Social Science & Medicine 376 (2025) 118113

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Can care ethics help healthcare systems address their environmental harms? Findings from focus groups with members of the UK public

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ARTICLE INFO

Handling editor: Medical Sociology Office

Keywords:
Ethics of care
Environmental impacts
Environmental harms
Sustainability
NHS
Health
Healthcare

ABSTRACT

Bioethics scholars have become increasingly interested in moral questions associated with healthcare's environmental harms. Much of this scholarship has remained in the theoretical space, where ethical reasoning is underpinned by certain obligations and the implementation of top-down principles. Drawing on twelve focus groups with members of the UK public, this paper aims to bring a sociological ethics of care approach to these discussions. In fulfilling this aim, we highlight how moral decision-making occurs in the context of interrelationships with others, and not simply according to top-down principles. We show how, in line with an ethics of care approach, participants prioritised caring needs based on those in close relational proximity, meaning that emphasis was placed primarily on themselves and their loved ones, followed by other humans and the NHS, and finally the environment. At the same time, we contribute to the ethics of care scholarship by showing how such relation-based hierarchical caring was affected by various socio-cultural and political factors–what we have called '*contextual caring*'. We note four factors: access to healthcare, capability of care work, increasing understanding of the relationship between humans and the environment, and societal norms of environmental citizenship. We stress the importance of considering these socio-cultural and political factors in any examination of how relation-based hierarchical care occurs in practice. We reflect on the implications of our focus group findings for policy measures towards addressing the UK NHS's environmental harms.

1. Introduction

Globally, national healthcare sectors contribute approximately 5.5 % to their country's greenhouse gas (GHG) emissions (Pichler et al., 2019). Healthcare also contributes to other environmental harms, including the production of toxic and non-toxic waste, water use, and effects on biodiversity (World Health Organisation, 2018; Lenzen et al., 2020). Calls have been made for the healthcare sector to address its adverse environmental impacts (COP28UAE, 2023) and m any healthcare systems internationally have committed to develop low-carbon health services (World Health Organisation, 2021). National and international organisations are beginning to produce guidance to help the sector with these efforts (Mertzke, 2022, The Academy of Medical Sciences, 2023; World Health Organisation, 2023; Royal College of Physicians, 2024).

While the ethicality of needing to reduce healthcare's environmental harms is undisputed–particularly with respect to high income settings where a high burden of environmental harm persists (Bhopal and Norheim 2023)–debate remains about the moral underpinnings of this ethicality: who has moral responsibility to enact changes? What could or should these changes look like in practice? And how could and/or should such responsibilities be balanced against other healthcare obligations? (Hantel et al., 2024a). Bioethics scholars have become increasingly interested in such moral questions (Dwyer, 2009; Lee, 2017; Richie, 2019; Samuel et al., 2022; Sheather et al., 2023; Pratt, 2024). This aligns with a bioethics literature that has long discussed the importance of considering the environment as part of any bioethical deliberation (Potter, 1988).

Much of the emerging scholarship in this area is theoretical: it revolves around the promotion of ethical reasoning that begins with top-down principles and/or is based on certain obligations and extends outward (Richie, 2019; Parker, 2023; van Gils-Schmidt and Salloch, 2024). For example, in a recent exchange in the *Journal of Medical Ethics*, van Gils-Schmidt and Salloch (2024) argued that a duties-based approach is useful to help clarify physician responsibilities to consider the environmental impacts of treatment options during clinical encounters. In another example, Richie (2019) has proposed a

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https://doi.org/10.1016/j.socscimed.2025.118113
Received 25 October 2024; Received in revised form 13 March 2025; Accepted 17 April 2025
Available online 20 April 2025

principles-based approach to guide healthcare decision-making. Empirical research is emerging but still tends to be associated with duties or obligations (Hantel et al., 2024b).

This paper aims to bring a sociological ethics of care approach to act as a critical companion to this existing body of literature. Drawing on twelve focus groups with 82 members of the UK public, the paper shows how moral decision-making often occurs in the realm of interrelationships with others. We argue that because of this, relationships need to be considered when examining moral questions raised by healthcare's environmental harms. Our research question was: how do participants discuss questions about the importance of considering the UK healthcare system's environmental harms? Our findings resonated with a key aspect of ethics of care–relational proximity–which means that ahead of other care work, moral precedence is given to those with whom people have closer relationships. In particular, participants primarily emphasised care directed towards themselves and their loved ones, followed by care for other humans and the NHS, and finally the environment. This relational proximity was nuanced, with certain socio-cultural and political factors affected the relational hierarchy. We note four: the importance of access to and capability for care (shaped by the socio-political landscape within which UK healthcare services currently operate), difficulties with conducting environmental care work, increasing understanding of the relationships between humans and the environment, and societal norms around definitions of good environmental citizenship. Our findings contribute to the ethics of care by encouraging consideration of socio-cultural and political factors in any examination of how people prioritise different caring responsibilities in a relational hierarchy (we call such caring '*contextual caring*' because caring is shaped by the socio-cultural and political context). They also emphasise the need to reflect on such factors when examining how moral questions associated with reducing healthcare's environmental harms ought to be considered at the policy level.

Before presenting our findings, we introduce the ethics of care scholarship: on the one hand, Tronto's (Fisher et al., 1990; Tronto, 1993, 2015) ethics of care framework, which we use to present the different caring work conducted by our participants. On the other hand, a brief literature on relational proximity in decision-making. We also contextualise our findings with a brief introduction to the socio-political landscape within which UK healthcare services currently operate given its relevance in shaping our participants' moral decision-making.

