



Published in final edited form as:

*Pain Manag Nurs.* 2011 March ; 12(1): 33–40. doi:10.1016/j.pmn.2009.08.002.

## Malingering? No Evidence in a Predominantly Hispanic Worker's Compensation Population with Chronic Pain

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### Introduction

Chronic pain is a national problem of epic proportions that affects local and national economy, overall workforce productivity, and individual quality of life. Not only is pain the most common reason individuals seek health care, chronic pain is the most common cause of disability (Berry, Covington, Dahl, Katz, & Miaskowski, 2006). Persistent or chronic pain affects over 76 million Americans, more than heart disease, diabetes, and cancer combined (American Pain Foundation, 2007; National Center for Health Statistics, 2006). The estimated cost of chronic pain is \$100 billion annually (National Institutes of Health, 1998) and escalating (Ortho-McNeil-Janssen Pharmaceuticals, 2008). Over one-third (35%) of Americans experience persistent or chronic pain that impacts ability to work and socialize (Singh, Patel, & Gallagher, 2009) while “approximately 50 million... are disabled partially or totally due to chronic pain” (Singh et al., ¶5) This number will increase as the population ages and treatment for pain-related chronic health problems such as back disorders, degenerative joint diseases, rheumatologic conditions, visceral diseases, and cancer rise (Hootman & Helmick, 2006; National Center for Health Statistics, 2006).

Currently only one in four individuals with chronic pain receives appropriate and adequate pain management (Berry et al., 2006). This may be due, in part, to the suspicions of malingering that accompany and may prejudice treatment or reimbursement decisions. Malingering is the “intentional ... [exaggeration of] physical or psychological symptoms motivated by external incentives such as ...avoiding work, obtaining financial compensation, or obtaining drugs” (American Psychiatric Association [APA] 2000, p 739). Despite evidence that malingering in chronic pain sufferers is rare (Social Security Administration, 1987), insurance companies, third-party payers, and others attribute chronic pain complaints to malingering when they lack a definitive cause or physical evidence to explain symptoms (Bianchini, Greve, & Glynn, 2005; Fishbain, Cutler, Rosomoff, & Rosomoff, 2004; Flor & Turk, 2006, p. 241; Geisser, Robinson, Miller, & Bade, 2003). Likewise, clinical journals apprise physicians and other providers to suspect malingering when patients seek compensation for injury or when pain is not or cannot be objectively confirmed, is judged disproportionate to the cause, or is recalcitrant to treatment (Aronoff et al., 2007; Bienenfeld, 2008; Kiester & Duke, 1999; McDermott & Feldman, 2007; Mendelson & Mendelson, 2004).

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## Background and Significance

Chronic pain seems to be the result of physiological changes in the nervous system secondary to untreated or under-treated acute pain (Gruener & Lande, 2006). Although injury may initiate chronic pain, factors remote from its cause perpetuate it leading to unexplainable persistent pain (Berry et al., p. 11). Individuals with chronic pain live with daily reminders of the stigma associated with a condition that belies objective evidence and a definitive, physical cause. This may be especially true in persons with work or accident-related injuries seeking compensation through litigation.

The American Psychiatric Association (APA) has legitimized claims of malingering by including it as a condition “that may be a focus of clinical attention” in the Diagnostic and Statistical Manual of Mental Disorders (APA, 2000, p.739). Diagnostic criteria for malingering often recognized in worker's compensation population include marked discrepancy between complaint of pain and objective findings in individuals who are in the process of litigating for compensation (p. 739). Yet, the validity of this diagnosis is questionable in light of equivocal research findings and inconsistent evidence for malingering and psychological etiology in chronic pain sufferers (Fishbain, Cutler, Rosomoff, & Rosomoff, 2004). Thus, while the likelihood of clinicians and third party payers to suspect patients of malingering is high, there is little, if any, objective evidence to support such suspicions.

## Purpose

The primary purpose of this archival study was to describe the psychological profile of chronic pain sufferers. A secondary aim was to identify the presence of malingering in a primarily Hispanic worker's compensation population, which is the focus of this paper. For the purpose of the study, individuals with chronic pain and a history of exaggerated symptoms were identified as malingerers if diagnosed with malingering by the psychologist.

## Material and Methods

We retrieved data from the medical records of patients who a) were treated for chronic pain in a specialty clinic and b) were referred to a psychologist for evaluation because they exhibited extreme difficulty accepting or managing pain and consistently reported severe pain ( $\geq 7$  on a 0-10 numerical rating scale) at each medical visit. In other words, individuals referred to the psychologist experienced chronic pain and a history of exaggerated symptoms. The setting was the private practice of a board-certified hand surgeon who holds national certification in pain management by the American Board of Pain Medicine. We followed university policy for the protection of human rights and obtained Institutional Review Board approval prior to the start of this research project.

