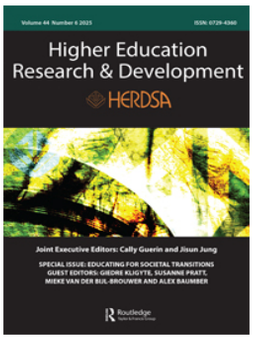

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Medical students' critical engagement with publications related to strategies addressing health disparities with Indigenous Peoples in Australia: critically iterative and iteratively critical

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ABSTRACT

Higher education's contributions to societal transitions can be limited by the inadvertent perpetuation of embedded practices that can be hard to see and taken for granted. Such practices can delegitimise other forms of knowledge and learning, potentially hindering societal transitions. Healthcare's preferencing objective ways of knowing, including accessing peer-reviewed literature via biomedical search engines, is one such embedded practice. This practice potentially influences medical students' understandings of Indigenous Peoples health disparities. Extending our collaboration beyond a two-year student research project, our research team of four medical students and three supervisors reconvened. We explored the question: In relation to shaping higher education's contributions to societal transitions, what is the nature of fostering medical students' engagement with publications addressing health disparities with Indigenous Peoples in Australia? Based in the interpretive paradigm and informed by philosophical hermeneutics, we present our findings encapsulating themes of *positional, interactive* and *precarious* using three stories: students' research insights; supervisors' hindsight insights; and collective team's insights for shaping societal transitions. Being iterative was critical to our deeper understandings. We invite others to join us in revisiting embedded practices in an iterative manner and being open to individual and collaborative critical reflexivity for further opportunities for higher education to contribute to societal transitions.

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Introduction

Addressing health disparities through culturally responsive approaches is an important consideration for all sections of society, including higher education. However, due to the complexity of both health disparities and societal transitions, higher education's contributions are not necessarily straightforward. For example, higher education's contributions to preparing medical students to address health disparities can be limited by the inadvertent perpetuation of particular embedded practices (Burke, 2012). One such embedded practice is healthcare's preferencing of objective ways of knowing.

Healthcare's hierarchy of evidence preferences objective ways of knowing where problems are resolved by experimental research and data are decontextualised from external and unrelated aspects of society and culture (Althaus, 2020, p. 14). The emphasis on deficits that can accompany objective ways of knowing can misrecognise the complexity of health disparities and misrepresent the strengths of community groups (Burke, 2012). Importantly, objective ways of knowing in relation to health disparities can be challenged by different worldviews, including well-recognised cultural, social and political determinants of health and equity-focused social justice stances (Nakata, 2007; The Lowitja Institute, 2020).

In writing this article we, as an interdisciplinary team of supervisors and medical students, sought to counteract the inadvertent perpetuation of preferencing objective ways of knowing about health disparities. This counteraction can be viewed as a societal transition, which, according to Rotmans and Loorbach (2009) is 'a radical, structural change of a societal (sub)system that is the result of a coevolution of economic, cultural, technological, ecological, and institutional developments at different scale levels'. In this article, healthcare and healthcare education are the social system; the change is the move beyond objective ways of knowing, and the coevolution involves cultural, ecological and institutional developments, that begin with a small-scale focus on a particular embedded practice. Our purpose was to enhance higher education's contributions to addressing health disparities with and by Indigenous Peoples in Australia.

Health and healthcare disparities between Indigenous and non-Indigenous people in Australia are rooted in systematic and interpersonal racism (Paradies, 2018). The importance of preparing medical students and practitioners to address health disparities with Indigenous Peoples in Australia is well recognised and supported (Australian Indigenous Doctors' Association, 2025). Reports of 'positive results for the healthcare outcomes associated with incorporating cultural competence training into medical courses' (Bainbridge et al., 2015, p. 17) are encouraging, though sparse. Cultural competence training aims to improve the capability to acknowledge cultural rights, diversity, values, and expectations for culturally relevant healthcare (Rukadikar et al., 2022) and has reportedly increased medical students' preparedness to work with Indigenous people including advocacy for change in Indigenous healthcare (Paul et al., 2006). However, challenges with such training are also evident. These challenges include the shortage of practitioners to provide cultural safety training, poor understanding of key concepts and difficulty developing tools to measure impact (Kurtz et al., 2018). We contend that while these challenges are being addressed there is scope to simultaneously and critically examine the embedded practice of preferencing objective ways of understanding. Embedded practices can be hard to see and taken for granted.

Being hard-to-see and taken-for-granted, embedded practices can delegitimise other forms of knowledge and learning, potentially hindering societal transitions, as explained by Jones et al. (2019):

> the approaches used and curricular resources must consider the context within which learning about Indigenous health occurs, such as the effect of a dominant biomedical paradigm that can delegitimize other forms of knowledge and learning. (p. 516)

The context of embedded practice we focused on was medical students' engagement with publications related to strategies addressing health disparities with Indigenous Peoples in Australia. Healthcare's hierarchy of evidence preferences peer review articles (Althaus, 2020) published in journals that are typically accessed through biomedical search engines. Unfortunately, such publications reinforce deficit discourse or only tell limited parts of culturally rich stories (Fogarty et al., 2018). We were interested in exploring medical students' engagement with a range of publications. In particular, we were interested in understanding how this engagement diversity could be fostered and what this might mean for shaping higher education's contribution to societal transitions.

