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Article in *Medical Education* · August 2024

DOI: 10.1111/medu.15479

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Understanding cultural dynamics shaping clinical reasoning skills: A dialogical exploration

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Email: mchandratilake@kln.ac.lk**Abstract**

Our study examined the influence of national cultural predispositions on training medical professionals and doctor–patient dynamics using a dialogical approach, guided by Hofstede's framework. This framework provided valuable insights into how cultural tendencies shape the learning and application of clinical reasoning skills in different cultural contexts. We found that dimensions such as power distance and individualism versus collectivism significantly influenced clinical reasoning, while other dimensions had more nuanced effects. Junior doctors in Southern nations, despite initially lagging behind, developed advanced clinical reasoning skills with experience, eventually matching their Northern counterparts. The study highlighted the link between cultural norms and educational practices, variations in family involvement during reasoning, adherence to clinical guidelines and doctors' emotional engagement in clinical care between Southern and Northern contexts. Additionally, we recognised that effective clinical reasoning extends beyond technical knowledge, involving an understanding and integration of cultural dynamics into patient care. This highlights the pressing need to prioritise this topic.

1 | INTRODUCTION

Clinical reasoning skills are crucial for effective patient care and involve the ability to connect patient signs and symptoms with diagnoses and adapt these connections across different clinical scenarios.¹ Over the past six decades, research has resulted in multiple models shedding light on the complexity of clinical reasoning in real-world clinical settings.^{2–5} The unified model of clinical reasoning⁵ highlights the influence of context on clinical reasoning and emphasises the importance of culture in shaping doctor–patient interactions during clinical encounters. The concept of culture is equally complex and multifaceted. Culture is defined as the shared core beliefs and perceptions about human nature, interpersonal relationships and interactions with the environment that differentiate groups. Factors such as age, gender, religion, ethnicity, profession, institution and nation influence cultural affiliations. Cultural perspectives evolve based on personal experiences and observations, impacting beliefs, values and behaviours through acculturation processes.^{6,7}

Understanding how culture influences clinical reasoning is challenging, whether at the individual, organisational or national level. Analysing this influence among medical professionals from diverse cultural backgrounds working in foreign settings is best done at the national level, as national culture exerts a lasting, consistent impact.^{8,9} Thus, in this study, we utilise national-level cultural dimensions to examine their effect on clinical reasoning in the Global North and South, aiming to uncover insights into cultural nuances relevant to clinical practice.

The globalisation of education has implications for medical education, influencing trainees' learning experiences and the development of their clinical reasoning skills. The interplay of cultural backgrounds influences communication, comprehension and interpretation during clinical consultations, as well as interactions with peers and healthcare team members.^{10,11} While there is a body of literature highlighting the influence of culture on various aspects of clinical practice, related to working independently in clinical practice,¹² seeking support,¹³ questioning and challenging authority¹⁴ and intercultural challenges

faced by international medical graduates,^{15–17} we recognised a notable gap in understanding its influence on learning and practising clinical reasoning skills. Given this context, we aimed to explore the following research question drawing upon our diverse clinical experiences and research efforts.

In the experiences of the authors, how do the cultural backgrounds of medical trainees and practitioners shape their learning and practices of clinical reasoning across the Global North and South?

2 | METHODOLOGY

In this study, we followed a dialogical approach¹⁸ to explore the influence of culture on clinical reasoning. It was guided by a constructivist view of knowledge creation,^{19,20} which recognises the active contribution of the cognitive efforts of an individual as well as the influence of social interaction and dialogue in knowledge development. We shared and analysed our clinical experiences to understand cultural variations in clinical reasoning between the Global North and South, thereby gaining a deeper insight into this topic.