## Sample

We purposefully sampled medical records from 1995-2005 and included all records of patients with a history of pain  $\geq 3$  months and a full psychological evaluation. Patients had a variety of medical diagnoses including physical trauma from motor vehicle or heavy machinery; joint, upper/lower extremity or back pain; median, ulnar, or brachial plexus neuropathy; and other neuralgia, neuritis, radiculitis and musculoskeletal symptoms. About 57% had received surgical treatment to correct the underlying cause of their pain but continued to experience unrelenting, persistent pain. The same psychologist conducted all evaluations using the Oswestry Pain Questionnaire, Psychosocial Stressors Severity, Patient Problem Report, and the Global Assessment of Function. All patients received standard treatment for underlying medical condition, psychological support, and pain management.

Pain management incorporated a signed contract, a prescription for return to work, exercise, weight management, and medications as indicated, such as analgesics, adjuvants (antidepressants, sleep aids, etc.), and neuroleptic medications. In addition, the physician provided compassionate patient-centered care, spending 30 minutes or more providing education and guidance, emotional support, and active listening at the majority of visits.

### Data Collection Methods

From October through December 2006, we extracted, coded, cleaned, and imported data into a computerized statistical program (SAS version 9.1) for analysis by a university statistician. We ensured inter-coder reliability by periodically confirming extracted and coded data with the research assistant trained to extract and code data.

Demographic data were extracted from either the primary medical record or the psychologist report or both and included gender, marital status, education, occupation, and ethnicity. Measured outcomes included pain severity; malingering and psychological distress such as depression, suicidal ideation, and substance use or abuse; work and litigation status; and level of functioning assessed by Oswestry Pain Questionnaire, the Psychosocial Symptom Severity, Patient Problem Reports, and the Global Assessment of Function as documented by the psychologist. See Table 1.

### Analysis

The analyses consisted of descriptive statistics, Pearson correlations, multiple regression, and chi square. Upon request, the statistician calculated odds-ratio to quantify the relationships between high interest categorical variables, such as gender, ethnicity, litigation status, and education with work status at the time of the last follow-up visit with the surgeon. We calculated both *a priori* and post hoc power analyses for a medium effect size, power of .80, and alpha of .05. Based on a *a priori* analysis, data from 85 medical records were needed to meet correlational significance (Cohen, 1992). Post hoc power analysis indicated that a sample size of 67 and 87 respectively were necessary to reach statistical significance for multiple regression and chi square measurements.

## Results

### Demographic Data & Pain Level

The sample (n=91) closely reflects the population of the US-Mexico border city where the clinic practice is located. The majority were Hispanic (81.3%), female (70.3%), and married (60.44%). Educational level was more-or-less evenly split into three groups: grade school or less, high school, and college or post-high school training. Eighty-seven (93%) were worker's compensation patients and a third were litigating for compensation related to work-related or other injury. See Table 2. At the time of the first visit to the psychologist, the typical patient was 42.6 years old experiencing high levels of daily pain (7/10) for 3.5 years. Average follow-up time by the surgeon after psychological evaluation was 2 years. See Table 3.

### Malingering and Psychological Distress

No participant received a diagnosis of malingering by the psychologist; nor did anyone receive a diagnosis of chronic pain syndrome, i. e. pain disorder associated with psychological factors, a condition that attributes pain to psychosocial stressors with little or no underlying medical condition (APA, 2000, p.499). Nonetheless, the participants experienced extreme distress in terms of mood and function. Over 92% (83/90) of patients had mood disorders with the majority (70/83) documented as secondary to chronic pain. Of the remaining 7 patients with primary psychiatric diagnoses, one was diagnosed with

conversion disorder and the others with adjustment disorders all related to pain. The psychological distress due to chronic pain was severe enough that about one third (32.3% or 29/90) of patients reported thoughts of self-harm, suicidal ideation, or suicide attempt. (See Table 4.) Despite the high rate of suicidal ideation, we found no documentation of suicide in the medical records of this population nor were any records omitted because of this.

Per the psychologist report, all patients denied illicit drug use and the majority denied alcohol (64/91) and tobacco (66/91) use. According to the PPR, out of 88 individuals, 83 reported no problem, 3 a mild problem, 1 a moderate problem, and 1 a severe problem with alcohol and no one reported problems with drug use prior to the onset of pain. There was no difference in the number of individuals reporting problems with alcohol and drug use after pain incident. See Table 4.

