



# Healthcare professionals' perspectives on environmental sustainability

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## Abstract

**Background:** Human health is dependent upon environmental sustainability. Many have argued that environmental sustainability advocacy and environmentally responsible healthcare practice are imperative healthcare actions.

**Research questions:** What are the key obstacles to healthcare professionals supporting environmental sustainability? How may these obstacles be overcome?

**Research design:** Data-driven thematic qualitative analysis of semi-structured interviews identified common and pertinent themes, and differences between specific healthcare disciplines.

**Participants:** A total of 64 healthcare professionals and academics from all states and territories of Australia, and multiple healthcare disciplines were recruited.

**Ethical considerations:** Institutional ethics approval was obtained for data collection. Participants gave informed consent. All data were de-identified to protect participant anonymity.

**Findings:** Qualitative analysis indicated that Australian healthcare professionals often take more action in their personal than professional lives to protect the environment, particularly those with strong professional identities. The healthcare sector's focus on economic rationalism was a substantial barrier to environmentally responsible behaviour. Professionals also feared conflict and professional ostracism, and often did not feel qualified to take action. This led to healthcare professionals making inconsistent moral judgements, and feeling silenced and powerless. Constraints on non-clinical employees within and beyond the sector exacerbated these difficulties.

**Discussion:** The findings are consistent with the literature reporting that organisational constraints, and strong social identification, can inhibit actions that align with personal values. This disparity can cause moral distress and residue, leading to feelings of powerlessness, resulting in less ethical behaviour.

**Conclusion:** The data highlight a disparity between personal and professional actions to address environmental sustainability. Given the constraints Australian healthcare professionals encounter, they are unlikely to shift to environmentally responsible practice without support from institutions and professional associations. Professional development is required to support this endeavour. The poor transference of pro-ecological behaviour from one setting to another is likely to have international implications for healthcare practice.

## Keywords

Environmental sustainability, healthcare ethics, professional paradigms, social identification

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## Introduction

There is an intrinsic and interdependent relationship between the social and natural environments.<sup>1–3</sup> The health of humans is dependent upon ecological and social sustainability, yet healthcare has significant negative impacts on the environment.<sup>4–6</sup> In addition to being resource intensive and consuming large amounts of clean water, materials and energy, healthcare uses, produces and inadvertently disseminates toxic and carcinogenic materials which contaminate waterways and food chains.<sup>4,5</sup> It also relies heavily upon non-biodegradable and carcinogenic plastics, and leads to the contamination of waterways with pharmaceutical residues that may affect aquatic species and contaminate human drinking water.<sup>4–6</sup> Action has been taken to address these issues, such as a decrease in the use of mercury, but they remain substantial.<sup>5</sup>

In Australia, there is considerable public concern regarding environmental sustainability, and Australian healthcare professionals are reported to be gravely concerned.<sup>3,7,8</sup> Many have argued that it is a moral imperative that healthcare professionals address environmental sustainability and ensure that they practise in an environmentally responsible way.<sup>3,9–11</sup> However, the qualitative data used in this article and in two previous papers suggest that most Australian healthcare professionals do not see addressing environmental sustainability as a core responsibility of their disciplines.<sup>12,13</sup> Through qualitative analysis, the author identifies factors resulting in a disconnection between personal and professional ethics and responsibilities, which inhibits change of healthcare practice to support environmental sustainability. Within this context, differences between healthcare disciplines are discussed, along with a consideration of how this disparity between personal and professional actions may be addressed.

## Methods

This study is part of a larger mixed methods project that involved an extensive literature review, written questionnaires of 158 tertiary healthcare educators and subsequently, semi-structured interviews of healthcare professionals and academics. The literature review and questionnaires largely focussed on education for sustainability, while the interviews had a broader focus, including the identification of barriers to environmentally responsible healthcare practice.<sup>12,13</sup> The interview data were used in this study, as described below.