Method

This article presents our insights from exploring the following overarching question: In relation to shaping higher education's contributions to societal transitions, what is the nature of fostering medical students' engagement with the publications addressing health disparities with Indigenous Peoples in Australia? Our insights began in a two-year compulsory research project undertaken by four students supported by their team of supervisors throughout the third and fourth years of their medical degree. Our insights crystallised through preparing this article as an extension of the student-supervisor collaboration developed during the research project.

In relation to the two-year compulsory medical student research project, the topic of the research was the nature of Cultural Considerations in strategies addressing health disparities for Indigenous Peoples in Australia, as seen in publications. This topic and the interpretive research approach were chosen by the supervisors, the suitability of the research aligned with the intended course learning outcomes, and confirmed by the course co-ordinator. The supervisors' choice of topic arose from discussions between three members of the initial supervisory team to extend their collaboration on a four-year research project about Indigenous ways of knowing and learning to support Indigenous healthcare students on clinical placement (Munro et al., 2019). Their experience provided a sound foundation for being aware of how challenging it can be to see embedded dominant objective practices when you are in the midst of them, how easy it is to continue to let such practices dominate, how challenging and inspiring it can be to come to this realisation, and the potential impact of objective ways of knowing for medical students engaging with Indigenous health.

Students had not worked together previously and were allocated to the research group and topic based on their clinical placement location. The students met weekly with supervisors to progress the research and complete assessments including a research proposal, literature review, and final report/presentation. During the first year, the students met via videoconference, and during their second year, we all met face-to-face. Although

changing over the two years, at least two members of the supervisory team have worked together previously. Although not all supervisors were able to meet each week, there was team cohesion through a shared interest in health equity, societal transitions and keenness to learn. Students and supervisors learnt with and from each other over and beyond the time of the research project.

In relation to developing our article for this special edition, the authors are the same medical students and research supervisors involved in the completion of a two-year research project. We continued our collaboration past the end of the project by disseminating findings at a higher education conference (Croker et al., 2023) and developing this article. On reading of this special edition, one supervisor contacted the research team to see if they were interested in developing an article to explore their research processes and findings in the broader context of societal transitions. Rather than returning to the regular whole team meetings, the sharing of ideas for this article was done using a 'parts to the whole' approach, whereby a subgroup of supervisors (LU, AC) took responsibility for driving the article development, by constructing a framework and checking in with the whole team for their input and critique. The authorship order is based on the student group first to reflect the temporal contributions to the topic rather than the compilation of this article. Author order within student and supervisor groups was randomly allocated to reflect the collective curation of concepts.

Approach used to answer our question

Philosophical hermeneutics was used as a meta-strategy in the research and development of this article (Higgs, 2010). We answered our question from within the interpretive research paradigm, using philosophical hermeneutics (Gadamer, 1975). This is consistent with the research paradigm and approach of the medical students' two-year research project. For the initial research project, we were aware of the rich possibilities of Indigenous methods of research. However, as a predominantly non-Indigenous research team, we did not feel comfortable using Indigenous research methods (Wilson, 2008). The interpretive research paradigm was suitable for embracing the subjectivities, multiple constructed realities and complex social processes inherent in both the topic and our collaborative research processes. This article was a continuation of the critical engagement and sense-making that began in the medical students' research project.

Our sense-making approach for both the research project and embedding it in the broader context of societal transitions was informed by philosophical hermeneutics (Gadamer, 1975), where interpretation is the process of 'making something that is unfamiliar, distant, and obscure in meaning into something real, near, and intelligible' (Palmer, 1969, p. 14). As shown in Figure 1, we constructed three different text sets to answer three sub-questions. The first text set explored the sub-question 'What was the students' sense-making of publications addressing Indigenous health strategies?'; the second text set explored the sub-question 'What was important for fostering this engagement?' and the third text set explored the question 'What does this mean for shaping societal transformation?'.

Our sense-making used three principles of philosophical hermeneutics, the hermeneutic circle, dialogue of question and answer and fusion of horizons (Gadamer, 1975). Using the hermeneutic circle, we moved repeatedly from parts of our understanding of aspects of the phenomenon to the whole of our emerging understanding, back to

Figure 1. Representation of our question-answer dialogue with three text sets.

the emerging whole of our understanding and so on. Informing this ongoing movement was a dialogue of question and answer with the text sets we created, as shown in Figure 1, from which we reached a fusion of horizons.

As shown in Figure 1, text sets for interpretation were constructed from iterative engagement with a range of literature. The lens used in the interpretation to shape the students' engagement with the publications was informed by Cultural Considerations and included three culturally based concepts: strengths-based approaches, decolonising frameworks and Indigenous Ways of Knowing (see Text Box 1). The lenses used to engage with the second and third text sets were the findings from the research project and the teams' reflections. The lens of Cultural Considerations was explicit in the dialogue with the first text set and was integral to the second and third text sets, enabling us to both respect and privilege Indigenous Knowledges and engage critically with embedded practices in publications.

