Topical Review

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What do we know about Indigenous Peoples with low back pain around the world? A topical review

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Abstract

Background – Low back pain (LBP) represents a worldwide burden with rising disability, especially in low- and middle-income countries. Indigenous Peoples are exposed to many risk factors for LBP and seem to have overall worse health and higher mortality compared to non-Indigenous. This article aims to provide a topical overview of LBP in Indigenous Peoples.

Methods – A comprehensive search was done using the keywords "Indigenous" and "back pain." Secondly, a cross-reference search of the citations list of the included articles was conducted.

Results – LBP is a prevalent, disabling health condition among Indigenous Peoples that impacts activities of daily living, emotional well-being, and cultural identity. Indigenous Peoples face numerous and unique barriers to obtain Western health care. LBP in Indigenous Peoples is partly iatrogenic and available health care lacks a culturally secure setting. In combination with racism and discrimination by health care providers, this leads to miscommunication, frustration, and poor outcome in Indigenous patients around the world.

Conclusion – Contextual considerations and interpretation of findings within the appropriate cultural context are needed in future research and treatment of LBP in Indigenous Peoples. However, our literature analysis exhibits disproportionate representation with the scarcity of studies of Indigenous Peoples of Asia and Africa. Addressing this gap in the literature could provide significant scientific value. Indigenous Peoples should not be forgotten in reducing the global burden for LBP.

Keywords: Indigenous Peoples, low back pain, prevalence, health care, culture, beliefs

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1 Introduction

Low back pain (LBP) is a debilitating health condition prevalent in all ages and geographical areas and affects most people at least once in their life [1]. In 2016, The Global Burden of Disease study estimated that more than half a billion people worldwide suffered from LBP, making it the leading cause of years lived with disability [2]. Lifetime prevalence of LBP ranges from 49 to 70% with a high recurrence rate of 85% [2]. LBP places a heavy burden on the individual, society, and health care systems in terms of medical costs, functional disability, and workdays lost [1]. Globally, LBP-related disability is rising with the most pronounced increases in low- and middle-income countries (LMICs) [1]. Furthermore, consequences of LBP in LMICs are more severe due to healthcare systems that focus more on infectious diseases. Moreover, they are not accommodated to cope with the growing burden of more chronic health issues as LBP [1].

Although the impact of LBP between high-income countries and LMICs is different, several universal risk factors for LBP have been identified such as poor mental

health, previous episodes of LBP, and chronic co-morbid conditions like diabetes [3]. In addition, physical risk factors such as heavy lifting, repetitive twisting, and bending have also been reported [4]. These risk factors are prevalent among Indigenous Peoples due to traditional agriculture and fishing in rural areas or physical demanding manual labor jobs in urban areas [5,6].

There are about 476 million Indigenous Peoples living worldwide and they account for most of the world's cultural diversity [7,8]. Historically, many Indigenous Peoples have suffered from the inhumane processes of colonization and its consequences. Even today, many Indigenous Peoples are often socially marginalized and impoverished facing threats to their very existence [7,8].

Research has shown that not all people within societies (including the Indigenous) receive the same opportunities for health care [9–11]. Access to health care is strongly influenced by financial status because economic factors prevail in many healthcare systems around the world [9,11,12]. Indigenous Peoples are estimated to make up about one-third of the world's poorest people living in rural areas [7,8]. International studies provided insights into public health, revealing disparities for Indigenous communities in relation to the general population [6]. Indigenous Peoples have overall worse health, higher mortality, lower literacy, and higher incidence of poverty compared to non-Indigenous communities [6].

In 2018, *The Lancet* published a call for action about the rising burden of LBP worldwide, partly attributable to poor health care [1,13,14]. Within this series, the growing burden in LMIC has been addressed. However, a comprehensive overview about LBP in Indigenous Peoples is lacking in the existing literature. Therefore, the aim of this article was to give a topical review of current knowledge of LBP in Indigenous Peoples. A narrative approach was used to obtain a broad perspective and identify potential gaps on the topic in the available literature not only to stimulate future research but also to initiate action.

