ORIGINAL ARTICLE

WILEY

Eco-anxiety among regional Australian youth with mental health problems: A qualitative study

Candice P. Boyd[1] | Julie Jamieson[2] | Kari Gibson[3] | Michelle Duffy[4] | Michelle Williamson[5] | Hester Parr[6]

[1]School of Geography, Earth and Atmospheric Sciences, University of Melbourne, Melbourne, Victoria, Australia

[2]Community Engagement Coordinator headspace Port Macquarie, Port Macquarie, New South Wales, Australia

[3]Phoenix Australia Institute for Posttraumatic Mental Health, University of Melbourne, Melbourne, Victoria, Australia

[4]School of Environmental and Life Sciences, University of Newcastle, Callaghan, New South Wales, Australia

[5]Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Victoria, Australia

[6]School of Geographical and Earth Sciences, University of Glasgow, Glasgow, Scotland, UK

Correspondence
Dr. Candice P. Boyd, School of Geography, Earth and Atmospheric Sciences, The University of Melbourne, Australia.
Email: cboyd@unimelb.edu.au

Funding information
A Community Engagement Grant from the Melbourne Social Equity Institute

Abstract

Aim: In Australia, climate-related disasters disproportionately affect rural, regional and remote young people with effects ranging from severe flooding and catastrophic fires to unbearable heat and yet most studies on eco-anxiety are based on reports by urban youth who do not have direct experiences of such impacts. Furthermore, there is a dearth of research on how eco-anxiety impacts those who already experience mental health problems. The present study aims to address this gap by focussing on the lived experiences of regional Australian youth with recent experience of climate-related disasters alongside clinical insights from those involved in their care.

Methods: Two groups, a clinician and client group, were recruited through headspace Port Macquarie—a primary youth mental health service in a regional city of New South Wales, Australia. In all, 25 participants took part in focus group discussions, including 13 clinicians and 12 clients of the service. Clients and clinicians responded to a version of the same questions: (1) whether the effects of climate change impact on regional youth with mental health problems, (2) how young people cope with eco-anxiety and (3) how regional communities can help young people cope with eco-anxiety better. Group discussions were audio-recorded and transcribed. Transcripts were analysed according to the principles of Interpretative Phenomenological Analysis using a team approach.

Results: Three dimensions of eco-anxiety were identified by clinicians and clients—helplessness in the present, hopelessness about the future and acute stress and anxiety related to experiences of severe flooding and fires. Clinicians and clients also thought that a misalignment between young people and older generations, including government, was a source of eco-anxiety and having a collective voice was seen as

important for regional youth as was community support through social media sites. Clinicians thought that eco-anxiety was 'in the background' for their clients, whereas the clients who participated were clearly experiencing eco-anxiety. Whereas clinicians could identify potential coping strategies, clients could not.

Conclusions: Eco-anxiety can be experienced by regional youth with mental health problems as both an acute response to natural hazards and a more sustained sense of hopelessness about the future. Impacts of acute anxiety and chronic hopelessness, with its associated depression risk, among young people with pre-existing mental health problems warrants further investigation as this study suggests that it may exacerbate their existing conditions. Clinicians and clients in this region would benefit from specific training and resources related to the identification and treatment of eco-anxiety. Future research on climate-related mental health should be inclusive of the perspectives of those who have direct experience of climate-related adverse events.

KEYWORDS

climate anxiety, climate change, eco-anxiety, mental health, regional youth

1 | INTRODUCTION

Also known as climate anxiety or climate change anxiety, eco-anxiety was recognized by the American Psychological Association in 2017 where it was defined as a sense of 'environmental doom' in relation to climate change (Clayton et al., 2017). Since then, there has been a growing concern among clinicians regarding the need for evidence-based interventions for young people experiencing distressing levels of eco-anxiety (Usher et al., 2019). Part of this concern is that eco-anxiety treads a fine line between what might be considered a reasonable and rational response to the climate crisis, which motivates pro-social behaviour and a clinical phenomenon that causes undue stress to the sufferer (Bingley et al., 2022).

The diagnosis and treatment of 'eco-anxiety' is further complicated by its presentation, which may be an acute response to environmental disasters such as floods, fires or sudden extinction events (Cianconi et al., 2020) or a chronic worry/existential crisis about the future of the planet and the longer-term survival of humanity as a species (Stollberg & Jonas, 2021). It may also be exacerbated by what some young people see as a lack of action on climate change by government (Hickman et al., 2021) or a disruption in their sense of identity in relation to the environment involving 'earth emotions' including eco-grief (Albrecht, 2019; Boyd & Parr, 2020). These complicating factors, combined with a small but rapidly growing evidence-base, means that clinicians may find it difficult to respond appropriately both at a clinical and service-wide level (Newnham et al., 2020).

