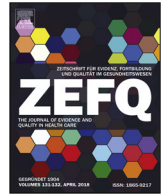




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Visions for planetary health: Results from open-ended questions of survey participants after a virtual planetary health lecture series



*Visionen zu planetarer Gesundheit: Antworten auf eine offene Frage im Rahmen einer Umfrage unter Teilnehmer*innen einer virtuellen Vortragsreihe zu planetarer Gesundheit*

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ABSTRACT

Introduction: A profound transformation of all areas of human activities is urgently needed for planetary health. Developing a shared vision of the future that is grounded in values aligned with planetary health is indispensable in this regard. The Planetary Health Academy is the first open online lecture series in Germany aiming for transformative planetary health education. As part of a recent evaluation of the impact of the lecture series, participants' visions for planetary health were also examined.

Methods: As part of a retrospective, cross-sectional, self-administered online survey, participants were asked to respond to an open-ended question on their visions for planetary health. Results were analysed using summarising qualitative content analysis according to Mayring. Sociodemographic details of those participants who provided a valid answer ($n = 197$) were calculated.

Results: Eight main categories were developed to summarise participants' visions for planetary health. These were: Awareness for planetary health – Planetary health integrated in all types of education – Establishment and development of the concept – A different understanding of health (care) – A transformative movement and global community – Transforming human activities – Planetary health as a guiding principle – The future state of planetary health.

Discussion: Broadly, the participants' visions were about planetary health as a goal and the means necessary to achieve this goal. Our findings can only be seen as a first explorative step in eliciting aspects of a common vision for planetary health, as our study design did not include a mechanism of building consensus towards one common vision. Besides the field of planetary health, similar concepts and associated movements exist or are emerging. Facilitating dialogue and exchange across disciplines and narratives about the prevailing future visions will be key to achieving what we call planetary health and what others might call *Ubuntu* or *buen vivir*.

Conclusion: The results of this study provide first insights into the planetary health visions of those whom we would consider members of a movement aligned behind the idea of planetary health. In future

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editions, the Planetary Health Academy could integrate more discursive elements with a particular focus on negotiating future visions to support the creation of a critical mass of change agents within the health community and beyond.

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ZUSAMMENFASSUNG

Einleitung: Um planetare Gesundheit zu erreichen, ist eine tiefgreifende Umgestaltung aller Bereiche menschlichen Handelns dringend erforderlich. Die Entwicklung einer gemeinsamen Vision, die auf Werten basiert, die mit planetarer Gesundheit in Einklang stehen, ist in diesem Zusammenhang unerlässlich. Die Planetary Health Academy ist die erste offene virtuelle Vortragsreihe in Deutschland, die transformative Bildung für planetare Gesundheit zum Ziel hat. Im Rahmen einer kürzlich durchgeführten Evaluation der Wirkung der Vortragsreihe wurden auch die Visionen der Teilnehmer*innen für planetare Gesundheit untersucht.

Methoden: Im Rahmen einer retrospektiven Querschnittserhebung wurden die Teilnehmer*innen gebeten, eine offene Frage zu ihren Visionen von planetarer Gesundheit zu beantworten. Die Ergebnisse wurden mit der zusammenfassenden qualitativen Inhaltsanalyse nach Mayring ausgewertet. Ergänzt werden die Ergebnisse durch die soziodemografischen Daten der Teilnehmer*innen, die eine gültige Antwort ($n = 197$) gaben.

Ergebnisse: Es wurden acht Hauptkategorien entwickelt, um die Visionen der Teilnehmer*innen für planetare Gesundheit zusammenzufassen. Diese waren: Bewusstsein für planetare Gesundheit – Planetare Gesundheit integriert in alle Arten von Bildung – Etablierung und Entwicklung des Konzepts – Ein anderes Verständnis von Gesundheit(sversorgung) – Eine transformative Bewegung und globale Gemeinschaft – Transformation menschlicher Aktivitäten – Planetare Gesundheit als Leitprinzip – Planetare Gesundheit in der Zukunft.