2 Methods

2.1 Literature review

First, a comprehensive search was conducted in July 2022 using three electronic databases (Web of Science, PubMed, and SCOPUS). The main keywords used in this search were "Indigenous" and "back pain". Synonyms of the main keywords, including endemic and local Indigenous groups, were also searched. Second, a cross-reference search of the bibliographies of the selected articles was conducted.

Screening of titles and abstracts was done for all identified literature. If the title of the study included 'LBP' and 'Indigenous' (or synonyms), the study was included. If Indigenous (or synonym) and broader terms were used in the title such as rheumatic diseases or (back) pain were present in the title or abstract, the full text was screened to check if relevant information was present about LBP. If so, the study was included. Other inclusion criteria were published in peer-reviewed journals, adult population, and full text available in English language. Letters, commentaries, unpublished manuscripts, dissertations, government reports, conference proceedings, meeting abstracts, and lecturers were excluded.

Definition of the term 'Indigenous' is a contested subject and outside the scope of this article [15]. Due to the great diversity of the Indigenous Peoples, agreeing on a single definition is likely not realistic. Furthermore, political, social, and legal perspectives have an influence on national level in defining Indigenous Peoples [15]. Depending on these perspectives, some communities do not want to be recognized as Indigenous Peoples. For this review, all included studies were checked on their definition of "Indigenous," having at least six out of the seven characteristics identified by the United Nations Permanent Forum on Indigenous Issues [16]. If not or unclear, they were excluded.

Figure 1 provides a flow-chart of the study selection and an overview of all the included studies, keywords, methods, and country or region can be found in Table 1. Manually two references with respect to Sami Indigenous Peoples were added bringing the total to 29 included papers.

3 Results

3.1 Prevalence of LBP in Indigenous Peoples

Prevalence of LBP in different Indigenous communities is summarized in Table 2. Point prevalence for LBP ranged from 10% in three tribal villages in India to 72% in Aboriginals in Australia [17–22]. Seven-day prevalence of LBP was reported for 12 different Indigenous Peoples ranging between 1.5 and 45.7% [12,21,23–27].

3.2 Impact of LBP

In Australia, Aboriginals experienced long-term LBP but reported no disability due to LBP [19]. Honeyman et al. concluded that LBP was not a health issue and Aboriginals were buffered from (chronic) LBP due to their cultural beliefs [19]. However, more recent qualitative research has rejected this

