



Published in final edited form as:

Pain Med. 2011 June ; 12(0 2): S36–S42. doi:10.1111/j.1526-4637.2011.01130.x.

Psychological Variables Potentially Implicated in Opioid-Related Mortality as Observed in Clinical Practice

Steven D. Passik, PhD* and Amy Lowery, PhD†

*Department of Psychiatry and Anesthesiology, Vanderbilt University Medical Center, Psychosomatic Medicine, Nashville, Tennessee

†Department of Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center, New York, New York, USA

Abstract

Opioid-related deaths in the United States have become a public health problem, with accidental and unintended overdoses being especially troubling. Screening for psychological risk factors is an important first step in safeguarding against nonadherence practices and identifying patients who may be vulnerable to the risks associated with opioid therapy. Validated screening instruments can aid in this attempt as a complementary tool to clinicians' assessments. A structured screening is imperative as part of an assessment, as clinician judgment is not the most reliable method of identifying nonadherence. As a complement to formal screening, we present for discussion and possible future study certain psychological variables observed during years of clinical practice that may be linked to medication nonadherence and accidental overdose. These variables include catastrophizing, fear, impulsivity, attention deficit disorders, existential distress, and certain personality disorders. In our experience, chronic pain patients with dual diagnoses may become "chemical copers" as a way of coping with their negative emotion. For these patients, times of stress could lead to accidental overdose. Behavioral, cognitive-behavioral (acceptance and commitment, dialectical behavior), existential (meaning-centered, dignity), and psychotropic therapies have been effective in treating these high-risk comorbidities, while managing expectations of pain relief appears key to preventing accidental overdose.

Keywords

Opioids; Aberrant Drug-Related Behavior; Accidental Overdose; Chronic Pain; Pain Management; Risk Assessment

Reprint requests to: Steven D. Passik, PhD, Department of Psychiatry and Anesthesiology, Vanderbilt University Medical Center, Psychosomatic Medicine, 1103 Oxford House, Nashville, TN 37232, USA. Tel: 615-875-4893; Fax: 615-875-3450; steven.d.passik@vanderbilt.edu.

Disclosures

During the past 3 years, Steven D. Passik, PhD, has served as a consultant and speaker for PriCara, Cephalon, Purdue Pharma LP, King, and Endo. Amy Lowery, PhD, has no financial disclosures or conflicts of interest to report.

Introduction

The rash of unintended opioid-related deaths throughout the United States over the past decade constitutes a complex public health problem. While much recent dialogue on opioid risk management has focused upon abuse, addiction, and diversion, little has been written and even less empirically investigated about the potential impact of public education to prevent overdose. Accidental and unintended opioid-related death can be difficult to foresee, but its aftermath devastates families and afflicts clinicians with collateral grief and psychological damage [1]. Other manuscripts in this volume address medical assessment and management of this problem. Clearly, a host of skills are now recognized as fundamental to the practice of safe and effective opioid therapy, including: following the principles of proper titration and opioid rotation [2]; conducting the appropriate medical assessment of medical comorbidities; assigning the correct weight to assessment factors to guide opioid selection and dosing [3]; carefully monitoring polypharmacy to ensure drug combinations are safe in a given patient [4]; and, finally, taking a team approach to all of the above, involving pharmacists and other medical and allied professionals when limits of one's expertise have been reached. Complementary skills and attitudes must be attained by all opioid prescribers if the goal of zero unintended deaths is to be realized. However, assessment management does not end there.

