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Research Paper Review

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Chiropractic and Biopsychosocial Model

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Gliedt JA, Schneider MJ, Evans MW et al.

ABSTRACT

INTRODUCTION: *There is an increasing awareness, interest and acceptance of the biopsychosocial (BPS) model by all health care professionals involved with patient care. The areas of spine care and pain medicine are no exception, and in fact, these areas of health care are a major centerpiece of the movement from the traditional biomedical model to a BPS model of patient assessment and delivery of care. The chiropractic approach to health care has a history that is grounded in key aspects of the BPS model. The profession has inherently implemented certain features of the BPS model throughout its history, perhaps without a full understanding or realization. The purpose of this paper is to present an overview of the BPS model, its relationship with spine care and pain management, and to discuss the BPS model, particularly psychosocial aspects, in the context of its historical relationship with chiropractic. We will also provide recommendations for the chiropractic profession as it relates to successful adoption of a full integration of the BPS model.*

METHODS*: This was a clinical commentary and therefore no formal study methods were outlined in the paper.*

CONCLUSION*: Clinical communications should focus on maximizing positive messages to foster self-efficacy and self-reliance, while minimizing negative communication that encourages reliance on passive care. Research regarding the implementation of the BPS model in practice is required, along with research investigating outcomes of BPS and integrated care. Increased emphasis of the BPS model in chiropractic education and continuing education courses is recommended.*

ANALYSIS

Reviewed by Dr. Brynne Stainsby

Author's Affiliations

College of Chiropractic, Logan University, Chesterfield, MO, USA; Physical Therapy, University of Pittsburgh, Pittsburgh, PA, USA; Food Science, Nutrition, and Health Promotion, Mississippi State University, Starkville, MS, USA; Neurosurgery, Medical College of Wisconsin, Milwaukee, WI, USA; Brody School of Medicine, East Carolina University, Greenville, NC, USA.

Background Information

Pain and disability are complex and growing problems in both developed and developing countries (1). Low back and neck pain specifically are two of the leading causes of disability worldwide, and account for billions of dollars in direct and indirect costs each year (2). Given this impact and the increasing prevalence of chronic pain, health care providers are recognizing that a model that accounts for the complexity of the patient may provide a more appropriate approach to care (3). Historically, disease, injury or illness have been viewed through a mechanistic paradigm that suggested problems were the result of a structural or cellular aberration (4). Although this pathoanatomic model allowed for the identification and eradication of many infectious diseases, it does not address the patient as a whole. The biopsychosocial (BPS) model proposes examining patients from a lens that incorporates the biological (physical or chemical alterations) and psychological (mental health and personal factors), in the context of the social determinants of health for each individual (5).

Research has suggested that the development of chronic pain is a complex process (6). Factors such as fear-avoidance beliefs, depression and anxiety, unsupportive social relationships, catastrophizing thoughts, low levels of self-efficacy and maladaptive beliefs are psychological factors that may contribute to the cycle of chronic or persistent pain (3). This cycle of pain and dysfunction may further be perpetuated by a clinician's focus on a pathoanatomic diagnosis, potentially creating a reliance on passive care if a patient believes that something is 'wrong' that must be fixed.

The purpose of this commentary was to summarize the BPS model and provide the authors' recommendations for integrating it into chiropractic education and practice.

Summary

Chiropractors and other manual medicine providers are well suited to engage in positive psychosocial interventions, which may help to reduce the risk of developing chronic pain and disability (3, 6, 7). Clinicians may assist patients with the development of active coping

techniques by encouraging positive thinking, helping patients learn to redirect negative self-thoughts, engage in activities which distract from pain and continue with physical activity within pacing parameters (3). We can also provide cognitive-behavioural (educational) sessions to help patients understand pain and the pain experience (3). By creating treatment plans that require patient commitment and active care, clinicians may assist patients in the development of feelings of control over their specific condition and general health (8).

As a recent example from the literature, Monticone et al. conducted an RCT to examine the effect of group-based rehabilitation with cognitive behavioural therapy (CBT) compared to general physiotherapy exercises in patients with chronic neck pain (9). Following treatment and at 12-month follow-up, the rehab and CBT group demonstrated a reduction in kinesiophobia and catastrophizing (9).

In another important example, the clinical guidelines recently published by the American College of Physicians recommends interventions such as mindfulness-based stress reduction, progressive relaxation, CBT, exercise, yoga, tai chi, manipulation and rehabilitation as initial treatment options for patients with acute, subacute and chronic low back pain (10).

It is important to recognize that clinicians may inadvertently justify a patient's maladaptive thoughts and beliefs if messages overemphasize pathoanatomy or the need for indefinite, long-term, passive care. If the patient perceives that missing appointments will result in the worsening or persistence of their condition, they may become reliant on passive care, lose a sense of self-efficacy and believe s/he has no control over her/his health. Clinicians should be aware of the potentially negative consequences of their words, and aim to frame messages in a positive light that emphasizes the benefits and gains of treatment.

Techniques such as motivational interviewing, CBT and Acceptance and Commitment Therapy (ACT) can serve as doctor-patient communication strategies to identify targeted behavioural changes, and understand a patient's motivations and barriers to making change. These techniques highlight the relationship between thoughts, emotions and behaviours and assist patients in the development of constructive alternatives to problematic thoughts:

- *Motivational interviewing (MI)* is a technique intended to target behavioural changes. It focuses on a patient-centered discussion to identify motivators and barriers to change. This technique is based on four principles: expressing empathy; developing discrepancy between what needs to occur for positive change and what the patient is willing to do; "rolling with resistance" if the patient expresses negativity, and; supporting the patient's self-efficacy so the patient understands the doctor is ready to support him/her when s/he is ready to make change (11).

- *Cognitive Behavioural Therapy (CBT)* is an approach that focuses on the relationship between thoughts, emotions and behaviours. It attempts to nurture the patient's

development and use of active problem-solving skills to assist him/her in managing the challenges associated with chronic pain (12).

- *Acceptance and Commitment Therapy (ACT)* intends to help a patient shift his/her perspective in order to deal positively with experiences. It aims to change problematic thoughts and feelings to constructive alternatives such as acceptance, mindfulness, cognitive defusion, and committed action (13)

CLINICAL APPLICATION & CONCLUSIONS

The authors recommend that clinical communications should focus on maximizing positive messages to foster self-efficacy and self-reliance, while minimizing negative communication that encourages reliance on passive care. The authors further suggest that research regarding the implementation of the BPS model in practice is required, along with research investigating outcomes of BPS and integrated care. Finally, the authors recommend increased emphasis of the BPS model in chiropractic education and continuing education courses.

STUDY METHODS

This was a clinical commentary and therefore no formal study methods were outlined in the paper.

STUDY STRENGTHS/WEAKNESSES

Strengths:

- This commentary provided an appropriate overview of the BPS model. It further described how the chiropractic profession has historically integrated this model and should continue to integrate communication strategies that support patient self-efficacy.

Weaknesses:

- The greatest weakness of this study is the lack of methodology reported. As a clinical commentary, we could assume it was written as a form of narrative literature review.

- While this article provides a summary of some literature related to the BPS model, without a clear research question or a systematic search strategy, it is impossible to know if the literature has been appropriately represented in this commentary.

- This was a more informal form of publication. As such, the authors did not report if or how the included articles were appraised. This could affect how we integrate this paper in proper context with other, high-level research, despite this paper presenting the topic in a logical, balanced manner.

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