






How Can Psychological Research Support Movements for Socio-Ecological Change? A Qualitative Study on Psychological Challenges and Questions of Activists

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Abstract

Research on collective climate action has been increasing in the past years. Yet, as scholars base their ideas on previous research and discussions in the scientific community, research may pass by the most pressing challenges that people working for socio-ecological change currently experience. To address this problem, we conducted 22 semi-structured qualitative interviews with participants from Europe and beyond to gain a better understanding of the psychological challenges and questions within socio-ecological movements. Inductive content analysis revealed eight key questions: How can movements and their members, (1) handle specific emotions, (2) become resilient, (3) deal with structural barriers, (4) create a (shared) identity, (5) work together constructively, (6) motivate others and themselves, (7) strengthen efficacy perceptions, and (8) how does societal change work? While a few of the raised themes have already received some attention in environmental psychology, most questions have not been sufficiently addressed. We therefore present a transdisciplinary research agenda for environmental psychology.



Keywords

socio-ecological change, environmental psychology, activists, inductive content analysis, transdisciplinary research

Non-Technical Summary

Background

More and more researchers are studying how people work together to tackle climate issues.

Why was this study done?

Researchers sometimes do not focus on the questions that matter most to people working for environmental and social justice. We wanted to address the questions that are important to those taking action on climate issues, so we did this study.

What did the researchers do and find?

We talked to 22 people involved in environmental movements to learn about their emotional and mental challenges and the questions they have. We found eight key questions that matter to activists: How can movements and their members, (1) deal with difficult emotions, (2) become resilient, (3) deal with structural barriers, (4) create a sense of belonging, (5) work well together, (6) motivate others and themselves, (7) strengthen people's belief in their ability to create change, and (8) understand how societal change works?

What do these findings mean?

Some of these questions have been studied before, but many have not gotten enough attention. We think that answering these questions can help to promote environmental and social justice. So, we suggest a research plan that connects activists' real-world questions with studies in environmental psychology.

Highlights

- We conducted 22 interviews with people working for socio-ecological change.
- Inductive content analysis revealed eight key questions of socio-ecological activists.
- Firstly, interviewees raised questions about handling specific emotions, becoming resilient and dealing with structural barriers.
- Secondly, the themes of identity building and constructive collaboration were central.
- Thirdly, main challenges were to motivate people, strengthen efficacy and affect actual societal change.

Climate change, biodiversity loss, and social injustices resulting from environmental problems are among the most pressing issues of our time (Brand, 2021; IPCC, 2021; Steffen et al., 2015). To target these problems, scholars argue that we need a major

socio-ecological transformation (WBGU, 2011). Social movements play a crucial role in this transformation. They drive political (e.g., Amenta et al., 2018), economic (e.g., Giugni & Grasso, 2018), and cultural (e.g., Van Dyke & Taylor, 2018) change through socio-ecological innovations and pressure on current societal systems (Geels & Schot, 2007).

In recent years, there has been an increase in psychological research on protest and activism around issues of socio-ecological change (e.g., Furlong & Vignoles, 2021; Hamann & Reese, 2020; Haugestad et al., 2021; Wallis & Loy, 2021). This new line of research often draws on well-established theories such as the social identity model of collective action (SIMCA; van Zomeren et al., 2008), applied to environmental contexts (e.g., Hamann et al., 2021; Keshavarzi et al., 2021; Nguyen et al., 2021). Often, scholars extend the SIMCA with other concepts such as attitudes (Bamberg et al., 2015), environmental self-identity (Carmona-Moya et al., 2021; Fernandes-Jesus et al., 2020), or global identification (Furlong & Vignoles, 2021), which are frequently encountered in the study of private-sphere environmental behaviour.

On the one hand, the climate crisis thus offers a new area to study and refine already existing psychological theories. On the other hand, researchers may overlook questions that are currently relevant to socio-ecological change itself. In our view, targeting questions originating from the practice of socio-ecological movements could contribute to a more impact-oriented environmental psychology (see Nielsen et al., 2021) and as such lead to more comprehensive responses to socio-ecological challenges. This article represents an initial transdisciplinary effort to establish a connection between activism and academia, providing socio-ecological movements with a platform to contribute to the scientific discourse (Lang et al., 2012).

Method

Data Collection and Sample

To investigate challenges and questions evolving around the topic of socio-ecological change, we conducted 22 qualitative interviews. All participants were interviewed between July and November 2021. Our aim was to conduct around 20 interviews, as we were targeting a very specific group of people (i.e., activists in social-ecological movements, mainly in Europe), for which saturation may be reached quickly (Hennink & Kaiser, 2022). Interviewees were recruited using the method of theoretical sampling, as described by Breuer et al. (2017) and Ligita et al. (2019). First, we approached socio-ecological change actors from our network. After conducting seven initial interviews, we aimed to specifically recruit activists who self-described as practising different forms of work for socio-ecological change, were located in different countries and had different personal backgrounds than previous interviewees. Semi-structured interviews were held

in English, German, or Spanish in person or via video call. Interviews lasted for an average duration of 26 minutes (range: 14–36 minutes). Participants did not receive any financial compensation for their participation. All research practices were in accordance with APA guidelines for ethical conduct (APA, 2017) and informed consent was obtained from all interviewees (see Supplement 1 in Hamann, von Agris, et al., 2024).

