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Opinion paper

Rethinking "Evidence" in Traditional Medicine "Integration"

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ABSTRACT

This paper explores the concept of integration of traditional medicine through a multidisciplinary approach that combines medical humanities and pharmaceutical sciences. While it aligns with the World Health Organization's (WHO) objective of fostering a harmonious and functional coexistence between conventional medicine and other therapeutic practices to ensure optimal patient care, this paper critically examines the underlying rationale of the WHO's strategy for achieving this integration. This logic is best illustrated by two of the central concepts that structure the WHO's discourse on T&CM[1]: Integration and Evidence-Based. Both inform research-funding decisions, most notably in the cooperation for development sector, and have a decisive influence on public health policies. In most parts of the world, the necessity for an evidence-based integration of T&CM functions like a mantra, rarely questioned by researchers within the medical or the social sciences, or by governmental and non-governmental actors. Consequently, the present paper problematizes the "evidence-based integration" of "traditional" medicines by challenging some of the key assumptions underpinning these concepts. In doing so, it aims to identify and highlight several elements that may serve as guides on the way to ethically and epistemologically more sound frameworks for the co-existence of modern and traditional medicines.

1. Introduction

Since the Alma Ata Declaration of 1978, which famously introduced the concept of 'Health for All', the World Health Organization (WHO) has advocated for the integration of traditional and complementary medicines (T&CM) into the primary healthcare systems of its member states. This call, which has been further nuanced over the past decades, is fundamentally based on two considerations: the lack of access to modern medical facilities and technologies in many parts of the world on the one hand, and the significant number of people in almost all WHO member states who have recourse to T&CM despite the accessibility of conventional medicine [1,2].

In view of these empirical realities, and conscious of the varying characteristics and roles played by T&CM in different geographical and cultural contexts, the WHO, as well as other transnational organizations such as UNESCO [3], insist on the necessity of a harmonious articulation of T&CM and conventional medicine to ensure optimal patient care. At the same time, with the widespread acceptance of the ideal of evidence-based medicine (EBM) and its tools of proof-production—particularly randomized controlled trials (RCTs) as the gold standard [4]—from the late 1990s onward, a consensus has emerged that this harmony can and should be achieved through processes of 'evidence-based integration' [2].

We certainly do not question the necessity and usefulness of granting as much access as possible to modern medical care as well as to other effective therapeutic options to all populations of the world. However, it is precisely because of this conviction that we believe it is high time to point out that the modalities adopted in the well-intentioned search for harmony are underscored by presuppositions that require nuanced and critical attention. These presuppositions are of an at once epistemological (concerning theory of knowledge) and ontological (concerning conceptions of reality) nature (Table 1).

Consequently, the objective of this paper is to challenge some of the key assumptions that support the concept of 'evidence-based integration' of traditional medicines. By doing so, we will be able to identify and emphasize elements that may contribute to developing frameworks

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[1] The nomenclature has changed in the WHO's documents and elsewhere over time from CAM to TCAM and the advantages and disadvantages have been largely discussed (Brosnan et al., 2018). More recently the acronym TCIM=Traditional, complementary and Integrative Medicine, has been proposed and become the most common one. Since this article centrally problematizes the notion of (I)ntegration and puts into question the biomedical model as the gold standard, we use T&CM for the time-being in order to avoid any potential misunderstandings.

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Table 1
Definitions of the key concepts discussed in this article.