Eco-philosopher Timothy Morton describes global warming as a 'hyperobject' (Morton, 2013). Hyperobjects are entities of such vast proportions that they defy human understanding to the extent that they are psychologically overwhelming. As a hyperobject, climate change can perpetuate a 'generalised sense that the ecological

foundations of existence are in the process of collapse' (Albrecht, 2012; p. 250). This component of eco-anxiety, related to fundamental existence, is thought to be 'paralysing', potentially preventing people from making changes in individual or collective behaviour (Pihkala, 2020). Existential fears regarding climate change are also associated with feelings of hopelessness, meaningless and reproductive anxiety (Dillarstone et al., 2023) as well as cognitive dissonance, denial and guilt, which some researchers refer to as 'moral injury' (Henritze et al., 2023).

As a wider social phenomenon, eco-anxiety is understood as an expression of the uncertainty and uncontrollability of anthropogenic climate change and is most associated with the 'millennial' generation (Wray, 2022; Tsui, 2023). However, social researchers have identified other groups of people who are vulnerable to the mental health impacts of climate change, and these are: people on the frontlines of climate-related disaster, people with disabilities, climate professionals including climate scientists, women, people with existing mental illness and indigenous peoples (e.g., Nicholas et al., 2020). In Australia, climate-related disasters disproportionately affect rural, regional and remote young people (Australian Academy of Science, 2021) and yet the majority of studies on eco-anxiety are based on reports by urban youth who do not have direct experiences of such impacts (Coffey et al., 2021). Furthermore, there is a dearth of research on how eco-anxiety impacts young people who already experience mental health problems. The present study aims to address this gap by focussing on the lived experiences of regional Australian youth with recent experience of climate-related disasters alongside clinical insights from those involved in their care. By taking a qualitative approach, the study is exploratory in nature with a view towards opening up new avenues for future research.

2 | METHOD

This study received ethical approval from The University of Melbourne's Human Research Ethics Committee and informed consent was obtained from all participants. The research was funded by a Community Engagement Grant from the Melbourne Social Equity Institute at The University of Melbourne. The funding covered some transport and accommodation costs for the first author and participant reimbursements.

2.1 | Location

The study was conducted in partnership with headspace Port Macquarie. Headspace is a primary mental health service for young people aged 12 to 25 years with clinics across metropolitan and regional Australia. Port Macquarie is a regional city located on the mid-North coast of New South Wales, Australia. It has a population of approximately 85 000 people with a median age of 48 years (Australian Bureau of Statistics, 2022). Just 10% of the population is aged 15 to 24 years. Port Macquarie is approximately 400 km from the major capital city of Sydney and 500 km from Brisbane, the capital of Queensland. Port Macquarie is a thriving tourist destination due to its scenic coastline. Agriculturally, the region produces fruit and nuts, beef, milk, cut flowers and blueberries (NSW Department of Primary Industries, 2020). In recent years, the area has been repeatedly impacted by bushfires, flash flooding and severe hailstorms.

2.2 | Participants and recruitment

The first author is a cultural geographer and clinical psychologist who have previously worked as a headspace clinician in Melbourne and regional Victoria, Australia. This background assisted in making contact with headspace Port Macquarie through existing professional networks. Via the centre manager and clinical lead, 13 clinicians were recruited to take part in a focus group facilitated by the first author. Clinicians ranged in disciplinary background—clinical psychology, social work or youth work—and included one student on a clinical placement.

The second author, community engagement coordinator at headspace Port Macquarie, recruited 12 clients via an advertisement on social media and a flyer available at the centre's reception desk. The community engagement coordinator is not engaged in direct clinical care of clients. As part of giving informed consent, clients were assured that their decision to participate or not was independent of their clinical care. As an employee of headspace, the community care coordinator ensured that clients felt comfortable and familiar and that if clients became distressed during or after their participation, they could be seen immediately by a duty worker. This

procedure also meant that clients remained anonymous to the wider research team.

2.3 | Data collection and analysis

Qualitative data were collected via the two facilitated focus groups in response to the same three questions (modified according to client or clinician group). These questions related to (1) whether the effects of climate change impact on regional youth with mental health problems, (2) how young people cope with eco-anxiety and (3) how regional communities can help young people cope with eco-anxiety better. Clinicians were instructed not to use specific examples for their practice and to keep their responses general. A roundtable approach was used where clinicians were invited to respond in turn to each of the three main questions. In the client focus group, young people were able to speak out of turn, but the facilitator took care to encourage those who were less responsive than others.