Clinicians know how important psychological and psychiatric factors are in patient adherence to safe medication use. Some of these seemingly obvious factors, including depression and drug abuse, are not always particularly well assessed or managed in the chronic pain setting [5]. Other variables to be addressed in this article likely play an important role in identifying at-risk patients who eventually overdose. These psychological variables include fear and desperation in the face of pain (i.e., catastrophizing), impulsivity, chemical coping, lack of acceptance, certain personality disorders (especially cluster B personality disorders [6] characterized by emotional overreactivity, self-destructiveness, and repetitive acting out), narcissistic issues around control and willful refusal to follow drug-taking directions ("It's my pain and my pain medicine, and nobody can tell me how to manage my pain"), demoralization and existential distress, sensation seeking, and escapism [7]. Some of these variables have been well described in the research literature, including empirical explorations of pain catastrophizing [8] and (lack of) acceptance. Others have been described clinically, such as descriptions of chemical coping [9], the prevalence and clinical implications of personality disorder in the pain clinic [10], and the challenges posed by the narcissistic pain patient [11]. There is general agreement that these characteristics and/or traits are related to undesirable and potentially harmful outcomes, but might they actually be lethal? Although the literature at present is insufficient to substantially answer that question, clinical observation suggests that patients at risk for poor outcomes, including nonadherence to prescriptive directions, might also be at risk for overdose related to opioids. In the current context, which addresses opioid-related overdose, the term "nonadherence" refers to overuse of medication and failure to follow medical direction. Thus, aberrant drug-related behaviors can be described as a subset of nonadherence.

Absence of formal education and guidance in specific identification of these factors accounts for observed variations in clinical practices and outcomes with regard to opioid

therapy as a component of chronic pain management [12]. Some of the variables to be discussed in this article would emerge under psychiatric evaluation (i.e., personality disorders); however, most are properly categorized as psychological constructs and, as such, require different evaluation measures. Therefore, psychological assessment is a prerequisite to any informed decision about whether and how to embark on an opioid trial. As Fine and Portenoy [13] have articulated, among the essential questions clinicians must ask themselves when considering opioid therapy is: “Is this patient likely to be a reliable drug taker?” Answering this question requires insight into current or historical substance abuse in the patient and his or her blood relatives or close contacts. Pain clinicians struggle to reach this goal against time pressures and lack of available addiction medicine expertise. Fortunately, there are now validated, brief screening tests to predict aberrant drug-related behaviors, which comprise a particularly dangerous subset of nonadherence, to aid clinicians in this part of the assessment and treatment planning [14,15].

Further complexity is apparent in the initial descriptions of the “differential diagnosis” of aberrant drug taking by Passik and Portenoy [16], which included nonchemical dependence-related psychiatric and psychological variables. Indeed, understanding aberrant drug-taking behaviors and the etiologies that lead to them is crucial. If the clinician is closely adhering to recommendations for proper prescribing of opioids as defined by contemporary treatment guidelines [17], then, presumably, patients following directions should not overdose. Thus, the at-risk patient is the patient who, for any of a myriad of combinations of the factors articulated above, is not following directions and so is engaging in what has been heretofore defined as aberrant drug-related behavior.

Most clinicians have probably never articulated many of the above-mentioned variables as actual targets for formal assessment. Rather, we have gone mostly by “feel,” perhaps characterizing some patients as “good” and others as “difficult” or simply as “adherent” or not. As we have come to learn, making assumptions about whether or not patients are adhering to prescribed opioid therapy can be dangerous. A recent study [18] tested urine samples for drugs from 10 patients believed to be nonadherent and 10 patients believed to be adherent. The clinicians were correct in their assessment 70% of the time when they believed the patient to be nonadherent, but they were only correct 39% of the time when they believed that the patient was adherent. Nonadherence in this study was defined as the presence of an illicit drug, the presence of a nonprescribed prescription opioid, and/or the absence of the prescribed opioid. Many readers would likely first think of this 70% nonadherence rate across the board as indicative of substance abuse or diversion and would certainly be correct in many instances. The above-mentioned personality traits and psychological variables are not mutually exclusive from and could drive substance abuse but also could cause nonadherence that can be detected on a urine screen on their own. For example, the catastrophizing patient could use up his or her drug supply early in a month during a pain flare and thus produce a sample missing the prescribed opioid. Likewise, a narcissistic patient could use up medication early and then go on to demand more in light of the urine test finding (i.e., “I told you I needed more!”). A patient lacking in acceptance of the limits of the medical aspects of pain therapy might “innocently” (i.e., not drug-abuse related) engage in doctor shopping or use pills from previous prescriptions in a desperate attempt to find relief and thus exhibit “unsanctioned” medications in the sample. A chemical