### **Work Status & Litigation**

Work was defined as employment, retirement, or returning to school or re-training as a student. Six individuals (6.6%) reported not working prior to the onset of chronic pain. At the time of the psychologist visit, about 64% (58/91) were not working, while the number of students increased from 1 to 5. At the last follow-up visit with the physician, the number of unemployed patients (6 or 6.6%) was no different from the number of non-workers prior to onset of chronic pain. However, the persons not working at the last follow-up visit were not necessarily those individuals who were not working at the initial visit to the surgeon. At the last follow-up visit by the surgeon seven (7.7%) individuals were classified as disabled based on Social Security criteria. See Table 5.

### **Functioning**

The psychologist documented Psychosocial Stressors Severity (PSS) scores for 86 and Global Assessment of Function (GAF) for 87 patients. Almost 84% reported that stressors severely affected their health. Likewise, the majority of individuals experienced pain and other psychosocial symptoms that led to moderate (57.5%) or serious (27.6%) difficulty in social, occupational, or school functioning. (See Table 6.) The areas of the PPR that patients reported most problematic were emotions, social relationships and activity, finances, physical health, self-esteem, and support ( $p > .001$ ).

### **Correlations and Differences**

Gender, ethnicity, age, education, litigation status or total patient problem report (Patient Problem Report) scores in the year prior to the onset of the chronic pain condition were not significantly associated with work status, level of pain, or GAF scores. Likewise, there was no statistical difference in work status at the time of the last follow-up visit with the physician based on gender, ethnicity, marital status, level of education, or report of litigation for compensation. However, function using GAF total scores, was negatively correlated with total Oswestry scores ( $-0.3455$ ,  $p = .0014$ ), usual pain level ( $-0.221$ ,  $p = .0411$ ), and total PPR at time of psychologist visit ( $-5318$ ,  $p < .00001$ ). In other words, as reported pain severity and impact of pain on psychological, emotional, social, and physical health increased (Oswestry and PPR), general interpersonal, social, and occupational function declined (GAF) (See Table 7.) To quantify the relationships between high interest categorical variables with work status on follow-up, the statistician calculated odds-ratio for each pair. Odds ratio for return to work indicated no difference based on age, gender, ethnicity, duration of pain, or litigation status (See Table 8.)

## Limitations

Like all archival research, the design of this study is limited by the lack of control over data that were available. We have no record of the number of patients referred to the psychologist who did not go or who went but did not return to us for follow-up. Over a period of 10 years, the practice of medicine and psychology changed, as did reporting methods. Therefore, our access was limited to the psychological testing that remained consistent over 10 years. Conversely, the same physician and psychologist conducted the assessments over the same time period, lending some uniformity to evaluation and treatment.

## Discussion

Despite the fact that participants demonstrated high levels of psychosocial distress and reported severe pain intensity lasting 3 years or longer that impaired psychological, social, and occupational function, no one was diagnosed as a malingerer or with pain disorder primarily psychological in origin. The psychological profile of patients with chronic pain in this population reflects chronic suffering and is similar to patterns observed in other chronic illnesses, such as rheumatoid arthritis (APS, 2002). Depression not only co-existed with chronic pain, but thoughts of self-harm, suicidal ideation, or suicide attempt secondary to chronic pain was high (almost a third in this population). This may be due to the serious impairment in occupational and social functioning related to pain that persisted an average of 3 years after the onset of painful condition and continued for 5 years or more. Of interest, reported drug and alcohol abuse was lower than that of the general population and incidence did not change significantly after the development of chronic pain. Therefore, in this population, there is no indication that patients with chronic pain turned to drugs and alcohol for pain relief. This may have been due to the compassionate, patient-centered care and adequate pain management offered to the participants in the clinical setting.

The vast majority of patients returned to work and reported lower levels of pain up to 5 years after onset of painful condition. As part of the treatment plan, the physician and the patient set a return to work (RTW) date based on clinical assessment. Our RTW rate is higher than what is reported in the literature (Manktelow, Binhammer, Tomat, Bril, & Szalai, 2004; Rosenberger, Jokl, & Ickovics, 2006). Furthermore, our findings differed from other research (Slover, Abdu, Hanscom, & Weinstein, 2006; Landers, et al., 2007) in that patients who litigated for compensation were just as likely to return to work as individuals who did not. We recommend further research to confirm whether the expectation of return to work influences the reality.

