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PII: S2667-2782(23)00053-6  
DOI: <https://doi.org/10.1016/j.joclim.2023.100253>  
Reference: JOCLIM 100253



To appear in: *The Journal of Climate Change and Health*

Received date: 11 August 2022  
Accepted date: 9 May 2023

Please cite this article as: Kimberly Croasdale , Kate Grailey , Neil Jennings , Joseph Mole , Emma L. Lawrance , Planning for the perfect storm: perceptions of UK mental health professionals on the increasing impacts of climate change on their service users, *The Journal of Climate Change and Health* (2023), doi: <https://doi.org/10.1016/j.joclim.2023.100253>

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## **Planning for the perfect storm: perceptions of UK mental health professionals on the increasing impacts of climate change on their service users**

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Word count = 3,970 words (excluding the abstract, tables, captions and references).

Abstract

### Introduction

Climate change poses a considerable risk of further increasing the world's mental health burden. The ways that, and extent to which, climate change is affecting mental health service users is poorly known. Mental health professionals (MHP)s' views on the nature of climate-related distress and the need for specialist training to support service users is undetermined globally.

### Methods

A questionnaire survey was disseminated to an opportunity sample of MHPs based in the United Kingdom (UK). It investigated whether MHPs perceived that the number of service users mentioning climate change as affecting their mental health or emotional distress had increased in the five years prior to 2021, and if they believe it will increase further. The survey explored MHPs' perceptions of the influence of climate change on service users' mental health needs, if they perceive this to be rational, and if they feel adequately prepared to manage climate change related mental health problems or emotional distress.

### Results

We surveyed 75 MHPs, including professionals in psychotherapy (38), psychology (19), psychiatry (6). MHPs reported a significant increase in the perceived prevalence of mental health problems or emotional distress related to climate change, believing this increase will continue. MHPs reported a range of impacts on service users due to climate change, typically viewed as a rational response. MHPs felt equipped to manage the consequences of climate change but would benefit from specific training.

Conclusions

Our results indicate an increasing incidence of climate-related emotional distress among service users as perceived by MHPs. The expectation among professionals is that this service need is here now but will continue to increase in the future, with potential implications for the provision of training.

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## Introduction

Poor mental health is arguably one of healthcare's greatest global crises [1]. Mental health difficulties are highly prevalent and rapidly increasing worldwide [2-4]. The climate crisis has been recognized as the greatest threat to human health [5]. This has led to many health institutions and medical professions declaring climate emergencies [5-8]. While the impacts of climate change on physical health [9-14] are widely known, it is only relatively recently that research has focused on the complex mental health impacts of climate change. Climate change affects mental health via a range of pathways. These include direct experiences, such as of higher temperatures or extreme weather events, indirect follow-on effects, such as forced migration, food and water insecurity or community breakdown, and vicarious experiences, including via awareness of current and future climate-related threats and insufficient climate action. The latter can include distress arising from awareness of climate-related impacts on other people and beings, even if the individual themselves is not yet affected, though the mental health burden of such awareness is still borne most by those directly threatened [15]. Over half (60%) of the UK public believe that awareness of climate change affects their mental health and that this will continue into the future [6]. A 2021 Lancet report highlights that eight out of ten people (84%) believe that within the next decade climate change will affect mental health at least as much as unemployment and COVID-19 [6].

The rapidly growing climate psychology literature has highlighted the widespread prevalence of a range of psychological responses to the climate crisis, including worry, anxiety, despair, anger, fear, guilt, hopelessness and helplessness [16-18]. Terminology such as eco- or climate-anxiety, eco- or climate-distress, solastalgia and ecological grief are being increasingly used [16, 19]. These responses are understood by climate-aware mental health researchers and professionals as typically caring, healthy and even adaptive responses rather than a mental disorder [20, 21]. However, it is acknowledged that emotional distress arising from concerns about climate change may trigger or exacerbate mental health conditions [22]. This may become clinically relevant, particularly if it interferes with daily functioning [20, 23]. In some studies, high levels of climate change-related emotional distress appear related to higher levels of anxiety and/or depression [18, 24].