1.1. Ethics of care

Under an ethics of care perspective care is considered central to all human lives, and persons exist in a web of dependencies reliant on care. It is therefore within the unique circumstances of interdependent and dependent caring relationships that moral considerations arise and ethical decisions are made (Gilligan, 1982; Noddings, 1984; Kittay, 1999; Held, 2007; Lynch, 2007; Robinson, 2011; Engster, 2014; Allison, 2017; de La Bellacasa, 2017; Maio, 2018; Tronto, 2020; Groves et al., 2021). Emotions are part of such decision making and act as a moral compass, enabling people to navigate different–often competing–caring relationships that produce, shape, and constrain their particular choices (Held, 2007; Maio, 2018; Moriggi et al., 2020).

Early care ethics scholarship was initially focused on *interpersonal* human interactions. This work quickly expanded to offer insights beyond the interpersonal (Gram-Hanssen, 2024). Categories of different care types have emerged–from primary, intimate 'love' relations which have strong attachments; to secondary care relationships between relatives, friends, neighbours and colleagues; to caring responsibilities with unknown others (Lynch, 2007). Some scholars have extended their conceptualisations of caring relationships across time and space to future or 'imagined' human generations (Groves, 2019; Randall, 2019), as well as to caring responsibilities that can include non-human institutions or entities (Tronto, 2010). With respect to healthcare, such work has been useful in informing how fair and adequate decisions about health service access, delivery, timeliness and acceptability should be made (Engster, 2014; Quilliam et al., 2023). Increasingly, scholars now see a role for care ethics in considerations of how to attend to the environment–an environment, they argue, that not only produces for humans, but also warrants care (Latimer and Miele, 2013; Rock and Degeling, 2015; Whyte et al., 2016; Allison, 2017; de La Bellacasa, 2017; Cañada et al., 2022; Brelje, 2023; Seymour and Connelly, 2023; Gram-Hanssen, 2024). Aligning with ecofeminist approaches, indigenous perspectives and environmental movements, these scholars reject human exceptionism at the level of care (Mies and Shiva, 2014; Cañada et al., 2022; Brelje, 2023; Davis, 2023). In a manner similar to post-humanism, and consistent with Latour (2007), they argue that care ethics should reflect human and non-human interconnectedness, arguing that this complex entanglement often complicates ethics decision-making and can therefore not be overlooked when considering how individuals make decisions (Rock and Degeling, 2015; Allison, 2017; de La Bellacasa, 2017; Flower and Hamington, 2022).

1.2. Tronto's ethics of care

Tronto's ethics of care framework offers a useful guide to explore different types of caring relationships–whether they be interpersonal, or more distal, institutional or environmental. Tronto defined four interrelated stages of care. First, *caring about,* which requires the moral dimension of *attentiveness* to 'become aware of and pay…attention to the need for caring…listening to articulated needs…and deciding which needs to care about' (Tronto, 1998: p. 16). Importantly, as we go on to show in this paper, it also includes the need to 'be attentive to one's own needs for care' because 'own needs [need to] have been sufficiently met so that one is able to glance around and notice others' (Tronto, 2020: p. 68). Second, *caring for* involves *taking responsibility* for the care needs recognised in stage one, and enacting agency to address these needs. Examples include co-ordinating volunteers for a specific care-recipient (p.56). Third, *caregiving* is 'the actual material meeting of the caring need' (Tronto, 1998: p. 17) and requires the moral dimension of *competence*; 'it involves physical work, and almost always requires that caregivers come in contact with the objects of care' (Tronto, 2020: p.56). Finally, *care receiving* relates to an evaluation of whether the 'thing, person, or group that received the caregiving' have had their care needs met (Tronto, 1998: p. 17). Here, the moral dimension–*responsiveness*–is shared between those giving and receiving care; while caregivers ensure appropriateness of care (matched to need), care-recipients must respond to–and accept–the care given. Since an act of care may produce new needs, responsiveness also requires attentiveness, and in this way the caring process comes full circle (Tronto, 1998).

In later work, Tronto (2015) defined a fifth stage, *caring with,* underpinned by the moral dispositions of *solidarity* and *trust*. This moves beyond the individual to develop shared responsibilities for enabling good caring societies consistent with justice, equality and freedom (Groot et al., 2019). As Tronto (2015) explains, *caring with* imagines the entire polity of citizens engaged in a lifetime of commitment to, and benefiting from, the four stages of caring, so that we can 'trust that over time, we will be able to reciprocate the care we received from fellow citizens, and that they will reciprocate the care we've given to them' (p.14). In democratic society then, *caring with* requires all individuals to consider their mutual responsibilities for caring, including responsibilities for personal care needs (Groot et al., 2019), when trying to act in solidarity with others. We return to this point later in the discussion.

1.3. Relational proximity

Care ethics scholars acknowledge and endorse the moral salience of relational proximity–that is, that care often manifests most strongly in caring relations with particular known others (familial or friendship ties). Furthermore, the capacity to care diminishes as social distance

increases (Syropoulos et al., 2024) and, as such, we have stronger reasons to prioritise the care needs of those closer to us (Noddings, 1984; Nortvedt and Nordhaug 2008; Randall, 2023). Such relational proximity was evident in our findings.