Diskussion: Die Visionen der Teilnehmer*innen betrafen planetare Gesundheit als Ziel und die zur Erreichung dieses Ziels erforderlichen Mittel. Unsere Ergebnisse können nur als ein erster explorativer Schritt bei der Herausarbeitung von Aspekten einer gemeinsamen Vision für planetare Gesundheit verstanden werden, da unser Studiendesign keinen Mechanismus zur Konsensbildung hinsichtlich einer gemeinsamen Vision enthielt. Neben planetarer Gesundheit existieren und entstehen ähnliche Konzepte und damit verbundene Bewegungen. Dialog und Austausch zwischen verschiedenen Disziplinen und über vorherrschende Zukunftsvisionen werden der Schlüssel sein, um das zu erreichen, was wir *planetare Gesundheit* und andere vielleicht *Ubuntu* oder *buen vivir* nennen.

Schlussfolgerung: Die Ergebnisse dieser Studie geben erste Einblicke in die Visionen für planetare Gesundheit derjenigen, die wir als Mitglieder einer Bewegung betrachten würden, die planetare Gesundheit erreichen wollen. Zukünftig könnte die Planetary Health Academy mehr diskursive Elemente integrieren, mit besonderem Schwerpunkt auf der Entwicklung von Zukunftsvisionen, um die Schaffung einer kritischen Masse von Akteur*innen des Wandels innerhalb der Gesundheitsberufe und darüber hinaus zu unterstützen.

Introduction

Humanity has experienced great progress, including in health and other dimensions of wellbeing, over the past century [1]. However, these gains come at a price: As of 2023, scientific evidence has been established for the transgression of six out of nine planetary boundaries [2]. These constitute safety thresholds for critical natural systems and processes such as the climate, the oceans, biogeochemical flows, and biodiversity. Human activities, including fossil fuel-based economic activities and mobility, unsustainable natural resource use and chemical pollution are the most important forces disrupting these systems and processes [3]. This results in the planet's unique living conditions, which enabled the development of civilisation as we know it, to be in peril. At the same time, not all of humanity has benefitted from these advances in the same way: within and across nations, inequalities are increasing [4,5]. Failing to meet everyone's basic needs as well as the overshooting of planetary boundaries constitute an existential threat to human health and wellbeing.

The concept of planetary health entails both a goal and the means to achieve this goal. The goal is to achieve health and wellbeing of all people which can only be realised in the presence of thriving natural systems as well as equitable social, political and economic systems that provide everyone with the resources to fulfil their needs for a life in health and dignity [1]. To achieve this, a

profound transformation of all areas of human activities is urgently needed, underpinned by a shared vision of the future that is grounded in values aligned with planetary health. Whitmee et al. have defined *conceptual failure* – besides *knowledge* and *governance failures* – as one of three challenges that need to be overcome to achieve planetary health [1]. This means, a common vision of a future where all of humanity is able to thrive is key to leveraging support for the changes urgently required to achieve planetary health. Creating such a shared vision can be fostered by transformative planetary health education. The aim of planetary health education is to not only convey knowledge about the current ecological and social crises. To appreciate the need for and become pioneers of a societal transformation towards planetary health, learners also need to be equipped with relevant practical skills, develop a strong sense of self-efficacy, and develop a set of guiding values in relation to planetary health [6–8].

Transformative planetary health education has therefore become a central field of action of the German Climate Change and Health Alliance (KLUG e.V.) and the Health for Future (H4F) movement [9]. KLUG and H4F conceived and delivered a virtual lecture series called Planetary Health Academy (PHA) [10] in a collaborative endeavour to empower health professionals and others interested in the topic in addressing the aforementioned threats to human health. Since May 2020, the lecture series has been offered four times (twice in German, twice in English). The last

two lecture series focussed on planetary health in the clinical context, the first two covered diverse aspects of planetary health such as planetary health ethics, social tipping dynamics, complex systems theory, the impacts of global environmental changes on health and examples of transformative action. The lectures usually consisted of short expert presentations and discussion with the audience. They were accompanied by virtual and in-person workshops, some of which were organised by local H4F groups for their members. With the PHA being offered in English, its reach increased beyond the Germanophone region and attracted participants from countries such as Australia, Brazil, Ghana, Indonesia and Spain.