cooper might take up marijuana at a time of stress and thus produce a sample with cannabis detected. These examples do not mean that aberrant drug-related behavior and nonadherence that is unrelated to drug abuse or addiction is somehow more innocuous. If the rash of opioid-related deaths has shown us anything, it is that nonadherence can kill.

The remainder of this chapter will explore some of these psychological variables in more detail and describe how they might be related to opioid overdose, particularly unintended or accidental overdoses. This discussion is highly speculative, relying upon the clinical experience of a seasoned pain psychologist, and we hope further research into these variables, as they intersect the management of chronic pain, may result. The problems of depression and suicide are explored in a separate manuscript [19].

Psychological Variables Related to Prescription Nonadherence and Their Possible Relationship to Drug Overdose

Fear and Desperation in the Face of Pain (i.e., Catastrophizing)—Catastrophizing has been demonstrated to be fairly common among patients with chronic pain and is related to poor outcomes and depression [5–8]. That it might also be related to opioid overdose is speculative, although it is easy to see how maladaptive thoughts such as “My pain is never going to get any better” or “This pain can make me want to die,” etc., could lead to abandonment of medication-related instructions and a desire to overuse one’s medicines to attempt to get relief. The Inventory of Negative Thoughts in Response to Pain [20] provides a way to quantify this tendency in a given patient and could easily be incorporated into a psychological assessment of a pain patient. When clinicians heard of deaths in which migraine sufferers were first treated with one of the newer rapid-onset fentanyl products, many probably assumed it was simply the lack of opioid tolerance in such patients who have severe, albeit episodic, pain. While acquiring enough tolerance to be able to rescue oneself with a potent fentanyl preparation, no doubt, presents an issue in such cases, clinical experience with migraine sufferers teaches that they suffer excruciating pain *on a repeated basis*. Those who have a tendency to be fearful and desperate in the face of such pain are likely to encounter difficulty in following “the letter of the law” when instructions include highly defined time limits related to the number of doses allowed. This specific form of panic can override sensibility and judgment with signs and symptoms that overlap with formal anxiety and depressive disorders. This clearly necessitates psychological and psychiatric treatment as well as cognitive behavioral therapy aimed at changing such maladaptive cognitions [21].

Impulsivity—Perhaps one of the most important and poorly understood psychological variables as it intersects with pain is the trait of impulsivity. Very little has been written or studied on impulsivity in pain management outside of noting its presence in patients with a history of attention deficit disorder (ADD) or borderline personality disorder, both of which have been related to aberrant drug-related behavior and both of which are commonly associated with substance abuse [7,22]. But one does not have to meet full criteria for one of these behavioral disorders to possess a tendency to act overly quickly or impulsively when it comes to the use of one’s pain medications when in distress. Over the years, clinical observation reveals any number of patients who were overusing their medications, either

coming up short on pill counts or requesting early renewals, and who were not even consciously aware of the extent of their overuse prior to running out of medications. No formal tool to assess impulsivity has been validated for use in pain patients. To gain some degree of insight into impulsive tendencies, clinicians might consider making inquiries into how major decisions are made, such as substantial purchases or taking on of debt. Asking questions pertaining to anger control (e.g., fights with spouse, authority figures, etc.) and number of speeding tickets as adults might provide some clue as to the degree of self-control and restraint against temptations or stress. Strategies that might slow down the process of drug ingestion, including limited supply of medications and cognitive therapies that rehearse a range of nondrug responses to pain flares, might prove useful in impulsive patients. Psychiatric intervention for ADD and psychotherapy for personality disorder might also be beneficial [23].