The partiality for closer particular others raises concerns when care ethics reasoning is scaled outside the personal realm. For critics outside the field, this represents an intrinsic flaw of care ethics because relational proximity promotes unfairness likened by some scholars to behaviour typical of that seen amongst children in a nursery (O'Neill, 1990; Singer, 2017). In particular, they say, relational proximity lacks consideration for integrating aspects of justice, equity and fairness (Nordhaug and Nortvedt, 2011). Within the field, a more nuanced approach is advocated, recognising the need to balance particularism with a wider justice approach. Nevertheless, theorists remain divided on how and when partiality to particular others can and should be morally justified (Randall, 2023; Nortvedt and Nordhaug 2008) and empirical scholarship suggests tensions in practice (Tsunematsu et al., 2023). This is exacerbated by the fact that relational proximity can be complicated by various factors. For example, the introduction of digital technologies and artificial intelligence can disrupt relational proximity by shifting far away relationships closer, or indeed, closer relationships further (Villegas-Galaviz and Martin, 2024). Similar disruptions transpire when the caring needs of unknown others are presented to us in different ways, with statistical information being less emotionally evocative than personal stories of hardship (Daniels, 2012). Our findings show similar disruptions to relational proximity when participants tried to balance caring responsibilities towards their own care, the care of human and non-human others, and the environment. We argue for closer scrutiny of disrupted caring relationships by attending to the fact that care takes place within a specific context–what we call 'contextual caring'.

1.4. An institution of healthcare: the UK National Health Service

Care is oftentimes not the central focus of UK healthcare policies (Jennings and Dawson, 2015; Heath and Montori, 2023). Rather, policies are underpinned by neoliberal rationalities–a political and economic ideology based on the organising principles of self-regulating markets, free-trade, and free choice. These organising principles promote individuals as rational actors, motivated by self-interest, capable of and responsible for making choices to manage their own well-being. Tronto (2010) argues that the neoliberal framing of healthcare policy-making has shaped and framed how we understand care in terms of both market-based governance and individual responsibility. In terms of the former, market mechanisms have driven healthcare into the private sector where profit-driven decision-making occurs. However, because care is not a financially profitable act, little incentive exists to develop innovative market-based care solutions (Tronto, 2010: p159-160). This means that aspects of compassionate care are lost and poor care prevails (Viens, 2019; Tronto, 2015; Heath and Montori, 2023). Furthermore, because neoliberal economic policy depends on continued economic growth, in times of economic difficulty, when health and care are viewed through the logics of the market rather than through a 'logic of care' (Mol, 2008), cutting healthcare spending is deemed an appropriate austerity measure (Viens, 2019).

In terms of the latter, neoliberal ideology holds that the market rather than the state is the best mechanism for addressing societal issues. This means that citizens (consumers) must be allowed to make (informed) individual choices. Responsibility for social change is therefore transferred to individuals (consumers) through instruments seeking to empower them to make informed choices. This is conducted through an ideological calculus that appeals to them as rational agents, rather than recognising that they have interdependent relationships with others and/or may be vulnerable and/or dependent (Mol, 2008; Tronto, 2010; Jennings and Dawson, 2015; Heath and Montori, 2023).

These neoliberal approaches have driven over a decade of austerity measures in the UK, introduced by the Conservative government in 2011, during which regressive financial cuts led to stagnant or falling life expectancy and widening health inequality (Institute of Health Equity, 2024; Merry and Gainsbury, 2023; Darzi, 2024). Government and subsequently public narratives around rationalisation of resource use at both local and national levels now dominate. It is within this context of austerity–what Doucet (2023) describes as a 'historical moment of multiple care, socioeconomic and socioecological crises' (p. 12)–that the UK National Health Service (NHS) has developed processes to address healthcare's associated environmental harms. It is also within this context that our participants had to balance moral responsibilities to care.

2. Methods

2.1. Recruitment

Twelve focus groups were conducted across the UK, both online (n = 4) and in person (n = 8; South London, North London, South Leeds, North Leeds, Norwich, Swansea, Glasgow and Edinburgh). In person focus groups were located in community centres and public venues (i.e. libraries, art galleries) to support visibility within the local community, and reduce barriers to attending.

Recruitment was through online and print advertisements in local newspapers, the *Patients Association* Newsletter, social media groups, libraries, community groups, and university channels. Local institutions, voluntary networks, and action groups also shared printed and online adverts. We also used *Roots Research* to support recruitment in person (Leeds, Norwich and Edinburgh) and online (particularly participants in Northern Ireland where no in person focus groups were held) (n = 18). Participants were offered £50, plus travel expenses (up to £10).

Recruitment involved scanning a QR code, which directed participants to an expression-of-interest registration page. Following registration, potential participants were emailed a participant information sheet and consent form. Those wishing to take part were emailed a one-page information sheet about the topic and an optional pre-workshop activity prior to the focus group. The pre-workshop activity was designed to introduce participants to the topic, asking participants to map a particular healthcare pathway they (or someone they knew) had experienced (including the process, people, objects etc), and then think of any good or bad environmental impacts associated with specific aspects of the pathway (see supplementary materials). Participants were encouraged to discuss the activity with family and/or friends. During the focus groups, participants–many of whom had conducted the activity–shared their maps. Demographics of focus group participants are displayed in Table 1.

2.2. Focus groups

Focus groups were 2 h (including a 5-min break), moderated by two researchers, and were video and audio recorded. Recordings were transcribed based on words only (rather than body language and/or gaps in speaking or intonations), though obvious areas of agreement/disagreement (nods/shaking heads) or laughter were noted. Videos were deleted following transcription and transcripts were de-identified. Codes to signify participants were as follows: G signified "focus group", followed by the focus group number (1–12), then a letter (the specific participant in a focus group).

The focus group schedule comprised three main exercises (see supplementary materials): mapping; speculative futures; and imaginaries. The mapping exercise was loosely based on Lupton's methodology (Lupton and Michael, 2017) and aimed to encourage participants to reflect on their own healthcare experiences, as well as consider associated environmental impacts (good and bad). Participants were asked to name (and implicitly to gender) an imagined 35-year-old patient presenting with a persistent cough, and describe all steps they perceived would be involved in making, attending, and following up a primary

Table 1
Demographic information associated with participants.

