between 16% and 30% (Dutta et al., 2013; Edwards et al., 2006; Kowal et al., 2014; Okifuji and Benham, 2011; Racine et al., 2014, 2017), current active suicidal thoughts varied between 3% and 17%, and previous suicide attempts ranged between 6% and 23% (Okifuji and Benham, 2011; Racine et al., 2014; Tang et al., 2016). It is worth noting that Tang et al. (2016) have further examined the history of lifetime suicide attempts in patients with chronic pain, and found that 13% of them reported a single attempt, while another 10% reported two or more attempts. One study (Racine et al., 2014) inquired more specifically about patients' suicidal behaviors, since chronic pain onset and their results showed that 27% of them had seriously considered suicide, 21% had reported having a plan at some point, and 6% had made an attempt (Racine et al., 2014). Similar results were obtained in two studies (Fishbain et al., 2009a, 2012) examining different suicidality items. They found that, compared to a community pain-free control group, patient in rehabilitation with chronic pain were more at risk of suicide on most suicidality items. In addition, Meeks et al. (2008) reported that among depressed geriatric patients with or without chronic pain, the former group was at higher risk of endorsing suicidal thoughts.

Several studies have also been interested in suicidal risk in persons with more specific chronic pain conditions. Some studies estimate the prevalence of suicidal behaviors in patients with fibromyalgia to range between 27% and 41% for passive and 6% and 14% for active suicidal ideation (Calandre et al., 2015; Jimenez-Rodriguez et al., 2014; Trinanes et al., 2014), while the prevalence of attempted suicide is reported at 17% (Calandre et al., 2011). Furthermore, compared to the

Download English Version:

<https://daneshyari.com/en/article/8950158>

Download Persian Version:

<https://daneshyari.com/article/8950158>

[Daneshyari.com](https://daneshyari.com)