

The Influence of Culture on Chronic Pain: A Collective Review of Local and International Literature

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Abstract

Chronic pain poses a therapeutic challenge to the healthcare community and is particularly prevalent in the psychiatric patient population. Research supports that chronic pain is a multifaceted process and the concurrent interplay between pathophysiology, cognitive, affective, behavioral and sociocultural factors summate to what is referred to as the chronic pain experience. The adequate treatment of pain has been highlighted in recent years with emphasis on the need for a multidisciplinary approach. It has emerged that chronic pain is experienced differently among patients of differing cultures and ethnicities.

Objectives: The objectives were to identify and critically appraise relevant research and give an integrated comprehensive overview of key considerations for the interaction of culture and chronic pain. Findings would potentially identify and stimulate areas for local research, while promoting awareness, multidisciplinary cooperation and policy development to inform decision-making and culturally relevant clinical practice.

Methods: A collective review of local and international literature was conducted using a systematic approach. Articles from the last 20 years, across three major disciplines were identified by relevance to the research question and key words. A final total of 30 articles were retrieved, categorized, analyzed, and synthesized.

Results: The reviewed data yielded a large number of potential outcomes to examine, ranging from patient variables, to limitations of healthcare providers to shortcomings of the healthcare system.

Discussion: Chronic pain is a multidimensional, composite experience shaped by interweaving and co-influencing biological and psychosocial factors. Understanding the culmination of these factors is pivotal to appreciating the differences in its manifestation and management.

Keywords: Chronic pain; Culture; Ethnicity; Differences; Disparities

Introduction

Chronic pain remains a widespread and poorly managed problem [1-3]. It is a constant therapeutic challenge and carries far reaching biological, psychological, social and economic ramifications [4-9]. It may confound the assessment, diagnosis, and therapy of coexistent medical and psychiatric diseases [10]. Patients with chronic pain are at heightened risk of developing psychiatric disorders. These include depression, anxiety, personality and somatization disorders as well as

substance dependence and addiction [10-12]. The relevance of psychiatry in the treatment of chronic pain is therefore easily appreciated, recognised by figures such as Freud and Stengel, and echoed by Melzack who stressed the important interactions of the sensory and emotional components of pain [12]. In an animal study looking at the histochemical changes induced by long term neuropathic pain, impairment of the noradrenergic systems similar to that found in depression was evident, which coincided with anxiety-depressive behaviours emphasizing the neuroendocrine link between these conditions. [11].