As part of a recent study which aimed at evaluating the PHA as an approach for transformative planetary health education, we also investigated participants' visions for planetary health [11]. The following analysis describes these results which will contribute to targeting and improving KLUG's future efforts in transformative planetary health education.

Methods

Study design

A retrospective, cross-sectional, self-administered online survey was conducted from December 22, 2021, to January 12, 2022. Participants were eligible if they had participated in at least one lecture of the PHA.

Questionnaire

In addition to rating and close-ended questions across multiple domains, including changes in knowledge about planetary health and reported action, participants were asked to respond to open-ended questions on their perceived motivation and barriers to act as well as their visions for planetary health [11]. Results for the open question "What is your vision for planetary health?" are presented here together with a sociodemographic description of the group of participants who provided a valid answer. Sociodemographic data collected included place of birth, gender, age, profession, and social commitment.

Descriptive statistics

Absolute numbers and percentages of socio-demographic variables were calculated based on ordinal data from the Likert scale items.

Analysis of free-text answers

We used summarising qualitative content analysis according to Mayring [12]. This method serves to inductively develop categories which summarise data concisely and comprehensively. Analysis of all answers was carried out by one researcher first and the results were then validated by a second researcher with any discrepancies being resolved through discussion. Analytical steps taken were a) translation of German answers into English, b) paraphrasing of all answers to condense them to their core content on a similar linguistic level, c) splitting and paraphrasing of answers that contained different aspects in separate units of meaning, d) summarising of paraphrased answers in higher-order categories. Categories were sense-checked against the original data at the end of this process. Both researchers actively reflected on their positionality during the qualitative data analysis (Appendix A).

Ethical approval

The study was approved by the University of Würzburg Ethics Committee (20211223 02).

Results

Valid responses to the open question regarding participants' visions were provided by 197 participants. 458 participants completed the survey, who represent 13% of a total of 3656 who were eligible and invited to participate. Most participants did not have a background of migration. Participants' age peaked between 25 and 34 years (27.5%), while 32.5% of the participants were older than 55 years. Most participants had an academic or professional doctorate, followed by participants with a master's or high school degree. Most had a background in health care, i.e. were medical doctors or medical students. Of those respondents who were active in a non-governmental organisation, a total of 79 (38.9%) were active with KLUG and/or H4F. Table 1 provides further information on the participants' demographic characteristics and social commitment. Categories developed during the qualitative analysis, including illustrative quotes and a definition for each, are summarized in Table 2.

What is your vision for planetary health?

Eight main categories were inductively developed with sub-categories reflecting further nuances within those that were relevant. The diversity of content within each category is low, as each category represents different facets of the dataset in relation to the research question which are grounded in individual units of meaning that are similar. In the following, the categories are presented in random order with example quotes. The full category system, including definitions of categories and further supporting quotes is presented in Table 2.

Awareness for planetary health

Participants considered an increased awareness for and knowledge about planetary health, both in the general population (ID 53 "sensitizing people for the topic") and specifically in health professionals (ID 40 "raising awareness within health care professionals for climate crisis and health"), to be part of their vision. Ultimately, everyone should be sensitized to and educated about the unfolding planetary crises and their impacts on health (ID 48 "educating all people on planetary health").

Planetary health integrated in all types of education

Further, the integration of planetary health into education on all levels, from primary through higher education as well as vocational training was described by participants (ID 77 "Deeply integrated into children's education, university and further education – in a wide variety of school education, training and further education formats"). The need to integrate planetary health education into health professionals' curricula was emphasized (ID 140 "PH being a compulsory subject for all medical professions also in continuing education curricula").

Establishment and development of the concept

In addition, the academic recognition of planetary health as well as further development of the theories that underpin it (ID 4 "establishing Planetary Health [...] in a theoretically well-founded way) and its distinction from other related concepts such

Table 1
Participants' demographic characteristics and social commitment (n = 197).