Chemical Coping—Passik and Kirsh [9] borrowed the term chemical coping from Eduardo Bruera and colleagues who first described the problem in dying alcoholics in their palliative care unit [24]. Such patients were described as highly drug seeking as a way of dealing with the myriad negative emotions they were experiencing, tending to express such feelings in global and physical terms. This mode of expression tended to lead even highly experienced palliative care staff to provide these patients with many centrally acting drugs, leading to a high rate of overmedication and delirium. Passik and colleagues [9] have extended the concept to chronic pain management with the realization that the traits that constitute chemical coping are not limited to addicted patients. Indeed, most addicted people are chemical copers, but most chemical copers are not addicted. It is easy to imagine that a patient with a tendency toward somatization who is poor at expressing negative emotion and who tends to overuse during times of stress could be vulnerable to accidental overdose when suffering setbacks in life. Passik and colleagues [9] have preliminarily validated a chemical coping inventory in cancer and noncancer pain, starting with a large item pool tapping into four conceptual realms: over centrality of drugs to coping with pain, somatization, alexithymia, and rejection of nondrug approaches to pain. Ultimately, the measure consists of 15 items with acceptable reliability and preliminary validity and could be used as part of a profile for limiting the risk of overdose in treatment planning. Treatments for chemical copers would largely consist of highly simplified drug regimens relying mainly on long-acting opioids so as not to reinforce “pill popping” with short-acting agents; rehabilitative and psychological approaches aimed at providing alternative forms of coping while demonstrating the value of these to the patient; and close monitoring of opioid use at times of emotional stress [25].

Lack of Acceptance—Acceptance has recently been studied as a constellation of adaptive traits in people with pain that lead them to better outcomes in pain therapies of many types [26–30]. With its roots in Eastern and Buddhist philosophies, the concept is a bit foreign to patients in Western culture in which acceptance is sometimes viewed as surrender. We are, after all, expected to “battle” our pain and use all of our “weapons,” including pills, to do so. It is preferable to accept one’s state of being and learn to “dance with one’s pain” rather than battle it, allowing the patient to lead at times (expand activities when pain is less severe) and the pain to lead at other times (rest and pace activities to avoid

flares when the pain is severe). Teaching the dance metaphor to our patients as a form of cognitive behavioral and acceptance-based coping has led to much functional improvement. Acceptance of the limits of medical interventions to provide relief is extremely valuable where opioids are concerned. This cognitive approach is at odds with the prevailing view that all people living with pain are entitled to a relatively pain-free existence. How to reconcile this dissonance is worthy of a thesis in and of itself! Realistically, the vast majority of patients will likely receive less than 100% pain control and, indeed, average percentages of relief for people in opioid trials ranges from 30% to 60% [31]. Therefore, managing expectations is a fundamental aspect of pain therapy. In the absence of effective counseling of this type, it is easy to see how a patient lacking in acceptance of this sad truth might accidentally overdose in a desperate attempt to obtain an unrealizable therapeutic outcome with opioid analgesics.

Personality Disorders—Personality disorders are longstanding patterns of mal-adaptive traits that have been shown to be fairly common in the pain clinic population [7,10]. The *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition [6] groups the personality disorders into three clusters: cluster A disorders are those with an odd or eccentric flavor; cluster B disorders are characterized by emotional overreactivity, self destructiveness, and repetitive acting out; and cluster C disorders tend to have an anxious avoidant quality. Narcissistic issues around control and willful or entitled refusal to follow drug-taking directions are signs of cluster B difficulties. A full discussion of the diagnosis, treatment, and management of personality disorder in the pain management clinic is beyond the scope of this chapter but important for clinicians to pursue. A useful reference is from Hay and Passik [32], discussing the deleterious impact of borderline personality disorder in palliative care.