Aligned with the expectations of the dialogical approach to this study, we met online via video conferencing every fortnight for 5 months. Our primary goal was to deepen our understanding of how cultural values shape clinical reasoning. We maintained an open mindset to develop novel insights. During our meetings, we reflected on our experiences and the influence of our cultural values on clinical reasoning. Adopting a reflexive stance²¹ allowed us to engage in a self-conscious critique, appraise and explore subjective and contextual influences on clinical reasoning. This interactive dialogue helped us bridge theoretical insights with practical applications. Our discussions covered various aspects of clinical practice, including interactions with patients, colleagues, senior medical staff and other clinical personnel. We also examined interactions with patients' families and the expectations of patients, caregivers and the public.

The online meetings lasted around 30–60 min, and they were recorded, transcribed into summaries, shared among the authors and reviewed at the beginning of subsequent meetings. This served to draw connections and build upon prior discussions. Over time, the summaries evolved into a cohesive narrative. Due to the nature of this activity and the lack of participant recruitment, ethical approval was not sought.

Hofstede's cultural dimensions theory has an extensive literature base and practical relevance in international business and education.^{10,16,22–25} We chose this theory to guide our discussions due to its empirical foundation, simplicity, widespread recognition, comprehensive coverage and ease of use in comparing cultures. However, we also considered other models of national culture proposed by scholars such as Kluckhohn and Strodtbeck,²⁶ Hall, Trompenaars, Schwartz and House.^{8,27} Nardon and Steers²⁸ identified five core cross-cutting themes across these models as applicable to business and management. We extended this analysis to medical education

and clinical practice, identifying social relationships, power distribution, uncertainty management, communication and context and indulgence versus restraint as relevant themes (Appendix S1). These themes aligned with Nardon and Steers²⁸ common themes, such as individualism–collectivism and hierarchy–equality concepts. However, other themes like mastery–harmony (relationship with the environment), monochronic–polychronic (use of time) and universalism–particularism (importance of rules versus relationships in behaviour control) seemed less relevant to clinical reasoning in healthcare.

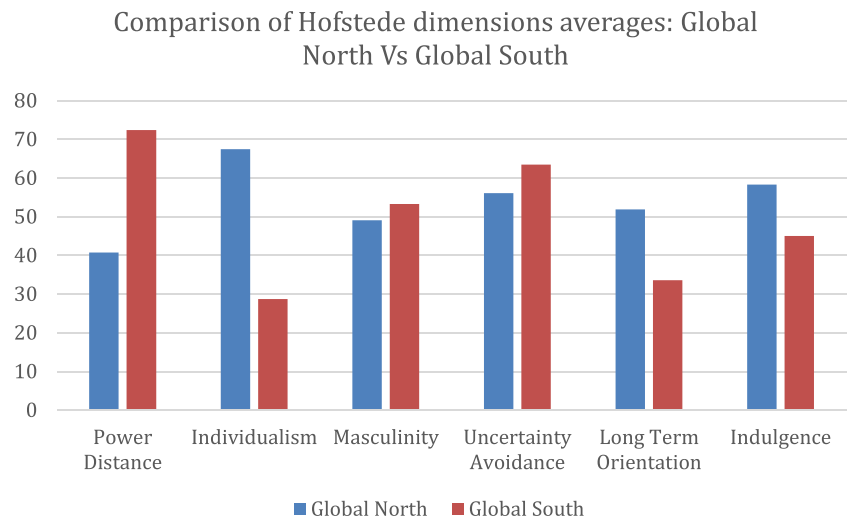
Four out of the five themes we identified overlapped significantly with Hofstede's framework, reinforcing our decision to use it in our discussions while incorporating insights from other models (Appendix S1). Additionally, we used Hofstede's data to calculate national cultural averages for countries in the Global North and South²⁹ enriching our discussion (Appendix S2). Nevertheless, Hofstede's cultural dimensions theory has faced criticism for overgeneralisation, reliance on outdated data and Western bias.^{30,31} It is also criticised for its limited scope, static views and oversimplification of complex cultural dynamics.³² Methodological flaws and failure to consider contextual factors further restrict its applicability and accuracy in reflecting the diversity and evolution of cultures.³³ Despite these criticisms, numerous studies support its value in understanding cross-cultural differences, providing a foundational framework for comparing cultural traits in international business, communication and education.^{10,16,22–25} This encouraged us to use this framework as a guide for our dialogue.