	N (%)
Age	
18–24	34 (17.0%)
25–34	55 (27.5%)
35–44	21 (10.5%)
45–54	25 (12.5%)
55–64	41 (20.5%)
65+	24 (12.0%)
Gender	
Female	131 (65.2%)
Male	67 (33.3%)
Prefer not to say	3 (1.5%)
Country of birth	
Germany	162 (82.2%)
Elsewhere	35 (17.8%)
Country of residence	
Germany/Austria/Switzerland	179 (91.8%)
International	17 (8.7%)
Background of migration	
Yes	38 (19.6%)
No	156 (80.4%)
Current employment*	
Student	65 (32.2%)
Trainee	1 (0.5%)
Employee	105 (52.0%)
Retired	18 (8.9%)
Others	13 (6.4%)
Profession*	
Medical student or doctor	169 (83.3%)
Others	34 (16.7%)
Highest degree of education	
Bachelors degree	20 (9.9%)
Masters degree	39 (19.2%)
Professional doctorate	51 (25.1%)
Academic doctorate	54 (26.6%)
High school degree	35 (17.2%)
Degree lower than high school	3 (1.5%)
No degree	1 (0.5%)
Non-governmental commitment*	
Active at Deutsche Allianz Klimawandel und Gesundheit e.V. (KLUG)	38 (19.3%)
Active at Health4Future (H4F)	63 (32.5%)
Active at other networks on environment, climate and health	37 (19.0%)
Active at organizations for environmental protection	54 (27.4%)
Active at professional associations	43 (21.4%)
Active at KLUG AND H4F	22 (10.8%)
Active at more than one organization	75 (37%)

*For these questions, participants could give more than one answer.

as One Health, were described (ID 5 “clarifying the relationships to Global Health, OneHealth and Eco-Health”).

A different understanding of health and health care

Relatedly, a different understanding of health as well as health care (systems) was expressed by participants as part of their visions for planetary health. This was characterised by a focus on the prevention of illness and maintenance of health instead of a “cure and repair”-paradigm (ID 329 “more emphasis on prevention, less on therapy”). Health care systems were envisioned to be transformed to be more resilient, more patient-focused and less profit-oriented (ID 340 “stopping of the economization of health systems”). Furthermore, a more holistic approach to the delivery of health services and health care was mentioned. The consideration and integration of planetary health into health policy as well as clinical decisions was also described (ID 257 “Planetary Health as a fundamental criterion in all health-related decisions”).

Transforming human activities

A transformation of human activities along various other dimensions was another salient aspect of participants' visions for planetary health. These included: a redefinition of values and of the features that constitute ‘a good life’ (ID 287 “reevaluation of “what is good living”); human activities to become more sustainable (ID 296 “sustainable existence of humans”); challenges to be solved using interdisciplinary approaches (ID 288 “interdisciplinarity in solving global challenges of our time”); economic activities to be rendered compatible with planetary health such as adequate pricing for products with harmful health and ecological impacts (ID 303 “elimination of the common causes of planetary and individual decline by establishing an adequate pricing, e.g. for coal and meat”), and an end to overconsumption.

The future state of planetary health

The future state of planetary health, akin to the outcome of these transformations, was described as follows: humans would live at peace with nature and each other (ID 29 “improv[e]ment of human and planetary health in harmony with each other”). The notion that humans are an inseparable part of nature and dependant on thriving natural systems is reflected in participants urging the recognition of interconnectedness (ID 101 “That mankind finds a way to understand itself as a species among many”). Lastly, the category ‘Humanity being in the safe operating space’ contains remarks about a world that is habitable for future generations, peaceful and just (ID 244 “a healthy earth that remains habitable for many generations to come”).

A transformative movement and global community

A global movement for planetary health with transformative impact and characterised by a sense of community was described (ID 120 “strengthening the psychological and social, also cultural resources that allow a multitude of people to be in solidarity with people from other countries, with other origins, needs, etc.”).