The growing evidence-base suggests a high prevalence of at least moderate levels of climate-related concern or emotional distress amongst the general public [25]; however, there is little existing research on whether and how climate-related emotional distress affects the mental health of those seeking professional mental health support [26, 27]. Young people globally are calling for appropriate climate-aware mental health support [28] and it is crucial to understand how current needs for climate-related mental health support are affecting services and the implications for meeting future demands. Furthermore, there is a need to understand the preparedness of mental health professionals (MHP) to support mental health needs arising from the climate crisis, and whether they require further training, particularly with the importance of not pathologizing climate-related distress itself, even if it is acting as a stressor to worsen other mental health outcomes. It is noted that climate change also compounds risks for individuals living with mental illness, including for example disproportionately higher risk of worsened mental and physical health at high temperatures. In the context of this study we primarily focus on the mental health implications of climate-related emotional distress. While researchers and climate-aware MHPs advocate for validation of climate-related emotional distress as a rational response to the threat of climate change and the currently insufficient global response, it is unknown if this is a viewpoint widely held by MHPs.

### Rationale for study

This study aims to contribute to the body of evidence available for policymakers and MHPs to incorporate climate change into planning and policy for mental health services in the UK [29-31].

The study was designed to answer four research questions regarding the perceptions of MHPs practicing in the UK:

1. Are service users mentioning climate change as a factor affecting their mental health or emotional distress more in the past year than they were five years ago?
2. Do mental health professionals perceive that climate change will become more of a factor in the mental health or emotional distress of service users in the next five years?
3. What do mental health professionals perceive the influence of climate change is on the mental health or emotional distress of their service users; and do they perceive this response as rational?
4. How equipped do mental health professionals feel to support service users with mental health problems or emotional distress related to climate change, and do they anticipate benefiting from specific training?

### **Methods**

This study used a bespoke survey developed by the research group to elicit MHPs' views on climate-related mental health needs in service users. The study was approved by the Imperial College London Research Governance and Integrity Team (reference number 21IC7017).

### Participants

Recruitment to the study occurred using opportunity sampling of professionals working in mental health services in the United Kingdom (UK), including the National Health Service (NHS), private and third sector. Participants had to have been working professionally for the last five years or more. As such, it was anticipated that participants would have been practicing for long enough to reflect on changes over a time period when public awareness of climate change has increased considerably [32], as research has highlighted a link between engagement with news, climate-change awareness and knowledge of climate-related emotional distress [33, 34]. Participants were recruited via direct approaches to colleagues and relevant professional bodies for wider dissemination (including the Royal College of Psychiatrists (RCPsych), UK Council for Psychotherapists (UKCP), Climate Psychology Alliance (CPA), the British Psychological Society (BPS), MHPs working for mental health charities (including Shout, The Mix and Place2Be), and via social media channels).

Sample size calculations were performed using G\*Power, a recommended software for sample size and power calculations for t-tests [35]. Based on the assumption of a medium effect (i.e.  $d=0.5$ ) [36] for the change in number of service users experiencing climate-related emotional distress over the last five years, it was estimated that 45 participants were needed.

Data were collected between August - October 2021. Written informed consent was taken prior to commencement of the survey.

### Survey Design and data collection

The survey entitled “Mental health professionals’ opinions of climate change and mental health” was developed between January and June 2021 (Appendix 1) with input from climate researchers and climate aware MHPs. The survey was designed to capture information on: participant demographics; views on climate change (as measured by agreement with specific statements related to climate change adapted from the European Social Survey (ESS)) [16]; participant’s perceived proportion of their service users mentioning climate change as a factor in their mental health (in the past year versus five years ago) and participant agreement with statements designed to answer research questions 2-4. Agreement was assessed using a five-point Likert Scale. Participants could provide free-text responses for additional information they perceived to be relevant. Language within the survey was designed to encompass wide ranging perspectives on the impact of climate change, and the terms ‘emotional distress’ and ‘mental health problems’ were selected to balance avoiding pathologizing, while still allowing for climate-related impact on the symptoms of known mental health conditions. Both ‘client’ and ‘service user’ were included in the survey in response to feedback in the survey review process, but for conciseness we have used the term ‘service user’ within this manuscript.

### Statistical Analysis

Data on participant demographics and their views on climate change were analyzed using descriptive statistics. To establish whether participants’ views differed from those of the UK population, Fisher’s exact test was used to compare the percentage of participants who endorsed questions relating to their views on climate change with percentage of people who endorsed similar questions in the ESS [37] and a survey conducted by the Office for National Statistics (ONS) [38].

The survey assessed the change in frequency of service users mentioning climate change as a factor in their mental health. A paired one-tailed t-test was used to assess for any statistically significant difference between the past year and five years ago. Likert scale data collected from participant agreement with statements addressing research questions 2-4 were managed as categorical ordinal data, analyzed using descriptive statistics and displayed as grouped bar charts.

### Results

Seventy-seven individuals responded to the survey; two participants were excluded as they reported practicing for less than five years. Data from 75 respondents were analyzed and are presented following the structure of the research questions. Participant demographics are presented in Table 1.