Many clinicians refer to borderline personality disorder as representative of the category as a whole. Rooted as it is in early childhood trauma and neglect (the prevalence of which has been noted to be extraordinarily high in some pain populations)[33,34], such patients can be vague in reporting and experiencing pain, impulsive and self-destructive in their drug taking, and prone to reexperiencing angry and neglectful caregiving scenarios in their minds and then enacting the scenarios unconsciously with health care providers (note to reader: refer to the literature on “transference” and “counter transference”). All of these traits can make pain management chaotic. Perhaps, most disturbing and dangerous is the fact that many such patients possess a tendency to dissociate under stress. Dissociation, a normal childlike response to escape trauma, can run the gamut from its adaptive use in the form of hypnosis or deep relaxation to cope with pain to more severe forms that include fugue states, psychogenic amnesia, and even multiple personalities [35–37]. The loss of agency that characterizes these more severe forms, if occurring at times of flare and stress and then playing out around medication taking, could lead to disastrous outcomes. Psychotherapy and, perhaps specifically, dialectical behavior therapy [38] should be an important part of management of borderline personality-disordered pain patients.

Demoralization and Existential Distress—Many chronic pain patients probably suffer with a type of demoralization syndrome that has been described in people with cancer [39].

Although not necessarily facing one's imminent demise with chronic pain, one is confronted with an experience that is "meaningless and intellectually empty and hopeless," as described by author and pain sufferer Melanie Thernstrom in "The Pain Chronicles" [40]. Related to, but not completely overlapping with depression, such patients struggle with trying to understand the purpose of their lives when its initial direction was interrupted or completely derailed by pain. Trying to find meaning in their suffering and not ultimately finding it can be deeply disturbing to people living with chronic pain and can play out in overuse of medications to dull various types of suffering that are not purely a function of somatically based disease per se. Many new forms of brief psychotherapy that have proved useful in palliative care, such as dignity therapy [41] and meaning-centered therapy, an adaption of the work of Victor Frankl by Breitbart et al. [42], may help some patients enhance their ability to cope with chronic pain.

Sensation Seeking—Many of the addicted patients we have encountered over the years were not so much addicted to a specific drug or various drugs as they were "stimulation junkies." In other words, they were addicted to an experience or feeling. Related to impulsivity and hyperactivity, sensation seeking often is seen in patients who also suffer with personality disorder and so are extremely prone to boredom and devastating emptiness when not stimulated or engaged in risk taking [43]. Such patients are likely to overuse drugs simply to "get out of (one's) self" and induce a change in mental status, not necessarily a positive one, to replace emptiness with some sense of enlivenment. It is fairly easy to see that anything centrally acting might become an object of overuse by such patients and that accidental and unintended overdose might follow from one's desire to feel, ironically, more alive.

Escapism—Passive and avoidant forms of coping have been associated with a range of poor outcomes in people with cancer, heart disease, and chronic pain [44–47]. The desire to escape one's pain by "zoning out" with one's pain medications is probably more common than most pain clinicians would like to ponder. Such drug taking might even be seen by the patient as a "reward" for enduring one's pain all day at work. However, dangers arise when medications are taken in the evening, when the pain flare is on the wane. The patient may be tired, consuming alcohol with dinner, and/or is too close to taking other centrally acting sedatives near bedtime.

General Management Suggestions

In addition to some of the specific psychotherapeutic strategies and interventions mentioned above, many others are important in managing opioid therapy so as to avoid accidental overdose. They include prescribing only in quantities that the clinician believes the patient can responsibly handle (for example, a "do-not-fill-until" prescription could be used to divide a month's worth of medication into three sets of 10-day supplies without requiring additional office visits); adapting safe storage devices and techniques to prevent impulsive overuse in the face of flare; and educating the patient's family members on the warning signs of an imminent emergency and on the proper responses to departures by the patient from agreed-upon opioid dosing with regard to overuse, including further limit setting and immediate follow-up with the prescriber or behavioral therapist.

In this context, it is appropriate to mention Project Lazarus, a North Carolina program [48] that has saved thousands of lives by providing friends and family members of pain patients and drug abusers alike with naloxone to administer at signs of overdose, which they have been trained to recognize. Perhaps, the program's success will outstrip its controversy and spur similar projects nationally.