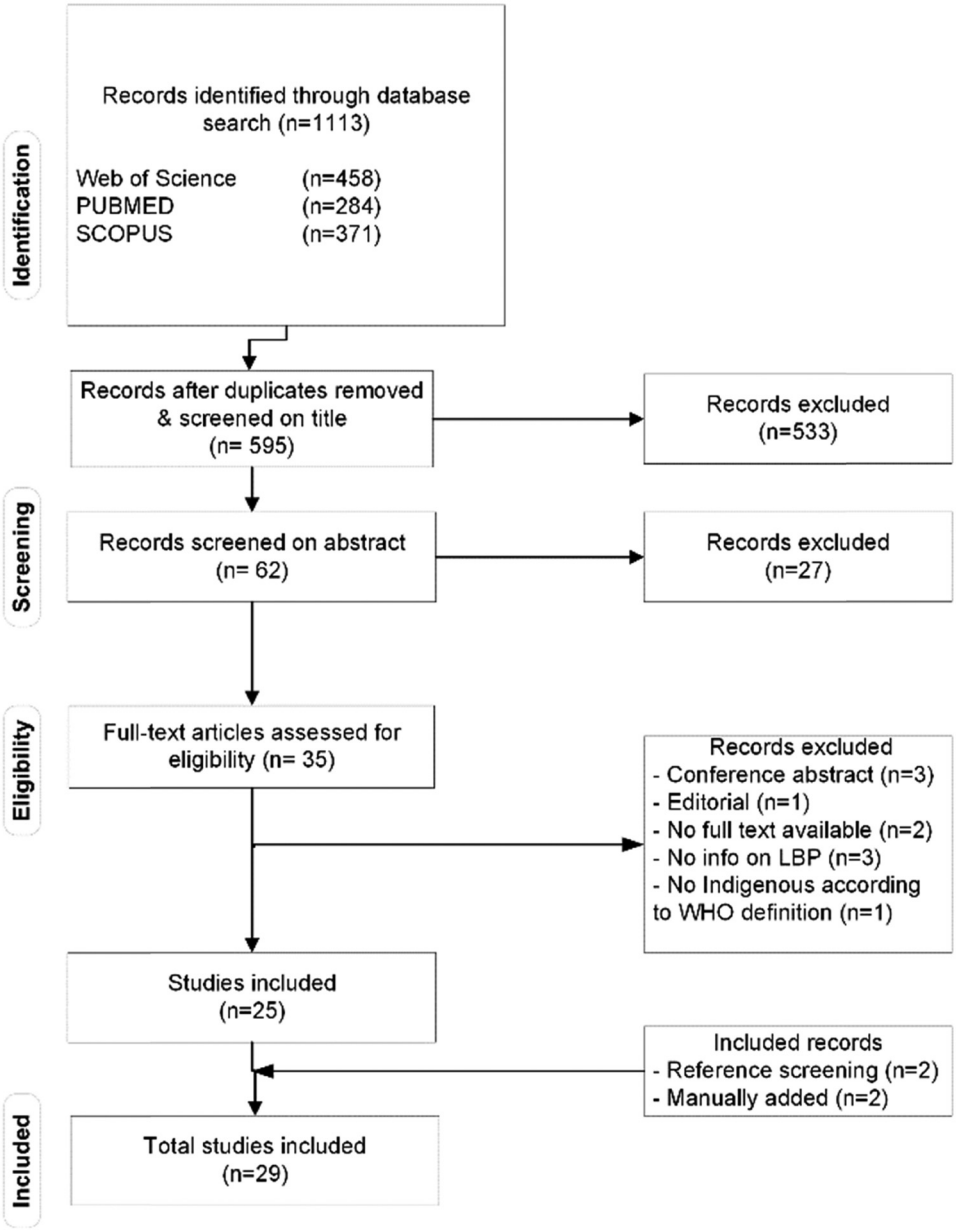

Figure 1: Flow chart of study selection.

concept concluding that in Aboriginals, LBP is a highly disabling health concern, negatively affecting activities of daily living (ADL) and emotional and cultural well-being [28].

In three tribal villages in India, 95% of the participants reported having difficulty to perform at least one or more ADL due to LBP using a self-developed questionnaire [20]. Participants continued their ADL (such as field work and household activities), even though these activities aggravated their pain because they could not afford absence from work [20]. Similar findings were reported in Indigenous communities in Brazil where LBP had an impact on mood, sleep, and ADL [17]. Daily pain was somewhat accepted as part of the traditional Indigenous way of living and Indigenous Peoples minimized their pain [17,20].

3.3 Western health care in Indigenous Peoples

3.3.1 Pain and Western healthcare perception

3.3.1.1 Cultural beliefs

Pain is a universal, complex experience impacted by a wide variety of factors including beliefs, attitudes, and