Planetary health as a guiding principle

Relatedly, planetary health was envisioned to become a guiding principle for all humans (ID 158 “PH becoming a normal decision-making basis and decision variable for all people”) but specifically in the realm of political activities (ID 186 “PH bei[.]ng anchored in policy-making ‘Planetary Health in all policies’”) and that concrete steps should be taken to achieve planetary health (ID 319 “PH being put into practice”).

Discussion

Key findings

A shared vision of the future is key to achieve the societal transformation that is required for planetary health. To our knowledge, this study is the first in the German context and potentially beyond to explore visions for planetary health. On the one hand, participants' answers referred to planetary health as a goal and described what would characterise a future state of planetary health. On the other hand, their answers related to the means necessary to achieve this goal. These include the integration of planetary health into different domains of education, increased awareness for planetary health in the public and decision-makers and notions of a different, more holistic understanding of health and health care.

Table 2
Categories derived from answers to open-ended question: What is your vision for planetary health?

Main category	Subcategories	Definition of (sub)category	Illustrating quote (s)
Awareness for planetary health	More awareness for planetary health in the public	People knowing more about and considering planetary health in their daily lives	ID 48 “educating all people on planetary health” ID 57 “more and more people becoming interested in Planetary Health” ID 62 “making it comprehe[n]sible for everybody that it already affects each of us personally”
	More awareness for planetary health in health professionals	Health professionals knowing more about and considering planetary health in their professional activities	ID 45 “all health professionals being conscious of the planet and climate change” ID 299 “raising awareness within health care professionals on the need of cutting emissions in the healthcare sector”
Planetary health integrated in all types of education	Schools	Planetary health being taught in schools	ID 211 “Planetary health becoming a school subject” ID 214 “PH as a deeply integrated part of children’s education”
	Vocational training	Planetary health being taught in vocational training	ID 232 “including planetary health and related topics in vocational training” ID 233 “Planetary Health becoming a part of non-university curricula”
	Universities	Planetary health being taught in universities	ID 219 “integration in university curricula” ID 221 “introducing the topic into the curricula of universities and colleges”
	Health professionals’ training	Planetary health being taught in health professionals’ training	ID 131 “Planetary Health as a fixed component in the training of medical professions” ID 133 “integration in regular curricula of health professions”
Establishment and development of the concept	–	Professional establishment and firm theoretical foundation of the concept	ID 5 “clarifying the relationships to Global Health, OneHealth and Eco-Health and not compete with one another, especially when it comes to funding” ID 345 “Planetary Health should be recognised academically”
A different understanding of health and health care	Health as a result of disease prevention	Shifting focus and resources from cure to prevention	ID 331 “For me, this means that a lot of value is placed on prevention” ID 328 “orientation on health rather than disease management”
	Considering and integrating planetary health in health policy and clinical decisions Transformation of health care systems	Streamline planetary health in clinical and health policy-related decision-making processes Health care systems to become more patient-oriented, resilient and equitable	ID 257 “fundamental criterion in all health-related decisions” ID 260 “Political integration in the health care system” ID 336 “cutting-edge medicine’ is not understood to mean as much technology as possible, but rather holistic medicine oriented towards people” ID 339 “health care systems that are not profit-oriented” ID 343 “the healthcare sector becoming more resilient to upcoming crises”
A transformative movement and global community	–	Creating a movement to achieve planetary health	ID 169 “working all together for a better future” ID 127 “continuing growth of a global community” ID 175 “igniting the spark that should burn in everyone as a community”
Transforming human activities	Redefinition of values	Developing a new value system in line with planetary health	ID 285 “change in the value system [...] towards connection with and appreciation of nature” ID 284 “solidarity, modesty [...] reverence for nature” ID 287 “re-evaluation of “what is good living””
	More interdisciplinarity	Overcoming sectoral boundaries	ID 288 “interdisciplinarity in solving global challenges of our time” ID 290 “interdisciplinarity as a forward-looking concept”
	Sustainability	Human activities becoming sustainable	ID 293 “that all people, especially medical staff act according to planetary health principles, e.g. less waste, reuse” ID 296 “a sustainable existence”
	Economic changes	Rendering the economic system compatible with planetary health	ID 303 “elimination of the common causes of planetary and individual health decline by establishing an adequate pricing, e.g. for coal and meat” ID 304 “end of hyperconsumption”
Planetary health as a guiding principle	A guiding principle in political activities	Planetary health to underpin politics	ID 185 “PH being supported by politics” ID 187 “PH becoming a guiding principle for political decisions”
	A guiding principle for all	Planetary health to underpin all human activities	ID 158 “PH becoming a normal decision-making basis and decision variable for all people”
	Actions for planetary health	Actions for planetary health to be taken	ID 326 “proposing clear practical recommendations” ID 314 “acting efficiently and effectively, e.g. through well-designed actions and structures”
The future state of planetary health	Humans at peace with nature and each other	Humans living in harmony with nature and each other	ID 23 “living in harmony with nature and our co-world” ID 24 “being at peace with oneself, with others and with nature”
	Recognition of interconnectedness	Humans recognising their place in a planetary ecosystem	ID 101 “That mankind finds a way to understand itself as a species among many and thus to makes the right decisions for the safest and most developed continuation of life on earth”
	Humanity being in the safe operating space	Human systems providing social foundation for all whilst staying within planetary boundaries	ID 239 “offering future generations a beautiful world, e.g. diverse and colorful not marked by exhaustion and exploitation” ID 270 “strengthening the psychological and social, also cultural resources that allow a multitude of people to live a good, healthy, fulfilled life in harmony with the planetary boundaries”