Conclusion

The emergent mortality associated with prescription drugs has mandated the field to take a new look at opioid prescribing and to seek balance in its risks and benefits. Although medication nonadherence and its subset, aberrant drug-related behavior, may not be related to drug abuse or addiction, such behavior can result in serious, even fatal, consequences. As such, clinicians must consider the importance of risk assessment before the initiation of opioid therapy and throughout the duration of their pain treatment. Screening tools are available to help identify at-risk patients. However, nothing replaces the value of a structured clinical interview to identify any potential psychological variables or personality disorders that may make a patient vulnerable to being a “chemical coper.” In this article, we propose that certain psychological variables may contribute to opioid-related nonadherence and mortality and should form the basis of future research. A multitude of behavioral, cognitive-behavioral, existential, and psychotropic therapies are available to aid in preventing nonadherence and accidental overdose in chronic pain patients.

References

1. Rassool GH, Oyefeso A. Predictors of course satisfaction and perceived course impact of addiction nurses undertaking a postgraduate diploma in addictive behaviour. *Nurse Educ Today*. 2007; 27(3): 256–65. [PubMed: 16831495]
2. Knotkova H, Fine PG, Portenoy RK. Opioid rotation: The science and the limitations of the equianalgesic dose table. *J Pain Symptom Manage*. 2009; 38(3):426–39. [PubMed: 19735903]
3. Edlund MJ, Martin BC, Fan MY, et al. An analysis of heavy utilizers of opioids for chronic noncancer pain in the TROUP study. *J Pain Symptom Manage*. 2010; 40(2):279–89. [PubMed: 20579834]
4. Wilsey BL, Fishman SM, Gilson AM, et al. Profiling multiple provider prescribing of opioids, benzodiazepines, stimulants, and anorectics. *Drug Alcohol Depend*. 2010; 112(1–2):99–106. [PubMed: 20566252]
5. Broyles LM, Colbert AM, Tate JA, Swigart VA, Happ MB. Clinicians' evaluation and management of mental health, substance abuse, and chronic pain conditions in the intensive care unit. *Crit Care Med*. 2008; 36(1):87–93. [PubMed: 18090376]
6. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Washington DC: Author; 2000. Revised 4th edition
7. Maloney E, Degenhardt L, Darke S, Nelson EC. Impulsivity and borderline personality as risk factors for suicide attempts among opioid-dependent individuals. *Psychiatry Res*. 2009; 169(1):16–21. [PubMed: 19616307]
8. Jamison RN, Link CL, Marceau LD. Do pain patients at high risk for substance misuse experience more pain? A longitudinal outcomes study. *Pain Med*. 2009; 10(6):1084–94. [PubMed: 19671087]
9. Kirsh KL, Jass C, Bennett DS, Hagen JE, Passik SD. Initial development of a survey tool to detect issues of chemical coping in chronic pain patients. *Palliat Support Care*. 2007; 5(3):219–26. [PubMed: 17969825]
10. Sansone RA, Sinclair JD, Wiederman MW. Disability and borderline personality disorder in chronic pain patients. *Pain Res Manag*. 2010; 15(6):369–70. [PubMed: 21165370]