The two focus groups were audio recorded and transcribed by a professional transcription service prior to analysis. The two facilitators uploaded audio files directly to the transcription website so that the wider research team received only de-identified transcripts. Transcripts were initially analysed by research team members independently from one another and then resolved into a consensus thematic structure by the first author. The analysis was guided by the principles of Interpretive Phenomenological Analysis which emphasizes the lived experience of psychological phenomena (Smith & Osborn, 2015); however, being an interdisciplinary team spanning human geography, clinical psychology, community services and population health, the findings are inflected by relational perspectives at the intersection of space, place and mental health (Parr, 2008). A team approach to reflexivity minimizes individual biases thereby increasing the credibility and trustworthiness of the findings (see Rankl et al., 2021).

3 | FINDINGS

The themes that emerged from the team approach to qualitative analysis are presented in two separate parts below based on the data from each focus group. These findings are then compared at the beginning of the Discussion section. In this Findings section, themes are organized around the three central questions presented to participants in each group. Thematic descriptions start with a single exemplar in the form of a direct quotation, followed by a brief explanation, which takes into account the responses of all participants. Care was taken in the selection of quotes to represent multiple voices. We have opted for brevity and breadth in our reporting to do justice to the full extent of the data across two different populations—clients and clinicians.

4 | PART ONE: CLINICIAN PERSPECTIVES

4.1 | Q1: Does anxiety about the effects of climate change impact on the mental health of the young people that you see and how?

4.1.1 | Eco-anxiety is in the background but not a presenting problem

> I guess it's always something kind of in the background with young people's minds. They don't tend to sort of bring it up I guess as an immediate problem ... it's kind of a background concern for young people about climate change and what's the world going to look like in 20 years' time. (*Clinician6*)

Clinicians were in general agreement that eco-anxiety was not often a presenting problem in their clinical work and that climate change was rarely discussed as a concern by the majority of young people they see. Some clinicians said that they were not familiar with the term eco-anxiety, and it was not something that they were all knowledgeable about.

4.2 | Uncertainty about the future

> [T]he recent changes that we're seeing in the climate, especially on the North Coast, negatively impact the well-being of young people in the community definitely increasing their sense of anxiety and stress and just general uncertainty, and I really think it's a kind of a form of vicarious trauma. Just that constant sense of unease and dread. (*Clinician9*).

In terms of their clients who do experience eco-anxiety, clinicians conceptualized this as anxiety and fear related to the state of the world. Clinicians linked this sense of uncertainty to recent trauma or vicarious trauma related to the extreme weather events recently experienced by their regional community.

4.3 | Acute stress/anxiety and trauma related to extreme events attributed to climate change

> I think the biggest issues for young people have been with the floods and the fires ... it's created a lot of paranoia about what the next phenomenon is going to be and how devastating it's going to be. I think social media can create a lot of fear in terms of the climate change effects, and I think one of the worst parts is that young people feel like they can't do anything about it, that the control's out of their hands. (*Clinician2*).

Clinicians believe that young people did attribute extreme events, like bushfires and floods, to climate change suggesting that stress, anxiety and a sense of hopeless was related to the repeated nature of these natural disasters.

4.4 | Q2: How do the young people you see cope with eco-anxiety?

4.4.1 | Community support/social connectedness

> ... isolation and separation [*is*] definitely increasing anxiety and the way to cope with that has been social prescribing and now we're doing more things like social connectedness scales and that didn't seem to be as high priority before these big climate things were happening. (*Clinician4*).

Clinicians identified an increased need for young people to feel socially connected in the wake of natural disasters and that community support and social connectedness was an important method of coping for young people in these situations.

4.4.2 | Peer connection/social support via social media

> I think that there's also young people who are involved in Community pages and getting a lot of support ... [i]t kind of showed the positive altruistic nature of people that we all have innate quality of good and that we all kind of want to generally help out one another. So, I think that really helped out young people. (*Clinician13*).

Clinicians generally saw social media as a positive way of young people connected with each other and their wider community. They also believed that social media was a source of hope for the young people they see.

4.4.3 | Coping skills—Meditation, mindfulness and creativity

> I think there's a lot of anxiety is about that future thinking and worrying about what's next and what's going to happen and what if, and so practicing mindfulness and meditation and their creativity, even if they can't do that with other people to be able to do that themselves. (*Clinician1*).

Clinicians tended to see the negative impacts of climate change as just one of several stresses impacting on regional youth with

mental health problems. They saw these 'multiple traumas' as cumulative and taking place before young people had the opportunity to build up coping strategies or develop resilience. Not many clinicians spoke about specific coping skills that they work on with their clients, but for those who did, they tended to be emotion-focussed coping skills related to the treatment of any form of anxiety.

4.4.4 | Avoidance, 'switching off'

I feel like there's a degree of disengagement from them, and switching off to these events, and we know that being overloaded by all that information, it's not helpful and I do find that the young people I've worked with have actually done that really well, switched off from information. (Clinician11).

Clinicians saw the avoidance of media around extreme events and climate change in general as helpful for their clients.