3 | RESEARCHER BACKGROUNDS AND ROLES IN DATA COLLECTION

Matt is a clinician and medical educator trained and practising in Canada, with over two decades of experience supervising a multicultural medical trainee population. Madawa has similar credentials, trained in both Sri Lanka and the United Kingdom, and is currently practising in Sri Lanka. He has also served in various countries on medical education consultancies and collaborative research. Dilmini, a medical educator with a background in medicine, trained and practised in Sri Lanka for over a decade and is currently working in the United Kingdom in a similar capacity.

Our shared professional backgrounds and diverse experiences in various cultural contexts facilitated engaging in critical discussions on the role of culture in clinical reasoning. Throughout the dialogical activity, we actively listened to each other, respected diverse perspectives and adjusted our viewpoints as new insights emerged. By continuous questioning and reflection on our own and each other's assumptions and experiences, we ensured that our exploration remained critical, dynamic and inclusive. Documenting our discussions helped trace the evolution of our thoughts, maintaining a high level of reflexivity²¹ and ensuring arrival at comprehensive conclusions informed by clinical reasoning related experiences in diverse cultural contexts.

FIGURE 1 Comparison of Hofstede dimension averages for countries in the Global North and Global South.



4 | OUTCOMES OF THE DIALOGICAL ACTIVITY

To provide perspective around cultural comparisons of the Global North and South we aggregated national cultural averages for Hofstede's cultural domains (Appendix S2) for countries in the Global North and Global South and compared them (Figure 1).

The largest differences in Global North versus Global South were noted in individualism (mean difference 39), power distance domain (mean difference 32) and long-term orientation (mean difference 18). Relatively smaller variations in means were observed for the remaining domains. The masculinity–femininity domain displayed the smallest mean difference (4), followed by uncertainty avoidance (7) and indulgence versus restraint (13).

Our dialogues were initiated by these findings and progressed through various Hofstede's dimensions^{9,34}—power distance, individualism versus collectivism, uncertainty avoidance, masculinity versus femininity, long-term versus short-term orientation and indulgence versus restraint, generating an insightful discussion. These details are outlined below according to their respective domains.

4.1 | Power distance

This domain refers to the extent of unequal power distribution within a community, as well as the acceptance and expectation of this hierarchy by less powerful members, which is also endorsed by leaders.⁹

We agreed that hierarchy within the medical profession is universally observed. However, our experience indicates that the power dynamics among healthcare team members in Northern cultures are often problematised and implicit. In contrast, the power discrepancy is more explicit in Southern cultures, where trainers hold a higher position of authority and trainees willingly adhere to these expectations. In both contexts, this disparity impacts not only the interactions between experienced and less experienced doctors but also the relationships among doctors, other clinical staff and patients. Work

experience plays a crucial role in the development of clinical reasoning skills; therefore, the presence of conducive relationships with all these individuals has significant implications for learning clinical reasoning skills.

Drawing from our experiences, in Northern nations, medical trainees are encouraged to demonstrate autonomy in clinical reasoning, openly express their opinions and engage in discussions with senior members as equals. Conversely, in Southern cultures, a hierarchical structure prevails, with senior physicians' decisions typically unquestioned. This dynamic often discourages junior doctors from openly voicing their opinions, fostering a more passive learning approach. This is evident in their tone, word choice, reluctance to speak and non-verbal cues. Senior doctors' dissatisfaction with incorrect answers and subtle acts of humiliation further reinforce this behaviour. Consequently, Southern trainees heavily rely on their seniors, potentially affecting their self-confidence and their ability to develop clinical reasoning skills.

Our observations suggest that medical trainees in Southern cultures benefit from significant exposure to a diverse range of clinical presentations due to the high patient load in hospitals. Although work experience enhances trainees' confidence in clinical reasoning across national boundaries, it plays a critical role for Southern trainees. Based on our experience, this exposure facilitates the rapid development of clinical reasoning skills among them compensating for the passive learning associated with authority-driven instruction. Trainees are thus enabled to actively participate and collaborate with senior doctors on an equal footing later in their training similar to their counterparts in the North.