11. Aronoff GM, Livengood JM. Pain: psychiatric aspects of impairment and disability. *Curr Pain Headache Rep.* 2003; 7(2):105–15. [PubMed: 12628052]
12. Livengood JM, Johnson BW. Are we training future pain specialists? *Pain Pract.* 2003; 3(4):277–81. [PubMed: 17166123]
13. Fine PG, Portenoy RK. Establishing “best practices” for opioid rotation: Conclusions of an expert panel. *J Pain Symptom Manage.* 2009; 38(3):418–25. [PubMed: 19735902]
14. Butler SF, Budman SH, Fanciullo GJ, Jamison RN. Cross validation of the current opioid misuse measure to monitor chronic pain patients on opioid therapy. *Clin J Pain.* 2010; 26(9):770–6. [PubMed: 20842012]
15. Webster LR, Webster RM. Predicting aberrant behaviors in opioid-treated patients: Preliminary validation of the Opioid Risk Tool. *Pain Med.* 2005; 6(6):432–42. [PubMed: 16336480]
16. Passik SD, Kirsh KL, McDonald MV, et al. A pilot survey of aberrant drug-taking attitudes and behaviors in samples of cancer and AIDS patients. *J Pain Symptom Manage.* 2000; 19(4):274–86. [PubMed: 10799794]
17. Chou R, Fanciullo GJ, Fine PG, et al. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. *J Pain.* 2009; 10(2):113–30. [PubMed: 19187889]
18. Bronstein, K.; Passik, S.; Munitz, L.; Leider, H. Predicting abnormal urine drug testing in patients on chronic opioid therapy. *Pain Week, 3rd Annual Meeting; Las Vegas, NV. September, 2010; Poster presentation*
19. Cheatle MD. Depression, chronic pain, and suicide by overdose: On the edge. *Pain Med.* 2011; 12:S43–8. [PubMed: 21668756]
20. Gil KM, Williams DA, Keefe FJ, Beckham JC. The relationship of negative thoughts to pain and psychological distress. *Behav Ther.* 1990; 21:349–62.
21. Vowles KE, McCracken LM, Eccleston C. Processes of change in treatment for chronic pain: the contributions of pain, acceptance, and catastrophizing. *Eur J Pain.* 2007; 11(7):779–87. [PubMed: 17303452]
22. Haavik J, Halmoy A, Lundervold AJ, Fasmer OB. Clinical assessment and diagnosis of adults with attention-deficit/hyperactivity disorder. *Expert Rev Neurother.* 2010; 10(10):1569–80. [PubMed: 20925472]
23. Knouse LE, Safren SA. Current status of cognitive behavioral therapy for adult attention-deficit hyperactivity disorder. *Psychiatr Clin North Am.* 2010; 33(3):497–509. [PubMed: 20599129]
24. Strasser F, Walker P, Bruera E. Palliative pain management: When both pain and suffering hurt. *J Palliat Care.* 2005; 21(2):69–79. [PubMed: 16114805]
25. Christo PJ, Grabow TS, Raja SN. Opioid effectiveness, addiction, and depression in chronic pain. *Adv Psychosom Med.* 2004; 25:123–37. [PubMed: 15248371]
26. Richardson EJ, Ness TJ, Doleys DM, et al. Catastrophizing, acceptance, and interference: Laboratory findings, subjective report, and pain willingness as a moderator. *Health Psychol.* 2010; 29(3):299–306. [PubMed: 20496984]
27. Johnston M, Foster M, Shennan J, Starkey NJ, Johnson A. The effectiveness of an Acceptance and Commitment Therapy self-help intervention for chronic pain. *Clin J Pain.* 2010; 26(5):393–402. [PubMed: 20473046]
28. Wicksell RK, Melin L, Lekander M, Olsson GL. Evaluating the effectiveness of exposure and acceptance strategies to improve functioning and quality of life in longstanding pediatric pain—A randomized controlled trial. *Pain.* 2009; 141(3):248–57. [PubMed: 19108951]
29. Vowles KE, McCracken LM, Eccleston C. Patient functioning and catastrophizing in chronic pain: The mediating effects of acceptance. *Health Psychol.* 2008; 27(suppl 2):S136–143. [PubMed: 18377155]
30. McCracken LM, Vowles KE. Acceptance of chronic pain. *Curr Pain Headache Rep.* 2006; 10(2):90–4. [PubMed: 16539860]
31. Kalso E, Simpson KH, Slappendel R, Dejonckheere J, Richarz U. Predicting long-term response to strong opioids in patients with low back pain: Findings from a randomized, controlled trial of transdermal fentanyl and morphine. *BMC Med.* 2007; 5:39. [PubMed: 18154644]