Demographic	Number of Participants	Total self-reported[a]
Country of residence		
England	53	82
Scotland	19	
Wales	5	
Northern Ireland	5	
Gender		
Female	54	82
Male	27	
Non-binary	1	
Age		
18–25	9	74
26–35	14	
36–50	18	
51–65	21	
66–75	9	
76 and over	3	
Ethnicity[b]		
White British	34	69
White Other	16	
Asian	10	
African	3	
Black British	2	
Scottish	2	
British	1	
Middle Eastern	1	
Occupation of main household earner when aged 14[b]		
Professional	35	71
Working Class	24	
Intermediate	9	
Other	2	
Prefer not to say	1	
Highest level of education attained		
Masters degree/PhD	25	68
Bachelors Degree/Higher National Diploma	23	
Certificate of Higher Education	2	
A Level or similar e.g. apprenticeship	9	
GCSE (or O Level/CSE)	8	
No formal qualifications	1	

[a] Providing demographic information beyond country of residence was optional at the point of registration, and so total self-reported figures are sometimes lower than the total 82 focus group participants.
[b] Self-reported data was collected using free-text and has been grouped into categories to reflect the information provided.

care appointment. A focus group moderator visualised the steps on a white/Miro board and participants were asked to indicate potential associated positive and negative environmental impacts on the map. Discussions particularly attended to participants' experiences, perceptions, views, beliefs and awareness of environmental concerns in the context of healthcare. Prompt questions explored how these environmental impacts might be considered within healthcare systems, including questions about participants' concerns, values, and priorities when accessing healthcare services. The speculative futures exercise encouraged participants to reflect on decision-making considerations and challenges at higher levels within the healthcare system. The exercise presented speculative headlines, kindly gifted by the Health Foundation-Liminal Space collaborative project 'Net Zero NHS: Imagining the Future', with slight modifications to adapt to our research aims. Participants were asked for immediate reflections and perspectives on each scenario. Finally, the imaginaries exercise asked participants to imagine a healthcare system that incorporated values that were important to them, and to reflect on what it might be like–and how it might be different to the current system. We were interested in how environmental considerations featured in these imaginaries.

2.3. Analysis

Our analysis was thematic, in line with Braun and Clarke (2021), though also extended beyond themes to draw out areas of agreement, divergence, and consensus building, and was modified for a collaborative setting. Analysis was conducted by the authors, who have clinical (SB), bioethics (GS, MM) and medical sociology (GS) backgrounds, with GS being an experienced qualitative researcher with decades of experience. The approach to developing themes across the research group was based on a collaborative methodology developed by the Solpan Consortium (Zimmermann et al., 2022). Focus group moderators, as well as the non-attending researcher who also listened to the focus groups, independently documented initial reflections and perspectives of each focus group. Reflections were discussed in a 2-h online meeting and a deductive coding structure (two hierarchical levels) was developed for thematic analysis in NVivo. The structure was independently trialled by two researchers on one transcript, and then discussed and modified by all three researchers during another online meeting. The modified schedule was applied to another transcript by one researcher, with further modifications made during an additional online meeting. The resulting coding schedule then became the master schedule. Transcripts were divided between the three researchers and coded using the master schedule. During coding, inductive codes were added where relevant and discussed at weekly meetings to alert other researchers to their additions. Each coded transcript was checked by a second researcher, and any discrepancies were discussed and resolved. No major discrepancies were noted. During analysis, and specifically related to descriptions and discussions of caring relationships, no differences were identified between online and in person focus groups, place of residence (including differences between the four nations), or demographic criteria, including gender.

2.4. Limitations

First, recruitment sought to capture people with varying levels of engagement or interest in environmental concerns and/or health (care). Although self-selection bias remains a large factor, mitigating steps included offering an incentive, and emphasising–through venue staff–-that participation did not depend on pre-existing knowledge or interest in environmental issues relating to healthcare. However, our participants seemed to reflect those who have an interest in environmental issues. Second, whilst our cohort does represent diversity across demographics, we do recognise that a majority of participants were white and educated to degree level or above. Third, the language of the pre-workshop activity was specifically framed in a neutral way to mitigate the chance of shaping participant views prior to attending the focus group; we recognised that a topic about environmental harms already brings certain connotations. We do, however, realise that the language of the activities may still have influenced participant views to some degree. Though we note that during focus groups, participants spoke about both positive and negative relationships between healthcare and the environment, which we have reported in more detail elsewhere (forthcoming). Finally, this study was conducted in the UK and cannot be generalised.

3. Findings

All participants recognised the importance of the NHS taking steps to mitigate its environmental harms. When discussing how this should happen, participants drew on an ethics of care. They used a pattern of reasoning in line with this approach, with their capacity to care decreasing with increased social distance (Syropoulos et al., 2024). This relational proximity meant that prominence was given to the needs of themselves, their loved ones and known humans. They also cared for/-about the NHS (as an institution) and the environment and/or distant humans, though this was more distally. At the same time, relational

proximity, as a moral barometer, was affected by various socio-cultural and political factors. It was reinforced by their experiences of healthcare, as well as by difficulties with knowing how to discharge caring responsibilities to the environment in the realm of healthcare. It was disrupted by participants' increasing understanding of the relationships between humans and the environment, as well as by the way in which environmental citizenship is mobilised within society. In the below we discuss these findings.