Our sample consisted of activists involved in a range of activities such as organising, campaigning, and education in socio-ecological movements. As they described themselves as working for socio-ecological change, we refer to them as members of socio-ecological movements. While our study had a project-specific focus on Europe, we were also able to recruit three participants from other areas. Of the 22 participants, six lived in Germany, four in the Netherlands, four in the United Kingdom, two in Spain, and one each in Greece, New Zealand, Sweden, Belgium, the United States, and Chile. Five participants were born outside Europe. Nine participants identified as male, ten as female and three as non-binary. The age range of our sample was 21–56 years ($M = 33.95$, $SD = 8.40$). On average, they had been involved in work for socio-ecological change for 12.27 years ($SD = 9.49$) and were currently working an average of 29.52 hours per week in these movements ($SD = 14.78$). While three participants worked without pay, all others received some form of financial compensation for at least part of these activities (see Table 1).

Interview Guide

We created a semi-structured interview guide focused on our main research question: What are psychological challenges and questions around socio-ecological change? We first asked our interviewees about their work for socio-ecological change, in particular about their thoughts, feelings, beliefs, and behaviours. Second, we inquired about the challenges they face in their work, thereby highlighting areas such as working collaboratively, motivating the public, and maintaining mental wellbeing. Third, we asked about the (psychological) questions arising from their work, on the individual, group, and societal level. Finally, we asked participants what questions they thought psychology could answer to support people working for socio-ecological change (see Supplement 2 in Hamann, von Agris, et al., 2024 for the interview guide).

Table 1
Demographic Information of 22 Interviewees

Pseudonym	Country of residence	Ethnicity	Gender	Age	Years of work	Working hours per week	Main area and/or work for socio-ecological movements
BE1	Belgium	White	Female	30	14	whole lifestyle (70% paid)	Peace movement, sustainability movement, agro-ecology movement
CL1	Chile	Latino	Female	25	6	50h (90% paid)	Environmental movement, feminist movement, LGBTQ+
DE1	Germany	White	Male	28	3	5h (n/a)	Climate justice movement
DE2	Germany	White	Female	24	3	15h (0% paid)	Climate justice movement, education
DE3	Germany	White	Male	28	8	40h (80% paid)	Climate justice movement and education for sustainable development
DE4	Germany	White	Female	47	12	20 – 45h (20% paid)	Climate justice movement
DE5	Germany	White	Male	34	11	30h (50% paid)	Social artists, ecovillage movement, open workshop collectives
DE6	Germany	White	Non-binary	21	4	20h (100% paid)	Climate justice movement, anti-colonial movement
EL1	Greece	White	Male	41	26	50h (n/a)	Environmental movement, intersectionality, solidarity with other movements
ES1	Spain	White	Male	56	42	40h (100% paid)	Various movements for socio-ecological change and justice, education and capacity building
ES2	Spain	White	Male	43	20	40 – 50h (70 – 88% paid)	Climate justice movement, parenting, agro-ecology
NL1	Netherlands	White	Male	30	7	50h (80% paid)	Food sovereignty, climate justice and social justice movement
NL2	Netherlands	White	Female	23	3	n/a	Climate and environmental justice movement, agroecology, food waste, LGBTQ+ rights
NL3	Netherlands	White	Non-binary	33	8	20h (60% paid)	Environmental movement, decolonial movement, queer movement, no-border movement
NL4	Netherlands	Black	Non-binary	29	17	24h (83% paid)	Embodied social justice movement, research and teaching on socio-ecological transformation, drug policy
NZ1	New Zealand	White	Female	42	6	5h (0% paid)	Environmental movement, decolonisation, anti-racism, fighting conspiracy groups
SE1	Sweden	White	Male	43	26	40h (100% paid)	Climate justice movement
UK1	UK	White	Female	33	15	30 – 40h (67% paid)	Land justice movement, education, care work, social movement, social science research, civil society
UK2	UK	White	Female	37	12	40h (75% paid)	Environmental movement, rewriting movement, regenerative land practices, radical education
UK3	UK	White	Female	36	18	28h (80% paid)	Refugee/ migration movement, social, environmental and economic justice
UK4	UK	Latino	Female	31	3	6h (33% paid)	Climate justice movement
US1	United States	Latino	Male	33	6	15h (33% paid)	Social and environmental justice movement