This ethos extends to medical education. In the North, medical trainees are expected to take responsibility for self-directed learning, actively seeking educational opportunities, which significantly enriches their educational journey. In contrast, junior trainees in Southern nations often rely heavily on teacher guidance despite diverse teaching methods promoting self-directed learning. However, their attitude shifts with experience, leading to increased confidence in later stages of training. These approaches to learning can also be

further explained through the dimensions of individualism and collectivism, as elaborated below.

The contextual differences in training environments between the South and the North therefore influence the development of reasoning confidence among trainees, particularly when transitioning between cultural contexts. The authors have observed that trainees from Southern cultures encounter challenges when practising in Northern nations, where assertive clinical reasoning is valued. Conversely, Northern trainees placed in Southern contexts struggle to conform to hierarchical leadership structures, impacting their learning experiences.

Doctor–patient communication is another aspect significantly influenced by the concept of power distance. In Northern healthcare systems, the power gap is less between doctors and patients, while patients are empowered to express themselves more and are involved more in the clinical decision-making process. In contrast, in Southern cultures, higher power distance between doctors and patients discourages the open sharing of essential patient information. This is another aspect that can be explained by the dimensional differences in individualism and collectivism between the North and the South.

4.2 | Individualism versus collectivism

This domain captures the extent to which individuals in a society prioritise their own interests over the interests of the group, reflecting individualism, or prioritise group harmony and collective goals over individual needs, reflecting collectivism.⁹

The involvement of family or friends in doctor–patient encounters highlights the contrast between individualist and collectivist approaches in healthcare. In Sri Lanka, it is common for family and friends to participate in clinical decision-making, unlike in the Global North. In Southern cultures, companions provide emotional support and valuable information to doctors, aiding clinical reasoning in hierarchical environments where power imbalances may intimidate patients, thereby facilitating the process of clinical reasoning in this context.

It is commonly assumed that practitioners from Northern cultures tend to prioritise individualism in their clinical reasoning, while those from Southern cultures lean towards collectivism. Consistent with these expectations, our experiences confirm that in Northern cultures, clinical decision-making tends to be more focused on the patient and driven by the objective of respecting patient autonomy, which aligns with individualistic values. In Southern cultures, doctors often embrace the involvement of family members in patient care, which reflects collectivist approaches.

However, it is noteworthy that doctors from the South are less likely to change their decisions based on others' opinions, reflecting the prevalent power hierarchy. Also, both Northern and Southern doctors rely more on professional knowledge and experience than strictly adhering to guidelines, due to the context-specific nature of clinical reasoning and complex clinical presentations necessitating reasoning beyond textbook prescriptions. This suggests that the

influence of collectivism in healthcare is complex and not universally applicable.

The focus on individual interests in individualistic cultures also motivate trainees from the North to be self-directed and driven in their learning, with a strong emphasis on personal growth and development. On the other hand, trainees from the East are not as driven towards personal development, although this can greatly vary depending on individual traits. We have observed more trainees from Southern cultures seeking external motivation from supervisors and senior staff compared to trainees from Northern cultures. Conversely, trainees from Northern cultures benefit more from internal motivation rather than external sources.

4.3 | Indulgence and restraint

The Indulgence and restraint domain reflects whether a society promotes the fulfilment of human desires and the enjoyment of life or emphasises the control of these desires through strict adherence to social norms.⁹

In Northern cultures, it is common to see a focus on individual well-being and quality of life during patient consultations. This is also evident in the support provided to healthcare staff, with workplace initiatives aimed at promoting emotional health and well-being. Improved emotional health has a positive impact on reasoning abilities and learning processes.