4.4.5 | Activism

You can either have that sense of further agency and like having positive impact, but then I think there's also the risk of perpetuating feelings of hopelessness because you can suggest those positive change, but then if it doesn't actually have any kind of impact then that can feel rather damaging as well to your wellbeing and mental health. (Clinician3).

Clinicians had mixed feelings about the role of political activism in addressing eco-anxiety, expressing concerns that for some young people it may increase their vulnerability to mental health problems. Clinicians seemed to have a higher regard for 'micro-activism', or small-scale local community actions, focussed on increasing agency around a problem that young people could have a sense of control over.

4.5 | Q3: How can regional communities support young people with mental health issues cope with eco-anxiety better?

4.5.1 | Crisis support/'fast-tracking' clients

... as a headspace service we kind of did a number of things, especially around the floods so we kind of created flood support specific relief around that that time appreciating that some it was quite an immediate thing that happened that people potentially needed immediate support around, so having that fast tracked access to support for that crisis that occurred at that time (Clinician3).

Minimizing the immediate impact of disaster events was something that clinicians saw as a priority for their service. This accords

with their general opinion that eco-anxiety is made worse for regional youth by their repeated exposure to the trauma of bushfires and floods.

4.5.2 | Psychoeducation

... bringing it back to the basics of promoting even this term eco anxiety. This is a term I haven't come across before like I don't know so even bringing awareness to this term it can help explain things that people are experiencing, which in a way it kind of normalizes things. (Clinician8).

Clinicians identified a need for young people to have better knowledge around the relationship between environmental health and psychological health. They also believed that the term eco-anxiety, or similar terms, had the potential to be normalizing for young people and the wider community.

4.5.3 | Letting young people 'have a voice'

I think the Council are part of our consortium. So, they have representation ... but we could even form a separate group with headspace too just focused on climate change and action work like a climate advisory youth group. (Clinician5).

Clinicians saw a role for their service in coordinating a youth advisory group focussed on climate change and climate-related health as a way of giving young people 'a voice' on climate within their organization and the broader community.

4.5.4 | Fostering community connection (broadly and through participation in environmental groups)

So when we're dealing with trauma, it's essential to foster connections ... even providing resources and information about organizations that are actually doing stuff to try and combat it and trying to help the environment and that sort of thing may be really helpful. (Clinician7).

Clinicians certainly saw the need to be judicious around recommending climate action activities to their clients and that the purpose and focus of the organization was something they would need to consider.

4.5.5 | Eco-therapy/eco-inspiration

I guess for me I keep thinking of that nature and actually bringing opportunities for young people to be more

connected with nature and connected with our local land and trying to shift that fear and anxiety into hope and trust and connection and to release some of the positive stories that they've been through as well … I think education is huge as well knowing all of the sides of climate change not just what's affecting there and what's going horribly wrong. (Clinician4).

Some clinicians, although not naming it as such, identified some of the principles of eco-therapy (healing through increased connection with nature) and eco-inspiration (being inspired by nature rather than afraid of it) as holding potential for the treatment of eco-anxiety.

4.6 | Other issues

4.6.1 | Misalignment between young people's political views and conservative views among older generations

… typically as a young person the first point of call is your family when you have these issues and I think that in a regional area, if your parents have very different issues on climate than what you do then are you getting the support at that first point? (Clinician9).

Clinicians identified a further issue related to their regional community in relation to the different voting patterns (related to different political ideologies) between clients and their parents. Clinicians saw this are particularly detrimental for their clients as it 'removed' a potential source of support for young people with eco-anxiety and could be a contributor to family conflict for young people already experiencing mental health issues.

5 | PART TWO: CLIENT PERSPECTIVES

5.1 | Q1: Does anxiety about the effects of climate change impact on your mental health and how?

5.1.1 | Hopelessness about the future

… already having mental health issues and then worrying that you may not have this planet to one, live on or have your kids live on. Like, I feel that sometimes it could make people extremely depressed, suicidal, because what's the point of getting up every single day, and pushing through what you're already going through, if there's no future for you? (Client1).

The young people who participated in this group (who are not representative of all the young people seen by clinicians at headspace Port Macquarie) identified eco-anxiety as a serious mental health issue that worsened their existing mental health issues as well as being a significant, independent source of distress for them. They described negative feelings that more closely resembled depression than anxiety.

5.1.2 | Helplessness in the present (futility of actions)

I mean, I guess sometimes it can make you kind of do feel a bit small if you don't feel like there's something you can do, because, in my personal opinion, it is everybody's responsibility to take care of the planet. But I feel we're not the biggest contributors. It's more like, your medical operations, and they're going to continue doing what they're going to do. (Client7).