Text Box 1. Cultural Considerations lens applied to text sets through three culturally based concepts.

Strength-based approaches: By placing positive attributes at the forefront, instead of focusing on what is 'lacking', strengths-based approaches focused on the capabilities and capacities of Indigenous Peoples (Fogarty et al., 2018). This approach involved explicitly avoiding the use of deficit statistics to compare Indigenous Peoples in Australia to non-Indigenous people. As explained by Bryant et al. (2021), strength-based approaches 'reframe the expectations and opportunities presented in institutional policies, programs and interventions and can disrupt internalised assumptions about deficit, rendering visible the capability, humanity and diversity of Indigenous peoples'(p. 1406).

Decolonising frameworks: Aboriginal researcher Juanita Sherwood presents a reflective model of decolonisation, describing it as a process of critical reflection upon the ongoing impact of colonialism on our current understanding of knowledge, truth and history (Sherwood, 2010). Decolonisation action in healthcare requires a shift towards the Aboriginal views of wellness, achieved by trusting experts within Aboriginal health organisations and communities (Sherwood & Edwards, 2006). This approach has shown success through Aboriginal Community Controlled Health Services (ACCHS), which deliver community-led, culturally informed health services (Pearson et al., 2020).

Indigenous Ways: Indigenous Ways of Knowing, Being and Doing are inherently part of the Indigenous approach to wellness but are complex concepts. While being aware that we were not in a position to define the concepts, we found Quandamooka researcher Karen Martin's perspective informed our understanding (Martin & Mirraboopa, 2003). Martin describes Ways of Knowing as the information and experiences shared by people as shaped by their role, gender and life stage (Martin & Mirraboopa, 2003). The interrelation between these roles and responsibilities within changing relationships constitutes Ways of Being. Ways of Doing are the expression of these roles individually and within a community (Martin & Mirraboopa, 2003). Incorporating Ways of Knowing, Being and Doing into health services enables dialogue to increase collaboration between the 'biomedical model' and Indigenous healing practices, which focus on reconnection to Culture, Family and Country (Rix & Rotumah, 2020).

A key strength of our interpretive research approach was our diversity, which enabled new perspectives and understandings to be brought to the topic. Supervisors were aware that perspectives were, and are, sculpted by our heritages, individual interactions with colonialism and varied experiences with Indigenous, critical and empirico-analytical knowledges and research approaches. Importantly we brought with us different cultural backgrounds, including Indigenous (GL and RS), South Asian Desi (NL and HP), South-east Asian (AM) and European heritages (GL, AC and LU). Our research meetings spanned our different work and study locations in regional New South Wales, Australia, including Tamworth, Armidale, Coffs Harbour and Newcastle.

Findings

Story 1 – students' research insights

Key to the students' sense-making was the diversity of the publications they accessed over 18 months. Over this time, students moved from their embedded practice of preferencing publications with objective perspectives where data are decontextualised from external and unrelated aspects of society and culture. After initially accessing biomedical search engines (e.g., ProQuest, CINHAL, PubMed and Informit), students expanded their horizons to include other search engines (e.g., Australian Indigenous HealthInfoNet) and personal recommendations to embrace a range of publications, including websites, social media and pamphlets. Students described this in their final research report (Lalwani et al., 2022) as follows:

> As we began to understand the topic more deeply, we felt strongly that texts should not be limited to high-impact journals, as this would inadvertently promote the empirico-analytical paradigm and privilege colonial perspectives. Therefore, accessing reputable text sources was prioritised, aiming to create a broad and diverse range of texts that challenged our beginning horizons. Throughout this process, 82 publications were identified, narrowed down to 40 publications based on exclusion criteria [written before 2002, studies outside of Australia or other First Nations groups, and studies not relevant to health strategies]. (p. 8)

This story summarises the findings described in the students' unpublished research report: positional, interactive and precarious. Together, these three themes highlight students' sense-making of healthcare strategies with Indigenous Peoples in Australia when given the opportunity to disrupt an embedded practice of preferencing objective ways of understanding.

Positional

This theme recognises the importance of authors' explicit positioning of themselves in relation to the healthcare strategy context. Key to this positioning are the behind-the-scenes personal stories. For example, in one publication Elizabeth Rix reflected on her identity and culture as 'a white person from a privileged upbringing' (p. 6), articulating her experiences as a 'distressing period of examining [her] position led [her] through difficult yet empowering discoveries' (Rix et al., 2014, p. 6). In another publication, Kendall and Barnett (2015) explained that they worked closely with a Murri Aboriginal community to establish 'cultural ties, relationships, and affiliations' (p. 440). Through

such explicit positioning, authors created the conditions for readers to engage with the complexity of people and cultures inherent in Indigenous health strategies. In contrast to these examples, other authors' positions in relation to healthcare strategies remained implicit. In such publications, readers may need to pause and reflect critically on the author's thinking and underlying intent.