Epistemology/ epistemological	Epistemology is a branch of philosophy that concerns the theory of knowledge. Concretely it analyses how a particular theory of knowledge underlies, guides, and influences scientific research and its outcomes.
Ontology/ontological	Ontology is a branch of philosophy that is concerned with the nature of reality itself. Paired with a constructivist approach it allows to describe and analyze the ways by which certain practices render certain phenomena more or less consistent (or even real).
Epistemic injustice	Epistemic injustice is a term first coined by Miranda Fricker in her 2007 book. She therein distinguishes between two kinds of epistemic injustice, 1. testimonial and 2. hermeneutic injustice that she defines as follows: "*Testimonial injustice occurs when prejudice causes a hearer to give a deflated level of credibility to a speaker's word ; hermeneutical injustice occurs at a prior stage, when a gap in collective interpretative resources puts someone at an unfair disadvantage when it comes to making sense of their (…) experience*" [5]
Etymology	Etymology is the study of the origin of words and of their changing meanings over time.
Colonization of Knowledge	This term has been proposed (e.g. by [6]) in order to refer to practices of knowledge production that are largely infused by and at the same time reproduce colonial violences, both on material and epistemological levels.
Pragmatism	Pragmatism is a philosophical tradition that 1. stands for an empirical method that forbids the exclusion or *a priori* disqualification of any experiences in as far as they are made by someone. It 2. stands for a theory of truth whose main criterion are the effects or consequences a truth produces rather the nits correspondence with a pre-existing reality. 3. And consequently, Pragmatism accounts for the fact that the truths we produce participate in transforming reality rather than simply representing it. (see: [7])
Ecology of Practices	The concept of an 'ecology of practices' is a proposition formulated by the philosopher of science Isabelle Stengers in her Magnus Opum *Cosmopolitics* [8]. This proposition opposes processes of unjustified disqualification of practices whose exigencies do not comply with majoritarian and universal models e.g. of evidence concerning their validity. Stengers proposes that in order to put an end to hegemonic arguments (e.g. authorized by science), it is necessary to create an ecology in which each practice can be valued and evaluated in accordance with the exigencies it has defined for itself and not with respect to abstract, general principles.
Two-eyed seeing	Two-eyed seeing, a notion derived from the indigenous term *Etuaptmumk*, is a concept that has been introduced by the Canadian thinker Albert D. Marshall, member of the Eskasoni First Nation [9]. Two-eyed seeing consists in viewing the world "*from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together*" [10]. It is a tool that should allow thinkers and practitioners from different traditions and value-universes to see eye to eye.

for the coexistence of modern and traditional medicines that are at once more realistic and ethically and epistemologically more sound.

2. Problematic aspects of "evidence-based integration"

Evidence-based medicine relies on methodical employment of up-to-date research findings to steer clinical decisions. It emphasizes the importance of integrating individual clinical expertise, patient values, and preferences with the most robust evidence available, including meta-analyses and randomized controlled trials (RCTs), to shape healthcare practices [4,11]. By claiming the preeminence of RCTs, EBM has implemented a new epistemological hierarchy [12]: emphasizing statistically relatable clinical research and relativizing the necessity for causal explanations that were formerly fundamental to modern medicine. Paradoxically, approved medications may not always yield anticipated outcomes in routine clinical settings [13,14].

This discrepancy, often attributed to individual differences in how drugs are processed by the body or responded to, is referred to as the efficacy-effectiveness gap [15]. Here, "efficacy" describes how well a drug works under controlled trial conditions, while "effectiveness" characterizes its performance in real-world clinical practice [13]. The recognition that many standard drugs do not uniformly benefit all patients has given rise to the concept of personalized or precision medicine [16]. This approach aims to tailor treatment strategies to individual patients, enhancing treatment success and minimizing adverse effects. At first glance, one might get the impression that the principle of personalized medicine is not a novel invention of biomedicine but has been a cornerstone in various T&CM practices for centuries. This impression is, however, misleading, since personalized medicine ultimately complicates rather than challenges the gold standard, as it continues to privilege probabilistic clinical data at the expense of those concerned with causal mechanisms. It has furthermore been pointed out that some T&CM practices such as Chinese herbal medicine or acupuncture – both practices with a longstanding written tradition – 'resist' standardized evidence-based methodologies better than others [17]. It has, however, also been shown that these specific medical practices have historically been transformed radically before complying with biomedical exigencies [18].

T&CM practices, however, for which 'supernatural' elements have remained central – be it the evocation of spiritual beings, or the transformation of a remedy's effectiveness e.g. through certain ritual actions continue to raise questions about how highly standardized evidence-based methodologies – even if they include qualitative aspects of care [19] could capture their respective modes of effectiveness. In other words, the insistence on evidence-based integration leverages the standardized methodologies and stringent criteria of EBM, which is designed for single, isolated variables, and has significant limitations when applied to numerous T&CM due to their nature.

Indeed, these T&CM often fail to prove their efficacy when subjected to EBM forms of evaluation because their effectiveness largely depends on their respective theories of what a body, a therapeutic intervention, as well as what disease and health are [20,21]. For example, phytotherapy is more prone to respond to the exigencies of RCTs [22] than Ayurveda. That is because the construction of patient cohort in phytotherapy is closer to biomedical practice whereas within Ayurveda's logic patients with the 'same' disease (according to the biomedical model) do not necessarily require the same treatment [23].