Malingering is a controversial topic. Some researchers such as Fishbain et al. (2004), who conducted a systematic review of the literature, conclude that there is inconsistent evidence for malingering and psychological etiology in chronic pain sufferers. Sullivan (2004) argues that the determination of exaggerated pain behavior is moral not scientific in nature. Neuropsychology researchers use exaggerated pain behavior and the possibility to gain from worker's compensation and disability as key elements in their assessment of malingering along with cognitive and perceptual testing (see Greve, Ord, Bianchini, & Curtis, 2009). Using three different neuropsychology assessments, Greve et al. (2009) conducted a retrospective study spanning 10 years (the same time period as our study) and identified evidence of malingering in 25.2%-36% of the 508 patient charts that were reviewed. However, 21% of the patients diagnosed with malingering had physical findings that explained pain; and, over a third of the total sample with exaggerated pain symptoms did not meet the criteria for malingering. Reliability and validity for the assessment techniques or the components of the assessment techniques were not reported. In addition, the researchers failed to report how the patients gained significantly from exaggerated pain behaviors

(Greve et al.). In our experience, the financial gain from worker's compensation or disability is far less than what individuals would earn if they returned to work. In our population, individuals returned to work despite significant pain severity because they could not afford not to do so for financial, self-esteem, and social reasons.

In our experience, there is no place for the stigma of malingering with which chronic pain patients are so often labeled. Labeling patients leads to mistrust and has no place in patient-centered care (Sullivan & Ferrell, 2005). Further research is needed on the impact of long-term compassionate and patient-centered care for people with chronic pain. In the meantime, it is critical for physicians, nurses, and other primary specialty care providers to accept a patient's report at face value and offer adequate pain management that includes pharmacologic and non-pharmacological interventions and attention to the impact of chronic pain on emotional well-being, social relationships, and ability to function in a variety of home, work, recreational, and community settings.

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Table 1

Measured Outcomes

Outcome	Type of measure	Frequency	Reported reliability & validity
Pain severity	Equidistant 0-10 numerical rating scale (NRS) (from no pain to worst pain possible)	Psychologist visit Each clinic visit	McQuay & Moore (2006, p. 416)
Malingering	Psychiatric diagnosis based on DSM criteria	Psychologist visit	
Return to work (RTW)	Self-report	Psychologist visit Each clinic visit	
Litigation status	Self-report	Psychologist visit	
Functioning			
<ul style="list-style-type: none"> <li>Oswestry Pain Questionnaire -- indicator of how pain affects an individual's ability to manage everyday life</li> </ul>	10-item survey that allows individuals to rate overall intensity of pain and impact of pain on personal care, lifting, walking, sitting, standing, sleeping, sex life, social life, and travel Items measured using 0-5 Likert rating scale, with 0 indicating no limitation due to pain and 5 noting maximum limitation; the total score ranges from 0-50; when doubled it converts into a disability rating	Psychologist visit	Rocchi, Sisti, Benedetti, et al. (2005)
<ul style="list-style-type: none"> <li>Patient Problem Report (PPR) -- rating of 18 psychosocial and environmental problems during the year prior to the onset of chronic pain and since the onset of chronic pain</li> </ul>	Each item rated on a 4-point Likert scale from no problem to extreme problem. Items include work, interpersonal relationships, general and social activities, finances, drug and alcohol use, self-esteem, physical and emotional health, suicidal impulses, social support, and health care	Psychologist visit	APA (2000) Skodol(1991) Skodol & Shrout (1989)
<ul style="list-style-type: none"> <li>Psychosocial Stressors Severity (PSS) -rating of the impact of psychosocial and environmental stressors on factors that affect or are affected by the diagnosis, treatment and prognosis of psychiatric illnesses</li> </ul>	One-item, 3-point Likert scale that rates the PSS as mild, moderate, and severe; rating determined by difference in PPR before and after chronic pain	Psychologist visit	APA (2000) Skodol (1991) Skodol & Shrout (1989)
<ul style="list-style-type: none"> <li>The Global Assessment of Function (GAF) scale -- rating overall psychological, social and occupational functioning of people 18 years of age and older.</li> </ul>	100-point measurement broken into 20 point increments. Each 10-point range has two components: one for symptom severity and the other for functioning. When symptoms and functioning are discordant, the rating reflects the worse of the two. Higher ratings reflect higher levels of functioning.	Psychologist visit	APA (2000) Endicott et al (1976) Goldman, Skodol, & Helmick (1992)



