

Chronic Low back Pain Beliefs and Management Practices in Africa: Time for a Re-think?

Abstract

Background: Chronic low back pain (CLBP) beliefs are important psychosocial risk-factors affecting the occurrence and progression of CLBP. To address pain beliefs and implement recommended biopsychosocial approaches for CLBP management, an understanding of patients' and healthcare professionals' (HCPs') beliefs, as well as CLBP management practices, is necessary. A narrative review was conducted to explore CLBP beliefs and practices in African countries.

Methods: Two systematic searches were conducted using seven databases (MEDLINE, Embase, PsychInfo, CINAHL Plus, AMED, PubMed and Web of Science) with combined variations of the terms, "Management", "Guidelines", "CLBP", "Beliefs", "Patients", "Healthcare Professionals", "Africa", .

Results: Five studies and one standard treatment guideline document were included. No systematically developed African CLBP treatment guideline was found, however CLBP practices were identified in two African countries. CLBP management in African countries appears to be biomedically oriented. Only three research articles investigated patients' CLBP beliefs in Africa, with none assessing HCPs' beliefs. Unhelpful CLBP beliefs (catastrophizing and fear-avoidance) and biomedical thoughts about the causes of CLBP were identified. Unhelpful CLBP beliefs were associated with increased disability.

Conclusion: Management practices for CLBP in African countries appear to contradict recommended biopsychosocial management guidelines by developed countries and are not sufficiently documented. Research on CLBP beliefs and CLBP management practices in Africa is deficient. To enhance the uptake of biopsychosocial approach in Africa, research around CLBP beliefs in African CLBP patients and HCPs is required.

Keywords: Chronic Low Back Pain, Beliefs, Practices, Biopsychosocial Approach

Introduction

Low back pain (LBP) is the leading cause of disability globally (Hoy et al., 2014; Wang et al., 2015). It incurs considerable economic costs, resulting from work absenteeism, decreased productivity and healthcare (Hoy et al., 2014). LBP is a significant burden in Africa; the life-time prevalence of LBP in Africa is 47% (Morris et al., 2018) and it is the second leading cause of disability in sub-Saharan Africa (Hoy et al., 2014). The costs and disability associated with LBP are projected to increase in African countries, where healthcare systems cannot cope with the increasing burden of LBP (Hartvigsen et al., 2018). The impact of LBP has also been captured qualitatively, being described as a “life of living death” by participants of a study conducted in Nigeria (Igwe-Chidobe et al., 2017). Chronic Low Back Pain (CLBP) forms a smaller percentage of all LBP cases, with an estimated global prevalence of 19.6% (Rodrigo et al., 2015). However most of the negative effects resulting from LBP are experienced by CLBP patients (Sullivan, 2012).

Pain beliefs are psychosocial factors that initiate psychological processes and attitudes that negatively affect the course and management of CLBP (Main et al., 2010). Thus, they affect patient recovery, treatment adherence and coping strategies (Nijs et al., 2013). CLBP beliefs are influenced by the socio-cultural environment, previous pain experiences and health literacy (Tan et al., 2014). Rigorously conducted systematic reviews (Darlow et al., 2012; Werner et al., 2012; Gardener et al., 2017) suggest that patients’ CLBP beliefs are also influenced by healthcare professionals’ (HCPs) beliefs and HCPs’ beliefs affect their subsequent treatment approach. Generic pain beliefs include fear avoidance beliefs (FABs), catastrophizing and self-efficacy. FABs and catastrophizing are associated with increased CLBP disability, decreased mental well-being, and prolonged absence from work (Wertli et al., 2014a; Wertli et al., 2014b; Main et al., 2010). Self-efficacy however improves CLBP outcomes (Jackson et al., 2014). Specific unhelpful beliefs include thoughts that the spine is vulnerable and LBP is unresolvable (Darlow et al., 2014).

A biopsychosocial approach is currently recommended for the diagnosis and management of CLBP by experts and national guidelines of developed countries (Oliveira et al., 2018; NICE, 2016). This approach provides a holistic model of care that addresses biological and psychosocial components (especially beliefs) in the management of CLBP. There is no definitive composition for a biopsychosocial approach; it is usually delivered as part of educational sessions such as back schools, incorporation of cognitive-behavioural therapy or self-management strategies (Kamper et al., 2015). High quality systematic reviews (Kamper et al., 2015; van Erp et al., 2019) report that biopsychosocial interventions delivered by a knowledgeable HCP or a multidisciplinary team are more effective for reducing pain and disability in CLBP patients when compared to usual care. These positive effects were also present in patients who had experienced failed treatments and provided long term benefits (Kamper et al., 2014). However successful adoption, implementation and effectiveness of a biopsychosocial approach in the context of CLBP depends on the knowledge of HCPs and the beliefs of both HCPs and patients (Nijs et al., 2013). In addition, an understanding of beliefs and cultural contexts are essential components of implementation science (Nilsen and Bernhardsson, 2019; Cabassa and Baumann, 2013). A narrative review was therefore conducted to appraise CLBP management practices/guidelines and beliefs in Africa.

