**The Chiropractic Hospital-Based Interventions Research Outcomes (CHIRO) Study: A Randomized Controlled Trial on The Effectiveness of Clinical Practice Guidelines in The Medical and Chiropractic Management of Patients with Acute Mechanical Low Back Pain**

The Spine Journal

Author’s Name

Assignment Due Date

**Introduction**

For this review, I chose Bishop et al.’s (2010) article because it explores the effectiveness of two Chiropractic Hospital-based Interventions (CHIRO) in treating acute low back pain. By understanding the most effective treatment for acute low back pain, the patients and healthcare providers are better placed to treat the patients.

**The Problem**

**Is the problem clearly stated?**

The problem was clearly stated, as evidenced by the researchers’ identification of the knowledge/literature gap that necessitated the current study. The researchers noted that even though the current Chiropractic Hospital-based Interventions, CHIRO (e.g., clinical practice guidelines and family physician-directed usual care) are based on sound empirical evidence, the translation of the guidelines to primary medical providers is yet to be fully understood.

**Is the problem practically important?**

Yes. This is because the CHIRO framework was utilized to determine if evidence-based CPG treatment is effective for patients with acute mechanical low back pain.

**What is the purpose of the study?**

The purpose was to investigate if clinical practice guidelines/care (CPG) resulted in better functional outcomes than family physician-directed usual care (UC) in patients with acute mechanical low back pain.

**What is the hypothesis? Are the key terms defined?**

The authors hypothesized that CPG treatment would lead to greater improvement in condition-specific quality of life than UC.

**Review of Literature**

**Are the cited sources pertinent to the study?**

Yes. All the cited sources are relevant to the study. This is because they all related to the treatment of acute low back problems and spinal disorders. Additionally, the literature is appropriate because the authors discussed the current CHIRO treatments for back pain, especially CPG-recommended treatments and UC.

**Is the review too broad or too narrow?**

The review is broad because the researchers reviewed 20 peer-reviewed articles related to the topic. The in-depth review led to the identification of the research problem.

**Are the references recent?**

The references are not recent. Out of the 20 articles reviewed, only one was published in the past five years before the publication of the current article.

**Is there any evidence of bias?**

No.

**Design and procedures**

**What research methodology was used?**

The researchers utilized a randomized controlled trial design. In this study design, the participants are randomly assigned to a control group and an experimental group. Therefore, as the study was carried out, the only expected difference between the control and the intervention group is the dependent/outcome variable being studied. In this study, Bishop et al. (2010) randomized the participants to receive either evidence-based clinical practice guidelines (CPGs) or family physician-directed usual care (UC). Both CPGs and UC were based on the Chiropractic Hospital-based Interventions Research Outcome (CHIRO) framework.

**Was it a replica study or an original study?**

Bishop et al.’s (2010) study was an original study. This is because the authors described the purpose of the study and the hypothesis. Additionally, the researchers gave a detailed description of the research methods, data analysis, discussion, limitations, and possible implications.

**What measurement tools were used?**

The measurement tools used included the physical functioning (PF) scale, Short Form-36 (SF-36) bodily pain (BP), and Roland-Morris Disability Questionnaire (RDQ).

**How were the procedures structured?**

Yes. Bishop et al. 92010) gave a detailed description of the treatments administered to both the experimental groups.

**Was a pilot study conducted?**

No

**What are the variables?**

The variables included bodily pain, physical functioning, and self-reported physical disability caused by low back pain as measured by RDQ.

**How was sampling performed?**

The authors utilized the convenience sampling technique. This is because the researchers recruited the participants from the patient population referred to the nearest university-based teaching hospital. Detailed inclusion and exclusion criteria were used to arrive at the final sample. Patients were included if they were aged 19-65 and had acute mechanical low back pain. Patients were excluded if they had spinal related diseases/condition, were pregnant, had a third-party insurance claim, had a past spinal injury, or had persisting pain in any areas of the spine.

**Data Analysis and presentation**

**How was data analyzed?**

Data was analyze using both descriptive and inferential statistical techniques. Descriptive statistics were used to describe the participants’ baseline characteristics e.g., age, symptom duration, and treatment. The descriptive statistics reported included the mean, standard deviation, and percentages. Additionally, independent samples t-test was used to determine whether the participants in the control and experimental groups showed differences in the outcomes (RDQ, BP, and PF).

**Was data qualitative or quantitative?**

The data was quantitative because it was collected, analyzed, and reported in numbers.

**Did findings support the hypothesis and purpose?**

The authors hypothesized that CPG treatment would lead to greater improvement in condition-specific quality of life than UC. This hypothesis was supported because CPG treatment resulted in better condition-specific functioning than UC treatment.

**Were weaknesses and problems discussed?**

No. The weaknesses and problems were not explained.

**Conclusions and Implications**

**Are the conclusions of the study related to the original purpose?**

The purpose of the current study was to determine if CPG-based treatment leads to better functional outcomes compared to UC in the treatment of acute mechanical low back pain. The study's conclusion was related to the original purpose because the researchers concluded that CPG treatment resulted in better condition-specific functioning than UC treatment.

**Were the implications discussed?**

Yes. The implications were discussed. Specifically, the authors noted that the implementation of CPGs is highly beneficial to patients, themselves, and not only a payers’ strategy to reduce costs. This is because compared to UC, CPG resulted in better condition-specific functioning.

**Whom the results and conclusions will affect?**

The results and conclusions will affect both the patients and the healthcare providers in treating acute mechanical low back pain. Following these findings, it is crucial for patients and healthcare providers to choose CPG over UC because it leads to better treatment outcomes.

**What recommendations were made at the conclusion?**

The researchers did not make any specific recommendations regarding the use of either treatment for patients with acute low back pain.

**Overall Assessment**

The study was well-conducted with clear methodology and procedures. The use of randomized control trial helps in eliminating bias. Additionally, the article informs the reader, patient, and healthcare providers on CHIRO treatment that leads to better patient outcomes. Therefore, the target reader is well-informed on the type of treatment to choose.

**References**

Bishop, P. B., Quon, J. A., Fisher, C. G., & Dvorak, M. F. (2010). The Chiropractic Hospital-based Interventions Research Outcomes (CHIRO) study: a randomized controlled trial on the effectiveness of clinical practice guidelines in the medical and chiropractic management of patients with acute mechanical low back pain. *The Spine Journal*, *10*(12), 1055-1064.