Clients described the climate crisis as something 'inherited' from previous generations, that they resented feeling responsible for, and that they felt helpless in preventing. Positively adapting to climate change was not a consideration for these young people, who expressed an overwhelming sense of doom about the future of the planet, which they had no control over.

5.1.3 | Feeling silenced or dismissed by older generations

… feeling a bit silenced also by older generations being like, "Oh, I'm sure it'll be alright", and it's like, "Maybe not though. Do you have a degree?" I've had that conversation with older generations and they've just said, "Oh, well turn your phone off". That doesn't take it away. That is the least of our issues, stop blaming the damn phone. (Client4).

Clients felt dismissed and silenced by older generations who did not take their concerns about climate change seriously. This accords with clinicians thoughts that the misalignment between young people's views and those of an older regional population were potentially a source of distress.

5.1.4 | Being let down by government

They're really letting us down, like, [the Prime Minister] is putting so much money towards fossil fuels. When we really need to focus on the environment at the moment, because what's the point of making money if you're not going to have a planet? You know those politicians who are meant to oversee the stuff, they're in their like, 60s, 70s. So by the time it actually hits really hard, a lot of them will probably not be here anymore. So it's a bit discouraging as well. Like, it's sort of been relegated to us. (Client8).

These clients viewed the actions and priorities of the government as contributing to climate change, and felt abandoned, ignored and discouraged about the lack of political action on climate change. They also expressed a sense of disappointment and outrage that those in the position to 'make a difference' were failing to do so.

5.1.5 | Acute stress/anxiety and trauma related to extreme events attributed to climate change

> In terms of like anxiety and stuff, personally, I felt it more going through the disasters, having to evacuate up to 10 times and make sure that my animals and the house, and really precious belongings were safe. And then the floods and COVID, obviously, that's not eco-related, but for me, yeah, it's more when the disasters are here and now. But understanding that those things took a long time to get to us. It wasn't just an overnight thing. And that's, I think, what makes me nervous about what's going to happen next. (*Client1*).

These clients clearly associated the recent bushfires and floods experienced by their regional community with climate change. They did, however, suggest that they felt differently about the two. Disasters were more strongly associated with stress and anxiety, whereas fear about climate change was more strongly associated with depression and a sense of hopelessness due to feeling overwhelmed.

5.1.6 | Being triggered by normal weather events

> And at night time that rain, for me, it was triggering. It was like, 'Are we going to be flooded'? You know, I'm safe, but it still doesn't help you not think about it. Think about others and yeah, animals, wildlife, all those things that are put out of place. I think that affects a lot of people too. (*Client7*).

Clients indicated that their traumatic experiences from past weather events had produced a negative association with normal weather events. This accords with clinician's commitment to providing trauma-informed care for clients during these periods of acute stress and anxiety, and also supports the potential use of eco-therapy and eco-inspiration as a counter to eco-anxiety.

5.2 | Q2. How do you cope with eco-anxiety?

5.2.1 | Failure to cope

> *Facilitator*: So if you do have eco-anxiety, or you worry about the future, about climate change, and how it's affecting you mentally, what are you doing at the moment to cope with it?

> *Client2*: I'm not.
> *Facilitator*: Not coping?
> *Client2*: Not really.
> *Client2*: Find ways to distract myself. Go to work and do other things and then I'll remember.
> *Client10*: And then it hits.

Clients unanimously expressed an inability to cope with eco-anxiety. Given that each of these young people were clients of the mental health service and had received psychological support for their existing mental health issues, this suggests that they potentially do not see eco-anxiety as 'treatable'.

5.2.2 | Avoidance/'switching off'

> When you wake up, you log on to your social media or your news app or whatever and you just see the same things. And it's even if it's local, it isn't affecting you, you just get tired of it and you become apathetic and sort of just like switch off because again, you're helpless and stuff. And what else can you do?(*Client3*).

While clients, in agreement with clinicians, thought that 'switching off' from media was helpful, they also saw it as a sign of apathy, which they then felt guilty about.

5.2.3 | Micro-activism

> I do think there are parts of our own personal lives that are needing to change, especially regarding consumerism. Thinking about even something as basic as same day shipping or whatever, like it's going to go on a flight, it's going to fly straight there. When it could have taken another means of getting here, like, I don't know, by train or shipping on a boat. And stuff like realizing that fixing car pollution isn't going to be replacing a car with a Tesla, it's going to be relying less on cars overall. (*Client1*).

Clients saw 'small acts of repair' in the form of micro-activism as a positive action towards reducing the impact of climate change but, to them, it 'wasn't enough' so on balance so did not alleviate their eco-anxiety.

5.2.4 | Peer/social connection via social media (zoom)

> I know when the floods did happen, because that was obviously in the middle of another [theatre] show. Literally, the whole cast, like we had our rehearsals, like all got cancelled. And we were like, "Right, we have Zoom now. What are we going to do? We're going to have a massive

Zoom date." So everyone that was isolated, we were all on Zoom, and were just kind of all talking and I showed them the fact that I now have a swimming pool. (Client7).