### *Data collection*

Given the transdisciplinary challenges of environmentally responsible healthcare practice, purposive chain-referral sampling was used to ensure that a wide breadth of healthcare professionals and academics, from all states and territories of Australia, the private and public sectors and differing professional levels, were represented.<sup>12–14</sup> Excluding multidisciplinary professionals, the healthcare professionals were from nursing and midwifery (24%); public health (12%); medicine, environmental health and dietetics (10% each); community and rural health (7%); physiotherapy, podiatry, occupational therapy and optometry (5% each) and speech pathology, sociology and psychology (2% each).<sup>12,13</sup> The inclusion of academics in this study is important, as previous literature indicates that professional education can contribute to the lack of action to support environmental sustainability, and that it can be altered to promote environmentally responsible behaviour.<sup>1</sup>

Institutional ethics approval was obtained for data collection. Before interviews were conducted, informed consent was obtained from the 64 participants. Participant anonymity was maintained by deleting workplace-specific information from quotes, and only referring to the general area of practice.

Interviews included questions about key obstacles to improving sustainability awareness and preparedness in the healthcare sector, and individual attributes that would allow healthcare professionals to more effectively address environmental sustainability issues in their professional contexts.<sup>12,13</sup> This led to

discussions of personal and professional perspectives of environmentally responsible behaviour, and the different actions taken in these contexts. Interviews were recorded and transcribed verbatim.

### *Data analysis*

Data-driven thematic qualitative analysis, within and beyond the interview period, identified common and pertinent themes regarding personal and professional perspectives of environmentally responsible behaviour, and differences between specific healthcare disciplines in this respect. Iterative analysis within the data collection period altered interviews to allow in-depth discussion of pertinent issues. Further insights were developed as analysis continued after data collection was complete. This involved revisiting transcripts that had already been analysed as new concepts emerged. These data are considered in the context of dominant professional paradigms and are compared to previous ethics literature on moral distress.<sup>15–25</sup>

### **Findings**

While analysing transcripts of interviews with Australian healthcare professionals and academics, it became clear that many interviewees took more action in their personal than professional lives to support environmental sustainability. There was often a clear distinction made between the two contexts. For example, a physiotherapist explained how environmental sustainability was addressed domestically but not professionally:

Professional lives . . . no, I mean, you know, I had a bush block and didn't use weed killer and, you know, it was all native, and if it died it got ripped out. And, you know, really that sort of critical save the frogs . . . But the practice was a practice. (Physiotherapy academic)

Differences between personal and professional values and priorities were apparent throughout the analysis, and interviewees often separated their opinions on environmental sustainability into 'personal' or 'professional' opinions. Economic rationalisation was reported to drive professional decisions and actions more than those in personal lives. Values that were more likely to help address environmental sustainability were often discussed as 'personal' values, such as a respect for the environment, other people and other species. For example, the following participant argues that being part of a community, rather than economics, is a key driver for environmental sustainability:

This is purely personal. It's not about the holy dollar. It is about being part of a bigger picture, part of a community and part of everything. Yes, we all need money to survive and so on but that shouldn't be the first and foremost thing . . . (Environmental health)

This indicates that most participants were making inconsistent ethical judgements about environmentally responsible behaviour due to situational constraints in the workplace. Common barriers to environmentally responsible healthcare practice included professional identities, workplace cultures and dominant professional paradigms, such as a focus on the curative biomedical model of health and objectivity. Some participants discussed the devaluing of subjectivity and/or a hierarchy of healthcare disciplines and research methodology, where female-dominated disciplines and experiential methodology with a less 'scientific' focus were held in low esteem. One participant argued that the healthcare sector values what it can easily measure, highlighting how a focus on objectivity can increase the disparity between personal and professional values:

I heard a quote once that said that we don't measure what we value, we value what we can measure. So the whole health system is based on – it's data that we can measure, that we can capture and then that substitutes for quality reporting. So we measure the number of people seen rather than the genuine impact that that health intervention

has had on the lives of those people. It's easier to measure, we can count people but we can't easily count health impact. (Allied health project manager and dietician)

Although the professional bias towards objectivity contributes to a disparity between personal and professional actions to support environmental sustainability, interviewees also discussed the need or benefits of objectivity in various professional contexts, including when addressing sustainability issues:

It was taking away the narrow focus and just trying to put other perspectives and really getting them [nursing students] to see a more global view and things from other angles which in itself is a real skill within nursing and that's how I framed it as well. You can't always just look at things from one perspective. We have to be objective, we have to gather the resources, we have to look at things from other viewpoints to make sure we've got all the information. That's part of our ability to assess. (Nurse and academic)

Fears of conflict, being offensive or being seen as opinionated, political, extreme or a fringe-element were also described as barriers that resulted in the separation between personal and professional judgements and actions. Due to these fears, some participants or their colleagues were hesitant to take political or professional action even though they agreed with the underlying premise for action. In some cases, this also inhibited action outside of the professional sphere. For example, when discussing environmental and social activism by healthcare professionals, a psychologist explained,

... sometimes people get caught up in the – I'm a psychologist I can't do that, I don't want to upset anyone. But I think if you believe in something I think you have to model that too – I mean what do you say to your clients all the time? Stand up for yourself, encourage them to be assertive, you know all these things.

... Then there's a colleague of mine and he says what you do with your life in general shouldn't just be all about being a psychologist. (Psychologist)

Resource constraints and codes of conduct were also reported to constrain employees:

... I think often we might be able to do more in terms of advocating and campaigning for more sustainable ways of doing things if we weren't bound by – like I've always worked in the public sector and public sector has kind of strict codes of conduct on when you can engage the media and what you can use your work resources to do ... So there are limits on how much public advocacy and campaigning and stuff you can do in your work role I think. (Occupational therapist)

Participants described how employees were constrained and silenced by these strong professional identities, workplace cultures and limited resources such that they often felt powerless, with regard to their ability to support environmental sustainability in the workplace. This sense of powerlessness was exacerbated by the global scale of environmental sustainability issues and the need for systemic change:

I suspect from the reactions that I've seen are that people have a sense of powerlessness, that, yes, you can do things personally but the ability to influence at a broader global level isn't there. And so people then move on or don't think – can't deal with that type of thing. And it's the local versus global problem that is hard to bridge ... (Public health)

The silencing of healthcare professionals was exacerbated by constrained workers in other disciplines and sectors that impact healthcare, such as managerial and administrative staff, and employees from supporting industries:

... a lot of senior people who don't get a lot of time to think about ways that this could happen, and if it is costing money it's a no-no anyway, even though they may go home to a beautifully, you know, do all their recycling and an energy-efficient house and all this sort of stuff on an individual basis. It's hard to get organisational change. (Public health physician)

Despite the difficulties described above, there were a small proportion of participants who discussed consciously applying the same principles in their personal and professional contexts to support environmental sustainability, and there were some disciplines where the disparity between personal and professional views on environmental sustainability seemed less pronounced. For example, dietitians' core professional roles were closely related to environmental sustainability, due to their professional interest in food security:

... the Dieticians Association of Australia ... [does] have a food and environment special interest group and we're now trying to write a position paper and where we see a dietician's role in terms of food and sustainability or what is our role in that. I mean primarily we've always focused on the consumer but really if we look at the whole paddock to plate scenario, my sense is and many of us think that we should actually be working with our primary producers as well and supporting them from the very beginning before the actual food gets to the consumer plate. (Dietician)

In contrast, other disciplines with well-defined professional identities and a strong biomedical focus, such as physiotherapy and podiatry, described less professional action to address environmental sustainability and appeared to have a greater disconnect between personal and professional judgements and actions. This involved a lack of education about environmental sustainability:

If you said to a podiatry student how much do you understand about your environmental impact, I doubt whether they would have a concept of that at all ...

So if you're looking at the cost of sterilising and the impact on the environment of plastic bags that we use for sterilising, yes it's huge. But do the students learn anything about that? No. Do I ever tell them about that? No. (Podiatrist and academic)

Disciplines with a broader range of practices and less rigid professional identities tended to have a greater sociocultural focus, and arguably the least disparity between personal and professional values and activities. For example, due to the diversity and nature of occupational therapy, this discipline has a greater focus on the sociocultural model of health, more respect for personal narrative and experiential learning, and has a more organic professional identity that may allow greater flexibility and adaptability than most other healthcare disciplines. However, the professional focus of occupational therapy on client-centred practice may cause tension or support environmental sustainability, depending upon the values voiced by the client:

I think often in doing clinical work with clients you're guided by their values and their goals and how they want to fit into society. So if we want to do things in a certain environmentally friendly way it may not necessarily fit with them, you know to come from a real client centred kind of approach. Where if it's an issue for them then I'll address it and work on it with them, but if it's not an issue then I tend just to focus on integrating them into the existing society in the way that other people are.