However, innovative research methodologies, such as RCTs for individualized herbal treatment [24] pragmatic trials [25] and adaptive designs [26], offer potential pathways to overcome these hurdles. Embracing an evidence-based approach to traditional medicine necessitates a paradigm shift in how we conceive of and evaluate medical evidence and who is authorized to define what counts as evidence. This shift involves recognizing the value of diverse types of evidence, including observational studies, qualitative research, and patient-reported outcomes. It also requires a reevaluation of the hierarchical evidence model that privileges certain forms of evidence over others.

The idea of integration, etymologically (Table 1) meaning to renew, to render undamaged, but also designating the action or process of combining two or more things in an effective way, is unfortunately rarely taken seriously in all its complexity. It becomes clear that the term "integration" is far from being innocent or purely technical. A look into the French Larousse renders this suspicion more palpable. It defines "integration" as process where "someone or some group is no longer a stranger to a community but is assimilated to it". The unidirectional signification of the term, where one minoritarian element is subjected/ assimilated/changed to/by the majoritarian, remains dominant. The

concept of "integration" in the context we interrogate in this paper often implies a unidirectional process where T&CM, or rather some 'assimilable' aspects of it, are introduced into the framework of conventional biomedicine [27]. More precisely, integration processes tend to involve only those aspects or elements of traditional healing practices that can be evaluated or proven according to the biomedical regime, thereby omitting a series of other elements that are of central importance for these practices, their practitioners, and their users [23].

This perspective overlooks the historical and ongoing contributions of indigenous knowledge systems to modern medicine, on the one hand. Many conventional medications are derived from bioprospecting or biopiracy, often without adequate recognition or compensation for the indigenous communities that provided the original knowledge [28,29]. The economic gains from such exploitation disproportionately benefit Western companies, leaving the original knowledge holders marginalized and uncompensated [28,30]. This scenario has fostered a pronounced and justified sense of skepticism among traditional healers about sharing their knowledge [31,32].

Indeed, despite several international initiatives aimed at protecting indigenous knowledge within the framework of intellectual property rights such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) adopted by the UN General Assembly in 2007, the International Convention on Biological Diversity (CBD), the Traditional Knowledge Digital Database (TKDL) in India, and the Nagoya Protocol on Access to Genetic Resources and Benefit-Sharing, which are intended to safeguard traditional medicinal knowledge and compensate indigenous communities, these efforts remain insufficient [32]. For example, the Nagoya Protocol relies heavily on national implementation through laws and regulations, and its success is contingent on the effectiveness of these national measures, which are often inconsistent or inadequate [33]. On the other hand, the insistence on the integration of T&CM into biomedicine often neglects the reciprocal benefits and the possibility for biomedicine to also learn from respective T&CM practitioners/theories, which could imply radical interrogations on both sides.

This oversight perpetuates a clear-cut hierarchy between scientific and nonscientific knowledge in the sense of an epistemological rupture [34]. It thereby perpetuates the long history of systematic "epistemic injustice" (Table 1) [5], an injustice linked to the uneven values that are attributed to different types of knowledge. Deflating the "level of credibility" [5][2] of healing practices that do not co-respond to the 'modern' epistemological regime and its criteria in the name of Western science and rationality can very well be understood as an instance of this type of injustice. In the context of traditional medicines this injustice is, as already mentioned, indeed often paired with forms of explicit or implicit neocolonial extractivism of local knowledges and know-hows that have been referred to as processes of the 'colonization of knowledge' (Table 1) [6].

Indeed, the continued and uninterrogated use of both terms (evidence-based and integration) with respect to T&CM assumes the necessity of developing supposedly 'underdeveloped' countries and their respective therapeutic cultures. It implicitly advocates the necessity of progress that is at once inseparable from the assumption that other cultures are lagging behind and from the neoliberal ideal of economic growth [35]. Today, it is largely recognized that these ideals can no longer be unquestioningly defended. Post- and decolonial studies have shown that considering other cultures as less advanced is a morally and epistemologically inadequate stance, while economic growth as a sustainable aim has become more than questionable in a world whose resources are depleted beyond their limits and is facing ever more dramatic ecological crises.[3] Despite this, these logics still largely inform research funding decisions, most notably in the cooperation-for-development sector, and thus have a decisive influence on public policies [36,37].