3.1. Seeking healthcare: caring about oneself

All participants were resolute that healthcare–and the NHS as an institution–should focus on caring for 'human' health (G07B). Whether discussing individual clinical encounters, or higher level healthcare systems, participants talked about the importance of having their own care needs and the care needs of their loved ones met. This was particularly stark when participants perceived themselves as acutely unwell. In these instances, they spoke about a transient changing of their own caring responsibilities, from *caregiving*, to being dependent, vulnerable and in need of being cared *for*. Participants in focus group 5 agreed that this shift was underpinned to a fear of being unwell:

> G05B: I think fear is a motivator, and if you're frightened that something's happening to you, you don't understand it, you want to get it sorted out.
>
> G05G: I agree
>
> G05A: Yeah, me too.

In focus group 10, one participant drew on Maslow's hierarchy of needs theory to similarly explain how *caring about* and *for* others, as well as *caregiving*, was only possible 'when we feel our needs have been satisfied' (G10E).

3.2. Caring for the environment in the context of healthcare

Participants were concerned about how their daily lives were contributing to environmental harms and described *caring for* the environment. For many, this concern extended to *caring about* the environment, and sometimes to *caregiving*. Participants described this care work either in eco-centric terms (*caring for* the environment because it was valuable in and of itself) or in anthropocentric terms (*caring for* the environment because it was instrumental to human health). Participants were keen to share examples of how they practiced their care work towards the environment through hands-on concrete work: 'if I buy a bottle of water, I'm still using the same plastic bottle for three years, I just keep refilling it. I never chuck anything in the bin, and ….I don't ever buy new clothes' (G05C).

However, when asked if the healthcare sector should address its associated environmental harms, despite agreeing that it should, participants nearly unanimously reasserted the importance of having their own healthcare requirements met–and prioritised–before environmental considerations. This was particularly salient during their own clinical encounters: 'I'd rather be more informed of my care path and choices than the environment… my care, supersedes environmental impact' (G11B); 'you want your treatment to be based on what's best for you, not what's best for the environment' (G06F). This also applied when participants considered the care of loved ones. While recognising decisions were emotionally difficult ('I think when you have emotion it's hard' (G01F)), consensus emerged around the importance of prioritising care for their loved ones through a relational proximity approach: 'you do whatever you need to do' (G01B). As participants explained, emotional connection towards their loved ones felt more 'real' than towards the environment or future humans, and this 'realness' held moral weight. G10E and G01B both described how caring for distant others or 'hypothetical futures' was less morally valid than caring for their present health concerns because of greater moral distance:

> G10E: when you're in pain, the idea of considering some potentially remote and possibly distant, you know, distant in terms of time effect is not one that's going to actually be very, be very valid ….;
>
> G01B: I think that the hypothetical future never feels as real as the life that people you love…and that's the fundamental issue …

Participants anticipated that their doctors used the same logic of moral proximity to prioritise patient care over more distant environmental care work because, as one participant explained, the guilt of 'losing a patient' would be greater than guilt incurred by overlooking environmental concerns:

> G01E: I know quite a few doctors [and] they would not think about the environmental impact, because they would think "this is what the patient needs" ….I think, what we said before about the guilt... I feel like they would rather take the guilt of the environmental impact than the guilt of potentially losing a patient.

Beyond prioritising their own and their loved ones' care needs ahead of the environment when receiving healthcare, through a relational proximity approach, participants also de-prioritised environmental care work compared with care work for their loved ones outside of healthcare. In one example, G04F reflected on a hypothetical scenario of being given information about the environmental impacts of treatment options during a clinical encounter. This, they perceived, could affect *caregiving* to their parents. As such, this participant was hesitant to bring environmental concerns into such discussions:

> in terms of going back to like my relationship with my parents; it feels like this will just be another thing I'm nagging them about. I go home and I'm like "why haven't you taken…this medication...that was prescribed". I just feel I'm just nagging them about stuff.

Similarly, responding to the prospect of their doctor discussing the way in which they travelled to their clinical appointment, G09B explained how c*aring for* her child limited her time, and therefore capacity to consider environmental concerns beyond current caring responsibilities:

> walking to the practice-like, that's great, because I was on a day off work. But in a normal day, if I had to go and pick my child up from her childcare, to get her to vaccinations…to then get to work, I wouldn't be doing that…because we just don't have time.

It transpired, however, that relational proximity as a moral barometer for participants' decision-making was not straightforward. It was amplified and/or disrupted by various factors, to which we now turn.

3.3. The need to evaluate caring for the environment: difficulties with parameters

Despite having the desire to conduct environmental care work, participants perceived there to be few parameters through which to measure how the environment *received* care work. They recognised that trying to disentangle these issues was difficult because of the separation of modern societies from their implicated environmental harms. Participants were frustrated with their lack of agency, having undertaken environmental care work that was wasted due to structural and systematic limitations:

> one of the greatest cons of the 21st century is recycling. Because unfortunately, it's really good–like everyone should do it–but only about 10 % of what we put in recycling bins is actually recycled (G05F).

This made it difficult for participants to fully comprehend how they could best care for the environment. With so many unknowns, the relational proximity of environmental care work seemed to be pushed far away.