Table 1: Overview of all included articles in the literature review

Year	Authors	Article title	Keywords	Methodology	Country or region
1996	Honeyman, P. T.	Effects of culture on back pain in Australian Aboriginals	• Back pain • Australian Aboriginals • Culture • Epidemiology	Mixed method	Australia
2004	Vindigni, D.	Prevalence of musculoskeletal conditions, associated pain and disability and the barriers to managing these conditions in a rural, Australian Aboriginal community.	• Aborigine • Australia • Indigenous • Musculoskeletal	Quantitative/ COPCORD	Australia
2005	Vindigni, D.	Low back pain risk factors in a large rural Australian Aboriginal community. An opportunity for managing co-morbidities?	• No key words	Quantitative	Australia
2003	Daerga, L.	Work-related musculoskeletal pain among reindeer herding Sami in Sweden – a pilot study on causes and prevention	• Reindeer herders • Sami • Musculoskeletal pain • Prospective study • Prevention • Etiology	Quantitative	Europe
2006	Deyo, R. A.	Back pain prevalence and Visit rates: Estimates from U.S. national surveys, 2002	• Prevalence • Back pain • Neck pain • Trends • Physician visits	Quantitative	United States
2008	Sjölander, P.	Musculoskeletal symptoms and perceived work strain among reindeer herders in Sweden	• Decision latitude • Hand pain • Low back pain • Neck pain • Reindeer husbandry • Sami • Work demand	Quantitative	Sweden
2011	Jimenez, N.	A review of the experience, Epidemiology, and management of pain among American Indian, Alaska Native, and Aboriginal Canadian Peoples	• American Indians • Alaska Natives • Pain • Disparities	Review	United States/ Canada
2012	Lin, I.B.	"I am absolutely shattered": The impact of chronic low back pain on Australian Aboriginal people	• No key words	Qualitative	Australia
2013	Lin, I. B.	Disabling chronic low back pain as an iatrogenic disorder: a qualitative study in Aboriginal Australians	• No key words	Qualitative	Australia
2014	Lin, I. B.	"I can sit and talk to her": Aboriginal people, chronic low back pain and healthcare practitioner communication	• Population groups • Back pain • Communication	Qualitative	Australia
2015	Strong, J.	Quiet about pain: Experiences of Aboriginal people in two rural communities	• Aboriginal Health • Communication • General Indigenous health • Indigenous health education • Pain management	Qualitative	Australia
2015	Peláez-Ballestas, I.	Prevalence and factors associated with musculoskeletal disorders and rheumatic diseases in indigenous Maya-Yucateco people: a cross-sectional community-based study	• COPCORD • Indigenous community • Maya-Yucateco • Prevalence • Rheumatic diseases	Quantitative/ COPCORD	Mexico

(Continued)

Table 1: *Continued*

Year	Authors	Article title	Keywords	Methodology	Country or region
2015	Julián-Santiago, F.	Epidemiology of rheumatic diseases in Mixtec and Chontal Indigenous communities in Mexico: a cross-sectional community-based study	• COPCORD • Indigenous population • Mexico • Oaxaca • Prevalence • Rheumatic diseases	Quantitative/ COPCORD	Mexico
2016	Granados, Y.	Prevalence of musculoskeletal disorders and rheumatic disease in the Warao, Kari'ña, and Chaima indigenous populations of Monagas State, Venezuela	• Indigenous populations • Musculoskeletal diseases • Prevalence • Rheumatic diseases • Venezuela	Quantitative/ COPCORD	Venezuela
2016	Quintana, R.	Prevalence of musculoskeletal disorders and rheumatic diseases in the indigenous Qom population of Rosario, Argentina	• COPCORD methodology • Indigenous people • Latin America • Qom • Rheumatic diseases	Quantitative/ COPCORD	Argentina
2016	Incayawar, M.	Exploring pain in the Andes-learning from the Quichua (Inca) people experience	• Pain assessment • Cross-cultural comparison • Beliefs • South American Amerind • Indigenous medicine • Cultural anthropology • Qichua	Qualitative	Ecuador
2016	Del Río Nájera, D.	Prevalence of rheumatic diseases in Raramuri people in Chihuahua, Mexico: a community-based study	• COPCORD • Indigenous people • Mexico • Musculoskeletal pain • Rheumatic disease	Quantitative/ COPCORD	Mexico
2017	Lin, I. B.	Addressing disparities in low back pain care by developing culturally appropriate information for Aboriginal Australians: “My back on track, my future”	• Communication • Education • Evidence-Based • Self-Management • Indigenous	Qualitative	Australia
2017	Lin I. B.	Unmet Needs of Aboriginal Australians with Musculoskeletal Pain: A Mixed-Method Systematic Review.	• No key words	Qualitative	Australia
2018	Peláez-Ballestas, I.	Epidemiology and socioeconomic impact of the rheumatic diseases on indigenous people: an invisible syndemic public health problem	• No key words	Quantitative	Venezuela and Mexico
2019	Arthur, L.	A systematic review of western medicine’s understanding of pain experience, expression, assessment, and management for Australian Aboriginal and Torres Strait Islander Peoples	• Australia, • Aboriginal and Torres Strait Islander peoples • Cultural safety	Systematic Review	Australia
2020	Strozzi, A.	Syndemic and syndemogenesis of low back pain in Latin-American population: a network and cluster analysis	• Latin-American population • Low back pain • Network Analysis • Syndemic • Syndemogenesis	Quantitative	Latin-America
2020	Juárez, V.	Prevalence of musculoskeletal disorders and rheumatic diseases in an Argentinean indigenous Wichi community	• COPCORD methodology • Indigenous peoples • Prevalence • Rheumatic diseases	Quantitative/ COPCORD	Argentina

