
Chronic Low Back Pain Disability a Modern-Day Epidemic (Doctoral Research Proposal)

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Introduction/Statement of the Problem

Low back pain is an almost universal human condition.¹ It has affected man throughout most of recorded history.² It is a major contributor to human suffering and disability and has enormous associated social costs.³ Chronic disability associated with low back pain has reached epidemic proportions despite advances in knowl-

edge and greater resources.¹ Persons suffering from low back pain represent two distinct populations. In approximately 80% of persons afflicted with low back pain, the problem seems to resolve no matter what type of care is provided while the remaining 20% of persons with low back pain seem destined to a life of chronic pain and disability regardless of the type of care provided.⁴ It is this latter group of individuals that is associated with the enormous financial and societal costs of low back pain in western societies.⁵

Historically, low back pain has been operationalized into two broad categories—acute low back pain and chronic low back pain disability. Various studies have identified several factors that may be associated with the occurrence of acute low back pain including smoking,^{6,7} obesity,⁸ socio-economic status (operationalized by job classification),⁹ and certain psychological traits (depression, type A behavior, and hypochondria).¹⁰⁻¹³ Most, if not all of these studies of acute low back pain have been conducted on adult populations. However, recent investigation has suggested that incident (acute) low back pain may be occurring in early adolescence rather than adulthood as previously assumed.¹⁴ This finding may require future studies investigating risk factors for acute low back pain to include adolescents as well as adults in their samples.

On the other hand, Waddell describes chronic pain, chronic disability, and chronic illness behavior associated with low back pain as a dissociation from the physical back problem. There is usually little evidence of remaining tissue damage in patients with chronic low back pain disability. Emotional distress, depression, and disease conviction become increasingly associated with the pain. Chronic pain usually becomes self-sustaining and does not respond well to traditional medical management.² Various psychological states and traits are thought as the main promoters of chronic low back pain disability. Psychological conditions that have been suggested as possible determinants of chronic low back pain disability include depression,¹⁵⁻¹⁷ hypochondriasis and hysteria,¹⁷ inappropriate coping strategies,^{18,19} and being self-centered.²⁰ Various

forms of abuse may also play a role as a determinant of chronic low back pain disability. Females with a history of being battered by their partner were found to be at greater risk for development of Post Traumatic Stress Disorder, depression, chronic pain, and substance abuse.²¹ Chronic pain and depression may be consequences of past childhood sexual abuse as well.²² Alcohol abuse has also been suggested as a possible determinant of chronic low back pain disability.^{16,23} Non-medical factors such as being on workers' compensation benefits and pending litigation have been found to be predictors of chronic low back pain disability.²⁰ Finally, ineffective or inappropriate medical care has also been implicated as a possible determinant of chronic low back pain disability.^{2,4}

Null Hypothesis

1. Individuals with acute low back pain and pre-disposing psychological risk factors develop chronic low back pain disability at the same rate and frequency regardless of the type of healthcare professional (medical physician versus chiropractor) providing care for their low back pain.
2. Low back pain sufferers who seek the services of medical physicians versus chiropractors do not differ demographically. Their severity of injury (pain intensity) and psychological profiles are homogeneous.

Methods

This study will be carried out prospectively, focusing on outcome data. Acute low back pain patients will be followed over a 3-month period. Anxiety, depression, functional capacity, general health status, work disability, and pain intensity will be the main outcomes variables measured at entry into the study and at 3 months follow-up. Socio-demographic information will also be collected at entry. Patients treated by medical physicians will be compared with patients treated by chiropractors. This comparison will provide information on outcome effectiveness between these two provider types.

A sample size of 400 participants, 200 from chiropractic clinics and 200 from various medical facilities will be utilized. Participants will be adults (18 years or older), residing on the island of Oahu, seeking the services of a chiropractic or medical provider with a primary complaint of acute low back pain (not more than 30 days duration, with at least a one year low back pain-free state prior to the most recent episode) of musculoskeletal origin.

Patients with low back pain secondary to organic dysfunction or

malignancy, patients with pending litigation associated with the low back pain (MVA, slip/fall), or patients being treated for depression will be excluded from the study.

The Beck's Depression Inventory, Oswestry Questionnaire (function), Short Form 12 (general health status), anxiety scale (not yet chosen), and Visual Analog Scale (pain intensity) will be the indices used to measure outcomes of the two provider types.

Each site (chiropractic and medical) will be given a predetermined number of packets (survey instruments and consent forms) to be handed out to prospective participants that fit the selection criteria (time one). The enrollment period will continue until all of the packets are handed out and completed. The purpose of the study will be explained to each prospective participant verbally by the receptionist/nurse. A written explanation will also be provided. Informed consent will be obtained. Confidentiality will be assured. Participants will be able to complete the surveys in approximately 10-15 minutes.

Each participant will be mailed a second packet (identical survey instruments contained in the first packet, time two) 3 months after entering the study. Participants who fill out and return the surveys will be compensated for their efforts.

Statistical analysis will include calculations of descriptive statistics of sample demographics, correlation coefficients of covariates, logistical regression, and multiple linear regression. The main independent variable will be provider type. The main dependant variables will include depressive symptoms, anxiety, general health status, pain intensity, functional capacity and work disability.

Conclusion

It is hoped that this outcome study will shed at least a "glimmer of light" into this complex public health crisis—the chronic low back pain disability epidemic. Obviously, this study is attempting to understand only a very small part of this serious societal burden. It is by no means an attempt at a major "breakthrough". Nevertheless, information garnered from this study will add to our knowledge base.

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