

Microeconomic Factors Associated with Pain, Health and Function in Patients with Chronic Low Back Pain

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Introduction

The effects of low back pain are far-reaching. Low back pain is one of the leading complaints among family physician visits. The direct costs of healthcare and indirect costs of lost wages and productivity amount to \$100-200 billion in the US each year. While 90% of individuals afflicted with low back pain return to work within 3 months (1), there are many patients who will sustain chronic episodes of low back pain. The costs associated with chronic low back pain patients comprise 75% of the total costs of work related low back pain, while comprising only 5% of the total number of work-related low back pain patients (2,3). It is, therefore, the focus of many epidemiologic and cost-analysis studies. However, it is still unclear as to whether the physical effects of chronic back pain have any associations with individual economic characteristics and personal productivity. The purpose of this study was to measure the functional status, pain characteristics, and overall health of chronic low back pain patients and their associations with income level, disability status, and employment status.

Material & Methods

Subjects. Investigators conducted this study in outpatient clinics of six family medicine residency programs across Texas. Patients were invited to participate if they were adults with low back pain for 3 months or longer, and were not new to the clinic. Investigators excluded pregnant women and patients with cancer.

Procedure. Medical students enrolled and surveyed 222 patients as they arrived for routine visits to the outpatient family medicine clinics. When the visit was complete, students retrieved their medical records and abstracted additional information related to low back pain.

Measurement. The 5-page patient survey addressed demographic characteristics, pain duration, frequency and severity, physical functioning and general health, anxiety, depression, social support and stress, and family violence. From the charts, students gathered information about the duration of the doctor-patient relationship, the patient's health insurance, the cause and duration of the low back pain, treatments for pain, co-morbidities, and BMI.

Analysis. In this analysis, the key outcome variables were income level, disability status, and employment status. Predictor variables included pain, functional status, and health as measured using 22 items in the MOS Short-Form 36 (4).

Results

Gender: 66% of participants were females.

Ethnicity: 43.2% were non-Hispanic White, 36.9% were Hispanic, 16.9% were African American and 3.2% were other.

Employment Status: 73.2% were unemployed

Disability Status: 47.7% were on or applying for disability

Income: 45.0% had an income of less than \$1000 / month

Results

Income Level and its Associations With Pain, Health, and Functional Status

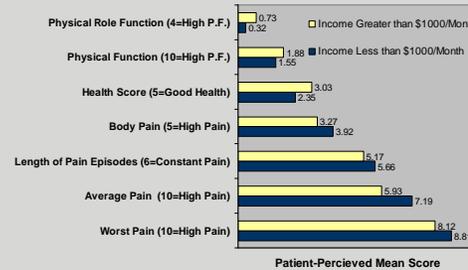


Figure 1

(All Comparisons Shown are Significant at P<0.05)

Employment Status and its Associations with Pain, Health, and Functional Status

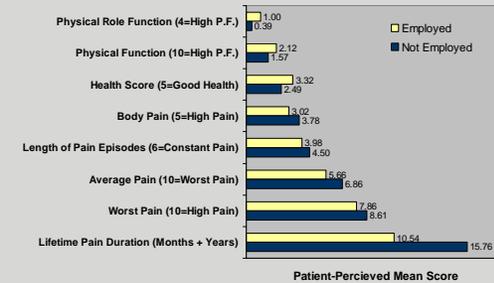


Figure 2

(All Comparisons Shown are Significant at P<0.05)

Disability Status and its Associations with Pain, Health, and Functional Status

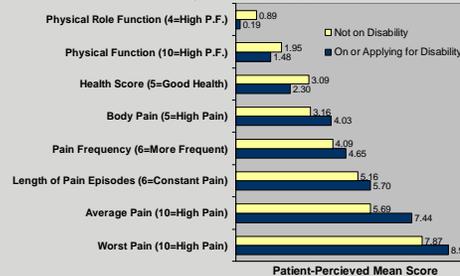


Figure 3

(All Comparisons Shown are Significant at P<0.05)

Table 1: Linear Regression Analysis Predicting Max # of Days Missed From Work, Chores, or Fun

Predictor	Beta	P Value
Self-Assessed Average Pain	.136	.056
Self-Assessed Physical Function	-.159	.034
Self-Assessed Physical Role Function	-.240	.001

Conclusions

Our bivariate analyses (Figures 1, 2, & 3) suggest that patients who have a monthly income greater than \$1000 per month, are employed, and are not applying for or are on disability generally report less pain, greater functional status and better health.

Our linear regression analysis (Table 1) suggests that the strongest correlates of decreased productivity are average pain levels, physical function and physical role function levels from the study survey.

The results of this study suggest that primary care physicians should encourage continued patient physical activities. Physicians' goals should be centered on keeping the patient as active as possible during episodes of debilitating chronic lower back pain. Similarly to opioid use (5), much consideration should be given before granting patients sick-leave or disability status. Such measures might prevent further debilitation and potential dependence on more expensive treatment modalities.

References

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