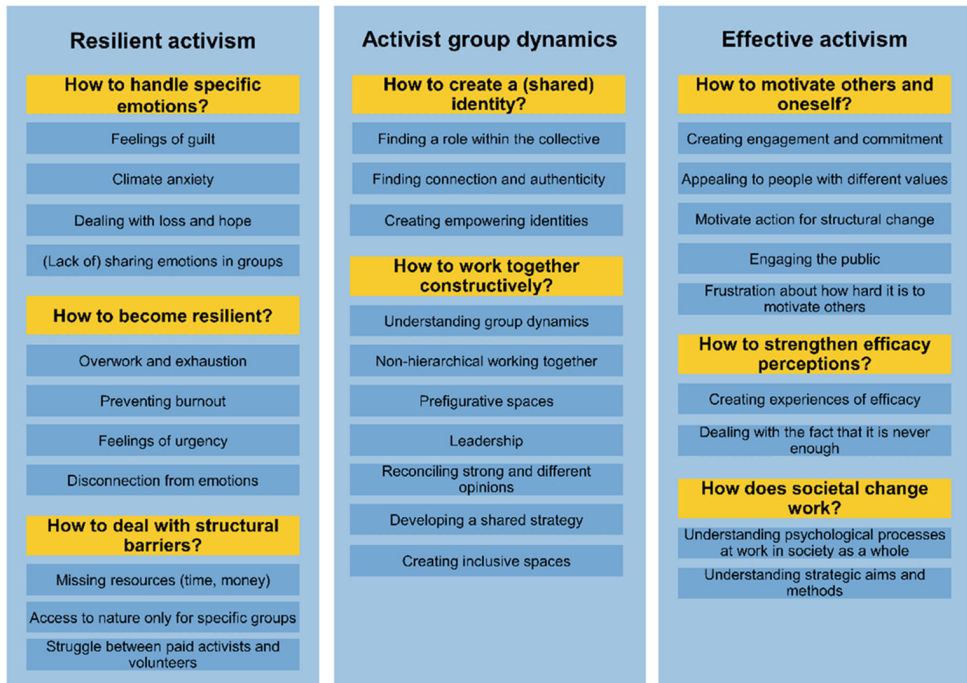
Note: The table provides an overview of the demographic information of the interviewees. LGBTQ+ is Lesbian, Gay, Bi, Trans, Queer, and others. Participants' pseudonyms are based on their country code. Years of work refers to the number of years participants have worked for socio-ecological movements. Working hours represent the hours spent on socio-ecological change work per week. The percentage of paid work is displayed in brackets.

Data Analysis

All interviews were video recorded using Zoom or audio recorded, anonymised, transcribed with Microsoft Word and coded with MAXQDA 2022 (VERBI Software, 2021). As there is limited research on this topic, we conducted an inductive content analysis (Mayring, 2010) to examine the interviews. According to this approach, we summarised the content of the interviews by creating an inductive code system. We started by freely coding six interviews. After that, all authors met to cluster the resulting codes in terms of their meaning and to identify underlying psychological concepts. Based on this shared understanding, four authors then coded two to three interviews each in relation to our main research question but without any specific coding guidelines. Next, we clustered the identified codes into 18 common themes.

These themes served as the basis for a second coding phase. To ensure intercoder consistency, five authors coded all interviews a second time, but none that they had coded in the first phase. During this coding phase, we first looked for overarching themes in each interview to understand the role that these themes played in each interviewee's work. Second, we specified in which context the overarching themes were mentioned to contextualise the emerging challenges and questions. Third, we further reduced the number of themes by summarising them into more inclusive cross-cutting themes.

Eight cross-cutting themes emerged that we further clustered into three categories for this article: handling specific emotions, becoming resilient, structural barriers (which can be seen as part of resilient activism); shared identity, working together (representing activist group dynamics); and motivating others, efficacy perceptions, societal change (as essential to effective activism). As psychological processes are often interrelated, one theme may have a direct influence on another theme (e.g., structural barriers on constructive group work). Our aim was to identify the most fundamental code that could potentially influence other codes. Figure 1 gives an overview of the main themes and exemplary extracted codes. Definitions of main themes are provided in Supplement 3 of Hamann, von Agris, et al. (2024).

Figure 1*Cross-Cutting Themes With Exemplary Extracted Codes*

Results

Resilient Activism

How to Handle Specific Emotions?

Descriptions of the different emotions that interviewees experienced in their work for socio-ecological change constituted a significant part of the interviews. It was noticeable that the ways of perceiving and handling challenging emotions differed between the interviewees. One aspect that emerged throughout the interviews was the nature of the emotions that activists experienced. Many interviewees reported feeling guilty in their work for socio-ecological change. One interviewee reported that “the most active activists are feeling guilty because they think they are not doing enough for any cause, for human rights, for climate justice, for whatever” (ES2). Particularly, activists from the Global North struggled with the ‘burden’ of guilt and responsibility that comes with their privileges and historically grown identities within a colonial system: “No matter how much I do, I never do enough. Many people lack the sense of having the right to exist,

especially white people from the Global North that first want to work off their historical debt” (DE2).