3. Towards a "multidimensional, multi-disciplinary, inclusive, and culturally appropriate evidence base"?

The WHO's most recent official document concerning T&CM, the Gujarat Declaration of August 2023, recognizes this challenge and calls for the evolution of "inclusive and multi-disciplinary research methods to capture research, not only on specific active ingredients for pharmaceutical applications, but also on complex, holistic and individualized TCIM and Indigenous knowledges and lifestyle approaches, thereby creating a multidimensional, multi-disciplinary, inclusive, and culturally appropriate evidence base, while maintaining the highest level of scientific rigor and ethical standards."[38]. This may be a sign of the growing recognition by the WHO of insights from medical anthropology as well as post- and decolonial Science Studies that show how the disqualification of non-scientific practices continues, despite the exploitation and mainstream incorporation of some of their basic practices. However, this kind of statement, with its continued insistence on evidence-based and scientific rigor, does not give any hint as to how T&CM practices and insights might enter the processes of reciprocal learning [39].

As anthropologists of medicine have pointed out, the effects of the "evidence-based integration" project frequently produce another form of additional, local epistemic violence. Indeed, the denomination "traditional medicine practitioner" and the institutionalization of associations of this type of practitioners is a relatively recent invention, created in 1997 by the Organization of African Unity (OUA), as an attempt to promote an "integrative medicine" [40]. In other words, the existence of these practitioners and their organizations must be seen as an effect (or artifact) of the respective ways in which countries of the Global South attempt to implement the WHO's recommendations towards the integration, and with it the standardization and regulation, of traditional medicine. Accordingly, the notion "traditional medicine practitioner" designates what might be referred to as a hybrid category, a third class of professionals somewhere and somehow placed in between traditional healers and biomedical personnel, bringing about a form of medical neotraditionalism [41,42].

It is a matter of fact that to gain recognition – by the WHO but also by local governments' health ministries – this neotraditionalism has the tendency to excessively foreground material elements of ancient local healing practices such as plant concoctions, or their pharmaceutically improved and standardized versions. While other elements, such as relational aspects, rituals, negotiations with ancestors, spirits etc. are relegated to the background. Such hierarchies contribute to systematic epistemic injustice, where the knowledge and practices of T&CM are undervalued or dismissed because they do not meet the criteria set by conventional biomedicine. Again, this approach fails to recognize the validity and effectiveness of T&CM practices within their own epistemological frameworks. Instead of fostering a collaborative and reciprocal environment, this approach reinforces a dichotomy that privileges one form of knowledge over another.

[2] Fricker writes about "deflating" a speaker's credibility in the first place (testimonial injustice). She however also addresses more collective and societal dimensions of 'epistemic injustice' that she refers to as "hermeneutical injustice". We are therefore convinced that her analytical tools can be transposed to systems of knowledge production, including the medical realm, without betraying her approach.

[3] Today the WHO launches projects on health policies and climate change, partially linking them to questions related to T&CM (https://www.who.int/news/item/07-11-2024-cop16-connects-biodiversity-and-health-with-traditional-medicine-as-a-bridge). This might not be totally contradictory to the call for 'evidence-based integration', but it demands a re-evaluation of the rarely problematized conceptual, ontological, epistemological, and political presuppositions that underscore the continued insistence on the necessity of subjecting 'other' practices to western rationalities.

Consequently, and that is the supplementary epistemic violence, local healers who do not have the means (financially, geographically etc.) to adhere to official traditional medicine associations, are now disqualified by their colleagues who claim to practice a modernized, less humbug-prone, more rational version of indigenous healing practices. However, vital cultural practices like rituals and mystical healing persist despite being ignored by official regulations. Research in countries like Madagascar [43] and DR Congo [44] shows these practices continue discreetly, outside institutional oversight. When authorities dismiss traditional healers who do not comply with their agendas of modernization, they indirectly create unfortunate cycles of disqualification. The effect is that these political decisions eventually force people to choose between medical systems, thereby potentially hindering rather than enhancing patient care, both in the Global South and with respect to T&CM practices in the Global North.