In contrast, Southern cultures place less importance on personal enjoyment and prioritise familial obligations and collective well-being. Our experiences suggest that cultural norms in this context do not promote conversations regarding the effects of illness on patients' social lives and overall well-being, as is commonly observed in Northern healthcare consultations. Furthermore, there appears to be limited attention given to the psychological well-being of healthcare staff. These cultural disparities can pose reasoning challenges by hindering the ability to incorporate the concept of well-being into reasoning during consultations. Additionally, they can act as a risk factor for doctors' individual reasoning, as the poor well-being of doctors can negatively impact their cognitive capacity to reason effectively.

During our discussions on the subsequent three domains of culture, masculinity versus femininity, long-term versus short-term orientation and uncertainty avoidance domain, it became apparent that we had limited experiences linking these cultural inclinations to clinical reasoning and patient care.

The masculinity versus femininity domain illustrates the preference of society for masculine traits such as authority, assertiveness and achievement, or feminine characteristics such as nurturing relationships, caring for others and promoting welfare.⁹

Northern countries, often characterised by masculine cultural traits, contrast with Southern cultures, which lean towards feminine cultural norms. When it comes to clinical reasoning in healthcare settings, the influence of masculine characteristics in Northern societies seems to be mediated by the presence of low power distance and a focus on individualism. These cultural norms promote the practice of

attentive listening and patient-centred care shaping the practice of clinical reasoning.

In contrast, Southern cultures tend to emphasise feminine traits, which can promote empathy and deeper understanding of others' needs. This, in turn, creates a compassionate work environment and fosters positive relationships with both patients and staff. However, it is important to note that these feminine traits may also be influenced by collectivist cultural norms. These norms prioritise the well-being of in-group members over out-group members, leading to a range of outcomes that align with our experiences.

Our observations suggest that feminine traits in Southern cultures foster stronger emotional commitment towards patients. Trainees often accept superiors' decisions to maintain harmony, reinforced by cultural norms of power distance. Conversely, in the North, masculine traits prioritise objectivity during work and reasoning, with less emphasis on pleasing superiors and emotional bonding with patients, aligning with individualistic cultural norms.

The long-term versus short-term orientation domain reflects whether a society focuses on future goals and values like perseverance and thrift or prioritises personal stability, reputation, tradition and reciprocal favours.⁹

According to Hofstede's framework, Northern countries often prioritise short-term goals, while Southern countries favour long-term objectives. This typically manifests in patient care, with Northern nations focusing on immediate problem-solving and Southern counterparts emphasising prevention and long-term management. However, our experiences suggest that in countries like the United Kingdom and Canada, there is an equal emphasis on immediate care, long-term care and prevention. Established care pathways and adherence to clinical guidelines foster these practices, contrasting with the disease-centred focus commonly seen in Southern regions.

In Sri Lanka, patient care primarily focuses on short-term goals, prioritising diagnosis over long-term care and prevention. Societal values favour immediate results, but external factors like heavy patient loads, limited staff and constrained resources also influence this practice. The impact of long-term orientation on patient care in other Southern countries, particularly those influenced by Confucianism such as China, remains unclear due to limited experience.

The uncertainty avoidance domain reflects how a society prepares its members to cope with ambiguous situations, whether they are welcomed or avoided.⁹ We unanimously acknowledged that diagnosis inherently involves uncertainty, and the reasoning process serves as the means to address it. When considering the reasoning methods employed by doctors from different cultural backgrounds, we could not find evidence based on our experience that link culture and reasoning approaches employed by doctors, trainees or students.

Our discussion emphasised how deeply rooted national cultural values influence the learning and practice of clinical reasoning, impacting outcomes such as missed learning opportunities, cultural mismatches with learning methods, delayed integration into clinical practice and reduced inclusivity for medical trainees. In clinical settings, these cultural differences can hinder trust-building with patients, lead to misinterpretations of patient information, result in

care approaches that patients reject and cause misunderstandings or non-compliance with treatment plans.

As a final note, we briefly discussed on the future trajectory of learning and applying clinical reasoning in an era where artificial intelligence (AI) is transforming all fields of education. Looking ahead, AI is positioned to revolutionise medical education and practice, surpassing previous technological advancements by its ability to learn and adapt autonomously. However, patient care demands a therapeutic relationship rooted in trust and empathy, aspects AI cannot replicate currently or in the foreseeable future. Effective clinical reasoning extends beyond technical knowledge and involves understanding and integrating cultural dynamics into patient care, in addition to managing all other contextual influences on clinical reasoning.