Interactive

The interactive theme recognises that reader-author interactions have the potential to shape engagement with health strategies for Indigenous People in Australia. Language could be used by authors as a purposive tool to foster reader engagement with publications through first-person grammar, evocative language and authorial insertion. Readers were not necessarily expected to be passive recipients of information but active and responsive participants. Smallwood (2020) indicates her expectation for reader-author interaction by inviting readers to see the world through her eyes:

> Yaama (Hello)! This article will take you on a journey, through my eyes and my experiences. I hope you are ready to hear, explore and come to understand the context that I am positioned within as a Gamilaroi yinarr (woman) from Australia. (p. 309)

Indigenous Peoples' and their voices could be elevated through direct quotes, for example, in 'Stories from Community' a publication about strategies addressing suicide in the Tiwi Islands, the authors privilege the voice of a Tiwi Elder: ' … the Government didn't care and never thought to consult us … but we knew doing it through our cultural way rather than whitefella way … we knew we had a chance for change' (Price et al., 2018, p. 12). Invitations to explore the authors' worlds were also evident in websites and pamphlets curating a range of visuospatial components, including photographs and artwork, for example in 'Written by the Mob for the Mob' stroke booklet (Peake et al., 2015) and the 'Bush-Balms' website (Purple House, n.d.). Recognising reader-author interactions and the richness of language and visual messages in publications highlighted the value of being open to going beyond objective ways of understanding.

Precarious

This theme recognises the precariousness of ensuring that objective ways of knowing are not preferred. The pervasive influence of colonisation within publications was acknowledged to varying degrees. Some publications were explicitly centred on decolonising and strengths-based approaches. For example, Urquhart et al. (2020) described a methodology that aimed to 'bridge the disconnect between Indigenous decolonising methods and western knowledges' (p. 8) to explore the strengths of a community-based Aboriginal wellbeing program.

However, the misalignment was evident between the rhetoric of not preferencing objective ways of knowing and the practice of doing so. For example, non-Indigenous author Orr (2017) described that she used a methodology that aimed 'to challenge power imbalances implicit in positivist research' (p. 17) whilst simultaneously highlighting deficit-focused statistics such as 'Aboriginal and Torres Strait Islanders experience … much greater (four-fold) prevalence of hospitalisation for alcohol-related mental and behavioural disorders' (pp. 12–13). Importantly, her intent was to challenge positivist

biomedical perspectives. However, the predominant deficit lens aligns with a colonising and biomedical viewpoint.

To recognise the precarious nature of not perpetuating objective perspectives, students as readers needed 'to develop a 'critical eye' in literature interpretation' (Lalwani et al., 2022, p. 14). A critical eye enables readers to recognise the precariousness of perpetuating objective ways of understanding.

Story 2 – supervisors' hindsight insights

This story summarises supervisors' reflections on what was important for fostering engagement for medical student sense-making. Prompted initially by the development of a conference presentation (Croker et al., 2023), and subsequently by a call for this special issue, as supervisors, we had an opportunity to further unbundle and explore our thinking. On reflection, the research team's journey mirrored the thematic progression of 'positional, interactive, and precarious', albeit in reverse order. We began in a precarious position, with an awareness of our role in societal transitions. We developed our interactions with the students and ourselves through subjectivity and collaborative momentum and positioned ourselves more strongly for critical thinking about our assumptions and embedded practices.

Precarious

On reflection, supervisors realised the extent of the precariousness of the research project and the extent to which they chose to make the precarious underpinnings of the project explicit from the beginning. As supervisors, we were aware of the important and complex space being entered into by the medical students through challenging the perpetuation of preferencing objective ways of understanding in research. We knew that we were 'doing things differently' by deliberately foregrounding subjectivity in research. At the same time, we were conscious that medical students are socialised into objective biomedical perspectives as part of evidence-based clinical practice. Supervisors intended to be upfront about the complexity, including the potential for the students' uncertainty and perhaps discomfort. This involved being aware of and responding to any uncertainty and discomfort by pausing, exploring and making tensions explicit through collaborative dialogues. The students acknowledged this discomfort and made it explicit to their peers in their end-of-project presentation (see Figure 2).

Figure 2. Representation of the discomfort students illustrated in their end-of-project presentation. Source: The Noun Project, royalty-free license, no attribution required.

As supervisors, we drew attention to a risk that we could inadvertently perpetuate health disparities by allowing the preferencing of objective and deficit-based perspectives to be perpetuated. As a supervisory team, we agreed to take care that we did not contribute to the problem that we were trying to address. The students responded with a strengths-based discourse and a refusal to use deficit statistics. Our open dialogue created conditions for the team to navigate these challenges while empowering students to engage critically and responsibly with the research topic.

Interactive

On reflection, learning with and about each other through valuing subjectivity was important to the collaborative momentum of the research team. We developed shared dialogues that challenged each other's preconceived ideas and opened each other up to new meanings, enhancing our continued motivations for new thinking. This process was not 'easy' at the start, but we overcame it through a mutual appreciation for the value of the topic, our commitment to weekly meetings between students and supervisors, leaving space to go away and think, and ongoing respectful and open communication between the collaborative group.

As supervisors, we encouraged students to access different publication styles, particularly grey literature such as websites and news articles. As the students began to explore these types of publications with enthusiasm, the team was motivated by deep thinking and engaging in critical dialogues about Indigenous health strategies. Unprompted by supervisors, students took the lens of the research topic into the semester break, engaging with different mediums, including museums and artworks, enriching their subjectivities (Figure 3). At our first meeting after the break, the students shared their insights through

Figure 3. Collage of student photos depicting students engaging with the research topic beyond research meetings.