32. Hay JL, Passik SD. The cancer patient with borderline personality disorder: Suggestions for symptom-focused management in the medical setting. *Psychooncology*. 2000; 9(2):91–100. [PubMed: 10767747]
33. Fischer-Kern M, Kapusta ND, Doering S, et al. The relationship between personality organization and psychiatric classification in chronic pain patients. *Psychopathology*. 2010; 44(1):21–6. [PubMed: 20980784]
34. Fischer-Kern M, Mikutta C, Kapusta ND, et al. The psychic structure of chronic pain patients. *Z Psychosom Med Psychother*. 2010; 56(1):34–46. [PubMed: 20229490]
35. Vogel M, Schatz D, Spitzer C, et al. A more proximal impact of dissociation than of trauma and posttraumatic stress disorder on schneiderian symptoms in patients diagnosed with schizophrenia. *Compr Psychiatry*. 2009; 50(2):128–34. [PubMed: 19216889]
36. Van Den Bosch LM, Verheul R, Langeland W, Van Den Brink W. Trauma, dissociation, and posttraumatic stress disorder in female borderline patients with and without substance abuse problems. *Aust N Z J Psychiatry*. 2003; 37(5):549–55. [PubMed: 14511082]
37. Maercker A, Beauducel A, Schutzwohl M. Trauma severity and initial reactions as precipitating factors for posttraumatic stress symptoms and chronic dissociation in former political prisoners. *J Trauma Stress*. 2000; 13(4):651–60. [PubMed: 11109237]
38. Linehan MM. Dialectical behavior therapy for borderline personality disorder. Theory and method *Bull Menninger Clin*. 1987; 51(3):261–76.
39. Kissane DW, Clarke DM, Street AF. Demoralization syndrome—a relevant psychiatric diagnosis for palliative care. *J Palliat Care*. 2001; 17(1):12–21. [PubMed: 11324179]
40. Thernstrom, M. *The Pain Chronicles: Cures, Myths, Mysteries, Prayers, Diaries, Brain Scans, Healing, and the Science of Suffering*. New York: Farrar, Straus and Giroux; 2010.
41. Chochinov HM, Hack T, Hassard T, et al. Dignity therapy: A novel psychotherapeutic intervention for patients near the end of life. *J Clin Oncol*. 2005; 23(24):5520–5. [PubMed: 16110012]
42. Breitbart W. Spirituality and meaning in supportive care: Spirituality- and meaning-centered group psychotherapy interventions in advanced cancer. *Support Care Cancer*. 2002; 10(4):272–80. [PubMed: 12029426]
43. Loas G, Borgne JY, Boyer P. Anhedonia and sensation seeking. *Ann Med Psychol*. 1995; 153(8): 524–7. discussion 527–8.
44. Perrot S, Poiraudou S, Kabir M, et al. Active or passive pain coping strategies in hip and knee osteoarthritis? Results of a national survey of 4,719 patients in a primary care setting. *Arthritis Rheum*. 2008; 59(11):1555–62. [PubMed: 18975370]
45. Samwel HJ, Evers AW, Crul BJ, Kraaimaat FW. The role of helplessness, fear of pain, and passive pain-coping in chronic pain patients. *Clin J Pain*. 2006; 22(3):245–51. [PubMed: 16514324]
46. Smith JA, Lumley MA, Longo DJ. Contrasting emotional approach coping with passive coping for chronic myofascial pain. *Ann Behav Med*. 2002; 24(4):326–35. [PubMed: 12434944]
47. Covic T, Adamson B, Hough M. The impact of passive coping on rheumatoid arthritis pain. *Rheumatology*. 2000; 39(9):1027–30. [PubMed: 10986310]
48. Albert S, Brason FW II, Sanford C, et al. Project Lazarus: Community-based overdose prevention in rural North Carolina. *Pain Med*. 2011; 12:S77–85. [PubMed: 21668761]