5 | DISCUSSION

We used Hofstede's framework to explore how national cultural predispositions affect medical training and doctor-patient dynamics. However, we acknowledge the limitations of generalising findings across regions due to cultural variations within and among countries.^{35,36} This framework may not fully capture the complex interplay of group and individual factors influencing behaviour. Additionally, terms like 'Global North' and 'Global South' may oversimplify global cultural orientations. Despite these limitations, we chose Hofstede's framework for its value in identifying general cultural tendencies at a national level and understanding their impact on clinical reasoning skills. Our decision is backed by extensive supportive literature, which outweighs existing criticisms.

Our conversation highlighted that understanding the intricacies of culture on clinical reasoning, even when guided by Hofstede's dimensions, was challenging. Each dimension profoundly impacted the others, resulting in a complex and interconnected influence on clinical reasoning. Isolating the influence of a single dimension on clinical reasoning was, therefore, unfeasible. We recognised that the dimensions of power distance and individualism versus collectivism profoundly influenced our understanding of the relationship between culture and clinical reasoning. Other dimensions contributed in a more limited way, with some shaping clinical reasoning in ways that cannot be explained by cultural dimensions alone.

Several significant arguments emerged from these shared experiences, which are not sufficiently addressed in the literature.

First, 'junior' doctors in Southern cultures exhibit clinical reasoning skills comparable to experienced doctors in Northern contexts once they become 'seniors'. In practical terms, this implies that junior doctors from the South may demonstrate certain limitations in their clinical reasoning abilities during their initial training, compared to their Northern counterparts. However, based on our experience, as they accumulate experience and progress in seniority, they become proficient clinicians on par with Northern clinicians. Our consensus was that Northern cultural contexts prioritise the development of clinical reasoning skills through more student-centred approaches, while Southern cultural contexts focus on their acquisition through more

didactic approaches. This implies that the methods of teaching and the learning strategies that students find beneficial in developing clinical reasoning skills may also vary across different cultural settings.²² However, the effectiveness and efficiency of these approaches have not been adequately examined in different cultural contexts and are waiting for further exploration.

Second, there was debate whether observed power differences in educational settings reflect inherent cultural norms, as suggested by Hofstede, or whether these differences are perpetuated by educational methods. In teacher-centred cultures, students may internalise authority and maintain power hierarchies, while egalitarian settings that encourage critical thinking and participation might help reduce power distances. Understanding whether cultural norms or educational approaches drive these differences is crucial for promoting equitable and effective education. Additionally, examining how this dynamic varies across different levels of medical training is important. Authors with experience in Sri Lanka and the United Kingdom noted that educational methods, such as active trainee involvement in discussions, senior clinicians reasoning aloud and shadowing experienced doctors, significantly enhance clinical reasoning skills across cultural contexts. This suggests that explicit demonstration plays a key role in developing these skills.^{37,38}

Third, significant differences exist in the involvement of patients' families in doctor–patient interactions between the Global North and Global South, influenced by individualist and collectivist cultural norms. In the Global South, where an interdependent self-concept prevails, social bonds and collective well-being are emphasised,³⁹ making family involvement in patient consultations culturally appropriate. In contrast, Northern cultures prioritise individual autonomy, making such involvement less common. The role of patients' families in clinical reasoning, though significant, is underexplored. Additionally, cultural norms could affect motivation. Northern trainees are often internally motivated, whereas external factors influence Southern trainees.³⁹ Consequently, strategies to motivate individuals from these different cultural backgrounds may vary significantly, impacting the development of clinical reasoning skills and their training, warranting further exploration.