3.4. Environmental care work is difficult in (un)caring healthcare

Beyond not knowing *how* to care, decisions about caring for the environment were complicated by participants' lack of emotional, mental or physical capacity in the context of an un-caring healthcare system. All participants, to varied extents, reflected on the inadequacies of existing healthcare services to meet their care needs, and described (often traumatic) experiences, effort and personal labour invested in trying to access care. Participants spoke with a sense of solidarity and empathy with one another about the amount of work they needed to invest in just getting to an appointment:

> G06B: I get a bus at half five in the morning to get to the [hospital], otherwise it's going to cost me [to park].. [..] …
>
> G06C: …if I get referred outside to a different hospital because of when the next available slot is…it'll be an hour and a half on, a several buses in the train.
>
> G06E: If you're not well either ….[..] …
>
> G06D: Yeah, if you hit the buses wrong it does take a long time

Beyond access, nearly all participants wanted to *receive* care: they wanted doctors to not only treat them but also show compassion and attentiveness through ongoing and open-ended interactions (Mol, 2008; Lanphier, 2021; Quilliam et al., 2023). Nevertheless, participants provided countless examples of where such care was perceived as lacking. Focus group 6 discussed instances of rushed appointments, inappropriate telephone consultations, and sentiments of not being listened to, all leading to feelings of despair and helplessness:

> G06B: when they [the doctors] call you back up ….and I'm trying to talk to the guy, but he's speaking so fast, yeah…"ok but take this tablet. Take that tablet", I'm like "yeah but stop rushing me". And he's like, "what's the problem?"…it's a nightmare
>
> G06E: You feel like you're being rushed through
>
> G06B: "Let me explain what's wrong with me. So you're the doctor, listen to me. In fact, you should see me face-to-face" ….
>
> G06D: A reluctance to actually see people, yeah
>
> G06B: Now they know you can do it by phone they're all reluctant to do that…If you go in… they actually might be able to notice something about you ….But they don't care ….And you come off the phone feeling…I've come off the phone literally in tears. Because I don't know what to do anymore.

In fact, throughout focus groups, participants gave repeated examples of logics of efficiency and audit that drove the need to see patients quickly: 'I believe the system is pushing you to have a, you know, telephone conversation because obviously saving time' (G11E); '[doctors] are quite eager to prescribe…instead of [spending time] talking to you…' (G07A). G10F reflected on how this logic disrupted their access to care, with their care needs unmet due to a lack of continuity and short appointments:

> You don't have the continuity of care with a GP anymore. [You have a] 10 minute appointment…I keep pointing out to my GP. I'm old, I've got lots of bits that don't work, and they're all interconnected. So, I can't just talk about one issue at a go. Their advice is "well you make another appointment".

Participants described the amount of work they needed to invest into getting better (access to) healthcare. G12C described lobbying for her son to receive coordinated complex care more locally:

> my son has routine investigations annually. We used to have to travel…and if they think that we could go to [city X], for a day, for a scope or a scan… it's just nuts! But I'm somebody who doesn't sit down quietly…And we can now have…any investigations…they can be done fairly locally.

With such work being invested into accessing and receiving care for themselves and/or their loved ones, participants had little capacity to care about the environment. G06D explained: 'if you could walk into your GP, have an appointment get seen on the same day…you might say, "Oh, how can I do this in a greener way" but, because it's such a struggle to get even, you know, even seen ….'. Consequently, because of the amount of investment in caring that was required, their caring responsibilities towards themselves and their loved ones overshadowed other caring responsibilities (to, for example, the environment).

Such views stretched to the institutional level, with participants *caring about* the wider NHS. In the context of the care-less healthcare crisis, healthcare's criteria for being a caring institution could not prioritise environmental care-work: 'we're having a mental health crisis …. and you've got smoking, and then you've got obesity, and environment like, isn't really a priority for health I don't feel' (GO5D). This *caring about* the NHS was exemplified by the personification of the healthcare system, which was described as struggling, and in need of care, support and protection. G06C explained: 'the fact that [addressing environmental harms is]…left up to…the NHS, which is already struggling…it feels like it's just being left ….'.

Caring about the NHS also extended to *caring with* doctors and other healthcare professionals. This was because participants wanted to protect them from environmental care work responsibilities. They recognised how doctors were 'overworked' and felt that it was difficult for doctors to follow any practice that was not the 'quickest and easiest' because of the 'knock on effect of just being exhausted' (G06C). Finally, this *caring with* disposition was part of broader solidaristic *caring with* work that participants engaged in towards the NHS and human others beyond considerations of the environment. Despite their experiences of inadequacies in healthcare services, some participants recounted their care work in trying to limit their service use to only when necessary so that the service would be more available to others, whom they recognised also used the healthcare service and sometimes may be worse off than them: '…if it's a case of, you don't feel like it's…really urgent, and so you don't want to like inconvenience any other people who might be really like having like urgent problems…' (G07B).

3.5. Closing the gap between human-environment distal relationships

Participants prioritised the importance of their own care needs, and the care needs of their loved ones, ahead of environmental considerations. At the same time, participants' discussions in focus groups suggested their increasing understanding of the entwined relationship between environment and human health, and that caring for/about loved ones and other humans was necessarily entangled with this care work. Participants reflected on ways in which their relational hierarchy needed to account for this so that it gave more moral significance to the environment (and therefore, consequentially, themselves and their loved ones). This was especially pertinent for those who had first-hand experience of the entanglement between lived environments and human health. For example, through *caring about*, G05B, who lived in an agricultural area, considered the risk to health posed by environmental pollutants. This participant described anxieties about their grandchildren swimming in local rivers because of the amount of pesticide and fertiliser run-off. G12D *gave care* to the environment when they realised how impacts on the environment were affecting human health. Reflecting on a research study about air pollution and school traffic that they had been informed about:

> one of the things they [a research study] did was have a meeting with parents from different schools and present the evidence…like, when you're picking up children, people leave their cars on and actually… the children, because they're at a certain level, they're the ones that are most affected…And actually, that's what sort of inspired me to do

something about my own usage of car and I mean, I use taxis for journeys that I need, for my mum and stuff. But otherwise, I think I've been able to navigate and look at other ways of getting [around].