Several interviewees reported feeling frustrated and anxious in their work, especially if they had been active for a long time. As one interviewee pointed out: “The emotions of despair and rage and extreme frustration over what’s going on, everything that should happen but isn’t happening. It’s become a cliché to talk about climate anxiety. [...] and there is that feeling that almost literally the world around us is going up in flames” (SE1). Connected to this, interviewees described a lack of psychological research and knowledge about emotional experiences of activism. One interviewee posed the question of how psychological knowledge could help them cope with their emotions in extreme situations, for example, when being overwhelmed with the climate crisis, or when dealing with traumatic experiences and police violence (DE1). Another interviewee wondered about how they could learn to deal with environmental and social loss, asking specifically: “What is the psychological effect of social breakdown?” (US1). Another aspect was the question about the effects of feeling hopeful. Few interviewees mentioned hope at all, but those who did had different concerns about it. One interviewee explained how “For me, it’s always very interesting, the feeling of hope. If hope is something that keeps you going or is it something that makes you complacent like ‘Oh it’s gonna be fine’[...]” (NL2).

One solution described by the interviewees was to create more spaces to talk about their perceived emotions in depth. These should go beyond the short and superficial sharing of, for example, tiredness or sadness, and recognise the diversity of experiences. According to them, there was a painful discrepancy between the extraordinary experiences that activist groups shared, and the lack of space to pause and jointly acknowledge these experiences and the emotions that arose. One interviewee summarised the importance of psychological work in this field when they shared how “we need to grapple with works on moaning and loss and grief and how to sustain our anger and willingness to fight against all odds. And clearly these are psychological, I mean, this is psychological work where psychologists can be of immense help. Both through therapy or groups sessions, but also through text, through writings about these” (SE1). According to another interviewee, it can be very challenging and uncomfortable to talk about emotions in the group, especially related to the internal dynamics of the collective (NL3). Here, psychological help may be particularly relevant.

How to Become Resilient?

The theme of ‘becoming resilient’ was created as an umbrella term for all aspects of long-term activism and its encompassing challenges. Various interviewees felt exhausted by their work and lacked recreation. Repeatedly, they found themselves stuck, overwhelmed and overworked because they had not allowed themselves the breaks they needed. They mentioned symptoms of burnout, depression, and disillusionment, and raised questions

about how to prevent or deal with this state. It seemed to be a challenge for various interviewees to set realistic boundaries of how much work- and emotional load they can carry. Particularly in demanding times, many interviewees reported a lack of coping strategies to deal with stress, for example, one participant described “I notice that I have days when I see very little of the outside world. Where I often think that I feel really unhealthy in my body and in my head in such hot phases of projects. [...] I don’t think we really know how we can help each other.” (DE6).

The interviewees’ exhaustion was partially attributed to a sense of urgency and time pressure. “In the climate movement, there is this ever-present feeling of urgency. We have to do this, (...), and if we don’t, we’re going to be completely fucked. But at the same time, you can’t keep running all the time. One question is: How do you balance the urgency with the fact that you are not going to be able to achieve change just like that?” (EL1). Finding a healthy balance is a challenge for both collective practices and individual activist routines, represented in this interviewee’s statement: “How do we move at a meaningful pace? [...] How do I strike the right balance between like doing too much and not doing enough?” (UK3). Overworking was also attributed to the general narrative that ‘activists’, by self-definition, want to do more and more, and neglect self-care as part of their radical practice of resistance and regeneration.

In addition, some interviewees mentioned an overall feeling of disconnection from each other and from nature. It seems to be a challenge to balance their engagement for a more sustainable and connected world with an increasingly disconnected, digitalised way of working together. Connected to this, participants stated increasing feelings of numbness. One interviewee reported that they “sometimes have moments of ‘what’s the point?’ Kind of tapping into apathy and nihilism. It tends to be when I’m really overworked and not giving myself enough time to really rest or play” (NL4). Another interviewee described their detachment from sadness and other feelings: “For example, the new IPCC report came out and I was reading it, and I just didn’t feel anything about it. I wasn’t sad [...] it didn’t really do anything with me anymore. And that made me quite concerned. [...] I want to keep this motivation of finding these things shocking, so I am motivated to fight against them” (NL2).

To counter burnout, disconnection, and apathy, many interviewees considered resilience as a part of a collective—not merely personal—practice. According to some interviewees, the lack of focus on collective resilience is partly rooted in neoliberal systems that individualise and pathologise collective problems. For example, one interviewee suggested that “in social movements it would be powerful to consider and really have more dialogue about how these collective structures are directly impacting our well-being, and our nervous systems and our mental health” (NL4). Various interviewees mentioned the importance of having mutual support groups and investigating the power of the group for the wellbeing of individuals. One interviewee reported their frustrating experiences with mainstream therapists (NL3). They longed for professionals who do not question

the decision of leading an activist life including all the confrontation and stress it involves.