Like clinicians, clients saw connections via social media as largely positive. Both client and clinician groups seem to separate wider media about climate change from groups that were specifically set up, or acted, as forms of social support.

5.3 | Q3: How can regional communities support young people with mental health issues cope with eco-anxiety better?

5.3.1 | Helping young people to have a voice, especially to government

Having youth involved in like advisory committees as well would be a really good, empowering emotion because I think this conversation has been that we don't feel like we're listened to or taken seriously. And that we are over-represented in jobs where we see little things. Like, working in shops, where we see how very stupid waste could be limited. And I think having us on advisory committees would be really important, because we do have something to say, and we do represent a big part of the population. So why shouldn't we be listened to? (Client5).

Being listened to and having their concerns about climate change taken seriously was very important to this group of clients. There is a potential role for headspace, as a youth mental health service embedded in community, to thoughtfully facilitate these activities through a youth platform.

5.4 | Other issues

5.4.1 | Relating nature and mental health

...after fires and smoky skies 'it's the first time I'd seen blue sky in about two months, probably. It felt like a weight lifted off my shoulders, just being able to see the blue sky'. (Client11).

When the rain came: 'I felt like that with the rain the past three weeks. I just felt like so... you know, this depressed weight on my shoulders. Then, when was it, Sunday? It was like, "Oh, I'm so happy, what's going on?" It's amazing. (Client7).

Although clients did not specifically identify nature-based activities as helpful in managing eco-anxiety, they did seem to appreciate the connections between nature and mental health, pointing towards the potential for eco-therapy in treating eco-anxiety.

6 | DISCUSSION

As researchers in the field have noted, studies on eco-anxiety are limited by an over-reliance on convenience samples of urban youth who may not have experienced direct impacts of climate change (see Coffey et al., 2021). Acknowledging that the experiences of urban youth are real, this study reinforces an imperative for future research to be inclusive of the needs and experiences of regional youth, particularly those who are recurrently affected by environmental disaster. Keeping in mind that clinicians were commenting generally on the young people that they see whereas those who participated in the client group were self-selected and clearly passionate about climate change as a social and political issue (which may not be representative of the overall client population in this location), the findings from this study confirm that eco-anxiety is a clinical issue of concern for regional youth with mental health problems who are seen by this service. Whether this is also the case in other areas of the country and across other youth mental health services warrants further investigation.

The findings from this qualitative study are summarized in Table 1 and have been grouped into concordant and discordant themes for contrast and comparison. It is noteworthy that both clinicians and clients characterized eco-anxiety as having a component of helplessness and hopelessness about the future as well as acute anxiety in relation to climate-related events such as floods and fires. Part of the urgency around better understanding and addressing eco-anxiety is the known impact on young people of clinical levels of anxiety during critical stages of brain development (Orygen, 2021; Romeo, 2013). However, evidence also suggests that the experience of clinical levels of hopelessness can multiply the odds of having a diagnosis of depression as a young person 10-fold (Liu et al., 2021). Further research is needed to better understand the depression risk associated with the experience of eco-anxiety.

Consistent with wider surveys (e.g., Hickman et al., 2021) a perceived lack of action by government contributed to the experience of eco-anxiety for the clients involved in this study, with clinicians also indicating the a 'generation gap' in social and political attitudes towards climate change might also be a contributing factor. While connecting with peers via social media and engaging in activism were seen as ameliorating factors, there is conflicting evidence in the literature about their clinical utility (Bingley et al., 2022). While clinicians and clients saw a role for mental health services in supporting collective action, there was also doubt and uncertainty around how best to do this.

Another important finding of this study was clients' failure to cope with symptoms of eco-anxiety while clinicians were able to identify several coping strategies that may assist their clients. This finding suggests that a more overt discussion of eco-anxiety and its effects on clients, inquiring about eco-anxiety as part of the intake process, and professional training in the treatment of climate-related mental health problems for clinicians may all be beneficial. For clinicians and clients, an increased knowledge and awareness of the principles of *eco-therapy* (establishing a positive relationship with the natural world; Jordan & Hindi, 2016) and *eco-inspiration* (expanding the climate

TABLE 1 Summary of findings (concordant and discordant themes in clinician and client accounts).