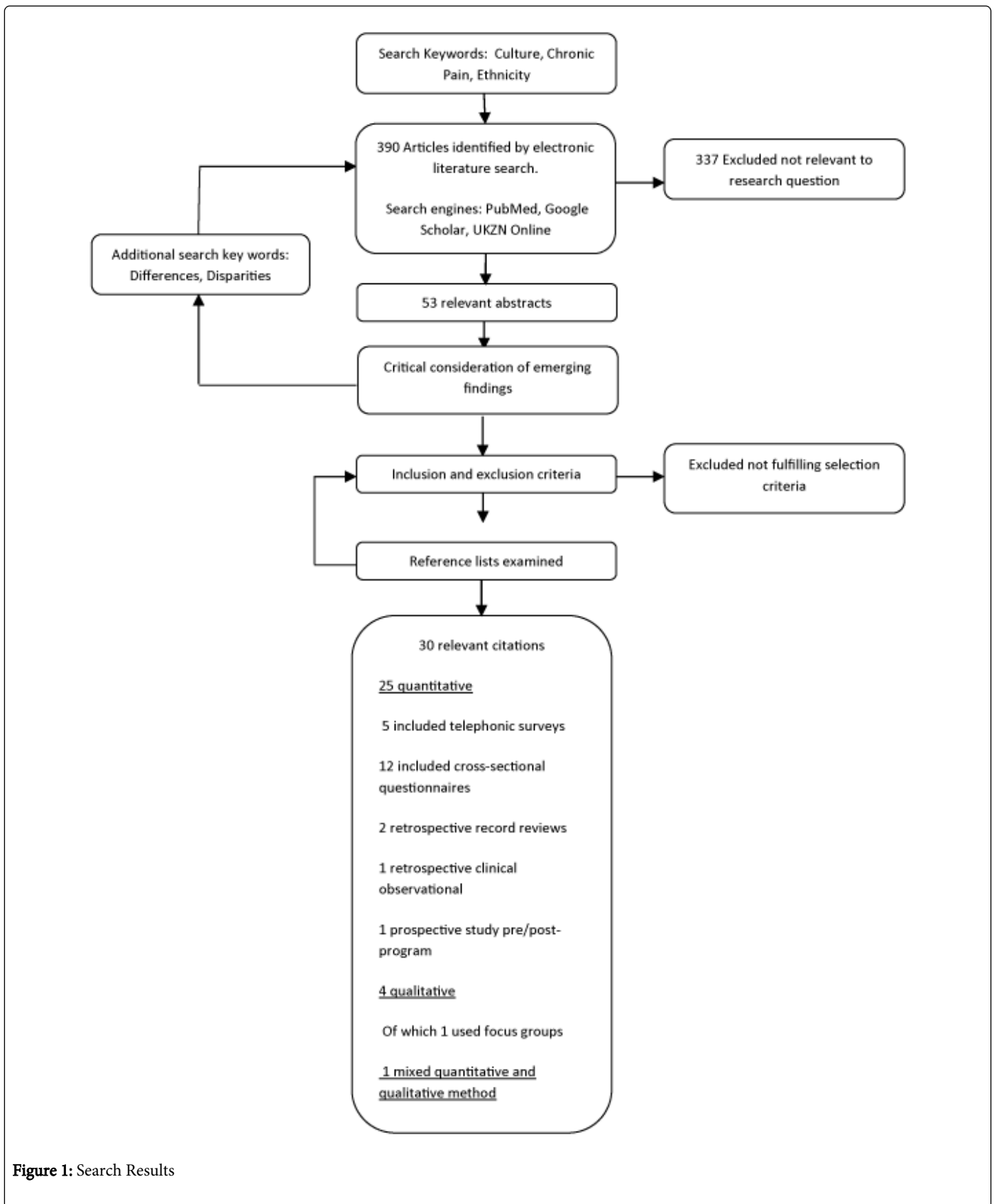


Figure 1: Search Results

It is estimated that long term pain may double the risk of depression with up to half of patients presenting to chronic pain clinics meeting diagnostic criteria, with its presence and severity often carrying greater prognostic value than baseline pain scores or disease activity. Graver implications include higher rates of suicidal ideation. Similarly almost two thirds of patients presenting with depression may complain of physical symptoms and report pain at presentation.

Anxiety symptoms are common and up to 30% of patients may manifest as panic disorder, generalized anxiety disorder, agoraphobia, or post-traumatic stress disorder (PTSD). A higher prevalence of substance dependence and addiction also exists in the chronic pain population adding further to therapeutic challenges. Personality disorders are more common, as well as sleep and somatization disorders [10,12]. Psychiatry therefore holds an important role in the care of these patients with early involvement recommended to optimize management and outcomes.

The subjectivity involved in pain report poses a challenge to clinicians, because a patient's self-report is modified by affective and cognitive components beyond the biomedical aspects of nociception [13]. It may therefore not correlate linearly with objective medical investigations [5,14-16]. Current definitions of pain reflect the evolution of our understanding of pain pathophysiology, from a one dimensional model based on neurophysiological and anatomical principles to a multifaceted process [4,17-19]. These are shaped to a significant degree by an individual's cultural perceptions with evidence to suggest cultural differences present in numerous pain care settings and across different types of pain [17,20,21]. Recommended standard of care for the treatment of chronic pain is hence an interdisciplinary, patient-centered approach in which patients' symptoms are foregrounded [22].

Conceptual Frameworks

'Pain experience' is used conceptually to define the individual's lived subjectivity of pain, encompassing beliefs, meanings and interpretations. Pain experience refers to the meaningful cognitive framework in which an individual experiences the world [23]. Numerous definitions of culture have been proposed and utilized by researchers and theorists in various contexts and from various fields, with little consensus on what is included under the umbrella term of 'culture'. Although perhaps best considered as a 'fluid' concept, culture can refer to a multitude of norms, practices and ideation characteristic of specific groups of people. Hence, culture is pivotal to a sense of individual and group identity and can encompass and/or overlap with one or more characteristics or 'social categories' such as ethnicity, religion, age, gender and language [24]. It follows this observation that cultural identity is likely to be a key mediator and modifier in how people perceive, interpret and cope with pain. Cultural identity is meaningful not just in how suffering and disability are conceptualized, but also in influencing medical decision-making and responses to treatments [5,25]. The construct of 'cultural competency' and healthcare system equity have been a focus of recent research, driven by an agenda of improving healthcare providers' knowledge about cultural factors affecting patient care in order to promote culturally equitable service delivery [26]. This concept is particularly applicable to the local African context, which constitutes a diverse cultural spectrum and where the goals of equitable, accessible and effective healthcare provision are central goals.