(Continued)

Table 1: *Continued*

Year	Authors	Article title	Keywords	Methodology	Country or region
2020	Mullerpatan, R.	Burden of spine among rural and tribal population in Raigad District of Maharashtra State of India	• Wichi • Spine pain • Prevalence • Epidemiology • Indian rural tribal • Cross-sectional survey • Formal group discussion	Mixed method	India
2020	Guevara, S. V.	Prevalence of Rheumatic Diseases and Quality of Life in the Saraguro Indigenous People, Ecuador: A Cross-sectional Community-Based Study	• COPCORD • Ecuador • Quality of Life • Rheumatic diseases • Saraguro indigenous people	Quantitative/ COPCORD	Ecuador
2021	Barbosa de Moraes, E.	Pain Management of Amazon Indigenous Peoples: A Community-Based Study	• Indigenous peoples • Traditional medicine • Pain management • Public health • Vulnerable population • Transcultural nursing	Quantitative	Brazil
2021	Ho-A-Tham, N.	Low back pain prevalence, beliefs and treatment-seeking behaviour in multi-ethnic Suriname	• Prevalence • Low back pain • Beliefs • Treatment seeking • Ethnicity • COPCORD • Suriname	Quantitative/ COPCORD	Suriname
2022	Minaur, N.	Rheumatic disease in an Australian Aboriginal community in North Queensland, Australia. A WHO-ILAR COPCORD survey	• Prevalence • Rheumatic diseases • Aboriginal Australian • COPCORD	Quantitative/ COPCORD	Australia
2022	Ottesen, T. D.	The Unmet Need for Orthopedic Services among American Indian and Alaska Native Communities in the United States	• No Key words	Review	United States

behavior. Orhan et al. concluded that various populations and ethnicities present differences in coping strategies, beliefs, and pain attitudes [29]. Aboriginals do not make their LBP publicly known due to cultural beliefs [28]. Vindigni et al. found that 33% of Aboriginals did not seek medical treatment for musculoskeletal conditions (of which LBP was the most prevalent condition) as they 'learnt to live with it' [21]. Studies done in the Quichuas in the Andes and Indigenous communities in the Amazon found that ignoring the pain was the most favored coping strategy [17,30].

Worldwide evidence shows LBP is partly iatrogenic and negative beliefs about LBP from health care practitioners (HCP) (e.g., LBP is caused by weak core) can harm patients [13]. Lin et al. found that biomedical, negative belief about LBP and its future consequences were present among Aboriginals in Australia due to interactions with Western HCP [31]. These negative beliefs have a negative, long-lasting impact on disability due to LBP [14]. This finding may be a consequence of greater exposure to biomedical beliefs, possibly in combination with erosion of cultural beliefs as previous research showed that LBP was not viewed as a health issue in Aboriginals [19].

3.3.1.2 Mistrust in Western healthcare

Mistrust of Western health care was seen in Indigenous Peoples in both the Americas and Australia [9,21,31,32]. Lack of trust in modern health care was caused by previous negative care experiences including stigmatization by the HCP, lack of empowerment in treatment decision-making, and perception that HCP fail to acknowledge their cultural identity and experience to understand pain [33,34].