Concordant themes	Discordant themes
1. Three dimensions of eco-anxiety identified were helplessness in the present, hopelessness about the future, and acute stress/anxiety/ trauma related to extreme, climate-related events (although clinicians put their emphasis on the third, seeing it as their role to 'fast track' clients in these cases, whereas the client group emphasized the first and second dimensions more than the third)	1. The effects of climate change were not 'in the background' for these clients, even though avoidance of triggers was sometimes a coping strategy. Could there be a disconnect between clinician and clients understanding of the extent of the problem? Is it being underestimated by clinicians?
2. Clinicians identified a misalignment between young people's views on climate change and that of older generations, which clients also emphasized as a problem which contributed to their eco-anxiety	2. Clients did not cite community-based support as either a way of coping or identify it as a way that regional communities could support young people better, despite being prompted several times by the focus group facilitator to consider its utility. Do experiences of being dismissed by older generations affect how or whether young people value community interaction?
3. Clients and clinicians thought that connecting with peers via the internet helped young people cope with eco-anxiety	3. Clients did not cite the individual coping strategies identified by clinicians—for example, mindfulness, meditation, creativity—and instead expressed a failure to cope.
4. Clinicians and clients raised information overload as an issue and that avoidance of media about the negative impacts of climate change by 'switching off' could be a helpful strategy as long as it didn't lead to apathy	4. While clinicians talked about various forms of activism as potentially helpful, clients saw these activities, even at a micro-level, as either futile, proportionally ineffective, or pointless in the wider scheme of things (compared to corporate and government inaction).
5. Clients and clinicians thought that empowering and enabling young people to 'have a voice' and/or participate in collective action was important. Clients asked for support in both activities. Clinicians saw it as their role to support clients in this way through their organization	5. Clinicians but not clients identified ecologically-based therapy as having treatment potential, although clients were aware of the relationship between nature and their mental health

change narrative beyond 'doom' and 'gloom'; Kellman, 2022) may result in better treatment outcomes for young people with eco-anxiety symptoms.

It is also clear from the findings that eco-anxiety is not experienced by these clients as simply fear or worry about the environment.

Clients expressed many of the complexities of climate-related emotions described by Henritze et al. (2023) as 'moral injury'—guilt, shame and anger (related to agency and responsibility) and depression, grief and betrayal (related to feelings of powerlessness). These complexities of eco-anxiety as a lived experience are obscured by its label, which is why some researchers prefer the term climate distress as it 'casts a wider net across all negative emotional interactions around climate change' (Koder et al., 2023, p3). For regional clinicians who are embedded in communities and often involved in frontline responses to climate-related disasters, there is potentially an interplay between their own climate distress and that of their clients (Silva & Coburn, 2023). This is also an important avenue for future research.

In summary, this qualitative study achieved its aims of providing a deeper understanding of the experience of eco-anxiety among regional youth with mental health problems in an area of Australia which has been subject to a series of climate-related disasters. These findings not only suggest a way forward for future research on eco-anxiety but have also identified the need for further training and support for clinicians and clients of youth mental health services in regional areas.

DATA AVAILABILITY STATEMENT
Research data are not shared.

ORCID
Candice P. Boyd https://orcid.org/0000-0003-2796-8559

REFERENCES
Albrecht, G. (2012). Psychoterratic conditions in a scientific and technological world. In P. H. Kahn, & P. H. Hasbach (Eds.), *Ecopsychology: Science, Totems, and the Technological Species* (pp. 241–264). MIT Press.

Albrecht, G. (2019). *Earth emotions: New words for a new world*. Cornell University Press.

Australian Academy of Science. (2021). *The risks to Australia of a 3°C warmer world*. Available at: www.science.org.au/warmerworld

Australian Bureau of Statistics. (2022). *Data by Region*. Available at: https://dbr.abs.gov.au/

Bingley, W. J., Tran, A., Boyd, C. P., Gibson, K., Kalokerinos, E. K., Koval, P., Kashima, Y., McDonald, D., & Greenaway, K. H. (2022). A multiple

needs framework for climate change anxiety interventions. *American Psychologist*, 77, 812–821.

Boyd, C. P., & Parr, H. (2020). Climate change and rural mental health: A social geographic perspective. *Rural and Remote Health*, 20, 6337. https://doi.org/10.22605/RRH6337

Cianconi, P., Betrò, S., & Janiri, L. (2020). The impact of climate change on mental health: A systematic descriptive review. *Frontiers in Psychiatry*, 11, 74. https://doi.org/10.3389/fpsyt.2020.00074

Clayton, S., Manning, C. M., Krygsman, K., & Speiser, M. (2017). *Mental health and our changing climate: Impacts, implications, and guidance*. American Psychological Association and ecoAmerica.