4. Decolonizing health?

The inquiry these realities call for is, first, that for an adequate attitude towards healing practices that are alien to us, and the diverse entities they employ, a tactful attitude. Such an attitude would be in congruence with the complexity of the respective practices and no longer perpetuate colonial gestures. Secondly, we need to ask which conceptual strategies are required to fairly represent practices outside the framework of modern epistemology, without disqualifying them.

In this context, adopting a radically pragmatist approach appears promising. Pragmatism (Table 1) can be defined as a branch of philosophy that cultivates an art of consequences. Indeed, pragmatism's foremost criterion of truth – as defined by one of its founders, William James – concerns the consequences of knowledge. That is, something is true if and only if it makes a (positive) difference for those who are concerned or affected by it.

However, EBM's focus on efficacy and the pragmatist art of consequences differ crucially even though both put the question of effects center-stage. In a pragmatist world – in stark contrast to the modernist regime of the statistical production of evidence – the truth of a statement, a concept, or a theory is not evaluated with respect to whether this knowledge corresponds with a pre-existing, static reality, but rather with respect to the question of whether this or that knowledge manages not to exclude any experience made by someone, somewhere. Consequently, a pragmatist approach to adequate modalities of coexistence between T&CM and modern healthcare systems would involve recognizing the validity of various forms of knowledge and the practical outcomes of different therapeutic practices for their users [7,45].

Pragmatism opposes any premature disqualification of practices simply because they cannot (yet) be scientifically explained. In other words, from such a perspective, if there are practitioners who know how to bring about healing with their techniques, they cannot be disqualified a priori, even if we cannot explain their success within our habitual logic. The pragmatist obligation consists in closely exploring and accounting for the concrete infrastructures and techniques that allow for producing therapeutic effects [46]. If such an effect is experienced, our theories of nature, the body, of disease and health as well as our experimental designs for evidence production have the obligation to change in order to account for the empirical data even if it appears improbable. If we take this stance seriously, however, we are forced to develop a mode of thinking, that allows for very different, distinct logics, truth and value criteria to coexist.

The philosopher of science, Isabelle Stengers, introduced the concept of an "ecology of practices" (Table 1) [8] to think through these issues. The task of such an ecology consists, according to Stengers, in developing concepts, modes of description and theoretical instruments that make it possible to consider even seemingly contradictory practices as equally valuable or valid insofar as they are considered and experienced as true, i.e. effective, by their respective practitioners and users. To realize such an ecology of practices, we must first understand the internal dynamics of each practice, including its methods, obligations, and conditions for success. Only then can we explore the potential connections, contrasts, and shared aspects among various therapeutic approaches.

In a similar vein, the Canadian thinkers Marshall and Marshall, members of the Eskasoni First Nation [9] have insisted on the crucial importance of cultivating what they call "two eyed seeing" (Table 1), a notion derived from the indigenous term Etuaptmumk, notably with respect to healing practices. Two-eyed seeing consists in viewing the world "from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together" [10]. Their approach has not only inspired physicians (e.g. [47]) to think and practice medicine with a particular attention to this double vision, but also scholars in other fields, e.g. geography [10,48].

With the realization that we are today in a situation that makes the invention of possible modes of fruitful articulation between different medical approaches politically, ethically and epistemologically, an urgent task, we must rethink how evidence or proof are produced. This may require developing a new vocabulary that values both scientific evidence and experiential knowledge from practitioners and patients and allows them to co-construct criteria for what counts as therapeutic evidence. In other words, who is to say what evidence should be and for what practice is the question we would like to submit for open discussion. What seems certain to us is that in order to bridge the gap between EBM and T&CM, innovative research methodologies and modes of two-eyed problematization that integrate decolonial reflections from the social sciences and philosophy, are absolutely paramount [49–51]. Developing new evidential devices must involve incorporating the perspectives of local practitioners and rethinking the criteria for what should count as evidence in the context of the respective T&CM in question. A reevaluation of the concepts of "evidence-based" and "integration" and a pragmatist approach that recognizes the value of diverse types of knowledge and experience and fosters an ecology of practices, a two- or more-eyed approach to health and disease promises more equitable frameworks for further research and might allow us to move towards decolonized health research and clinical practice.