A collective review of literature was undertaken to explore the multiplicity of factors that modify the pain experience and the variables that confound the picture of clinical pain. Implications for research and practice are explored with the goal of enriching understanding, improving care and lessening the burden of this debilitating condition.

Materials and Methods

The overall aim was to systematically bring together as much relevant high quality data as possible in order to address the research problem of improving a general understanding of the interaction of culture and chronic pain. A collective literature review (CLR) was utilized as an established tool within evidence-based medicine to provide a comprehensive and replicable examination of current knowledge. The CLR was conducted according to the structured review guidelines of Khan et al. which consisted of a five step systematic sampling and reading of the research literature developed for use in healthcare contexts [27]. A computer-based strategy utilizing the following online search engines was employed: Pubmed/Google Scholar/UKZN online database. The key words used were 'culture', 'chronic pain' and 'ethnicity'. The terms 'disparities' and 'differences' were included later, as these terms emerged several times within the context of the research question, and were therefore added to improve identification of relevant data. From those results, articles from the last 20 years, across three major disciplines were identified by relevance to the research question and key words through the reading of abstracts. Inclusion criteria were local and/or international published peer-reviewed journals of health sciences (medicine, applied psychology and nursing) in English or translated, describing patients with chronic non-malignant pain. Exclusion criteria were open access non-peer-reviewed e-journals, abstracts only, quantitative studies with sample size less than 60, editorials, systematic or other kinds of reviews, dissertations and professional journals as well as articles describing acute pain, post-operative pain, labor pain, dental pain, pediatric pain or oncological pain. A secondary search was thereafter conducted and further relevant studies identified from reference lists of these articles. In order to approach each article in a systematic, uniform way, a data extraction form was devised and implemented [27]. Broad existing categories of patient related, provider related and healthcare system related factors were adopted and subheadings below these greater umbrella headings were used to discuss each area further [5,28].

Results

The results of the search process produced 390 potentially relevant articles. 337 of these were excluded on the basis of title and abstract. The remaining 53 articles were then subjected to the selection criteria and closer scrutiny. The reference lists of the selected articles were examined to sample further articles for selection. The final number of articles for analysis was 30 (Figure 1).

The reviewed data yielded a large number of potential outcomes to examine, ranging from different patient variables, to limitations of healthcare providers and shortcomings of the healthcare system. Accounting for the differences among cultural groups was difficult, given the large number of potential confounding variables. Of note was the lack of literature regarding this topic in the Sub-Saharan African context.

Patient-Related Factors

Expressiveness vs. stoicism

Pain expressiveness encompasses a constellation of pain behaviours that moderate the outward display or manifestation of being in pain. This has been shown to differ across cultures and involves body language as well as verbal communication, emotionality, coping mechanisms, gender role expectations, as well as family and community influences. Stoicism refers to the understated bearing of pain, an attribute which is often anchored in cultural or religious beliefs [29]. The tendency to over or under report pain has significant repercussions for accurate pain assessment and therefore all treatment decisions taken thereafter [6].

Findings from numerous studies support a cultural basis of stoicism. These include studies on various populations across diverse geographical locations, including indigenous South American tribes, the Irish community, 'Old Americans', Indian and Asian populations [1,6,9,20,24].

From the studies found, expressiveness was described in populations such as Hispanic, Italian, Egyptian and African American groups, often when compared to Caucasian populations [24, 30,31]. Several corroborating studies from the USA support that African-American subjects reported higher levels of clinical pain or greater pain-related disability than White subjects. [4, 18,30-35].

A propensity for a stronger affective component associated with African-American identity is described in several articles and might be an important factor in modifying the pain experience [10,18,31,36].

Pain catastrophizing is defined as 'a negative emotional and cognitive response to pain that involves elements of magnification, helplessness, and pessimism' [37]. Numerous studies have begun to look for a predilection of this cognitive style in particular cultural groups. Researchers have associated pain catastrophizing with functional disability, pain severity, depression, the development of fear-avoidance behaviors and non-compliance in chronic pain patients [5,35,38]. Directed psychological assessment should place added impetus on addressing coping skills and affective maladaptions [5].

Some studies found that ethnic differences in pain responses diminished when groups were closely matched on sex, pain site, age, education level, work status and pain duration or variables such as coping, social learning, or attitude [21,34,35]. These findings highlight the need to acknowledge and adequately control for such factors.