As we can assume that individuals who participated in the PHA are sensitized regarding the extent of the existential threat that global environmental changes pose to human health and wellbeing as well as the urgency to transform the very systems that drive these changes, it is not surprising that their answers revolved around these two aspects. This is an encouraging finding for KLUG's endeavours in transformative education and movement building given that their goal is to increase awareness for these issues and the urgent need to address them. However, these findings can only be seen as a first explorative step in eliciting aspects of a common vision for planetary health, as our study design did not contain a mechanism of consensus-building regarding one common vision.

In alignment with Bloom's seminal taxonomy of educational objectives [8], our study acknowledges the importance of affective learning objectives in the realm of planetary health education. The Planetary Health Academy strategically employed methods such as role models, discussions, and facilitation of openness to foster affective learning and create a space for participants to reflect on a shared vision for planetary health.

It also needs to be considered that health professionals, who were the main target group of the PHA and the majority of the survey respondents, might more easily relate to the concept of planetary health compared to members of other professions. While this might reduce the generalizability of our results, it is not atypical for emerging concepts to be shaped by pioneers in a 'societal niche' before becoming more mainstream [13]. Transformative education efforts targeted at health professionals with the aim of creating a shared vision for a healthy and sustainable future therefore can have potential to generate what is also known as a "critical mass" – a high enough number of people to drive changes in overall societal dynamics [14]. Health professionals can play a special role as change agents in society due to their professional ethos and position as trusted communicators [15].

However, we also notice that besides the field of planetary health, similar concepts and associated movements exist or are emerging, for example the Doughnut Economics approach with the Doughnut Economics Action Lab or the idea of a Wellbeing Society with the Wellbeing Economy Alliance [16,17]. The Doughnut is a visual representation of what it means for humanity to thrive in this century, consisting of a social foundation and an ecological ceiling which frame a doughnut-shaped operating space "that is both ecologically safe and socially just" [16]. Facilitating dialogue and exchange across disciplines, cultures and narratives about the future visions that prevail within these will be key to achieving what we call planetary health and what others might call Ubuntu ("a collective ontology which stresses the value of compassion and relatedness, and 'life as mutual aid", originating from the African continent) or *buen vivir* ("*Good Living* based on living in harmony with (and not at the cost of) others or nature", originating from Ecuador) [18].