PowerPoint presentations of their engagement with the topic over their holiday, where they had located themselves within the topic. The depth of thinking and the unprompted sharing fostered the collaborative momentum of the project.

Positional

We reflected that as supervisors we purposively structured discussions about heritage, culture, age, gender and privilege to foster medical students' awareness of their own positioning. Initially, supervisors explicitly linked these dialogues to the research process, showing students how to question the tacit assumptions of their own position, in relation to their (dis)harmony with biomedical perspectives and the research topic. As the project evolved, the students became more confident in questioning their assumptions, their positions and reflections, and their embedded practices.

The positionality of the research collective needed to be continually revisited, as there was always a risk of perpetuating embedded practices. And this could be done so easily. For example, supervisors invited an Indigenous member of staff to hear about the student's research. A supervisor began to organise the meeting – booking a room, setting an agenda and articulating outcomes. The Indigenous staff member gently challenged our embedded practices, responding to the organised plan by saying 'Or we could just have a chat'. So, we sat outside, shared food and talked about a range of topics including the research project (Figure 4). On reflection, the supervisor realised that we actually had discussed everything she had set out to do but in an organic relaxed manner. This experience made explicit the need for an ongoing iterative journey to continually question our own assumptions and ways of practising.

Story 3 – collective team's insights for shaping societal transitions

Our third story presents the collective team's insights into how this research project might begin to contribute to shaping higher education's contributions to societal transitions. This is based on our ongoing sense-making and reflective dialogues. The three

Figure 4. Photo of the research team (students and supervisors) 'having a chat'.

themes, positional, interactive and precarious, flipped again, align with our understanding of how we may challenge and potentially disrupt embedded practices. In this story, we draw on theory and publications to elucidate key conditions to: position ourselves for critical reflexivity; value the role of inter-subjectivity; and embrace the precarious. We invite others to join us in our ongoing critical reflections through questions posed at the end of each theme.

Positional

Positioning ourselves for critical reflexivity is a condition to shape societal transitions. Critical reflexivity can be understood as a process of recognising one's position in the world to better understand one's own limitations and the lived realities of others (Nakata, 2007; Ng et al., 2019). Critical reflexivity pertains to positionality; it involves examining one's experiences, knowledge, and application of knowledge (Call-Cummings & Ross, 2019). Without critical reflexivity, there are dangers that individuals, communities, institutions, and systems continue to perpetuate through embedded practices (Milner, 2007). Hence, critical reflexivity is paramount to examine sociocultural positions, challenge privilege, disrupt racism, and hold those in power to account (McCartan et al., 2022). In our project, dialogues between students and supervisors worked to draw out our critical reflexivities, exposing students to social theories, alongside critically dialoguing about positionality, knowledges and social phenomena that may have remained unexamined (Ng et al., 2019).

Through partnerships, medical students, educators and other members of universities can collaborate to sharpen their own self-criticism to disrupt embedded practices of medical education and enable future doctors to deliver meaningful health outcomes within contemporary and diverse societies (McKivett & Paul, 2023). Such change necessitates internal reflection, which may cause discomfort, challenging our understanding of the world and our practices. To disrupt embedded practices going forward, ongoing critical reflexivity can focus an increased awareness of the limitations that exist in current approaches to knowledge and a sense of appreciation for the diverse social realities that exist in a global society (Razack et al., 2022).

In relation to shaping higher education's contributions to societal transitions that address health disparities with Indigenous Peoples in Australia, a key question for our ongoing consideration is:

What might it look like if educators and students began their involvement by positioning themselves to critically reflect on:

- their positions in the world,
- the embedded practices of higher education that advertently or inadvertently are perpetuated and
- the implications for societal transitions?

Interactive

Being interactive is another condition for shaping societal transitions in which we hold ourselves open to conversations with others to develop new insights and new learning (Regan, 2012). We can build collaborative momentum to search for and question

embedded practices by valuing intersubjectivity, interacting with other people and being open to other practices. Important for building collaborative momentum is understanding the biases that shape our own thinking and allowing room for others to disagree and incorporate new ideas (Regan, 2012). Supervisors began with an acute awareness that we were not entering the project as impartial or neutral observers (Darder, 2018). Instead, we joined as humans interacting in society, becoming co-learners. As co-learners, we used shared language to question our individual understandings and bring sensitivity to articulating and expressing tensions as we moved towards a deeper, mutual understanding of the phenomenon.

The medical curriculum can benefit from embracing and facilitating diverse, flexible and collaborative discussions between Indigenous and non-Indigenous people and communities, as well as students and educators, to challenge embedded practices and inform new thinking to shape transitions (Jones et al., 2019; McKivett et al., 2020; Nakata, 2007).

In relation to shaping higher education's contributions to societal transitions that address health disparities with Indigenous Peoples in Australia, a key question for ongoing consideration is:

What might it look like if educators, students and communities collaborated to critically reflect on:

- what they can learn from each other based on their diverse positions in the world,
- the embedded practices of higher education that come into view based on these reflections,
- the implications for societal transitions?