Table 2: Prevalence of LBP in different Indigenous communities

Indigenous communities	Prevalence LBP (%)	Prevalence type[1]	Country	Reference paper
Europe				
Sami	45.7	7D	Sweden	Sjölander, 2008
Sami	45.2	7D	Sweden	Daerga, 2003
North America				
Yucatec Maya	10.0	7D–C	Mexico	Peláez-Ballestas, 2018
Mixteca Alta	16.7	7D–C	Mexico	Peláez-Ballestas, 2018
Chontal	10.4	7D–C	Mexico	Peláez-Ballestas, 2018
Raramuri	1.5	7D–C	Mexico	Peláez-Ballestas, 2018
American Indians/Alaska Native	35.0	3M	United States	Deyo, 2006
South America				
Qom (Tobas)	19.8	7D–C	Argentina	Peláez-Ballestas, 2018
Wichi	13.1	7D–C	Argentina	Julián-Santiago, 2020
Warao	13.2	7D–C	Venezuela	Peláez-Ballestas, 2018
Karina	7.2	7D–C	Venezuela	Peláez-Ballestas, 2018
Chaima	9.8	7D–C	Venezuela	Peláez-Ballestas, 2018
Saraguro	9.3	7D–C	Ecuador	Guevara, 2020
Rural indigenous Brazil	45.3	PP	Brazil	Barbosa de Moraes, 2021
Indigenous and Creole	13.3	PP	Suriname	Ho-A-Tham, 2021
Oceania				
Aboriginals	41.0	PP	Australia	Honeyman et al., 1996
Aboriginals	72.0	PP	Australia	Vindigni, 2005
Aboriginals	39.0	7D	Australia	Vindigni, 2004
Aboriginals	4.3	7D–C	Australia	Minaur, 2022
Asia				
3 tribal villages in India	10.0	PP	India	Mullerpatan, 2020

[1]7D–C = 7-day prevalence using COPCORD protocol; 7D = 7-day prevalence; PP = point prevalence; 3M = 3-month prevalence.

3.3.2 Access to Western health care

Limited access to adequate Western health care due to financial constraints is a worldwide problem affecting almost half of the world's population, especially many Indigenous communities [10,35]. In this review, the barriers for Indigenous Peoples with LBP were discussed along the journey of an Indigenous individual to Western health care as presented in Figure 2.

When an Indigenous person decides to seek Western medical care, many barriers for accessing health care exist [9,36]. Not in all countries a universal health care system is present. In South America, only 3% of the people reported having a complete social insurance, i.e., insurance that covers all necessary health-related expenses [12]. Furthermore, the cost of treatment is not affordable for many Indigenous Peoples [20,32,37].

Difficulty accessing adequate Western health care due to the geographical location of the communities is an important problem reported in multiple studies [9,10,20,21,32,37,38]. The most reported barriers were lack of (public) transport, high travel costs, and long travel time to adequate health care. For Indigenous individuals living in very remote villages in the Amazon, this barrier is obvious and hard to overcome [17]. Interestingly, also urban communities such as American Natives living 3 h from a hospital by car reported similar barriers [36]. Most of these natives live in poverty, without means of transportation to clinical appointments as public transport and ambulances are not available on all reservations [9]. Similar findings were reported by studies in Mexico, Venezuela, and India [20,32,37,39].

3.3.3 Western healthcare experience

When Indigenous managed to access Western health care for their LBP, the experience was often negative [31,32,34]. Communication with HCP is difficult as a limited number of HCP speak an Indigenous language, resulting in discrimination against patients who only speak an Indigenous language [17,32]. According to Aboriginals, poor communication by the HCP is one of the biggest factors contributing to inadequate care for LBP [33]. Indigenous Peoples reported having difficulties making themselves understood toward the HCP, even though they are fluent in English [33]. Information provided by the HCP was often unclear. Moreover