These relationships, which highlighted the interconnectedness of environment and health outside the healthcare system, prompted reflection on the need for the NHS to consider its own environmental harms because such impacts could inadvertently contribute to human (ill)health.

Beyond participants' increasing understanding of the relationship between environment and health, relational proximity hierarchies were also disrupted by societal discourses about environmental citizenship. Specifically, they were disrupted by the abounding media and policy discourses about how (citizens of) society *should* care for the environment (*caring with* responsibilities). This led participants to believe that the environment should hold greater significance in their moral decision-making. Specifically, while in some scenarios, such as acute care needs, de-prioritising environmental caring seemed straightforward, in other circumstances, participants would agonise over such decisions. They described the guilt they felt when they prioritised their own health needs (G03D), as well as feelings of selfishness because they perceived that this decision would compromise them as good environmental citizens. G06C reflected on the hypothetical scenario of being offered a choice of either a more environmentally friendly injection, or less environmentally friendly pills, with the dilemma related to their needle phobia. In the extract below, the moral dimension resulting from *caring for* the environment came into tension with personal care preferences and quality of life. Choices favouring the latter acted as a measure of moral character–'essentially [asking] are you a good person?' This extract, and the focus on what it means to be a good person, illustrated emerging tensions between looking after oneself and *caring with* (solidarity) through environmentally responsible citizenship:

I was once offered…for ….vertigo, between the week of pills, or one injection. And I have a phobia of needles. And if I was told that the injection would be much better for the environment ….I'd then have to decide whether my phobia was like…I'd likely go home and cry …, and be …, be really upset if they were to give me that choice …. Putting the [choice on me], it's like essentially saying, are you a good person?

G06E: And it's making you feel worse when you're unwell isn't it?

G06C: I mean in any way, I think, obviously, being environmentally friendly is really important ….But when it's essentially ….your quality of life versus the environment, it becomes, like, a really difficult moral dilemma.

4. Discussion

Rather than falling back on a predetermined normativity, participants used an ethics of care to consider how the UK healthcare sector should reduce its associated environmental harms. As part of this approach, participants linked with scholars who emphasise that care work can extend to the environment (Latimer and Miele, 2013; Rock and Degeling, 2015; Whyte et al., 2016; Allison, 2017; de La Bellacasa, 2017; Cañada et al., 2022; Brelje, 2023; Gram-Hanssen, 2024). At the same time, participants de-prioritised environmental care work because of its relative moral distance compared to other caring responsibilities, including their own healthcare needs (Hem and Pettersen, 2011; Quitmann et al., 2023). They also emphasised challenges with knowing how to do environmental care work in the context of healthcare delivery. Furthermore, care-less healthcare delivery made it nearly impossible to have the capacity to care for the environment. When participants could care beyond themselves and their loved ones, they first gave precedence to the needs of known humans and other humans, followed by the NHS. Only beyond these caring responsibilities, and if capacity remained and knowledge was sufficient, could participants care for the perceived more distant environment. At the same time, participants' moral hierarchy was disrupted by an awareness of the interconnectedness between environment and health, as well as an embodiment of societal ideals of environmental citizenship.

Overall, these findings contribute to the ethics of care scholarship by emphasising the complexity of applying a relational-based moral hierarchy to caring. This is because this hierarchy was affected by individual experiences, relational dynamics, and various socio-cultural and political factors. As such, when considering the moral hierarchy of relational-based caring, we need to analyse the context of caring–what we call paying attention to *contextual caring*. This requires us to go beyond the descriptive categorisation of care work provided by Tronto (1998, 2020), to a more nuanced understanding that acknowledges how personal and societal values intersect with experiences, and with institutional and societal norms and practices. Together these observations invite further reflection on conventional ideas about how caregivers apply moral significance to more proximal others. For example, our findings showed how participants did not always know how to care for the environment because of societal constraints that often separate societies from environmental work; they did not always have capacity to care for the environment due to institutional, societal and political factors; and that their views on environmental care were shaped by societal norms around environmental citizenship. This does not mean that Tronto's categories of care are not inherently useful. Rather, to deepen our analytical approach to relation-based care hierarchy in decision-making, we need to reflect on the context within which care is happening.

4.1. What does this mean for policy?

As others have explained before, and as we discussed earlier, scaling the ethics of care approach may ask too much of ethics of care due to problems encountered when extending care beyond the 'local and familiar' (Mendus, 1993), and because preference is given to those in closest proximity to caregivers at the expense of care towards those further away. As such, we do not presume that policy decision-making should solely be underpinned by an ethics of care, which would need to prioritise such relational proximity. Rather, we share others' views supportive of ethics of care as a valuable companion to other morally relevant approaches (Edwards, 2009; Groenhout, 2015; Maio, 2018), alongside the need for concepts of justice, fairness and inclusivity, such that decisions are acceptable to all members of society based on impartial consideration.

So where does this leave us? Our findings suggest that addressing environmental harms associated with healthcare systems evoked a range of dilemmas, not least those associated with trying to conduct this work in the context of care-less healthcare delivery. From a policy perspective, this means if environmental considerations are to be taken seriously, we need to foreground the development of a more caring NHS (Tronto, 2015; Redhead et al., 2023). Redhead and colleagues (2023) argue that to do this does not only require developing caring practices within the healthcare institution: citizens (also) need to *care with* the institution, prioritising communal responsibility to ease the burden on the NHS by contributing to their own, and their families' good health and well-being. This, the authors say, reflects the NHS constitution as a social contract (p.103). Examples include 'accepting (further) delay to non-urgent treatment for the benefit of those whose needs are more urgent' (p.105) through feeling a sense of community and social obligation to those more in need than themselves–something our own participants also spoke about as part of their own care work.