How to Deal With Structural Barriers?

Interviewees frequently addressed structural barriers that made their active and resilient engagement difficult. The topic that has been mentioned most prominently is money, or as one interviewee put it: “you actually have to survive” (US1). Without financial resources, people are excluded since they might not even be able to afford the necessities for activism, such as online data to join video conferences. Several interviewees expressed their struggles to juggle activism besides other commitments like work, education, or family. It was pointed out that in particular members of less privileged groups often do not have the freedom to engage in activism due to lack of money and time. Furthermore, financial limitations and “unequal access to nature” (UK2) also prevent less privileged groups from gathering the necessary experiences to become an activist.

Moreover, interviewees described that they have to face an immense power imbalance between themselves and their political opponents. Most of the time there is “definitely skill, but not as much skill and money in our group compared to whoever we end up having a campaign against” (NZ1). In line with this, the interviewees often experienced frustration because of the lack of funding and posed the question of how to “build collective ways of funding the political movement that we need, especially in the Global South” (US1). In a conversation after the interview, one interviewee also clearly stated that they think that financial and temporal resources should go directly into socio-ecological activism instead of *researching* it which has a lower importance for them (DE4). However, interviewees also noted that receiving funding holds further challenges such as complicated dynamics between paid activists and volunteers.

Activist Group Dynamics

How to Create a (Shared) Identity?

Various interviewees mentioned processes of identity formation within and around socio-ecological movements. Many seemed to be reflecting on the various roles that people take on within the movement, and the expectations that come with those roles. One interviewee mentioned that “there is a strong reliance on the fact that people share visions and values will be enough. But after workshops and trainings, I realised how valuable it is to learn certain competences, for example, differentiation of different roles. What can be my role as an activist, and what is it not?” (DE1). Similarly, for some people it was important to remind themselves that all roles are important and have their respective right to exist. The idea of finding a role within the movement and creating their own ‘ideal’ identity as a contributing activist was on the minds of several interviewees.

However, another interviewee explained the potential downsides of activist roles: “I find the word authenticity difficult. How to be in authentic relationships when I am

trying to project the idea of the good self? Because then this model facilitator, model activist, model researcher, model white person is this thing that is interacting with the world, rather than me with the fragility, questions and not knowing the answers and all of those things. [...] One thing that runs through all the work I do is this desire to find real connection” (UK1). Another interviewee raised related questions about the potential of identities to both unlock power and harm. They asked, “How do we manage the psychological process of forming genuine and empowering identities without having those becoming a new kind of prison, [...] instead learn to grow such psychological spaces where our identity, our sense of self, our sense of our collective self can compete, evolve, and grow?” (ES1).

Beyond questions around the (dis-)advantages of identification, one interviewee asked about the psychological mechanisms that create high identification in the first place (DE3). They wanted to know more about how to strengthen identification with different socio-ecological movements, but also how to deal with the fact that individuals have very different identities. Thereby, they asked about a ‘good’ balance between a strong identification with some socio-ecological groups and causes, and the weaker identification with many other causes and respective groups.

How to Work Together Constructively?

Many participants addressed questions and challenges regarding working together in one’s group and across social movements. Some of the questions revolved around organising action groups. One participant directly posed the question about what’s the best way to organise? (DE6) Another interviewee described that their group aimed for flat hierarchies in their structures: “One of the challenges [is] how to avoid hierarchies that are always there. People with more experiences [...] [have] a little bit of training, so that’s a challenge always, how not to impose thoughts but at the same time get shit done” (NL1). These flat hierarchies required more patience as deadlines were not strictly handled. Another interviewee talked about establishing collective practices that represent alternative societies: “For a long time, I have been curious about how to implement what anarchists would call prefigurative politics; so we’re creating the world we would like to live in by doing that as much as possible in our daily interactions” (NL4), and addressed the reluctance to embrace leadership in socio-ecological movements: “I think that in a lot of lefty movements there is quite an aversion to authoritarianism and to leaders in general. I wonder how this potentially hinders collective action. [...] So, I’m quite curious about what healthy leadership looks like, how there can be different models of it” (NL4).

Creating an inviting and constructive way of working as a group was a challenge that was mentioned by several interviewees. One participant described it as “figuring out ways to have more difficult conversations, ways to deal with disagreement inside the movement without like holding grudges or getting super angry” (NL3). In line with

this, interviewees also struggled with bringing different people and opinions together: “Theoretically, I really get behind that it’s like a positive thing to have diversity [but] in practical terms it’s really hard when there are 25 different opinions in the room and you have got to make a decision” (UK3). Within these struggles, another participant raised questions about finding a collective strategy (DE6). They describe a lack of a shared understanding of the political situation, for example, who are opponents and what needs to be done.