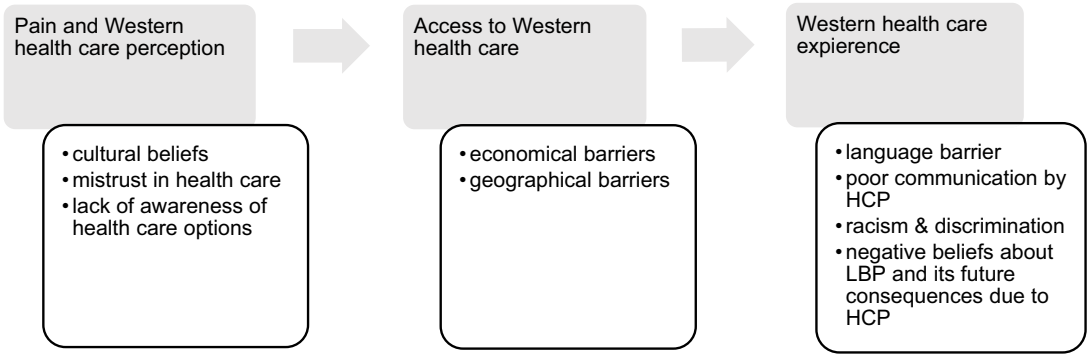

Figure 2: Western health care in Indigenous Peoples.

Aboriginals reported being too embarrassed to ask for clarification (including medical jargon) [33]. Similar findings were reported in South America [5,17,32,40]. Commonly used clinical tools such as abstract scales are not all applicable to Indigenous patients [5,17,36,41]. For example, Indigenous Peoples express difficulties in reducing their pain intensity to a numerical scale [36,42]. Furthermore, negative stereotypes and racial views were present in HCP toward Indigenous patients [9,32,33,36].

4 Discussion

LBP is estimated to have a point prevalence of about 7.5% worldwide [2]. All five studies in our review reporting on point prevalence found higher prevalence rates compared to the global average [17–21].

Research on Indigenous populations and their experience with LBP is limited. Furthermore, the literature suffers from a disproportional representation of Indigenous communities. Specifically, about 40% of all articles were conducted in Australia, while they represent only 3% of the world's Indigenous Peoples [39]. By contrast, only one study from Asia and no studies from Africa were included, while it is estimated that about 75% of the world's Indigenous Peoples live in Asia and many Indigenous communities are present in Africa [43]. The recognition of Indigenous Peoples in Asia and Africa has been a complex and contentious issue influenced by social, economic, and political factors [15]. Empirical research and concerted efforts are still needed to address this issue. One of the limitations of this study is that all conclusions are mostly drawn from Indigenous Peoples in the Americas and Australia. Nonetheless, this review has identified a clear gap in research on these underrepresented Indigenous communities that could offer great scientific value if addressed.

This review highlights the need for more contextual considerations in the future for research and treatment of LBP in Indigenous Peoples. Not all measurement tools, treatment options, and methodologies used are applicable in Indigenous Peoples [28,36,42]. Both treatment and research approaches should be sensitive to the unique cultural, social, and economic context. Findings should be interpreted within the appropriate cultural context.

First, the use of Indigenous identity in studies often does not go beyond labeling based on ethnicity without further analysis of the psychosocial, economic, and cultural factors that may influence LBP outcomes. Considering the significant role of these factors in the prevalence and risk factors for LBP, using Indigenous Identity as a proxy variable could provide valuable insights.

Second, quantitative questionnaires lack cultural validity, and many have abstract scales that are hard to interpret for many Indigenous Peoples [5,17,36,41,42]. This limitation is particularly evident in this review when examining disability in Indigenous populations. LBP burden in Indigenous Peoples, even though quantitative questionnaires were not able to detect this previously [19,28]. Many Indigenous Peoples reported that they had no choice but to continue their ADL due to the socio-economic situation, possibly resulting in under representation of the true impact of LBP [17,20,28]. Disability may not carry the same meaning or even be a consideration in some Indigenous Peoples [28]. In 2011, Jimenez et al. made a recommendation for the development of culturally appropriate measurement tools as they identified the challenges with utilizing quantitative methods in Indigenous Peoples [36]. Only the WHO International League of Associations of Rheumatology Community Oriented Program for Control of Rheumatic Diseases protocol has done some in-depth research on cultural validity and adapted their questionnaire which has been used in some studies [5,32,37,40,42]. However, the authors of this article state that this development of more culturally appropriate measurement tools for LBP is a

necessity and possesses substantial scientific value in quantitative research in Indigenous Peoples. Furthermore, some tools could prove to be useful in objectifying improvement in the treatment of LBP as well.