... I think it's great if Allied Health clinicians go out into the workforce and try and operate themselves and advocate within their services for things to be done as sustainably as possible and for workplaces to contribute to the broader movements for change on those issues as well. But yeah when it comes down to – there's always got to be a careful approach to dealing with clients to respecting their values I suppose and letting them lead the way on those things rather than try to put your agenda onto them. (Occupational therapist)

In contrast to occupational therapy and dietetics, nursing and other allied health professionals often reported that a broader professional identity needs to develop to allow progress in their disciplines and future adaptability:

... we have these dominant professional paradigms that control and people get moulded ... we've actually got to change that quite considerably I think, that cultural dimension ... I argue for new professionalism one that's actually much more accommodating and generous about its space ... (Nurse)

In some cases, participants felt they and/or their colleagues did not have the authority to discuss environmental sustainability in the healthcare context. Despite years of healthcare practice and/or academic experience, some interviewees went as far as to say that their understandings, opinions or perspectives were irrelevant, yet, they expressed thoughtful opinions about the links between the environment and health, and the importance of global perspectives, political lobbying and community education. All of which are in alignment with the literature in this field.<sup>12,26</sup> A culture of 'qualified expertise' may constrain individual healthcare professionals and academics, such that they feel uncomfortable discussing environmental sustainability within professional contexts, as they have had no formal training and do not possess documented qualifications related to addressing environmental sustainability:

... I guess that that's exactly right, they're not qualified, they don't feel like they've got enough experience in it. I mean people have experience in particular content areas, like I talk about active travel, particularly cycling and walking, that sort of thing, as a way of not using cars as much. And you can talk about things in a specific content area, and others talk about nutrition and various – community gardens, that sort of thing, but that's only a piece of it. And so there isn't any kind of leadership here, even a middle management or certainly at a government level that would really help that. (Public health promotion)

This is impacting the future workforce, as academics teaching healthcare students are not comfortable covering environmental sustainability issues within subjects:

They [academic peers] said oh yeah well I recycle at home but I think none of them have really thought about embedding that into what they teach. So at a personal level people are committed, but at that professional level, curriculum level, at work level, they're not so they don't follow it into their work life ... (Dietician and academic)

A lack of professional development about environmental sustainability and healthcare contributes to these problems. Participants often described exposure to environmental sustainability information in the context of the home, but not the workplace, and reported that professional development is required to allow healthcare professionals to better support the natural environment in their professional contexts:

I mean we're all being educated at home about climate change and those sorts of things being again good stewards of the planet ... We're being educated at home so it stands to reason that how does that translate into your work? What do you take to work? How are you informed about the impact of these sorts of things at work? So there's opportunity there for – whether you have round tables or you have collections of people who have an interest, who are pursuing things, who can get support, doing that together as part of their professional development ... (Nurse)

Although there was great interest expressed in addressing environmental sustainability issues, some interviewees also discussed the importance of appreciating the defined scope of practice of specific disciplines and professional limitations:

... One of the challenges in health to that approach though is that you need to train health professionals to understand and know the limitations of their own professional expertise and boundaries before you open the gate and commit them to work inter-professionally. (Allied health professional development)

This included concern about collective political action being taken by healthcare associations. For example, a dietician felt that her discipline should not collectively contribute to broad economic arguments as they lacked the expertise, and instead should acknowledge the boundaries of practice as discussed below:

Because I think we have to as health professionals acknowledge the boundaries of practice, what we can do to make a difference and what probably we should just have an informed opinion about but probably keep out of ... (Dietician)

Such boundaries could inhibit the transfer of personal perspectives and actions that support environmental sustainability into professional contexts. However, collaborating with other disciplines could help to overcome these issues, as noted by the dietician who goes on to say:

I'm talking about the broader economy, and I guess also another example would be environmental science. Now we're not all trained in environmental science. We have to really rely I suppose on the experts in that area rather than promulgating simplistic solutions that we don't fully understand. So I think, yeah, we need to know our limits. We can advocate and certainly have an informed opinion but when it comes to pushing people in a certain direction I think we need to get good advice ... (Dietician)

Collectively the data indicate that disparate personal and professional perspectives on environmentally responsible behaviour were common, but that some healthcare professionals did take action in both their personal and professional lives to support the environment. Common barriers to taking professional action included dominant professional paradigms, a fear of professional ostracism and limited resources. An inability to take action to support the environment often led healthcare professionals to feel silenced, frustrated and powerless. Transdisciplinary collaborations and a broadening of professional identities may help to overcome such barriers, but organisational support and professional development appear to be key to implementing change.

## Discussion

The term 'sustainability' can be widely interpreted. However, semi-structured interview schedules were used to direct participant discussions, and the consistency of responses and examples provided across different healthcare contexts, in both private and public healthcare settings, supports the validity of the generalisations made in this study. This study was conducted in a single country, and therefore, generalising the findings to other countries is problematic. However, the poor transference of pro-ecological behaviour from one setting to another (as described below) is likely to have international implications. The sample of participants in this study was diverse as the systemic nature of the issues being considered required a broad multidisciplinary focus. It cannot be guaranteed that the sample represents all Australian healthcare professionals; however, all states and territories of Australia, and multiple disciplines and professional levels were represented.<sup>12,13</sup>

The qualitative analysis indicated that often there was substantial disparity between the personal values of practitioners and the lack of action taken in the workplace to support environmental sustainability. Similarly, Glasser<sup>1</sup> argues that 'widespread disjunction between people's core beliefs and actions' (p. 132) inhibits change to support environmental sustainability. This is thought to contribute to 'environmental numbness', where societies appear indifferent to environmental destruction.<sup>5</sup>

In contrast, in their personal lives, the interviewees often addressed environmental sustainability. Unfortunately, these ‘personal’ actions and values were not easily transferred to the professional setting. This is in agreement with the literature describing that there is very little evidence of ‘pro-ecological behaviour’ transferring from one situation or context to another.<sup>16</sup> This suggests that environmentally responsible behaviour is greatly influenced by contextual factors and constraints.<sup>16</sup>

There are multiple reasons why disparity between personal values and actions may occur.<sup>15,20,21</sup> Participants in this study described several workplace and organisational constraints that inhibited their ethical autonomy and ability to take action to support the environment. The prevalence of organisational constraints is also discussed in the literature, which highlights that healthcare professionals are often acting on behalf of the institutions they serve rather than being the ‘author’ of their own actions.<sup>17,20,21,27–29</sup> Organisational factors are thought to influence both practitioners’ ability to perceive the ethical dimension of practice and their ability to effectively address ethical issues once identified.<sup>17,21</sup> Institutional policies, regulations and guidelines influencing ethical judgements and driving the behaviour of employees have been referred to as ‘institutionalised morality’.<sup>21</sup> In general, employees feel an obligation to conform to organisational rules and regulations even when they conflict with their own values.<sup>21</sup> Unfortunately, this institutionalised morality may result in a ‘minimal morality’ based upon only the most fundamental anthropocentric principles.<sup>21</sup>

Interviewees described how economic and resource constraints were key workplace barriers. This supports previous literature describing how these constraints inhibit the full manifestation of employees’ moral judgement capabilities, and can result in unethical organisational behaviour.<sup>20,21,28,29</sup> Topf<sup>5</sup> suggests that people working under these conditions are likely to be susceptible to environmental numbness.