Next to struggles with diversity of opinion, interviewees also struggled with not being diverse enough as movements. One participant raised the problem that “we don’t reach many parts of society, or they don’t organise within our movement. And in some respect we don’t seem to address them. I find that quite terrible, but I don’t know how to solve that. Apparently, we have a culture or a language that is not inviting for people” (DE4). One interviewee addressed the challenge of finding a balance in their groups between resistance and regenerative work since emotional work within a group can also be very time-consuming: “If you focus on people, then this group could turn into a therapy group, and not an environmental justice group, right? So, I think it is very difficult to find the balance. [...] And then, sometimes, we put too much focus on the objectives without thinking ‘where is the people’” (ES2).

Effective Activism

How to Motivate Others and Oneself?

One aspect that interviewees mentioned repeatedly was their capacity to find, sustain and spread motivation. Several interviewees mentioned the challenge of creating commitment in other people. One aspect of this was communication—how to address people, which value systems to appeal to, and which emotions to evoke were open questions for many interviewees. Addressing and involving people was described as especially challenging when their life circumstances and needs diverged from the interviewees’ own lives: “It can be really hard to motivate people who are not already involved in activism because people are tired and overwhelmed by life itself.” (NL3). Similarly, many interviewees expressed frustration at the difficulty of motivating people to take action which targets structural change that goes beyond individual or technical solutions: “And [people] don’t see the agency in the most responsible countries that are producing this crisis” (US1).

Furthermore, interviewees wondered about the mechanics of how to involve the broader public and incentivise the willingness to become active. There seemed to be doubt about whether and how to frame issues in a catchy way that appeals to people instead of putting them off. Especially the interviewees who had been involved in movements for a long time struggled with repetitiveness of their work: “I basically, for the last ten years, have been trying to phrase the same problem again and again. We all have said and written down these things in 95,000 variations already. So, I always

wonder: Which words can I use so that the message is not worn out and doesn't sound old?" (DE4).

How to Strengthen Efficacy Perceptions?

A cross-cutting theme regarding motivation were reflections on participants own and their group's efficacy. Many interviewees mentioned a desire for more experiences of accomplishment. According to them, activists are constantly caught between two poles. On the one hand, they know that there is a lot of work to be done. On the other hand, they do not know which problem to tackle first, or they do not have the capabilities to deal with all the (social/ organisational) problems they encounter. One interviewee noted "It's difficult to know what to do when there is so much to do always" (UK3). Several people pointed out that they were unsure of their societal impact as individuals and/or activist groups and emphasised the need to clarify their own efficacy as activists.

To face difficulties with their efficacy, two interviewees pointed towards the importance of empowering collective experiences as the fuel of movements (e.g., participation in civil disobedience). One interviewee described that they "experienced a lot of powerful, collective moments, [...] those that you cannot easily replicate but which are very special moments that have so much power that people stay for many years and participate. And it would have been interesting to know more about these dynamics" (DE1). According to the interviewees, these empowering experiences enable people to keep fighting in the face of political apathy and a rapidly progressing climate catastrophe.

How Does Societal Change Work?

Another cross-cutting theme was the need to understand how societal change works. This manifests itself as "the need to use psychological [...] tools to understand what's going on. [...] Not what we go through as activist. But what processes of denial and repression [...] operate in society at large" (SE1). Several interviewees mentioned their need for strategies to reach the general public and asked what narratives should be included. For example, an interviewee asked, "What happens when we reach 1.5 degrees? Because the whole 'soon it's going to be too late'-narrative is collapsing in a way" (DE4). This points to a key challenge of socio-ecological movements: The need to develop a viable theory of change for the transformation of societies to show people how they can contribute effectively, as individuals as well as groups.

Discussion

This study investigated what challenges socio-ecological movements are currently facing, and what psychological questions arise from these challenges. Based on 22 qualitative interviews with actors from socio-ecological movements, we identified eight recurring themes. As part of resilient activism, interviewees asked how to handle specific

emotions, how to become resilient in the face of overwork, feelings of numbness and burnout, and how they could deal with structural barriers such as financial and time resources. With respect to group dynamics, interviewees wondered how to manage activist roles and how to foster a shared identity. Other questions concerned challenges of working together constructively and dealing with diverging opinions and backgrounds. As essential to effective activism, interviewees asked for more information on what motivates others for their cause, what could increase their own and others' sense of efficacy, and raised the question of how societal change actually works. Notably, these themes include crucial aspects for activist retention (Bunnage, 2014).

In the following, we highlight themes which have been addressed in environmental psychology and identify topics that require further attention. We are aware that these interpretations largely depend on our own overview of environmental psychology, and that other researchers may disagree with or would add to our evaluation. Therefore, we invite readers to take our themes as a suggestion upon which future research can build.