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During the preparation of this work the authors used DeepL and ChatGPT in order to verify English grammar and spelling. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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Amandine Nachtergael: Writing – review & editing, Writing – original draft, Funding acquisition, Conceptualization. **Katrin Solhdju:** Writing – review & editing, Writing – original draft, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

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References

[1] C.S. Mutombo, S.A. Bakari, V.N. Ntabaza, A. Nachtergael, J.B.S. Lumbu, P. Duez, J. B. Kahumba, Perceptions and use of traditional African medicine in Lubumbashi, Haut-Katanga province (DR Congo): a cross-sectional study, PLoS. One 17 (2022) 0276325, https://doi.org/10.1371/journal.pone.0276325.
[2] World Health Organization (WHO), WHO Traditional Medicine strategy: 2014-2023, World Health Organization, 2013. who.int/publications-detail-redirect/9789241506096, Accessed June 25, 2025.
[3] Comité international de bioéthique, Rapport du CIB sur les systèmes de la médecine traditionnelle et leurs implications éthiques (document de programme et de réunion No. SHS/EGC/IBC-19/12/3 REV.), UNESCO, Paris, France, 2012.
[4] D.L. Sackett, Evidence-based medicine. What it is and what it isn't, Br. Med. J. 321 (1996) 71.
[5] M. Fricker. Epistemic Injustice: Power and the Ethics of Knowing, Oxford University Press, 2007, https://doi.org/10.1093/acprof:oso/9780198237907.001.0001.
[6] S. Boumediene, La colonisation du savoir. Une histoire des plantes médicinales du « Nouveau Monde », 2016, pp. 1492–1750. ⟨halshs-01999007⟩.
[7] W. James. Pragmatism : A New Name for Some Old Ways of Thinking. Longmans, Green, and co., New York, 1907.
[8] I. Stengers, Cosmopolitiques, Empêcheurs de penser en rond, 2022.
[9] C. Bartlett, M. Marshall, A. Marshall, Two-eyed seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing, J. Environ. Stud. Sci. 2 (2012) 331–340, https://doi.org/10.1007/s13412-012-0086-8.
[10] L. Moorman, J. Evanovitch, T. Muliaina, Envisioning indigenized geography: a two-eyed seeing approach, J. Geogr. High. Educ. 45 (2) (2021) 201–220, https://doi.org/10.1080/03098265.2021.1872060.
[11] M. Tringale, G. Stephen, A.M. Boylan, C. Heneghan, Integrating patient values and preferences in healthcare: a systematic review of qualitative evidence, BMJ Open. 12 (11) (2022) e067268, https://doi.org/10.1136/bmjopen-2022-067268.
[12] S. Timmermans, M. Berg. The Gold standard: the Challenge of Evidence-Based Medicine, Temple University Press, 2010. https://muse.jhu.edu/book/9430.
[13] H.G. Eichler, E. Abadie, A. Breckenridge, Bridging the efficacy–effectiveness gap: a regulator's perspective on addressing variability of drug response, Nat. Rev. Drug Discov. 10 (2011) 495–506, https://doi.org/10.1038/nrd3501.
[14] T. Misu, C.M. Kortepeter, M.A. Muñoz, E. Wu, G.J. Dal Pan, An evaluation of "Drug Ineffective" postmarketing reports in drug safety surveillance, Drugs-real world outcomes 5 (2018) 91–99, https://doi.org/10.1007/s40801-018-0131-3.
[15] P. Friesen, Mesmer, the placebo effect, and the efficacy paradox: lessons for evidence-based medicine and complementary and alternative medicine, Crit. Public Health 29 (2019) 435–447, https://doi.org/10.1080/09581596.2019.1597967.
[16] F.R. Vogenberg, C. Isaacson Barash, M. Pursel, Pers. Med., P T 35 (2010) 560–576.
[17] M. Wang, Z. Wang, J. Zhou, W. Sun, Y. Wang, M. Han, H. Yang, W.J. Liu, Y. Wang, Effects of traditional Chinese herbal medicine in patients with diabetic kidney disease: study protocol for a randomized controlled trial, Trials 19 (1) (2018) 38, https://doi.org/10.1186/s13063-018-2749-6.