Coffey, Y., Bhullar, N., Durkin, J., Shahidul Islam, M. D., & Usher, K. (2021). Understanding eco-anxiety: A systematic scoping review of current literature and identified knowledge gaps. *The Journal of Climate Change and Health*, 3, 100047. https://doi.org/10.1016/j.joclim.2021.100047

Dillarstone, H., Brown, L. J., & Flores, E. C. (2023). Climate change, mental health, and reproductive decision-making: A systematic review. *PLOS Climate*, 2(11), e0000236. https://doi.org/10.1371/journal.pclm.0000236

Henritze, E., Goldman, S., Simon, S., & Brown, A. D. (2023). Moral injury as an inclusive mental health framework for addressing climate change distress and promoting justice-oriented care. *The Lancet: Planetary Health*, 7(3), E238–E241. https://doi.org/10.1016/S2542-5196(22)00335-7

Hickman, C., Marks, E., Pinhkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & Van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5, e863–e873. https://doi.org/10.1016/S2542-5196(21)00278-3

Jordan, M., & Hindi, J. (2016). *Ecotherapy: Theory, research and practice*. Palgrave Macmillan.

Kellman, I. (2022). Build eco-inspiration not eco-anxiety. In E. C. Flores, I. Kellman, Y. Joye, A. W. Bolderdijk, S. Ayab-Karlsson, A. Wutich, L. Ayalon, & C. Hickman (Eds.), *A healthy planet for a healthy mind. One earth*, 5 April (Vol. 5, pp. 307–310). https://doi.org/10.1016/j.oneear.2022.03.021

Koder, J., Dunk, J., & Rhodes, P. (2023). Climate distress: A review of current psychological research and practice. *Sustainability*, 15(10), 8115. https://doi.org/10.3390/su15108115

Liu, Q., Martin, N., Findling, R. L., Youngstrom, E. A., Garber, J., Curry, J. F., Hyde, J., Essex, M. J., Compas, B. E., Goodyer, I. M., Rohde, P., Stark, K. D., Slattery, M. J., Forehand, R., & Cole, D. A. (2021). Hopelessness and depressive symptoms in children and adolescents: An integrative data analysis. *Journal of Abnormal Psychology*, 130, 594–607. https://doi.org/10.1037/abn0000667

Morton, T. (2013). *Hyperobjects: Philosophy and ecology after the end of the world*. The University of Minnesota Press.

Newnham, E. A., Titov, N., & McEvoy, P. (2020). Preparing mental health systems for climate crisis. *The Lancet Planetary Health*, 4, e89–e90. https://doi.org/10.1016/S2542-5196(20)30036-X

Nicholas, P. K., Breakey, S., White, B. P., Brown, M. J., Fanuele, J., Starodub, R., & Ros, A. V. (2020). Mental health impacts of climate change: Perspective for the ED clinician. *Journal of Emergency Nursing*, 46(5), 590–599.

NSW Department of Primary Industries. (2020). *Agriculture industry snapshot for planning*: *Mid North Coast subregion*. Available from: www.dpi.nsw.gov.au/agriculture/lup

Orygen. (2021). *Position statement*: *Climate change and youth mental health*. Available at: https://www.orygen.org.au/Orygen-Institute/Policy-Areas/Research-and-data/climate-change-and-youth-mental-health/Orygen-position-statement-Youth-Mental-Health

Parr, H. (2008). *Mental health and social space: Towards inclusionary geographies?* Wiley. https://doi.org/10.1002/9780470712924

Pihkala, P. (2020). Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, 12(19), 7836. https://doi.org/10.3390/su12197836

Rankl, F., Johnson, G. A., & Vindrola-Padros, C. (2021). Examining what we know in relation to how we know it: A team-based reflexivity model for rapid qualitative health research. *Qualitative Health Research*, 31(7), 1358–1370. https://doi.org/10.1177/1049732321998062

Romeo, R. (2013). The teenage brain: The stress response and the adolescent brain. *Current Directions in Psychological Science*, 22, 140–145. https://doi.org/10.1177/0963721413475445

Silva, J. F. B., & Coburn, J. (2023). Therapists' experience of climate change: A dialectic between personal and professional. *Counselling and Psychotherapy Research*, 23(2), 417–431. https://onlinelibrary.wiley.com/doi/full/10.1002/capr.12515

Smith, J. A., & Osborn, M. (2015). Interpretative phenomenological analysis as a useful methodology on the lived experience of pain. *British Journal of Pain*, 9, 41–42. https://doi.org/10.1177/2049463714541642

Stollberg, J., & Jonas, E. (2021). Existential threat as a challenge for individual and collective engagement: Climate change and the motivation to act. *Current Opinion in Psychology*, 42, 145–150. https://doi.org/10.1016/j.copsyc.2021.10.004

Tsui, T. (2023). *It's not just you: How to navigate eco-anxiety and the climate crisis*. Gallery Books.

Usher, K., Durkin, J., & Bhullar, N. (2019). Eco-anxiety: How thinking about climate change-related environmental decline is affecting our mental health. *International Journal of Mental Health Nursing*, 28, 1233–1234.

Wray, B. (2022). *Generation dread: Finding purpose in an age of climate crisis*. Knopf Canada.