Precarious

Being open to embracing the precariousness of change is another condition for shaping societal transitions. Openness to seeing things differently enables assumptions and embedded practices to be made visible and interrogated. Inherent in this openness is the risk of exposing vulnerabilities for doing things differently. However, this vulnerability is important for changing embedded practices such as those that may reinforce colonialism and dominant paradigms. Embracing vulnerability can sensitively bring attention to power inequities and give rise to moral and political obligations to challenge and change dominant ways of practice (Mackenzie et al., 2013).

Colonisation, inequities and privilege have manifested in medical education and continue to perpetuate embedded practices (Joseph et al., 2021). Supervisors in this project recognised that we needed to hold these vulnerabilities to embrace the precariousness of change. On one hand, we did not want to be complicit in delegitimising other forms of knowledge (Jones et al., 2019). On the other hand, we needed to support the medical student socialisation for biomedical understandings. This required creating 'trusting spaces' (Joseph et al., 2021, p. 11) to embrace vulnerability, where we could engage in discourse about race, colonialism and power through critical reflexivity.

In relation to shaping higher education's contributions to societal transitions that address health disparities with Indigenous Peoples in Australia, a key question for our ongoing consideration is:

What might it look like if educators, students and communities were supported by higher education to embrace the precariousness of change and critically reflect on:

- how can it be otherwise,
- the vulnerabilities that might need to be embraced for change to occur,
- the implications for societal transitions?

Conclusion

We would like to conclude by returning to the title of the article: Medical students' critical engagement with publications related to strategies addressing health disparities with Indigenous Peoples in Australia: Critically iterative and iteratively critical. This return to the title is intentionally iterative; that is, it is critical that engagement with strategies addressing health disparities with Indigenous Peoples in Australia is ongoing, seeking deeper levels of understanding. Thus, we are deliberately not concluding with the answer to our series of research questions; rather we are inviting others to join us in our ongoing journey of critical reflexivity. We propose that such reflexivity is critical to higher education's contributions to societal transitions and that higher levels of criticality can be developed through ongoing iterations. We wonder if perhaps insights into our small study can ripple out to other embedded practices for others and ourselves. For example, the process of addressing reviewer feedback provided us with an ongoing source of critical reflection that, if not beyond the scope of the article, could have developed into a fourth story. In such a story we would have explained our somewhat precarious beginning for positioning our writing about societal transitions (noting that the research at the core of the article was undertaken in the interpretive paradigm) and how, as we interacted with the review feedback, we more confidently positioned ourselves as part of a scholarly critical paradigm community of practice. Yet, to a large extent, we are still on the periphery where we need to critically reflect on terminology we had taken for granted, including 'health disparity'. This fourth story might have ended with a question for those working with the critical paradigm: how can we create conditions for people in different disciplines to work together to design, carry out research and/or develop publications for meaningful societal transitions in higher education?

We align ourselves with Kenneth Gergen's aspiration for new understandings for future practices being developed by deliberating on current practices. We contend that bringing a critical lens to such deliberation helps avoid the inadvertent perpetuation of embedded practices that limit opportunities for higher education's contributions to societal transitions:

> If such [current and emerging] practices can be illuminated in terms of this [future] potential, a new consciousness may be germinated. New and more potent practices may be stimulated. In certain respects, then, the present offering may serve as a mid-wife to a movement in the making. A voice may be given to an otherwise unarticulated sensibility, thus giving form and function to future undertakings. (Gergen 2015, p. 298)

This critical lens can be seen as a personal capability for all students and staff in higher education (Davies & Barnett, 2015). Revisiting embedded practices in an *iterative* manner enables us all to keep embedded practices in view and open for individual and collaborative *critical* reflexivity.

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References

Althaus, C. (2020). Different paradigms of evidence and knowledge: Recognising, honouring, and celebrating Indigenous ways of knowing and being. *Australian Journal of Public Administration*, *79*(2), 187–207. https://doi.org/10.1111/1467-8500.12400

Australian Indigenous Doctors' Association. (2025). *AIDA's cultural safety training*. Retrieved 16/05 from https://aida.org.au/cultural-safety-program/what-is-cultural-safety/

Bainbridge, R., McCalman, J., Clifford, A., & Tsey, K. (2015). *Cultural competency in the delivery of health services for Indigenous people. (Issues paper no. 13)*. Closing the Gap Clearinghouse.

Bryant, J., Bolt, R., Botfield, J. R., Martin, K., Doyle, M., Murphy, D., Graham, S., Newman, C. E., Bell, S., & Treloar, C. (2021). Beyond deficit: 'Strengths-based approaches' in Indigenous health research. *Sociology of Health & Illness*, *43*(6), 1405–1421. https://doi.org/10.1111/1467-9566.13311

Burke, *P.* (2012). *The right to higher education: Beyond widening participation*. Taylor & Francis Group.