**Demographic data****Table 2**

	Frequency	Percent
<b>GENDER (n=91)</b>		
Female	64	70.33
Male	27	29.67
<b>ETHNICITY (n=91)</b>		
Non-Hispanic	17	18.68
Hispanic	74	81.32
<b>EDUCATION (n=91)</b>		
Grade School and less	28	30.77
High School	29	31.87
Post High School/College	34	37.36
<b>MARITAL STATUS (n=91)</b>		
Married	55	60.44
Not Married	36	39.56
<b>LITIGATION STATUS (n=90)</b>		
No	60	66.66
Yes	30	33.33

**Table 3**

**Age and pain severity**

	Age in years	Pain duration: psychologist visit in years	Pain duration: last FU/visit by surgeon in years	Length of FU by surgeon after psych evaluation in years	Pain level initial visit	Pain level usual psych visit	Pain level least psych visit	Pain level worst psych visit
<b>N</b>	91	91	91	90	89	89	89	89
<b>Mean</b>	42.64	3.46	5.76	2.43	7.49	7.04	5.02	9.15
<b>Median</b>	42	3	5	2	8	7	5	9
<b>Mode</b>	43	1	4	2	8	7	5	10
<b>SD</b>	10.05	3.57	4.2	2.03	2.27	1.54	2.06	1.05
<b>Range</b>	17-70	0.08-22	0.5-23	0-10	2-10	3-10	0-10	5-10

<sup>1</sup> FU = follow-up

**Table 4**  
**Suicidal ideation and substance use as documented by psychologist**

	Frequency	Percent
<b>SUICIDAL THOUGHTS (n=90)</b>		
None	61	67.78
Thoughts of Self Harm	6	6.67
Suicide Ideation	14	15.56
Suicide Attempt	9	10.00
<b>ALCOHOL USE (n=91)</b>		
None	64	70.33
Slight	19	20.88
Social Drinker	2	2.20
Moderate	6	6.59
<b>TOBACCO USE (n=90)</b>		
None	66	72.53
Slight	9	9.89
Moderate	10	10.99
Heavy	6	6.59

**Table 5**

**Work Status at 3 different time periods**

	Not working	Working	Retired	Student	Disabled
<b>PRIOR TO PAIN/INJURY</b>	6 (6.6%)	81 (89%)	3 (3.3%)	1 (1.1%)	na
<b>TIME OF PSYCHOLOGIST VISIT</b>	58 (63.7%)	25 (27.5%)	3 (3.3%)	5 (5.5%)	na
<b>TIME OF LAST FU VISIT WITH SURGEON</b>	6 (6.6%)	72 (79.1%)	5 (5.5%)	1 (1.1%)	7 (7.7%)

**Table 6**  
**Stressors and Function**

	Frequency	Percent
<b>PSYCHOSOCIAL STRESSORS SEVERITY (PSS) (n=86)</b>		
Mild	1.16	1
Moderate	15.12	14
Severe	83.72	86
<b>GLOBAL ASSESSMENT OF FUNCTION (GAF) * (n=87)</b>		
Serious difficulty (41-50)	24	27.59
Moderate difficulty (51-60)	50	57.47
Some difficulty (61-70)	12	13.79
Good in all areas (71-80)	1	1.15

\* Ranking for social, occupational, or school functioning

**Table 7**  
**Maximum Likelihood Estimates for Work Status at Last Visit with Surgeon (n=91)**

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
GENDER	1	0.1430	0.3446	0.1723	0.6781
ETHNICITY	1	-0.3618	0.4479	0.6527	0.4192
EDUCATION: Grade School and less	1	0.2063	0.5499	0.1408	0.7075
EDUCATION: High School	1	-0.9239	0.6749	1.8744	0.1710
EDUCATION: Post High School/College	1	0.5599	0.6186	0.8191	0.3654
MARITAL STATUS	1	0.1819	0.3525	0.2663	0.6058
LITIGATION STATUS	1	0.1645	0.3452	0.2272	0.6336

**Table 8**  
**Odds ratio estimates for return to work status at time of last visit**

Effect	Point Estimate	95% Wald Confidence Limits	
<b>GENDER</b>	1.331	0.345	5.139
<b>ETHNICITY</b>	0.485	0.0084	2.807
<b>LITIGATION</b>	1.390	0.359	5.378
<b>MARITAL STATUS</b>	1.439	0.361	5.726
<b>AGE</b>	0.939	0.871	1.012
<b>DURATION OF PAIN</b>	0.901	0.168	4.839
<b>LENGTH OF FU<sup>l</sup></b>	1.014	0.195	5.279

<sup>l</sup>FU = follow-up