Critics might dismiss visionary thinking and time spent agreeing on language or narratives as a waste of time. We would argue that this kind of agreement on a shared vision, especially across narratives and languages to describe it, is key to drive a movement into one direction and reduce the need for repeatedly negotiating it. This analysis presents a first step in investigating potential aspects of a planetary health vision. Enacting in the present what is needed to realise a vision about the future in context-sensitive ways in the face of prevailing ideas of what a good life is, can be emotionally challenging. Pioneers in a niche can therefore also benefit from regular exchange with peers and other disciplines regarding their common cause. Striking a good balance between a dynamically evolving vision in relation to changes in circumstances and agreeing on common grounds to concertedly drive changes is important. Further research that is based on a transfor-

mative or participatory action paradigm could draw from our findings and play an important role in providing space for reflection and constructive dialogue to build a common vision for planetary health [19].

Changing norms and values is part of what participants described as their vision for planetary health. This has been described as key to inducing profound societal changes and usually happens through dialogue and discussion, community building and role models. While some participants mentioned specific norms and values, one needs to appreciate that the direction of change of norms and values can never be prescribed and similarly, norms and values cannot be taught – they need to be negotiated and enacted through lived interpersonal experiences [20,21]. Further research that could shed light on these processes would have to be participatory or ethnographic combined with in-depth interviews of groups or individuals.

Drawing on Kern's insights into curriculum development, our study underscores the significance of integrating planetary health into diverse domains of education. The participants in our study emphasized the need for transformative education, aligning with Kern's framework, which advocates for educational approaches that drive societal transformation [22].

Strengths and limitations

As the results presented here derive from a survey item that was embedded in an evaluation survey of an education initiative, participants' responses regarding the integration of planetary health into education might have been primed by these circumstances. Some answers were not very detailed, whereas others were rich and contained various aspects. Overall depth of the dataset and the analysis is acceptable. Generally, diversity within respondents regarding sociodemographic background was poor due to the PHA targeting health professionals, students and trainees. Relatedly, sample size for this analysis was small with only 13% of the study population providing a valid answer. Therefore, selection bias cannot be ruled out. The results of data analysis by one author (KW) was validated by a second author (FvG), increasing reliability of results.

Conclusions

The results of this study provide first insights into the planetary health visions of those who we would consider members of a movement aligned behind the idea of planetary health. While we cannot conclude that a common vision of planetary health exists among those who participated in this study or make any inferences to the parent population, it was possible to elicit several themes through a systematic approach to qualitative content analysis that were sufficiently saturated. In future editions, the Planetary Health Academy could integrate more discursive elements and actively involve diverse perspectives with a particular focus on negotiating future visions and including perspectives that are different from those we were able to highlight with this study to support the creation of a critical mass of change agents within the health community and beyond. Negotiating visions of the future can also be seen as an integral part to democratic decision-making and a key driver to innovation. Participatory action or transformative research can play an important role both in igniting processes of reflection and consensus-building regarding future visions and in rendering such processes explicit and comprehensible to others. For planetary health to emerge from the "niche", an active process of engaging with citizens outside the health system would be warranted which can happen on the individual, organisational and professional-political level.

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Conflict of interest

FvG works for the Planetary Health Academy as a member of the organising team. SG and MF previously worked for the Planetary Health Academy as a member of the organising team. SG and KW work at the Centre for Planetary Health Policy, which receives institutional funding from Stiftung Mercator. All other authors declare no competing interests.

CRedit authors statement

Katharina Wabnitz: Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Data curation, Conceptualization. Friederike von Gierke: Writing – review & editing, Formal analysis, Data curation. Sophie Gepp: Writing – review & editing, Methodology, Investigation, Conceptualization. Laura Jung: Writing – review & editing, Methodology, Conceptualization. Frederick Schneider: Writing – review & editing, Formal analysis, Data curation. Eva-Maria Schwienhorst-Stich: Writing – review & editing, Validation, Supervision, Methodology, Conceptualization, Data curation. Marischa Fast: Writing – review & editing, Supervision, Methodology, Conceptualization.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.zefq.2023.12.002>.