Call-Cummings, M., & Ross, K. (2019). Re-positioning power and re-imagining reflexivity: Examining positionality and building validity through reconstructive horizon analysis. In K. K. Strunk & L. A. Locke (Eds.), *Research methods for social justice and equity in education* (pp. 3–13). Springer. https://doi.org/10.1007/978-3-030-05900-2_1

Croker, A., Lalwani, N., Love, G., Ma, A.-M., Purohit, H., Smallwood, R., & Urquhart, L. (2023). '*Looking back to move forward?*': *Medical students' engagement with literature related to strategies addressing health disparities for Indigenous Australians* Higher Education Research and Development Society of Australasia (HERDSA) 2023, Brisbane, Australia.

Darder, A. (2018). Decolonizing interpretive research: Subaltern sensibilities and the politics of voice. *Qualitative Research Journal*, *18*(2), 94–104. https://doi.org/10.1108/QRJ-D-17-00056

Davies, M., & Barnett, R. (2015). *The Palgrave handbook of critical thinking in higher education*. Palgrave Macmillan.

Fogarty, W., Bulloch, H., McDonnell, S., & Davis, M. (2018a). *Deficit discourse and Indigenous health: How narrative framings of Aboriginal and Torres Strait Islander people are reproduced in policy*.

Fogarty, W., Lovell, M., Langenberg, J., & Heron, M.-J. (2018b). *Deficit discourse and strengths-based approaches: Changing the narrative of Aboriginal and Torres Strait Islander health and wellbeing*. Lowitja Institute.

Gadamer, H.-G. (1975). *Truth and method*. Bloomsbury Publishing.

Gergen, K. J. (2015). From mirroring to world-making: Research as future forming. *Journal for the Theory of Social Behaviour*, *45*(3), 287–310. https://doi.org/10.1111/jtsb.12075

Higgs, J. (2010). Hermeneutics as meta-strategy. In J. Higgs, N. Cherry, R. Macklin, & R. Ajjawi (Eds.), *Researching practice: A discourse on qualitative methodologies* (pp. 309–322). Sense Publishers.

Jones, R., Crowshoe, L., Reid, *P*., Calam, B., Curtis, E., Green, M., Huria, T., Jacklin, K., Kamaka, M., Lacey, C., Milroy, J., Paul, D., Pitama, S., Walker, L., Webb, G., & Ewen, S. (2019). Educating for Indigenous health equity: An International Consensus Statement. *Academic Medicine*, *94*(4), 512–519. https://doi.org/10.1097/acm.0000000000002476

Joseph, O. R., Flint, S. W., Raymond-Williams, R., Awadzi, R., & Johnson, J. (2021). Understanding healthcare students' experiences of racial bias: A narrative review of the role of implicit bias and potential interventions in educational settings. *International Journal of Environmental Research and Public Health*, *18*(23), 12771. https://doi.org/10.3390/ijerph182312771

Kendall, E., & Barnett, L. (2015). Principles for the development of Aboriginal health interventions: Culturally appropriate methods through systemic empathy. *Ethnicity & Health*, *20*(5), 437–452. https://doi.org/10.1080/13557858.2014.921897

Kurtz, D. L. M., Janke, R., Vinek, J., Wells, T., Hutchinson, *P*., & Froste, A. (2018). Health sciences cultural safety education in Australia, Canada, New Zealand, and the United States: A literature review. *International Journal of Medical Education*, *9*, 271–285. https://doi.org/10.5116/ijme.5bc7.21e2

Lalwani, N., Love, G., Ma, A.-M., & Purohit, H. (2022). *Looking back to move forward: The nature of cultural considerations in strategies addressing health disparity for Aboriginal and Torres Strait Islander peoples, as seen in publications*.

The Lowitja Institute. (2020). *Culture is key: Towards cultural determinants-driven health policy - Final Report*. https://www.lowitja.org.au/resource/culture-is-key-towards-cultural-determinants-driven-health-policy/

Mackenzie, C., Rogers, W., & Dodds, S. (2013). Vulnerability: New essays in ethics and feminist philosophy. In C. Mackenzie, W. Rogers, & S. Dodds (Eds.) (pp. 1–30). Oxford University Press.

Martin, K., & Mirraboopa, B. (2003). Ways of knowing, being and doing: A theoretical framework and methods for Indigenous and Indigenist re-search. *Journal of Australian Studies*, *27*(76), 203–214. https://doi.org/10.1080/14443050309387838

McCartan, J., Brimblecombe, J., & Adams, K. (2022). Methodological tensions for non-Indigenous people in Indigenous research: A critique of critical discourse analysis in the Australian context. *Social Sciences & Humanities Open*, *6*(1), 100282. https://doi.org/10.1016/j.ssaho.2022.100282

McKivett, A., Hudson, J. N., McDermott, D., & Paul, D. (2020). Two-eyed seeing: A useful gaze in Indigenous medical education research. *Medical Education*, *54*(3), 217–224. https://doi.org/10.1111/medu.14026

McKivett, A., & Paul, D. (2023). Recreating the future—Indigenous research paradigms in health professional education research. *Medical Education*, *58*(1), 149–156. https://doi.org/10.1111/medu.15154

Milner, H. R. I. V. (2007). Race, culture, and researcher positionality: Working through dangers seen, unseen, and unforeseen. *Educational Researcher*, *36*(7), 388–400. https://doi.org/10.3102/0013189X07309471

Munro, S., Brown, L., Croker, A., Fisher, K., Burrows, J. M., & Munro, L. (2019). *Yearning to yarn: Using Aboriginal ways of knowing and learning to support clinical placement experiences of Aboriginal health professional students (978-0-7259-0102-8)*. Centre of Excellence for Equity in Higher Education's Excellence in Teaching for Equity in Higher Education.