Within and beyond the professional sphere, interviewees displayed strong disciplinary identities that contributed to the disparity between personal values and actions. Such strong social identification involves the internalisation of disciplinary rules, codes, values, moral standards and responsibilities.<sup>17,20,21,30</sup> Strong professional identities contributed to participants’ fears of professional ostracism if they espoused values, or took ethical actions, that were not in direct alignment with core disciplinary values and responsibilities. Hence, interviewees feared being seen as opinionated fringe-elements if they took action to support environmental sustainability. A fear of social isolation is a documented inhibitor of ethical action.<sup>30</sup>

As disciplinary language, concepts and ideology shape and demarcate ethical practice, a narrow professional focus is likely to decrease the responsiveness of healthcare professionals to environmental sustainability.<sup>17,24,25</sup> To overcome such difficulties, interviewees and the literature both discussed ‘opening up’ or ‘broadening’ professional identities and workplace cultures.<sup>21,22,31</sup> This included the development of transdisciplinary understandings of workplaces and practice.<sup>17,28,31</sup> A transdisciplinary focus would help to address environmental sustainability issues that involve interdisciplinary tensions and systemic problems.

It has also been argued that professionals should develop an understanding of the sociocultural context of their discipline and maintain some distance from disciplinary norms such that they can be questioned.<sup>18,21</sup> This requires a culture that facilitates dialogue and respect.<sup>17,30</sup> It is important that this includes a critical examination of how professed values are realised, and whether a disparity between espoused and unstated organisational values occurs to inhibit ethical practice.<sup>17,20</sup>

This study indicates that ‘scientific’ objectivity is a focus of healthcare professionalism that contributes to the disparity between personal values and actions to support environmental sustainability. This is despite scientific data providing evidence of the links between health and environmental sustainability.<sup>32</sup> The devaluing of subjectivity contributes to the ‘dehumanisation’ of healthcare where personal and professional selves are seen as distinct entities.<sup>33</sup> In combination with a focus on efficiency and economics, scientific dominance in healthcare contributes to a procedural culture that strives for impartiality, but is less responsive to the needs of individuals and local communities.<sup>17,19,23–25,27</sup> The reciprocal relationship between people and the planet is also argued to be undervalued in this context.<sup>1,5</sup> Due to these pressures, many healthcare

professionals (including some of the interviewees) feel uncomfortable acknowledging that the personal has influenced their practice, even when the outcomes are positive.<sup>33</sup> Additionally, interviewees reported that objectivity encourages a focus on easily measurable outcomes. The long-term indirect global impact of healthcare practice on the natural environment, and subsequent health impacts, is not likely to be as easily measured, as the short-term direct impact of healthcare practice on an individual client/patient or economic outcomes.<sup>4</sup>

Academic training of healthcare professionals initiates (or exacerbates) the focus on objectivity and the disconnection between pro-ecological values and actions.<sup>1,2</sup> It promotes passivity as a pragmatic action and problem-solving are considered unsuitable for academic scholarship, and it inhibits advocacy as taking a political stance opposes the objectivity that is viewed as key to scholarly activity.<sup>1</sup> The focus on objectivity and reductionism can also promote alienation from non-human species, as it can devalue species that do not have an obvious positive impact on human life and overlooks the systemic nature of ecological systems.<sup>1,2</sup> A shift in higher education pedagogy that promotes action and systemic integrated thinking (rather than reductionism) may be required to promote environmentally responsible behaviour in graduates.<sup>2</sup> Additionally, critical subjectivity that promotes methodical reasoning that integrates feelings and emotions may be more appropriate than objectivity to allow graduates to take a political stance that is underpinned by sound reasoning.<sup>1,2</sup> Introspective self-reflection in healthcare is a widely accepted example of subjective inquiry to inform practice.<sup>12,22,33</sup>

Interviewees often reported that professional development is required to allow healthcare professionals to better support the natural environment in their professional contexts, as they were only exposed to environmentally responsible concepts and information in a domestic context. As described by the interviewees, if people do not feel 'qualified' to take action, they may remain passive even though this contradicts their own values.<sup>18</sup> Professional development may help address this issue, broaden concepts of healthcare professionalism and increase healthcare professionals' capacity to support the environment.<sup>16</sup> This training must include other organisational members who do not have a clinical background (e.g. managerial and administrative staff). This would help to reduce conflicts between clinical and non-clinical staff, and help to address systemic issues.<sup>31</sup> It is important to note that disciplinary hierarchies and power differentials complicate the professional landscape and can cause disparity between practice and professional values for some disciplines, as well as with personal values.<sup>19,20,23</sup> Domineering disciplines can include non-clinical professions, with a strong focus on economic rationalism as described by the interviewees.