Culture-related generational expectations for pain expressiveness appeared to be protective in several studies, where older adults were more likely to develop more effective coping skills and strategies with improved pain-related outcomes and less healthcare provider visits. [7,33,39].

The 'Good Patient'

The perception of the 'cooperative or non-bothersome patient' has a history in medical paternalism of the past and healthcare system disparities. The desirability of the passive patient role is now challenged by greater awareness of patients' rights and autonomy and the observable benefits of active patient engagement such as improved insight, ethical decision making, motivation and compliance with treatment [40]. One ethnic group receiving increasing attention in medical ethics research is the Hispanic ethnic minority in the USA,

with numerous exemplars of culturally influenced health-seeking behaviors, differences in decision-making and the role of religion and faith in decision-making [41].

Meaning attributed to pain

Several cultures seek meaning in pain. An example is the ideation in Hindu culture of karma, which promotes coping through acceptance by the understanding that suffering is not random but a reaction to past indiscretions [29]. Positive acceptance of pain has been found to have a significant association with self-reported quality of life (QOL) among patients with chronic pain [42,43]. Religious practices can also encompass coping strategies, for example, meditation [44].

Historically having endured hardships

It is well described that a history of discrimination has far reaching psychosocial consequences. Beyond the socioeconomic disadvantage, discrimination affects educational opportunities, occupational status and access to care alongside a mind-set of distrust, external locus of control and low expectations of the healthcare system. These ramifications have accumulative detrimental effects on physical health and emotional well-being [7,24]. The detrimental physiological and psychological effects of chronic stress associated with perceived discrimination, as is often faced by ethnic minorities, are linked to deleterious long term effects of sympathetic activation and physiological wear. This extra burden decreases the patients reserve or capacity for coping with pain [45]. The influences of apartheid on the older generations of black South Africans may have such implications.

Distrust/low expectations

Several studies documented negative appraisals of healthcare services by African-Americans compared with Caucasian subjects, with higher pain scores or less perceived control over health and beliefs that culture affects access to pain treatment. [18,28,34]. Other studies have demonstrated a general reluctance in ethnic 'minority groups' in help-seeking and participation in interdisciplinary pain care programs [32,46]. A distrust of the healthcare system and the people who work in it is a clear barrier to efficient, timely and appropriate management, leading to poorer outcomes, increased morbidity and greater burden of disease. [45].

Tendency for using traditional remedies/prayer

'Complementary and Alternative Medicine (CAM) defines a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period [8].

Studies suggest that while CAM represents treatments which may deviate considerably from mainstream medical practice, they are very often a place of refuge for patients in chronic pain desperate for relief [8,30,43]. The use of traditional medicines and techniques has been found to correlate with the strength of cultural ties [47]. A working knowledge of the supposed benefits, side effects and potential drug interactions of CAM are valuable tools for the medical practitioner.

Studies of Hispanic and African-American patients in the USA found these patients were more likely to use home remedies and more likely to rely on prayer than non-Latino Whites [9,18,21,41,48]. In Sub-Saharan Africa, in a 2012 study in Maputo, it was reported that a

large part of the population was still strongly linked to cultural roots and enlisted the services of local traditional healers for treatment of 'bodily and emotional pain' [49]. In the African context, where the consult of ancestors is a common practice before embarking on certain management decisions, this issue of spirituality and acknowledging the role of traditional healers is particularly relevant.

Language barrier and literacy

Effective communication is crucial when assessing something as subjective as pain. [17,28,50] The use of cultural descriptors of pain and the failings of translators can lead to inadequate appreciation of a patient's self-report [38]. Lower socioeconomic status, often linked to poorer education and less literacy and knowledge about one's health all add to disparities. [5,41]. Implications for both clinical assessment and research involve the use of the many existing validated measures of pain constructs. Improper phrasing of questions or scoring systems which are linguistically ambiguous can compromise study results and hamper effective communication, decision-making, or outcome measuring [38]. Patient satisfaction with healthcare provider interactions has been shown to improve with good communication encompassing culturally sensitive measures, adequate translation, active listening and empathy for the patient's concerns and expectations [40].

Pain as a private topic/subject of shame/sign of weakness

In some cultures ill health may be construed as a personal failing or weakness when unable to overcome the condition or fulfil culturally assigned roles in the family or society [40]. Individuals might perceive their outcomes as consequences of their own behaviours [7]. It may be considered a topic to be kept away from spouses and children so as not to appear a burden [43].