Methods

A systematic search of seven databases (MEDLINE, Embase, PsychInfo, CINAHL Plus, AMED, PubMed and Web of Science) was conducted. The search and data extraction were carried out by the first author. The search was conducted from 2007 to 2018 to allow for inclusion of current studies. Two advanced searches were conducted to identify: a) the management guidelines/practices for CLBP in African countries and b) the CLBP beliefs among populations, patients and HCPs. HCPs considered for this review were doctors and physiotherapists since these professionals are the main HCPs involved with CLBP management in African countries. Keywords and their synonyms were derived and combined using each database's specific strategy. The derived keywords were; "Chronic Low Back Pain", "Beliefs", "Management", "Guidelines", "Africa", "Patients" and "Healthcare Professionals". Reference lists of relevant articles were also hand searched to identify other articles. Only articles published in English were included in the review.

The advanced search for the CLBP management practices for African countries yielded a total of six hundred and sixty nine (669) articles from all the databases. After duplicates were removed, the title and abstracts were screened by the first author and then full texts of twelve (12) articles were read. Of these, three (3) articles were included (Figure 1). The advanced search for CLBP beliefs yielded a total of two thousand nine hundred and eighty three (2983) articles from the seven databases. Duplicates were removed and then the titles and abstract screened for relevance. Articles that looked at beliefs pertaining to other HCPs and other conditions were excluded (articles that assessed beliefs of multiple HCPs which included doctors and/or physiotherapists were however included). Effectiveness studies and studies assessing psychometric properties were excluded. Abstracts and full texts of fifty-six (56) articles were then read. Eighteen (18) studies assessing CLBP beliefs in developed and developing countries were identified. Only three studies, out of these, were conducted in Africa and therefore included in the review (Figure 2).

Results and Discussion

Five research studies and a treatment guideline document were included in this review. These are summarized in Table 1. No systematically developed continental/national guideline for CLBP management in African countries was identified. Two cross-sectional studies (Major-Helsloot et al., 2014; Opong-Yeboah and May, 2014) evaluating CLBP management practices in South-Africa and Ghana were retrieved. A standard treatment guidelines (STG) document that included summarized guidelines for management of CLBP by doctors in Ghana was also retrieved (STG, 2010).

None of the systematic reviews assessing CLBP beliefs contained a study conducted in Africa. Therefore, only original studies involving direct data collection from research participants (primary studies: one qualitative and two quantitative studies) were included in this review. The three studies (Nesto and Ina, 2017; Igwesi-Chidobe et al., 2017; Igwesi-Chidobe et al., 2017) assessed beliefs among CLBP patients. No study assessing the CLBP beliefs of African HCPs was identified.

Chronic Low Back Pain Management Practices in Africa

There is very limited research investigating how CLBP is managed in Africa. A cross-sectional study (Major-Helsloot et al., 2014) was conducted in Cape-Town, South-Africa to assess the management of LBP at primary care level. The study included eight communities selected from a cluster sampling

and randomization process. Results from the study indicated that pain medication was the only treatment received by the majority of patients (90%), while physiotherapy, patient education and advice to stay healthy were rarely prescribed to patients. The authors further suggest that physiotherapy treatment for CLBP in South-Africa is focused on passive modalities such as heat therapy and massage thus indicating poor uptake of recommended international guidance for CLBP management.

The STG document for doctors in Ghana proposed routine imaging for all LBP cases and an option for physiotherapy referral (STG, 2010). Though the STG mentions psychosocial risk factors as possible risk-factors for CLBP, there is no indication of a management pathway addressing psychosocial components. Also, a recommendation of routine imaging emphasizes a biomedical approach to management, which contradicts management guidelines of developed countries. A similar biomedical orientation was identified in a web-based survey investigating the LBP management practices among Ghanaian physiotherapists (n=44; response rate= 67%) (Oppong-Yeboah and May, 2014). The results indicated that most CLBP patients attend numerous (>8) physiotherapy sessions. Although there is no definitive number of optimal treatment sessions for CLBP, most studies utilizing active self-management components (such as education and exercises) or biopsychosocial approaches report a treatment duration of eight to twelve (8-12) weeks, comprising between three to four (3-4) treatment sessions (Kamper et al., 2015; van Erp et al., 2019). Numerous treatment sessions may therefore be indicative of a biomedical approach (Oppong-Yeboah and May, 2014), with over-reliance on passive modalities to be administered by the physiotherapist. The study findings also indicate that, though recommended guidelines such as exercise and advice were used, passive modalities such as electrotherapy were also commonly employed. Advice given was mainly on 'postural awareness and technique modification', suggesting a lack of consideration of psychosocial factors.