*Table 1: Demographic characteristics of mental health professionals that responded to the survey and were included in survey analysis*

Demographic characteristics	N	%
Role title (self-defined by participant)		
Psychologist	19	25%
Psychiatrist	6	8%
Psychotherapist	38	51%

Psychological Wellbeing Practitioner (PWP)/High Intensity Therapist in IAPT (Improving Access to Psychological Therapy) Counsellor/psychotherapeutic counsellor Other:	2	3%
Jungian analyst	3	4%
Mental health nurse	1	1%
Non-clinical mental health supervisor	3	4%
Psychological therapist	1	1%
Mental health coach and therapist	1	1%
Year first started seeing service users		
1975-1990	14	19%
1991-2000	14	19%
2001-2010	30	40%
2011-2016	17	23%
Sector (note: respondents could select more than one sector)		
NHS	38	51%
Private	43	57%
Charity	7	9%
Other: teaching/academic	3	4%
Client/service user age group (note: respondents could select more than one age group)		
Adult	53	71%
Child and adolescent	16	21%
Transition (transitioning from child/adolescent to adult services)	0	-
Any age	13	17%
Family group (more than one client from a family together)	17	23%

#### Participant views on Climate Change

Ninety percent of participants stated they have thought a great deal about climate change (69% definitely agree; 21% somewhat agree). Ninety-eight percent of participants agreed that the world's climate is changing (91% definitely agree; 7% somewhat agree). This did not significantly differ from the percentage of the UK population (94%) who agreed that the climate is 'probably or definitely changing' in the ESS [37], ( $\chi^2(1) = 2.08, p = 0.14$ ). Moreover, 95% of participants agreed that climate change is human caused (67% definitely agree; 28% somewhat agree). This did not significantly differ

from the percentage (91%) of the UK population reported [37] to agree that climate change is at least partially caused by human activity,  $\chi^2(1) = 1.23$ ,  $p = .20$ . Finally, 94% reported that they are worried about climate change (69% definitely agree; 25% somewhat agree). This was significantly higher than the percentage of the UK (75%) population who the ONS [38] reported as being 'very' or 'somewhat' worried about the impact of climate change,  $\chi^2(1) = 13.78$ ,  $p < .001$ .

Respondents broadly agreed that there are significant interactions between climate change and mental health (47% definitely agree; 35% somewhat agree). A higher proportion of respondents were aware of the evidence linking climate change and mental health than those who were unaware (36% definitely agree; 21% somewhat agree) (Figure 1).

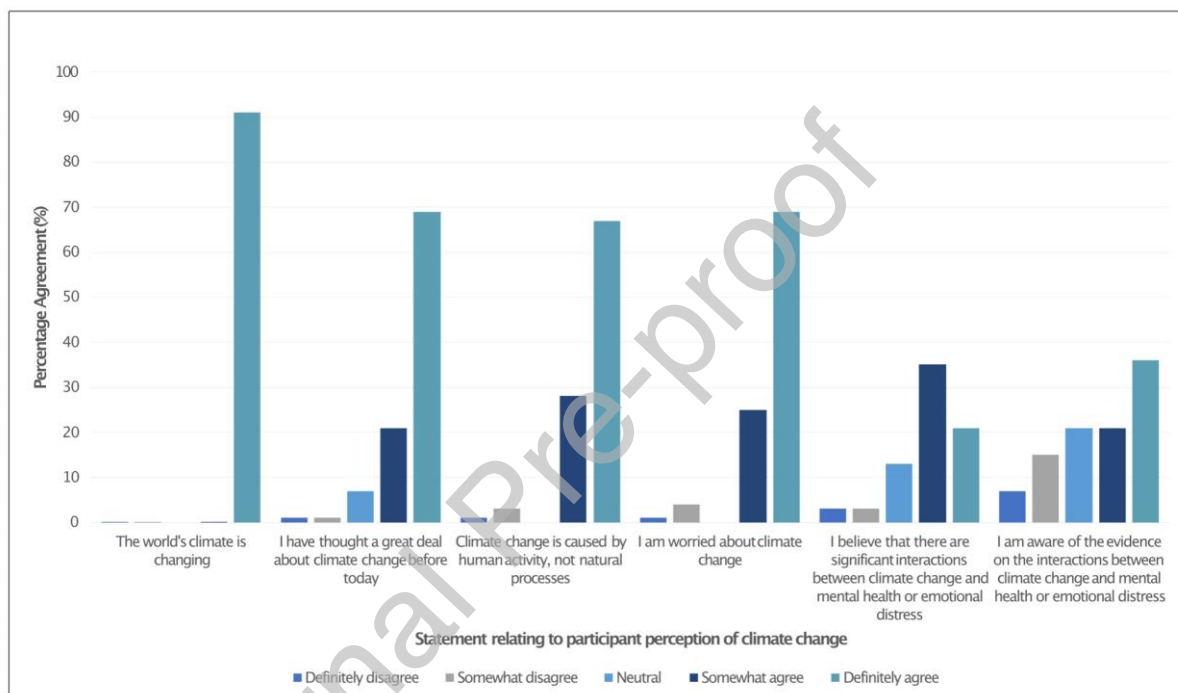


Figure 1: Mental health professionals' agreement with statements relating to their awareness of climate change (n=75)