Coping mechanisms

Coping can be regarded as 'a response aimed at diminishing the physical, emotional, and psychological burden associated with stressful life events [51]. The observation of greater emotional distress and greater sense of disability among certain ethnic groups may be explained by differing capacity or efficacy for coping. The contrast has been drawn between active and passive coping mechanisms, with African-Americans and Hispanic patients often demonstrating passive coping (praying, hoping, diverting) which can be associated with poorer adjustment to pain, while Caucasians have been observed to ignore pain or to employ active coping self-statements, and to exhibit an internal locus of control [5,18,21].

Identifying and addressing these modifiable processes can potentially interrupt negative feedback loops which serve to reinforce or amplify pain symptoms and disability, enhancing quality of life and reducing emotional burden.

Healthcare provider factors

Interpersonal communication between a patient and doctor is an exercise in social cognition and this encounter is central to accurate pain assessment [5]. 'Social cognition' refers to the way in which group perceptions, attitudes and biases can affect appraisal of social interaction.

The social interaction between patient and provider is subject to the healthcare worker's personal biases and limitations in training and

knowledge [2,4,18,52]. Assessing chronic pain is inherently complex and medical practitioners might be especially vulnerable to psychosocial influences and the tendency toward ethnic stereotyping [15]. This can influence how providers interpret pain complaints, reach assessments and justify decisions. It has been posited that these preconceived beliefs might be used by providers as 'social blueprints' in an attempt (unconscious or not) at mental efficiency. It helps expedite decision-making and response generation, especially in the time-limited and pressurized circumstances in which healthcare providers often find themselves, all the more likely in resource-deprived, developing world settings [50].

Studies suggested that these perceptions might lead to discrepant patient and physician assessments of pain and have repercussions in the dispensing of certain drugs [4,16].

The role of psychological variables such as stereotypical beliefs, prejudices or social cognitive processes has yet to be fully explored in their influence upon pain experience [5]. Doctors also often report inadequate training in pain assessment and management and with strict monitoring over the prescription of scheduled drugs and the fears of medication abuse, dependence and legal repercussions, a conservative approach is often taken [4,50].

Healthcare service factors

Multiple factors play a role regarding 'access to care', including the infrastructure of the society concerned, the primary care setting, referral pathways and (importantly) socioeconomic circumstances of the patients themselves which affect affordability, insurance coverage and transport, influencing rates of care-seeking. Social stratification, ethnic and racial profiling might influence local practices and availability of medications [2,28,46,53]. In the African context, where a large proportion of the population is reliant on public healthcare and reside in rural settings, the deficits in infrastructure regarding access to healthcare and the shortage of health professionals become more clearly apparent.

Discussion

A surge of emerging literature points toward disparities identified in the chronic pain population, centering around the influence of an individual's culture on the chronic pain experience. The growing norm of regarding health as a holistic biopsychosocial entity, brings to the fore the need for culturally competent healthcare providers who can successfully elicit, interpret and manage patients in contexts of transcultural and intracultural diversity [17,25].

The limitations of this review are noted as follows. Firstly, included literature resources were limited to articles accessible via the databases of the University of Kwazulu Natal.

Secondly, inconsistent terminology across studies made comparisons challenging, especially with the interchangeable or overlapping usages of 'culture', 'ethnicity' and 'race' in the chronic pain literature [5]. Despite this lack of uniformity, there was persistent consensus that cultural differences existed, while observing that culture was best conceptualized as a dynamic process. Conceptual clarity was highlighted as an issue to be addressed in future initiatives, as meaningful deductions hinge on consistent and precise use of such constructs, noting that definitions can vary according to research paradigms and methodologies. [45,54] Sampling biases, self-report methods, referral patterns (especially in the setting of specialist pain

centers) and different recruitment strategies limited by the method, language and districts are sources of bias and limitation [53,55].

The majority of current research cited is limited to geographical regions, mostly from the developed world with over-representation of some demographic identities. Pertinent to the author is the lack of research in sub-Saharan Africa, the socio-cultural and political-economic history of which represents a far different context from first world countries like the United States. This limited inclusion of other racial/ethnic groups highlights potential areas for local research. In addition, more research is needed to account for intracultural diversity, acculturated, assimilated or immigrant cultural populations [24,50,53].

Given that culture may be conceptualized as a pattern of knowledge that informs how individuals behave or perceive themselves, issues of gender and gender relations are also pivotal, as well as generational identity.

