



Functional Status and Depression in Chronic Low Back Pain Patients

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Background

Chronic low back pain (CLBP) significantly limits the physical capabilities of a large number of patients. The severity of the pain can range from interfering with work and recreational activities to inhibiting daily actions.¹ Chronic low back pain afflicts 3.4% of the population, 34% of one sampled group believe themselves to be permanently disabled.²

There are two major goals of patients receiving treatment; managing the pain and improving their functional capabilities. The majority of the research focuses on managing the pain with the understanding that improving pain levels will allow for a higher degree of function. It has been shown that the most important variable in successful treatment of CLBP is the reduction of subjective feelings of disability in patients.⁵

How are depression and anxiety associated with functional status of chronic low back pain patients? This study will evaluate the relationship between mental disorders, depression and anxiety, and the functional status of chronic low back patients.

MATERIALS and METHODS

In eight Texas family medicine residency programs, medical students identified and surveyed 223 family medicine patients with chronic low back pain (3 months or longer) during a routine office visit. Surveys addressed characteristics of the pain (severity, cause, duration); characteristics of the patient (age, gender, ethnic background, occupation); mediators of pain (trust in the doctor, length of the doctor/patient relationship, treatments for pain, and social support), and issues that exacerbate pain or decrease functional status (depression, anxiety, substance abuse, adverse childhood experiences, comorbidities, and social stress). Outcome measures included health and functional status, measured by the MOS Short-Form-36.

After the visit, students surveyed subjects' doctors, addressing characteristics of the back pain, patients' use of and requests for medicines, and doctors' levels of trust of their patients.



RESULTS

The sample was a total of 223 patients of which 33.2% were male and 66.8% female. The median age was 52 years with a standard deviation of 14.6 years. Ethnic background was: 47.4% Anglo, 35.3% Hispanic, and 17% African American. Of this population 73.5% were living on less than \$2,000 each month. The mean level of pain reported amongst all subjects was 6.38 (1 to 10 scale), with an average duration of 10.7 years.

These patients rated their functional status poorly, with a median of 1.5, scores ranging from 1 to 3. Of these patients 67.7% reported using addictive pain medications to treat their pain. More than 30% of the sample rated with a PHQ score higher than 20, which is the benchmark for defining severe depression. Only 10% had minimal depressive symptoms (score 9 or less, Figure 2). Forty-five percent scored in the clinical anxiety level on the Beck Anxiety Scale (Figure 1).

Pearson's correlation analysis revealed functional status was negatively correlated with depression (PHQ scale, $r = -.360$, $p = .000$), childhood household exposure to depression ($r = -.158$, $p = .025$), anxiety (Beck Scale, $r = 0.197$, $p = .003$) and pain severity ($r = -.320$, $p = .000$).

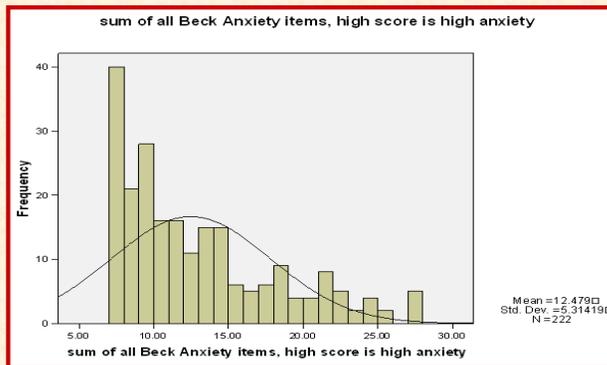


Figure 1

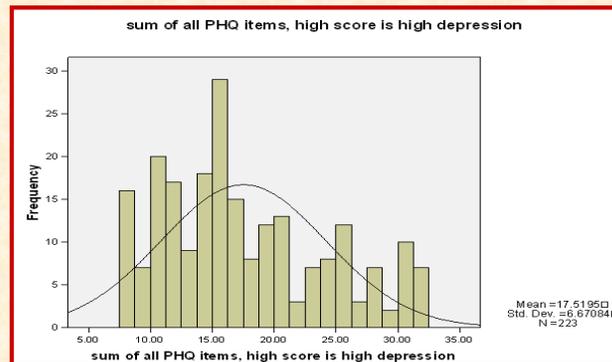


Figure 2

Linear regression analysis showed that depression remained negatively correlated with functional status, even after controlling for the influence of pain severity and age. (Table 1)

Table 1. Linear Regression

Outcome = Functional Status, high score is high function. Adjusted R² = .287

Predictors	Beta	p-value
Pain Severity	-.314	.000
Age	-.266	.000
PHQ Depression	-.340	.000

Backwards Stepwise Elimination Method Used.

Variables entered also included: pain duration, Beck Anxiety Score, childhood exposure to depression.

CONCLUSIONS

- Depression is a condition with high prevalence among chronic low back pain patients. So it must not be a condition overlooked when attempting to manage pain.
- Chronic low back pain patients with exposure to depression in their childhood home have a decreased functional status.
- Depression has a very strong negative correlation to functional status, even when controlling for age and pain severity. Therefore treating a patient's depression might have efficacious results in improving the functional status of patients.
- If treatment of depression and anxiety can improve functional status doctors might be able to better serve their patients without placing patients on addictive pain management regimens.

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