Research Question 1: Are service users mentioning climate change as a factor affecting their mental health or emotional distress more in the past year than they were five years ago?

Data were captured on the frequency of service users mentioning climate-related emotional distress over the past year, and five years ago (Figure 2). The categories were assigned a numerical value (one to five) to facilitate statistical analysis. A paired-samples t-test demonstrated that respondents perceived significantly more service users describing climate change as a factor affecting their mental health or levels of emotional distress in the past year ( $M = 2.15$ ;  $SD = 0.563$ ) compared with five years ago ( $M = 1.35$ ;  $SD = 1.023$ ),  $t(70) = 7.481$ ,  $p < 0.001$ . This was a large effect ( $d = 0.888$ ).



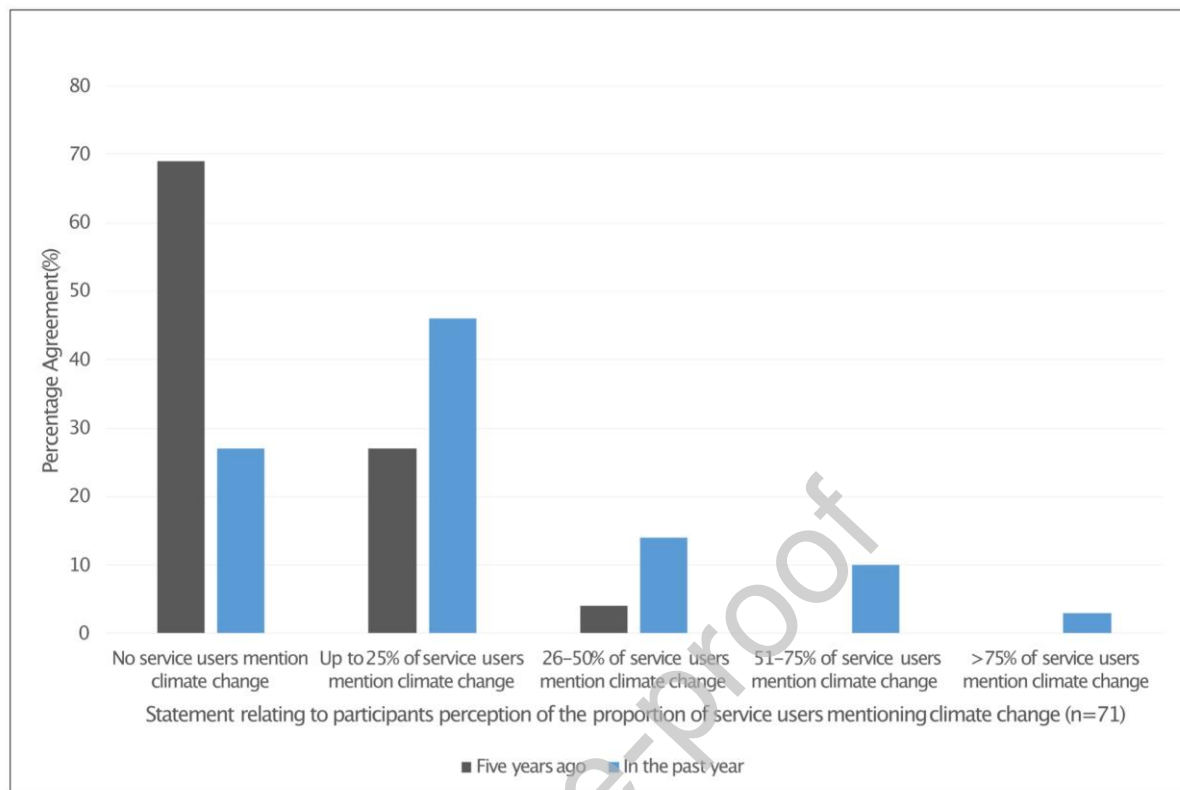


Figure 2: Mental health professionals' ratings of the proportion of their service users who mentioned climate change as a factor affecting their mental health or emotional distress, five years ago and in the past year (n=71).