As the interviewees were often unable to act in accordance with their own values in the workplace, they were making inconsistent moral judgements about being environmentally responsible that were dependent upon the situational context. There was a clear mismatch between personal values and ideals, and the perceived needs and responsibilities of specific healthcare disciplines and organisations. This resulted in participants choosing to act in environmentally responsible ways at home but not at the workplace. Inconsistent moral judgements can cause cognitive dissonance and moral distress.<sup>17,18,20,21</sup> Moral distress involves the perception that one's integrity is undermined, as one believes that he or she knows the correct action to take but is constrained from doing so.<sup>17-20,23</sup> This can result in long-term consequences (moral residue) and contribute to professional burnout, decreased staff retention, decreased quality of healthcare and decreased ethical behaviour of remaining staff.<sup>17-20,23,28,29,34,35</sup> As described by the interviewees, moral distress can lead to feelings of frustration and powerlessness.<sup>17,20,23,28,29,34,35</sup> Previously, moral distress has largely been discussed in healthcare as arising from an inability to advocate on behalf of patients, or to provide adequate care.<sup>19</sup> These ethical dilemmas usually focus on the short-term, immediate needs of an individual patient/client. In contrast, environmentally responsible behaviour needs to address the long-term, indirect and often global consequences of healthcare practice.<sup>1,2</sup>

Interviewees often described their lack of control in the workplace. If there is a perception of low control, people are more likely to feel that they can justify performing actions that contradict their own values.<sup>16</sup>

Conversely, Topf<sup>5</sup> reports that perceptions of increased control increase the likelihood of environmentally responsible practices in hospitals. If employees are supported to make ethical decisions that align with their own values, they will experience moral eustress (rather than distress), and are more likely to take action to address ethical dilemmas in the future.<sup>20</sup> Ideally, all healthcare professionals would have the determination and resilience to exhibit moral courage and actively apply ethical principles throughout their practice, despite threats such as professional ostracism.<sup>30</sup> However, ethical practice that supports the environment is more likely if organisations take steps to support employees to make such ethical decisions, and if such goals are aligned with stated and unstated institutional values and mores.<sup>20</sup> To support ethical practice, institutions must ensure that employees are able to safely voice ethical concerns, and that pathways exist to positively address such concerns.<sup>20</sup> In this study, such opportunities often appeared to be lacking, and participants frequently described how they or others were being ‘silenced’. Organisations that empower employees will enhance ethical practice, including more environmentally responsible healthcare.<sup>35,36</sup> By increasing the numbers of future-thinking, proactive and engaged employees, such strategies may help address environmental sustainability and have positive global outcomes.<sup>12,13,36</sup>

Educational opportunities that promote moral reasoning and competency with a focus on global citizenship would promote environmentally responsible practice.<sup>21,28,36</sup> This would involve considering any inconsistencies between actions and personal beliefs. Although this would be confronting, Glasser<sup>1</sup> argues that this would ‘ultimately generate progress toward ecocultural sustainability’ (p. 138). Global citizenship is currently a popular concept in healthcare.<sup>11,22</sup> Interviewees from this study discussed the importance of healthcare professionals being ‘good’ global citizens, with a broader focus than on just discipline-specific ethics.<sup>12,13</sup> Hence, healthcare ethics should be situated in the larger context of healthcare practice to allow the consideration of social and environmental local and global impacts, and to support the concept of global citizenship.<sup>17,21</sup> To support this ethical education, academia, professional associations and organisations are encouraged to produce and supply relevant resources.<sup>30</sup>

In conclusion, this study suggests that dominant professional paradigms and institutional constraints inhibit many Australian healthcare professionals and academics from addressing environmental sustainability in the workplace, although this action aligns with their own values. It highlights that organisations and professional associations need to support individual healthcare professionals to implement environmentally responsible practices. Healthcare education and professional development must be designed to support such change.

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## Conflict of interest

The author declares that there is no conflict of interest.

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