[18] R. Guilloux, De L'exotique Au politique: La Réception De L'acupuncture Extrême-Orientale Dans Le Système De Santé Français (XVIIe-XXe Siècles), PhD thesis, Lyon 2, (2006).
[19] Cochrane Qualitative & Implementation Methods Group & Campbell Qualitative Evidence Synthesis Working Group. Cochrane-Campbell Handbook for Qualitative Evidence Synthesis. Cochrane, 2026. https://www.cochrane.org/authors/handbooks-and-manuals/cochrane-campbell-handbook-qualitative-evidence-synthesis.
[20] C. Brosnan, P. Vuolanto, J.A.B. Danell, Introduction: reconceptualising complementary and alternative medicine as knowledge production and social transformation, in: C. Brosnan, P. Vuolanto, JA. Danell (Eds.), Complementary and Alternative Medicine. Health, Technology and Society, Palgrave Macmillan, Cham, 2018.
[21] A.F. Long, Outcome measurement in complementary and alternative medicine: unpicking the effects, J. Altern. Complement. Med. 8 (2002) 777–786, https://doi.org/10.1089/10755530260511793.
[22] R. Fürst, I. Zündorf, Evidence-based phytotherapy in Europe: where do we stand? Planta Med. 81 (2015) 962–967.
[23] M. Bode, U. PayyaPPalliMana, Evidence based traditional medicine: for whom and to what end? eJ. Indian Med. 6 (1) (2013) 1–20.
[24] D.E. Furst, M.M. Venkatraman, B.K. Swamy, M. McGann, C. Booth-LaForce, P. R. Manohar, R. Sarin, A. Mahapatra, P.K. Kumar, Well controlled, double-blind, placebo-controlled trials of classical ayurvedic treatment are possible in rheumatoid arthritis, Ann. Rheum. Dis. 70 (2) (2011) 392–393, https://doi.org/10.1136/ard.2010.136226.
[25] N.A. Patsopoulos, A pragmatic view on pragmatic trials, Dialogues. Clin. Neurosci. 13 (2) (2011) 217–224, https://doi.org/10.31887/DCNS.2011.13.2/npatsopoulos.
[26] P. Pallmann, A.W. Bedding, B. Choodari-Oskooei, M. Dimairo, L. Flight, L. V. Hampson, J. Holmes, A.P. Mander, L. Odondi, M.R. Sydes, S.S. Villar, J.M. S. Wason, C.J. Weir, G.M. Wheeler, C. Yap, T. Jaki, Adaptive designs in clinical trials: why use them, and how to run and report them, BMC Med., 16 (1) (2018) 29, https://doi.org/10.1186/s12916-018-1017-7.
[27] N. Ijaz, What is traditional, complementary and integrative medicine: an operational typology, Available at SSRN, 2024, https://ssrn.com/abstract=4564463.
[28] T. Efferth, M. Banerjee, M.S. Abu-Darwish, S. Abdelfatah, M. Böckers, D. Bhakta-Guha, V. Bolzani, S. Daak, Ö.L. Demirezer, M. Dawood, M. Efferth, H.R. El-Seedi, N. Fischer, H.J. Greten, S. Hamdoun, C. Hong, M. Horneber, O. Kadioglu, H. E. Khalid, S.A. Khalid, N.W. Paul, Biopiracy versus one-World medicine-from colonial relicts to global collaborative concepts, Phytomedicine 53 (2019) 319–331, https://doi.org/10.1016/j.phymed.2018.06.007.
[29] D.J. Newman, G.M. Cragg, Natural products as sources of new drugs over the nearly four decades from 01/1981 to 09/2019, J. Nat. Prod. 83 (2020) 770–803, https://doi.org/10.1021/acs.jnatprod.9b01285.
[30] D. Dörr, Biopiracy and the right to self-determination of indigenous peoples, Phytomedicine 53 (2019) 308–312, https://doi.org/10.1016/j.phymed.2018.10.019.
[31] C. Hayden, When nature goes public: the making and unmaking of bioprospecting in Mexico. When nature goes public: the making and unmaking of bioprospecting in Mexico, When Nature Goes Public. Princeton University Press. (2003) Hayden: When nature goes public: The making and unmaking... - Google Scholar, Princeton University Press, 2003.
[32] M. Heinrich, A. Hesketh, 25 years after the `Rio Convention'–lessons learned in the context of sustainable development and protecting indigenous and local knowledge, Phytomed.: int. j. phytother. phytopharm. 53 (2019) 332–343, https://doi.org/10.1016/j.phymed.2018.04.061.
