RESEARCH ARTICLE

# Analysis of Chronic Pain Management in Canada and South Asia

**Jesse Sidhu**, McMaster University; **Gurmit Singh**, McMaster University

**ABSTRACT**

Chronic pain is a complicated condition that involves biological, sociological and psychological aspects. Management of chronic pain vastly differs between high-income and low- and middle-income countries due to variances in pain education, drug accessibility, governmental policies, culture and infrastructure. Therefore, this literature review analyzed chronic pain management in Canada and specific South Asian countries, including India, Pakistan, Sri Lanka and Bangladesh, to examine these differences, as well as what sociocultural and infrastructural factors contribute to them. In Canada, chronic pain still presents a major obstacle for society due to opioid misuse and mortality, patient beliefs, and poor pain education in professional health science programs. However, Canada's approach to pain assessment and management is more standardized through the regular use of pain scales and treatment guides and less hindered when compared to the South Asian countries examined. These South Asian countries face different barriers to providing effective pain management. Cultural beliefs, physician education, infrequent use of standardized pain assessment tools and healthcare infrastructure all present as barriers to effective pain management. Therefore, in Canada and the four South Asian countries examined, significance should be placed on the field of pain management via education, funding, and legislative changes to increase accessibility to suitable treatments.

## INTRODUCTION

Chronic pain is pain that is experienced for longer than the expected recovery time, usually lasting longer than three to six months, and involves biopsychosocial aspects that complicate its management [1]. The term chronic pain encompasses many conditions including cancer pain, neuropathic pain and musculoskeletal pain [1]. About 20-25% of the global population experiences chronic pain and it can severely hinder a person's daily activities, promote depressive symptoms and impact relationships with others [1,2].

General global guidelines for chronic pain management stem from the World Health Organization's (WHO) analgesic ladder that provides stepwise recommendations for handling pain management [3]. Steps include use of non-opioid drugs, weak opioids and strong opioids as pain intensity increases [4].

Management of chronic pain vastly differs between high-income and low- and middle-income countries due to discrepancies in pain education, drug accessibility, culture, governmental policies and infrastructure [5]. Therefore, this paper analyzed differences in chronic pain management between Canada and the South Asian countries studied.

## METHODOLOGY

Chronic pain management practices were researched in Canada and the following South Asian countries: India, Pakistan, Bangladesh and Sri Lanka, to analyze differences between these locations and the factors affecting pain practices. These factors included policies, sociocultural values, economies, and healthcare systems. Differences in chronic pain management were explored through a literature review of available research using Google Scholar, PubMed and Web of Science databases. Documents that were evaluated included review articles (34), primary research articles (20), reports (10), government documents (2), books (1), and textbooks (1) for a total of 68 documents.

## RESULTS

Canada based its chronic pain management guidelines on the WHO's analgesic ladder [6–8]. These guidelines are provided by professional agencies including the Registered Nurses' Association of Ontario and the Canadian Pain Society (CPS) [7,8]. Recommendations emphasize pain assessments using diagnostic procedures and pain scales, and personalizing treatments based on assessment results and detailed medical histories [8]. The Canadian Chronic Pain Study II found that primary care physicians were regularly implementing standard pain assessments and followed the treatment guidelines as outlined by the CPS [9]. Additionally, Canada prescribes the second most opioids in the world [6]. A study in Ontario found that opioid prescriptions increased by 29% between 1991 and 2007 [10]. Furthermore, since the 1980s, opioid sales to pharmacies and hospitals has increased by 3000% [11]. The increase in opioid usage can lead to dependence and addiction [12]. This is a contributing factor of opioid misuse in Canada as evidenced by the 2861 opioid related deaths and approximately 16 people who were hospitalized daily for overdoses in 2016 [11].