Themes (Somewhat) Addressed in Environmental Psychology

A number of themes emerged that reflect previous research in environmental psychology, particularly on how activism can increase its effectiveness. Both textbooks (e.g., Steg et al., 2013) and meta-analyses (e.g., Bamberg & Möser, 2007; Bergquist et al., 2023) exist that target the question of how to frame climate issues and motivate people to change their private behaviours. In addition to scientific results, this area has already produced material that translates scientific findings into practical advice (Hamann et al., 2016; Harré, 2011; Lewandowsky et al., 2020).

While the investigated psychological factors have mostly been applied to private actions, there are studies that transfer the same factors to socio-ecological initiatives and movements (Bamberg et al., 2015; Fielding & Head, 2012). Moreover, we find many recent studies on the basic factors motivating activist behaviour (e.g., Furlong & Vignoles, 2021; Landmann & Naumann, 2024; Wallis & Loy, 2021), underlined by an extended meta-analysis of the SIMCA (Agostini & van Zomeren, 2021). It is noteworthy that these studies have tended to focus on protest behaviour. Our interviewees indicated that they struggled with challenges around many other activist behaviours as well as the question of which activist roles to take on. Future research could provide a more nuanced picture of the motivations behind different activist roles, so that individuals could become more aware of how particular roles fit with their own motivation. In doing so, more attention needs to be paid to organising and volunteering, as these form the backbone of socio-ecological movements (e.g., Hamann et al., 2021).

A useful framework of how effective activism could look like has been proposed in *The Psychology of Effective Activism* (Gulliver et al., 2021). While the book targets a scientific audience, it also offers advice to activists on how to select and engage with specific target groups. Furthermore, various reviews in social psychology aim to

provide a comprehensive overview of the numerous antecedents and consequences of collective action, which were also mentioned in the interviews (e.g., Becker & Tausch, 2015; Thomas et al., 2022).

Themes that both our interviewees mentioned and that have been identified as relevant facets of collective action within socio-ecological movements are social identity (Haugestad et al., 2021; Keshavarzi et al., 2021; Tajfel, 1978; van Zomeren et al., 2019; Wallis & Loy, 2021) and self-efficacy beliefs (Furlong & Vignoles, 2021; Hamann, Wullenkord, et al., 2024; Haugestad et al., 2021; Keshavarzi et al., 2021). The interviewees particularly inquired about potential predictors that could explain and interventions that could foster social identity and efficacy beliefs. With respect to efficacy beliefs, we find a field with scattered interventions, sometimes presenting effective interventions (e.g., Jugert et al., 2016; Van de Velde et al., 2010) and sometimes not (e.g., Hanss & Böhm, 2013; Hornsey et al., 2021; Xue et al., 2016). However, a comprehensive review on this topic is still missing (Hamann et al., 2021; but see Hornsey et al., 2022). With regard to social identity, we are aware of only few environmental psychology studies targeting the predictors and emergence of social identification (Hamann & Masson, 2022; Haugestad et al., 2021; Thomas et al., 2016).

Potential Blind Spots in Environmental Psychology

A blind spot in environmental psychology has been the consequences of activism on people's emotions and health. Previous research has examined fear and guilt as motivators for collective action (Bamberg et al., 2018), and focused on the predictors and consequences of climate anxiety in larger populations (e.g., Ogunbode et al., 2022; Wullenkord et al., 2021). Yet, it is noteworthy that our interviewees rather asked how they as activists could *manage* specific emotions such as guilt and anxiety in a healthy way.

Interviewees further mentioned physical, emotional and motivational symptoms such as exhaustion, feelings of distance from other people and nature, numbness, and fighting hopelessness, which are characteristic of activist burnout (i.e., a state in which an activist's commitment is threatened by long-term physical, emotional, and motivational stressors, Gorski et al., 2019). While there is some qualitative research on environmental activists (Driscoll, 2020; Gorski et al., 2019) and social justice activists (Chen & Gorski, 2015; Conner et al., 2023; Gorski, 2019; Rodgers, 2010) in the intersection of psychology and sociology, quantitative research on the causes, consequences, and prevention of burnout among socio-ecological activists is still lacking. We suggest that targeting emotions and burnout requires, on the one hand, a better understanding of interventions that promote resilience among activists (e.g., like climate cafés and teacher's education, Ojala, 2015) and a better understanding of how to foster positive emotions among activists (e.g., Feldman & Hart, 2016; Pizarro et al., 2022). On the other hand, collaborations between environmental and clinical psychology may offer a breeding ground for research on traumatic activist experiences.

We found that topics of activist group dynamics have not yet been thoroughly addressed in environmental psychology and could potentially build on existing research in organisational and work psychology. How to lead constructive discussions including various opinions, and how to deal with diversity and flat hierarchies seem to be open research questions. Furthermore, not only do marginalised groups (e.g., those with lower socio-economic status, ethnic minorities) seem to face structural barriers within socio-ecological movements, but there is also a lack of studies targeting marginalised groups and the question of what factors facilitate their inclusion in socio-ecological movements.