References

- [1] Whitmee S et al. Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation-Lancet Commission on planetary health. *Lancet* 2015;386(10007):1973–2028.
- [2] Richardson K et al. Earth beyond six of nine planetary boundaries. *Sci Adv* 2023;9(37):eadh2458.
- [3] Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2021: The Physical Science Basis*. In: Masson-Delmotte V, Zhai P, Pirani A, Connors SL, Péan C, Berger S, Caud N, Chen Y, Goldfarb L, Gomis MI, Huang M, Leitzell K, Lonnoy E, Matthews JBR, Maycock TK, Waterfield T, Yelekçi O, Yu R, Zhou B, editors. *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press; 2021.
- [4] OECD. *Health for Everyone? Social Inequalities in Health and Health Systems*. OECD Health Policy Studies. Paris: OECD Publishing; 2019.
- [5] Ahmed N, et al. *Inequality Kills: The unparalleled action needed to combat unprecedented inequality in the wake of COVID-19*; 2022.
- [6] Shaw E et al. AMEE consensus statement: planetary health and education for sustainable healthcare. *Med Teacher* 2021;43(3):272–86.
- [7] Guzmán CAF et al. A framework to guide planetary health education. *Lancet Planet Health* 2021;5(5):e253–5.
- [8] Bloom BS et al. *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain*. New York: McKay; 1956.
- [9] Deutsche Allianz Klimawandel und Gesundheit (KLUG e.V.). *Gemeinsam handeln für Klima und Gesundheit*. 2022 [cited 2022 8th of August]; Available from: <https://www.klimawandel-gesundheit.de/>
- [10] Deutsche Allianz Klimawandel und Gesundheit (KLUG e.V.). *Planetary Health Academy – Vom Wissen zum transformativen Handeln*. 2022 [cited 2022 13th July]; Available from: <https://planetary-health-academy.de/>
- [11] Gepp S et al. The Planetary Health Academy—a virtual lecture series for transformative education in Germany. *Lancet Planet Health* 2023;7(1):e68–76.
- [12] Mayring P. *Qualitative Inhaltsanalyse: Grundlagen und Techniken*, Beltz Pädagogik, 12., überarb. Aufl., Beltz. Weinheim; 2015.
- [13] Grin J, Rotmans J, Schot J. *Transitions to sustainable development: new directions in the study of long term transformative change*. Routledge; 2010.
- [14] Lenton TM et al. Operationalising positive tipping points towards global sustainability. *Global Sustain* 2022;5:e1.
- [15] Wabnitz K-J, et al. *Planetary health-transformative education regarding the climate and sustainability crises for health professionals*; 2021.
- [16] Doughnut Economics Action Lab. *Turning the ideas of Doughnut Economics into action*; 2022 [cited 2022 24th of August]. Available from: <https://doughnuteconomics.org/>
- [17] Wellbeing Economy Alliance. *WEAll is a collaboration of organisations, alliances, movements and individuals working towards a wellbeing economy, delivering human and ecological wellbeing*; 2022 [cited 2022 24th of August]. Available from: <https://weall.org/>
- [18] van Norren DE. *The sustainable development goals viewed through gross national happiness, Ubuntu, and Buen Vivir*. *Int Environ Agreements: Polit Law Econ* 2020;20(3):431–58.
- [19] Schneidewind U, et al. *Pledge for a transformative science: a conceptual framework*. Wuppertal papers; 2016.
- [20] Joas *Wie entstehen Werte? H. Wertebildung und Wertevermittlung in pluralistischen Gesellschaften*. Paper Presented at Gute Werte, schlechte Werte. *Gesellschaftliche Ethik und die Rolle der Medien*, 2006.
- [21] Frey D, Graupmann V, Fladerer MP. *Zum Problem der Wertevermittlung und der Umsetzung in Verhalten*. In: *Psychologie der Werte*. Springer; 2016. p. 307–20.
- [22] Thomas PA et al. *Curriculum development for medical education: a six-step approach*. JHU Press; 2022.