A positive correlation has been shown between low socioeconomic status (SES) and chronic musculoskeletal pain [25]. It predisposes individuals to having certain jobs that inevitably result in more 'wear and tear', musculoskeletal pain and risk of occupational injuries. SES might also determine education levels, language proficiency, and timely access to appropriate healthcare with regards to transport means [30,31,34].

Education is a central theme in many studies examining inequitable treatment, and applies to the physicians as much to the patients [17]. Physicians need training in the assessment of pain and greater confidence in prescribing stronger analgesics where indicated. Also they should be reflective about their own personal biases and negative stereotyping. Another noteworthy limitation observed in most studies was the lack of controlling for researchers' ethnicity, gender and so on, or in the case of qualitative research, inadequate reflexivity with regards to the researcher's identities [5,45,54].

Regarding implications for research, the merits of clinical studies were often contrasted to laboratory studies. Laboratory studies, usually involving standardized pain stimuli in samples of healthy individuals and are more amenable than chronic pain to experimental research designs [5]. Clinical studies examine patients in the context of stressors that moderate the overall severity of chronic pain, though with the added problem of controlling for multiple variables. Qualitative methods are useful in that they are a detailed exploration into cultural phenomena and patient specific beliefs [1,40]. Quantitative methods are necessary in developing standardized assessment measures. For example, South Africa researchers are currently developing cross-cultural adaptations of the South African Pain Catastrophizing Scale [38,56]. A combination of qualitative and quantitative paradigms together provide the most complete understanding, and should be tailored to the kind of research question. Similarly when weighing up nomothetic or ideographic research strategies or emic or etic perspectives, it is best to consider the stances as complementary rather than competing.

Several research questions arise and remain unanswered. Firstly, what are the implications of culture in the African chronic pain population, with multiple ethnic and cultural denominations being present. There were no articles found that describe cultural influences in pain in the local context. Do similar themes exist? Which cultures exhibit these traits? Are patients of differing ethnic backgrounds to their healthcare providers satisfied with the level of communication, rapport and management? It is clear that the same socioeconomic

hindrances exist but to what extent is less clear. What is the cultural competency of the average medical practitioner? On what aspect do healthcare providers feel most inadequate when treating patients of different cultures? Are Health care providers trained adequately in a biopsychosocial approach to pain assessment and management?

As evidenced in the literature surveyed, differences and disparities in pain and its clinical assessment and management can be introduced at patient, healthcare provider and healthcare system level [1,20]. Cultural considerations are integral in formulating a therapeutic approach and long term management goals in the rehabilitation of chronic pain patients, enabling the healthcare provider to recommend the most culturally accepted pain control method that coincides with the patient's belief system, encouraging compliance and promoting better self-care [43].

Conclusion

Chronic pain is a common comorbidity in psychiatric patients. The relationship is not necessarily a causal one, but the strong prevalence solidifies the role of the psychiatric practitioner in the chronic pain management team. The role of the psychiatrist encompasses thorough individualised evaluation of the patient's personal affective or cognitive constitution, diagnosis of psychiatric disorders, and appropriate prescription of neurotropic agents [10,12].

Chronic pain is a multidimensional, composite experience shaped by interweaving and co-influencing biological and psychosocial factors. Understanding the culmination of these moderating factors is pivotal to appreciating the differences in its manifestation and management [50]. Acknowledgement of the cultural aspects of pain should not undermine the importance of somatic pain mechanisms, but encourage healthcare providers to enrich and broaden their understanding of pain and appreciate its impact as a biopsychosocial experience. To overlook the pervasive influence of culture on beliefs, attitudes and behavioural practices is to disregard a wealth of insight into one's patients' thoughts and motivations which could greatly add to clinical practice [24]. In our local context an improved understanding of the interaction of culture and chronic pain can promote healthcare delivery that is culture-appropriate and resource efficient, with the potential to improve help-seeking behavior, compliance and response to treatment. It should be emphasized though that to stereotype patients from cultural groups is just as inappropriate, as intracultural variation exists. Culture must be acknowledged as a dynamic, flexible system. Health care providers must be cognizant of the general cultural beliefs as well as be sensitive to the unique pain experience of the individual. Cultural competence should provide an adequate grounding upon which to approach and discuss issues. Further research into cultural differences in pain appears warranted with the hope of eliciting the mechanisms that underlie these differences. It is the hope of the reviewer that this CLR will increase awareness of the importance of cultural sensitivity in our local setting and facilitate further discussion and help to strive toward promoting equitable management for all patients with chronic pain.

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