A key question, however, is how to differentiate this sense of responsibility for *caring with*, from the moralisation of responsibility, so that those who are not 'response-able' (Haraway, 2016) to contribute to their own well-being, for any number of reasons associated with their personal, cultural, socio-economic or other context, do not feel

pressurised in the form of guilt, anxiety or stress for the decisions they make. In fact, as our findings showed, and as other scholars have noted (Moriggi et al., 2020: p. 287), decisions about the environment were sometimes laboured and led to fear and anxiety as participants tried to balance proximal caring responsibilities with the desire to be a 'good environmental citizen'. Many feminist scholars interpret this fear and anxiety as being associated with a particular meaning of citizenship which is entwined with neoliberal ideologies associated with taking personal responsibility for environmental harms (MacGregor, 2006; Middlemiss, 2010; Karlsson, 2012). These scholars reject this neoliberal approach to citizenship on several grounds and we note two relevant to our findings.

First, by foregrounding responsibilisation of the individual (Rose, 1999), the ideology dismisses questions about what environmental care work institutions and systems should take responsibility for. This is despite many of our participants, in line with the literature (for example, see (Samuel et al., 2024)), feeling that system level changes are required to address environmental considerations in healthcare service delivery. However, how to apply responsibilities equitably within the current context of healthcare delivery remains an issue (Hantel et al., 2024a). As Tronto (2010) explains, institutions of care have many sets and levels of needs that lead to conflicting ends, and many individuals have different needs, all of which need balancing (p.168). Our participants were wary of the NHS taking on too many environmental caring responsibilities given its own struggles to provide good care, leading to unanswered questions about the best way to approach the issue at the systems level.

Second, the feelings of fear and anxiety articulated by our participants go against the tenets of ethics of care, which are tethered by mutually beneficial relationships supportive of flourishing for all involved in care work. To address this, Davis (2023) has proposed a reframing of environmental care work to 'ecological care work', which speaks to the interrelatedness of humans and non-humans. When doing ecological care work, this author says, 'a carer might be reminded that they are also within the consideration of ecosystemic interactions' (p. 7) and must also receive care, i.e., if care work leads to feelings of distress, over-burden, and guilt, this is not care work. Such reflections are also associated with the idea of 'mature care', which stresses self-care as essential to the reciprocity of caring relationships (Hem and Pettersen, 2011). They also support reflections made by several of our participants, which we have not described in the findings, but which spoke to more interrelational approaches to caring, which view human/non-human/more-than-human caring responsibilities not as proximal versus distant moral responsibilities, but as intrinsic to one another such that they promote each other in a caring web.

All of the above stresses the need to attend to relationships in health policy, while also being cognisant of how caring relationships are being defined in practice (by examining the implications of how care is being defined, and ensuring this is aligned with ethics of care approaches). We argue that attending to such approaches can lead to benefits for both patients and the healthcare system, while providing an opportunity to address the NHS's environmental harms. One way of achieving this is by paying attention to human-environmental relationships through a co-benefits approach. Participants did support the NHS reducing its associated environmental harms, but not at the expense of patient health, so promoting opportunities that allow for caring across both seems attainable (forthcoming). The importance of this should not be understated, the interrelationship between humans and the environment is becoming undeniably vital for human health. Climate change is already affecting the health of millions worldwide (Romanello et al., 2022), and a significant number of our participants were able to reflect on instances of adverse health impacts attributed to climate change and other environmental harms for themselves, family members and/or friends. This meant that for these participants, the relational distance between their caring responsibilities towards humans and the environment was shrinking. In terms of policy, recognition of the overlap between health and the environment–two agendas that have previously been seen as separated (Mahase 2023)–will likely have connotations for decision-making at all levels, as healthcare systems increasingly grapple with care work in which the environment becomes ever more morally proximal.

5. Conclusion

In considering how to address the environmental harms of healthcare service delivery, members of the UK public prioritised care for those with closer relational proximity (themselves, loved ones, other humans, and the NHS) ahead of the environment, in line with an ethics of care. Decision-making using relational proximity required '*contextual caring*' influenced by four main factors: access to healthcare, capacity for environmental care work and caregiving, increasing understandings of the relationships between environment and health, and societal notions of environmental citizenship.

CRediT authorship contribution statement

Gabrielle Samuel: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **Miranda MacFarlane:** Writing – review & editing, Project administration, Methodology, Investigation, Formal analysis. **Sarah Briggs:** Writing – review & editing, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis.

Consent to participate

Informed consent was obtained from all individual participants included in the study. The authors affirm that participants provided informed consent for publication.

Ethics approval statement

Approval was granted by King's College Research Ethics Committee (LRS/DP-23/24–39889).

Funding

This study was funded by the Wellcome under Grant number: 222180/Z/20/Z (Samuel) and NIHR under award number CL-2022-13-001 (Briggs). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care. SB was also supported by an ECR Research and Travel Grant from St Anne's College, University of Oxford.

Declaration of competing interest

The authors have no relevant financial or non-financial interests to disclose.

Acknowledgements

We are very much indebted to our participants, and thank them for giving up their time so generously. We are also incredibly grateful for the feedback we received from our colleagues and friends, Dr Susie Weller and Dr Rishita Nandagiri on an initial draft of the paper.

Appendix ASupplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.socscimed.2025.118113.

Data availability

Data will be made available on request.

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