Alternatively, Lin et al. suggested that qualitative methods within a culturally rigorous framework could be more suitable to assess the impact of LBP [28]. Qualitative methods have more close engagement with Indigenous Peoples and attempt to understand the data through the perspective of Indigenous cultural lens if done correctly [28].

Third, a culturally adapted and safe setting in health care for Indigenous Peoples is frequently lacking and communication of the HCP is often poor, leading to miscommunications and negative health experience in Indigenous Peoples [31–34]. Worldwide, a gap exists between current evidence and intervention for LBP, even in high-income countries. Overuse of imaging for diagnostics, (opioid) medications, and surgery for treatment are a major problem as they are in conflict with current guidelines [14,44].

Exposure to HCP with a biomedical approach can have negative consequences for (Indigenous) patients as LBP is partly iatrogenic [31]. Current guidelines recommend that HCP should have an active approach focusing on psychosocial factors, education, and improving function to help patients with LBP [14]. Good communication and understanding between HCP and patients are cornerstones in the management of LBP and have an important influence on the outcome of the treatment [14]. Indigenous individuals with LBP need to be able to discuss their pain and associated factors in a safe and culturally appropriate setting [34,45,46]. Within healthcare systems, a culturally adapted and safe setting for Indigenous Peoples is frequently lacking and communication of the HCP is often poor with discrimination and racism being present around the world [9,32,36]. An HCP presented with an Indigenous patient often needs a way to overcome mistrust in health care systems and avoid miscommunications. Attention to language use as well as implementing a cultural form of conversation (e.g., 'yarning' in Aboriginal culture) could be beneficial [33,47]. This could help to build a relationship between HCP and their patients, which is an important factor in treatment satisfaction for Indigenous. Towle et al. suggested taking the time to listen to the patient and knowledge of the history of Indigenous Peoples can also enhance the communication [48].

Indigenous leaders and communities globally have emphasized the importance of training HCP in culturally safe care for Indigenous Peoples. In the past, these programs have been successful in mitigating racism and raising awareness [46,49,50]. However, more legislations and guidelines need to be implemented around the world to bring structural changes [51]. Despite some countries having white papers that stipulate equal accessible health care for all and legal entitlement for Indigenous patients to use their traditional language in healthcare interactions, many challenges to equal culturally safe care still exist [52].

Other initiatives such as development of culturally appropriate information for Aboriginals with LBP in line with the current guidelines could be beneficial [53]. As results seem promising, this could strengthen positive beliefs about LBP and reduce the need for access to physical and Western health care. The authors suggest that more similar initiatives should be taken in providing culturally adapted information on LBP management to Indigenous Peoples worldwide.

5 Conclusions

LBP is a burden among Indigenous Peoples impacting different aspects of their lives including their cultural identity. Obtaining Western healthcare presents unique challenges for Indigenous Peoples. Quality of health care is often unacceptable due to poor communication by HCP, ignorance of their patients' culture, racism, and discrimination. While certain healthcare systems are actively striving for greater inclusivity for Indigenous Peoples, a considerable journey lies ahead.

The current literature lacks proportional representation of Indigenous Peoples, indicating a significant gap in the literature. Increased recognition, collaboration, and engagement with these underrepresented Indigenous Peoples are necessary to address this gap. Doing so has the potential to provide valuable scientific insights into these Indigenous Peoples and contribute to improving their health and well-being. It is time to act!

This article emphasizes the importance of contextual factors in both research and treatment in Indigenous Peoples due to their unique cultural identity. Many widely used measurement tools, treatment options, and methodologies lack cultural validity and are not applicable in Indigenous Peoples. The development of culturally valid measurement tools has important scientific merit and is essential for the advancements of research in Indigenous Peoples.

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