Our observations on adherence to clinical guidelines during clinical reasoning also differed from the expected patterns of low and high uncertainty avoidance among doctors from Northern and Southern cultures, respectively. There was a general preference for clinical reasoning based on individual judgement rather than strict adherence to guidelines and protocols across both contexts. This observation finds support in existing evidence.^{40,41} This may be due to the uncertainties associated with clinical presentations and, therefore, their management. Hence, the influence of national culture seems to be mediated by stronger patient or doctor-related contextual factors and organisational factors in this context, highlighting the intricate nature of cultural nuances in clinical reasoning.

Research indicates cultural differences in attention and perception between Northern and Southern societies,⁴² complementing Hofstede's individualism–collectivism dimension. Western individuals typically use analytic processes, focusing on salient objects, while

Southern individuals adopt a holistic approach, attending to the broader context. Consequently, Northern doctors are expected to prioritise diagnosis and problem-solving, whereas Southern doctors emphasise holistic care. However, our experiences suggest the opposite might be true. Evidence of low- and high-context communication in Northern and Southern contexts aligns with these perceptions.⁴³ Therefore, Southern trainees may benefit from detailed contextual descriptions during clinical reasoning, while Northern trainees may be comfortable with abstract information. This disparity can affect learning and practice, with Southern trainees needing more information for decision-making than their Northern counterparts.

Finally, our observations indicate that in Southern contexts, doctors exhibit greater emotional involvement with patients, a practice often encouraged by their trainers,³⁷ unlike in the North. Hofstede's dimensions do not address this, but Trompenaars' dimensions of specific versus diffuse roles and neutral versus affective expression provide insight.²⁷ Southern doctors' use of familial terms like 'mother' and 'father' with patients and 'brother' and 'sister' with colleagues reflects collectivist norms and Trompenaars' dimensions. In diffuse role cultures like the South, where work and personal life overlap, public emotional expression is encouraged, allowing clinicians to reflect their personal lives in their professional practice. Conversely, in compartmentalised role cultures like the North, emotional expression in public is discouraged, making emotional involvement in patient care less acceptable. Although the influence of emotions on clinical reasoning is recognised, it requires further investigation.

We also recognised the potential applications of the novel AI technologies in medical education and clinical practice. Nevertheless, we believe these advancements should be grounded on strong theoretical foundations of clinical reasoning, leveraging the insights gained from decades of research. This approach is essential to overcome previous challenges in integrating technology to support clinical reasoning. While AI technology can currently yield benefits in teaching and learning clinical reasoning,⁴⁴ its application in doctor–patient consultations in an ethical and confident manner will likely necessitate decades of research.

6 | CONCLUSION

In conclusion, our exploration of the influence of national cultural predispositions on training medical professionals and doctor–patient dynamics, guided by Hofstede's framework, revealed significant complexities. Despite its limitations, the framework provided valuable insights into general cultural tendencies and their impact on clinical reasoning. We found that dimensions such as power distance and individualism versus collectivism profoundly influenced clinical reasoning, while other dimensions had a more nuanced impact. Notably, junior doctors in Southern nations, despite initially lagging behind, developed advanced clinical reasoning skills with experience, eventually matching their Northern counterparts. The observed power dynamics in educational settings underscored the intricate connection between cultural norms and educational practices. Furthermore,

family involvement in patient care, adherence to clinical guidelines and the emotional engagement of doctors varied significantly between Southern and Northern contexts, reflecting deeper cultural norms. Finally, we recognised the potential of artificial intelligence in medical education, emphasising the need for strong theoretical foundations to effectively integrate technology in clinical practice. These findings highlight the importance of considering cultural contexts in medical training and developing clinical reasoning skills.

AUTHOR CONTRIBUTIONS

Dilmini Karunaratne: Writing—review and editing; writing—original draft. **Matthew Sibbald:** Conceptualization; writing—review and editing; supervision. **Madawa Chandratilake:** Conceptualization; writing—review and editing; supervision.

ACKNOWLEDGMENTS

None.

CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Karunaratne D, Sibbald M, Chandratilake M. Understanding cultural dynamics shaping clinical reasoning skills: A dialogical exploration. *Med Educ*. 2024;1-8. doi:10.1111/medu.15479