Nakata, M. (2007). *Disciplining the savages: Savaging the disciplines*. Aboriginal Studies Press.

Ng, S. L., Wright, S. R., & Kuper, A. (2019). The divergence and convergence of critical reflection and critical reflexivity: Implications for health professions education. *Academic Medicine*, *94*(8), 1122–1128. https://doi.org/10.1097/acm.0000000000002724

Orr, E. K. (2017). Action research about good practice by Aboriginal hospital liaison officers and social workers in hospitals in Victoria. *Action Learning and Action Research Journal*, *23*(2), 11–49.

Palmer, R. (1969). *Hermeneutics: Interpretation theory in Schleirmacher, Dilthey, Heidegger, and Gadamer*. Northwestern Press.

Paradies, Y. (2018). *Racism and Indigenous health*. Oxford University Press. https://oxfordre.com/publichealth/view/10.1093acrefore/9780190632366.001.0001/acrefore-9780190632366-e-86

Paul, D., Carr, S., & Milroy, H. (2006). Making a difference: The early impact of an Aboriginal health undergraduate medical curriculum. *Medical Journal of Australia*, *184*(10), 522–525. https://doi.org/10.5694/j.1326-5377.2006.tb00350.x

Peake, R., Dieckmann, M.-A., & Hatfield, J. (2015). '*Written by the Mob for the Mob' stroke booklet*. Hunter New England Local Health District.

Pearson, O., Schwartzkopff, K., Dawson, A., Hagger, C., Karagi, A., Davy, C., Brown, A., Braunack-Mayer, A., & ., on Behalf of the Leadership Group Guiding the Centre for Research Excellence in Aboriginal Chronic Disease Knowledge, T., & Exchange. (2020). Aboriginal community controlled health organisations address health equity through action on the social determinants of health of Aboriginal and Torres Strait Islander peoples in Australia. *BMC Public Health*, *20*(1), 1859. https://doi.org/10.1186/s12889-020-09943-4

Price, J., Jeffery, N., Baird, L., Kingsburra, S., & Tipiloura, B. (2018). *Stories from community: How suicide rates fell in two Indigenous communities*. Healing Foundation.

Purple House. (n.d). *Bash Balms*. https://www.bushbalm.com.au/

Razack, S., McKivett, A., & de Carvalho Filho, M. A. (2022). Challenging epistemological hegemonies: Researching inequity and discrimination in health professions education. In J. Cleland & S. J. Durning (Eds.), *Researching medical education* (pp. 175–185). Wiley. https://doi.org/10.1002/9781119839446.ch16

Regan, P. (2012). Hans-Georg Gadamer's philosophical hermeneutics: Concepts of reading, understanding and interpretation. *Meta: Research in Hermeneutics, Phenomenology, and Practical Philosophy*, *4*(2), 286–303.

Rix, E. F., Barclay, L., & Wilson, S. (2014). Can a white nurse get it? 'Reflexive practice' and the non-Indigenous clinician/researcher working with Aboriginal people. *Rural and Remote Health*, *14*(2), 2679.

Rix, L., & Rotumah, D. (2020). Healing mainstream health: Building understanding and respect for Indigenous knowledges. In J. Frawley, G. Russell, & J. Sherwood (Eds.), *Cultural competence and the higher education sector: Australian perspectives, policies and practice* (pp. 175–195). Springer. https://doi.org/10.1007/978-981-15-5362-2

Rotmans, J., & Loorbach, D. (2009). Complexity and transition management. *Journal of Industrial Ecology*, *13*(2), 184–196. https://doi.org/10.1111/j.1530-9290.2009.00116.x

Rukadikar, C., Mali, S., Bajpai, R., Rukadikar, A., & Singh, A. K. (2022). A review on cultural competency in medical education. *Journal of Family Medicine and Primary Care*, *11*(8), 4319–4329. https://doi.org/10.4103/jfmpc.jfmpc_2503_21

Sherwood, J. (2010). *Do no harm: Decolonising Aboriginal health research* [Doctoral thesis, University of New South Wales]. Sydney.

Sherwood, J., & Edwards, T. (2006). Decolonisation: A critical step for improving Aboriginal health. *Contemporary Nurse*, *22*(2), 178–190. https://doi.org/10.5172/conu.2006.22.2.178

Smallwood, R. L. (2020). Referenced reflections to my wurrumay (son): Awareness of the impact of colonisation. *AlterNative: An International Journal of Indigenous Peoples*, *16*(4), 309–314. https://doi.org/10.1177/1177180120967997

Urquhart, L., Brown, L., Duncanson, K., Roberts, K., & Fisher, K. (2020). A dialogical approach to understand perspectives of an Aboriginal wellbeing program: An extension of Habermas' Theory of Communicative Action. *International Journal of Qualitative Methods*, *19*, 1–10. https://doi.org/10.1177/1609406920957495

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood Publishing.