Finally, interviewees raised the question of how societal change works. While this question cannot only be addressed by psychologists alone, we believe that psychology should join interdisciplinary discussions and contribute with our unique perspective that starts from the perceptions, feelings, and actions of individuals (see Wullenkord & Hamann, 2021). Table 2 displays a transdisciplinary research agenda for environmental psychology that we derived from the interviews. As much as we focused on psychological challenges and questions, the interviewees also offered many suggestions on how to confront them (e.g., creating spaces to talk about emotions) that could guide intervention design. Importantly, they highlighted the need to address these themes collectively, which underlines collective approaches to environmental action (e.g., Fritsche et al., 2018).

Limitations

First, as is the nature of qualitative research, we relied entirely on the self-reflective capacities of the interviewees, which may carry specific biases. Second, the team of authors was made up of researchers from the Global North, all of whom were white, privileged and had scientific degrees in psychology. This may have influenced the networks we recruited from and the interview implementation itself, as interviewees may have focused on sharing ideas that they believed we would understand from our perspective. In addition, it is possible that our personal experiences, such as having fewer structural barriers than some interviewees, and our previous knowledge of environmental psychology may have influenced our interpretation of the interviews and codes, potentially leading to divergent interpretations of what the interviewees actually meant. Still, our interview study uncovered many topics that have not yet been sufficiently addressed by environmental psychology, thus going beyond established knowledge and theories.

Table 2
Transdisciplinary Research Agenda for Environmental Psychology Arising From Key Themes of the Qualitative Interviews

Key theme	Research questions mentioned in a theme
<i>Handling specific emotions</i>	<ul style="list-style-type: none"> - How can activists deal with guilt, frustration, and anxiety? - How to deal with traumatic activist experiences? - Is hope motivating or demotivating collective action? - What are successful interventions for collectively sharing emotions?
<i>Becoming resilient</i>	<ul style="list-style-type: none"> - How can activists collectively deal with burnout and find a healthy balance before it happens? - How to confront apathy and disconnection to each other and nature?
<i>Structural barriers</i>	<ul style="list-style-type: none"> - How to confront structural barriers leading to unequal access to activism? - How can socio-ecological organisations acquire funding and confront financial hierarchies?
<i>(Shared) identity</i>	<ul style="list-style-type: none"> - How can people find their role in an activist collective?
<i>Working together</i>	<ul style="list-style-type: none"> - What leads to high identification with socio-ecological groups and movements? - How can groups organise themselves effectively, especially if they have flat hierarchies and horizontal (e.g., anarchist) group structures? - How does healthy leadership in socio-ecological groups look like? - How to deal with diversity of opinion in activist groups?
<i>Motivating others</i>	<ul style="list-style-type: none"> - How can groups build a shared political understanding of socio-ecological crises? - How can activists address people's values and emotions? - How to motivate people for structural socio-ecological change beyond individual action and technical solutions?
<i>Efficacy</i>	<ul style="list-style-type: none"> - How can activists (re)phrase messages in a motivating way? - How can people's perceptions of efficacy be strengthened? - How can individuals balance activist demands and capacities? - What are collectively empowering experiences for socio-ecological movements?
<i>Societal change</i>	<ul style="list-style-type: none"> - What are the underlying psychological mechanisms of socio-ecological change on a societal level? - What are the most effective strategies for fostering structural socio-ecological change? (interdisciplinary question)

Third, a major limitation of our study is the lack of diversity in the sample of interviewees. Most of the participants were born and/or based in Europe. Our coders noted that discourses indeed partially diverged for people born in Europe compared to those who were not. However, the sample of non-Europeans was too small to identify any patterns. Future research should therefore focus on exploring the different experiences, challenges, and questions of socio-ecological movements in the Global South and North. Answers may be influenced by the fact that activists from the Global South are often based in less democratic countries, may face greater repression (Hines, 2022), receive less media attention (BBC, 2021) and are more affected by the climate crisis (Eckstein et al., 2021). Finally, our study only focused on the perspective of individuals involved in socio-ecological movements. It would therefore be fruitful for future studies to focus on other stakeholder groups in the socio-ecological crisis, such as politicians, city administrators, farmers, teachers, trade unions, entrepreneurs, or citizens.

Openness and Transparency Statements

The present article has been checked by its handling editor(s) for compliance with the journal's open science and transparency policies. The completed *Transparency Checklist* is publicly available at:

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Diversity Statement. In the list below, the check mark (☑) indicates which steps were taken to increase diversity within the context of this paper. Steps that were not taken or did not apply are unmarked (☐).

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- Degree of privilege/marginalization considered in authorship order
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Supplementary Materials. The following table provides an overview of the accessibility of supplementary materials (if any) for this paper.

Type of supplementary material	Availability/Access
Material	
Study materials.	Hamann, von Agris, et al. (2024)

Badges for Good Research Practices.

Open data: NO.

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