The South Asian countries examined use the WHO's analgesic ladder as guidance on chronic pain management [13–16]. However, although professional agencies, such as the Indian Society for the Study of Pain, exist to recommend pain management based on international guidelines, implementing them is challenging [14,17,18]. In India, the Narcotic Drugs and Psychotropic Substances Act limits storage and distribution of opioids. Amendments in 2014 have still not increased opioid supply to medical establishments in many states [17]. Similarly, in Pakistan, there are also legislative constraints as there are no legal paths to obtaining fentanyl and methadone which are commonly used in cancer pain treatments [18]. In Bangladesh, due to the scarcity of recommended opioids, pethidine is still widely used for chronic pain treatments even though it was removed from the WHO's recommended list because of its toxicities [16].

The pain assessment process was not as regularly implemented in these South Asian countries [17,19]. In Pakistan, studies discovered that healthcare workers irregularly noted pain details and pain scales were seldom used [19]. The pain assessment process was found to be more sporadic compared to the standardization observed in high-income countries [19]. In India, inadequate pain assessment was found to be one of the most typical reasons for deficient pain management [17].

Patient beliefs in Canada and the South Asian countries studied can lead to reluctance in seeking and using opioids due to fears of addiction [9,17,20,21]. Furthermore, in South Asia, common cultures include Hinduism and Islam which can influence pain management [20,22]. Some beliefs in Hinduism include enduring pain and suffering without medication as a possible means for spiritual growth [23]. Islamic beliefs can prevent the consumption of opioids because of its sedative properties which can affect a patient's ability to recite prayers [20].

In both Canada and the South Asian countries examined, there was inadequate pain education in the medical curriculum. In Canada, veterinarian programs incorporated 87 hours of pain education relative to 16 hours which is provided in the medical curriculum [24]. Similarly, in India, a survey found that 60% of physicians had less than 10 hours of pain education within their curriculum [25].

Finally, South Asian countries have insufficient

funding and healthcare infrastructure for adequate pain management as only a small percentage of their Gross Domestic Product (GDP) is spent on healthcare. In South Asian countries, approximately 3-4% of their GDP is spent on healthcare, in comparison to Canada where 11% is used [26,27]. This is one of the contributing factors to the inaccessibility of opioids in these countries [17].

## DISCUSSION

Chronic pain management practices differ widely between Canada and the South Asian countries studied. In Canada, chronic pain management is more standardized through the regular use of pain assessments, opioid availability and tailored treatment plans when compared to South Asian countries. However, unhindered access to opioids can lead to the misuse and mortality that is observed in Canada. Conversely, restrictive laws, opioid supply issues and inexperience surrounding the prescription of opioids in the South Asian countries studied can foster the undertreatment of chronic pain [16–18]. Additionally, inadequate use of standard pain assessments can impede accurate diagnoses and suitable treatments. Therefore, when utilizing opioids for the management of chronic pain, there needs to be a balance between access to opioids and appropriate education for physicians and patients.

In Canada, changes to physician education can include increased time allocated to pain education in the medical curriculum. For example, having sufficient knowledge on optimal dosing strategies and other non-opioid or non-pharmacological treatments such as cognitive behavioral therapy and physical activity may assist in the reduction of unnecessary opioid prescriptions [6,8,17]. Additionally, improved patient education on the risks of opioid use can also help prevent misuse. In the South Asian countries studied, some changes that may enhance pain education for physicians can include promoting the use of standardized pain assessments, prioritizing pain management and the benefits of opioids for effective pain relief [17].

Furthermore, opioid distribution and supply policies need to be re-examined, so patients have sufficient access. Finally, funding should be allocated to healthcare infrastructure especially in rural areas so that patients have access to pain clinics and treatments.

## CONCLUSION

South Asia and Canada face numerous challenges in their chronic pain management. Canada's approach is more standardized when compared to South Asia. However, both systems can stand to improve chronic pain management practices. Therefore, recommendations to help improve chronic pain alleviation include placing more emphasis on the field of pain management through education, funding, and legislative changes to inform physicians and patients about chronic pain and increasing accessibility to appropriate treatments. Chronic pain is a debilitating ailment, therefore it is important to provide optimal pain relief.

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