[33] F. Rabitz, Biopiracy after the Nagoya Protocol: problem structure, regime design and implementation challenges, Braz. Polit. Sci. Rev. 9 (2015) 30–53, https://doi.org/10.1590/1981-38212014000200010.
[34] G. Bachelard, The Formation of the Scientific Mind: A Contribution to a Psychoanalysis of Objective Knowledge, Clinamen Press, Paris, France, (1938). G. Bachelard, in: Gallimard (Ed.), The Formation... - Google Scholar.
[35] C. Fournier, R. Oakley, Conversions and erasures: colonial ontologies in Canadian and international traditional, complementary, and alternative medicine integration policies, in: C. Brosnan, P. Vuolanto, JA. Danell (Eds.), Complementary and Alternative Medicine. Health, Technology and Society, Palgrave Macmillan, Cham, 2018.
[36] J. Crane, Unequal "partners": AIDS, academia, and the rise of global health, Behemoth: J. Civilis. 3 (3) (2010) 78–97.
[37] R. Kumar, R. Khosla, D. McCoy, Decolonising global health research: shifting power for transformative change, PLOS. Glob. Public Health 4 (4) (2024) e0003141, https://doi.org/10.1371/journal.pgph.0003141.
[38] T.E.A.M. WHO, WHO traditional medicine global summit 2023 meeting report: gujarat declaration, J. Ayurveda Integr. Med. 14 (2023).
[39] H. Verran, Science and an African Logic, University of Chicago Press, Chicago, IL, 2001.
[40] L. Pordié, Panser Le monde, Penser Les Médecines, Karthala Editions, 2005.
[41] D. Fassin, Pouvoir Et Maladie En Afrique. Anthropologie sociale Dans La Banlieue De Dakar, PUF, Paris, 1992.
[42] L. Pordié, Les nouveaux guérisseurs. Éditions EHESS, Paris, 2013.
[43] P. Didier, Valorization of traditional medicine in Madagascar, place of traditional healers in medicinal plants' research and training, Autrepart 81 (1) (2017) 159–172, https://doi.org/10.3917/autr.081.0159.
[44] C.S. Mutombo, S.A. Bakari, V.N. Ntabaza, A. Nachtergael, J.B.S. Lumbu, P. Duez, J. B. Kahumba, A cross-sectional study of mutual perceptions between conventional and traditional caregivers in Lubumbashi: a step towards integrative medicine, Eur. J. Integr. Med. (2025) 102480, https://doi.org/10.1016/j.eujim.2025.102480.
[45] B. Latour, An Inquiry into Modes of Existence. An Anthropology of the Moderns, Harvard University Press, 2013.
[46] Solhdju, K., 2023. L'Attachement de William James à l'âme des sciences. Pour Un Autre « sens Dramatique Des Probabilités De La nature », in: Stengers, I., Debaise, D. (Eds.), Au risque des effets. Paris, France.
[47] J. Greggain, Etuaptmumk: two-eyed seeing, BCMJ (B. C. Med. J.) 65 (5) (2023) 155. President's comment.
[48] M. Sinclaire, A. Schultz, J. Linton, E. McGibbon, *Etuaptmumk* (Two-Eyed Seeing) and Ethical space: ways to disrupt health researchers' Colonial attraction to a singular biomedical worldview, Witn.: Can. J. Crit. Nurs. Discourse 3 (1) (2021) 57–72, https://doi.org/10.25071/2291-5796.94.
[49] D. Hollenberg, L. Muzzin, Epistemological challenges to integrative medicine: an anti-colonial perspective on the combination of complementary/alternative medicine with biomedicine, Health Sociol. Rev. 19 (1) (2010) 34–56, https://doi.org/10.5172/hesr.2010.19.1.034.
[50] N. Ijaz, J. Hunter, S. Grant, K. Templeman, Protocol for a scoping review of traditional medicine research methods, methodologies, frameworks and strategies, Front. Med. 10 (11) (2024) 1409392, https://doi.org/10.3389/fmed.2024.1409392.
[51] N. Ijaz, J. Rioux, C. Elder, J. Weeks, Whole systems research Methods in Health care: a scoping review, J. Altern. Complement. Med. 25 (S1) (2019) S21–S51, https://doi.org/10.1089/acm.2018.0499.