Chronic Low Back Pain Beliefs in Africa

There is a paucity of research on CLBP beliefs among African populations. CLBP beliefs have been assessed in only two African countries (Nigeria and Malawi) (Igwesi-Chidobe et al., 2017; Nesto and Ina, 2017). Although both patients' and HCPs' beliefs are important for effective CLBP management, there is currently no research reporting the beliefs of HCPs involved in CLBP management in Africa, consequently the following section will focus on the beliefs of patients.

A cross-sectional study was conducted by Igwesi-Chidobe et al., (2017) to assess the biopsychosocial risk-factors for CLBP disability in a rural Nigerian population. A multi-staged cluster sampling and stratified sampling method was used to enroll two hundred (200) participants for the study. Data collection questionnaires were translated into the local language and validated. The questionnaires were administered by trained community health workers due to the low literacy levels of participants, thus creating a risk of interviewer bias. The study demonstrated that FABs and illness perceptions were the most prevalent factors associated with CLBP disability. Other factors found to affect self-reported disability were pain intensity, catastrophizing and anxiety. Performance-based disability was also adversely affected by being female and lack of societal support. The results of this study corroborate findings from developed countries (Briggs et al., 2010; Wertli et al., 2014a; Wertli et al., 2014b, Singh et al., 2016) that suggest LBP is affected by inherent patient beliefs and other psychosocial factors.

Another cross-sectional survey (Nesto and Ina, 2017) was conducted in Malawi, investigating LBP knowledge and attitudes/beliefs of patients attending physiotherapy. Two hundred and five (205) participants were conveniently sampled and four separately validated questionnaires were adapted for the study. Convenience sampling creates a risk of selection bias and thus affects the generalizability of the study findings. The study identified that most patients possessed fear-avoidance (93%) and catastrophic (72%) beliefs. Although all the study participants had visited a physiotherapist, and reported that their major sources of information were HCPs (Nesto and Ina, 2017), unhelpful beliefs were common. What cannot be established from these findings is to what extent HCPs' beliefs influenced those of patients.

A qualitative study of 30 CLBP patients was conducted in rural Nigeria on CLBP beliefs and experiences (Igwesi-Chidobe et al., 2017). Data was collected until data saturation was achieved. Reflexivity and how data was translated to ensure richness of content were well-detailed, strengthening the trustworthiness of this study. Participants believed CLBP resulted from manual work, poverty, degeneration and infection (biomedical causes). Some also believed CLBP was not an illness (biopsychosocial orientation). This reveals biomedical beliefs with some biopsychosocial components among participants. Cultural and spiritual connotations were also ascribed to CLBP, with spirituality used as a coping strategy either adaptively or mal-adaptively.

Recommendation for Practice

The CLBP management pathways in African countries identified in this review suggest the favouring of passive modalities and biomedically tailored advice and approaches; for which evidence suggests minimal to no effectiveness, and short term benefits (NICE, 2016; Oliveira, 2018). With an increasing LBP burden in Africa, there is the need for adoption and implementation of evidence-based and holistic approaches that acknowledge and address the multifactorial contributors to CLBP, especially psychosocial factors. CLBP management in Africa has to be rethought and redesigned to facilitate the uptake of biopsychosocial approaches. This necessitates a more thorough understanding of CLBP beliefs in African professional, patient and public populations, in order to effectively implement context-specific and culturally sensitive biopsychosocial interventions.

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Table 1: Characteristics of Included Studies

Management Guidelines and Practices for LBP in Africa					
No	Author(s)	Aim of Research	Research Design	Country	Population/Setting
1.	SGT, 2010	Treatment guidelines	Compiled by experts	Ghana	General treatment guidelines including LBP
2.	Major-Helsloot et al., (2014)	To assess the management of LBP at primary care level	Cross-sectional Survey	South-Africa	Visitors attending eight community health centres in Cape Town (n=489)
3.	Oppong-Yeboah and May (2014)	To assess the low back pain management practices among physiotherapists in Ghana	Cross-Sectional Survey	Ghana	Physiotherapists (n=44)
CLBP Beliefs in Africa					
4.	Igwesi-Chidobe et al., 2017	To assess the biopsychosocial factors associated with CLBP in rural Nigeria	Cross-sectional study	Nigeria	Rural Nigeria. Population-based (n=200)
5.	Nesto and Ina, 2017	To evaluate the knowledge, attitude and beliefs of patients on LBP among LBP patients attending physiotherapy in a hospital in Malawi	Cross-sectional Survey	Malawi	Hospital-based LBP/CLBP patients
6.	Igwesi-Chidobe et al., 2017	To explore the experiences of Nigerian rural dwellers on living with CLBP	Qualitative study	Nigeria	Rural dwellers with CLBP (n=30)