Research Question 2: Do mental health professionals perceive that climate change will become more of a factor in the mental health or emotional distress of service users in the next five years?

Respondents felt that climate change is likely to become more of a factor in the mental health or levels of emotional distress in the service users they see over the next five years (2021 - 2026) (40% definitely agree; 42% somewhat agree) (Figure 3). This was reflected in qualitative data:

"I feel that as the younger population become more educated/knowledgeable in climate change that this is an area that clinicians are going to require to skill up on." Participant no. 22, Counsellor

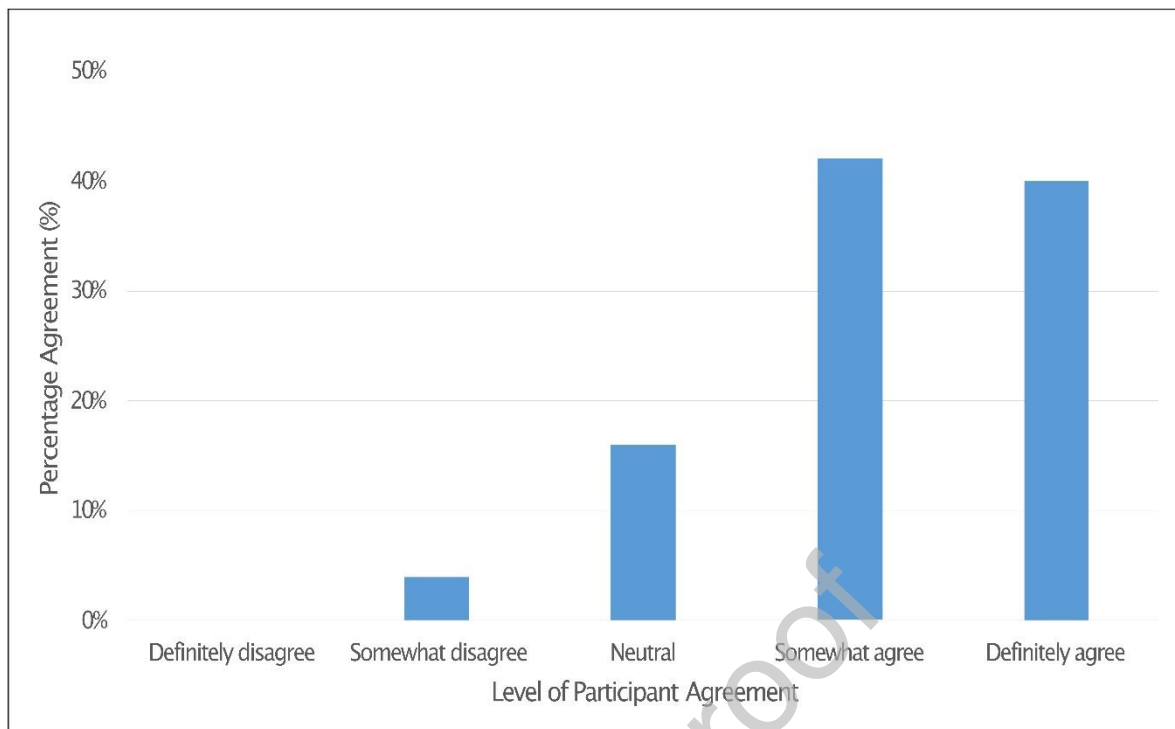


Figure 3: Mental health professionals' perceptions of climate change becoming more of a factor affecting the mental health or level of emotional distress in service users over the next five years (2021 – 2026) (n=75).

Research Question 3: What do mental health professionals perceive the influence of climate change is on the mental health or emotional distress of their service users; and do they perceive this response to the threats as rational?

Two-thirds of professionals (67%) supported service users experiencing climate change related emotional distress they perceived to be rational. Only 9% reported caring for service users with irrationally high levels of emotional distress as a consequence of climate change. Sixteen percent of professionals reported service users with levels of climate-related distress that caused difficulties in daily life (16%). Fifty-one percent believed they cared for service users whose mental health problems or emotional distress were exacerbated or worsened by climate change. Sixteen percent supported service users with mental health problems or emotional distress perceived as being triggered by climate change. Qualitative data from free-text responses corroborated these data.

“Fundamentally we are talking about existential threat and this requires [being] heard, [being] validated and enabling people to explore how they can be part of the change...” Participant no. 12, Psychologist

“I do feel that this [climate change] is an area that can make a client’s [mental health] issues worse, but we should all be able to work with it as with any other anxiety.” Participant no. 50, Psychotherapist

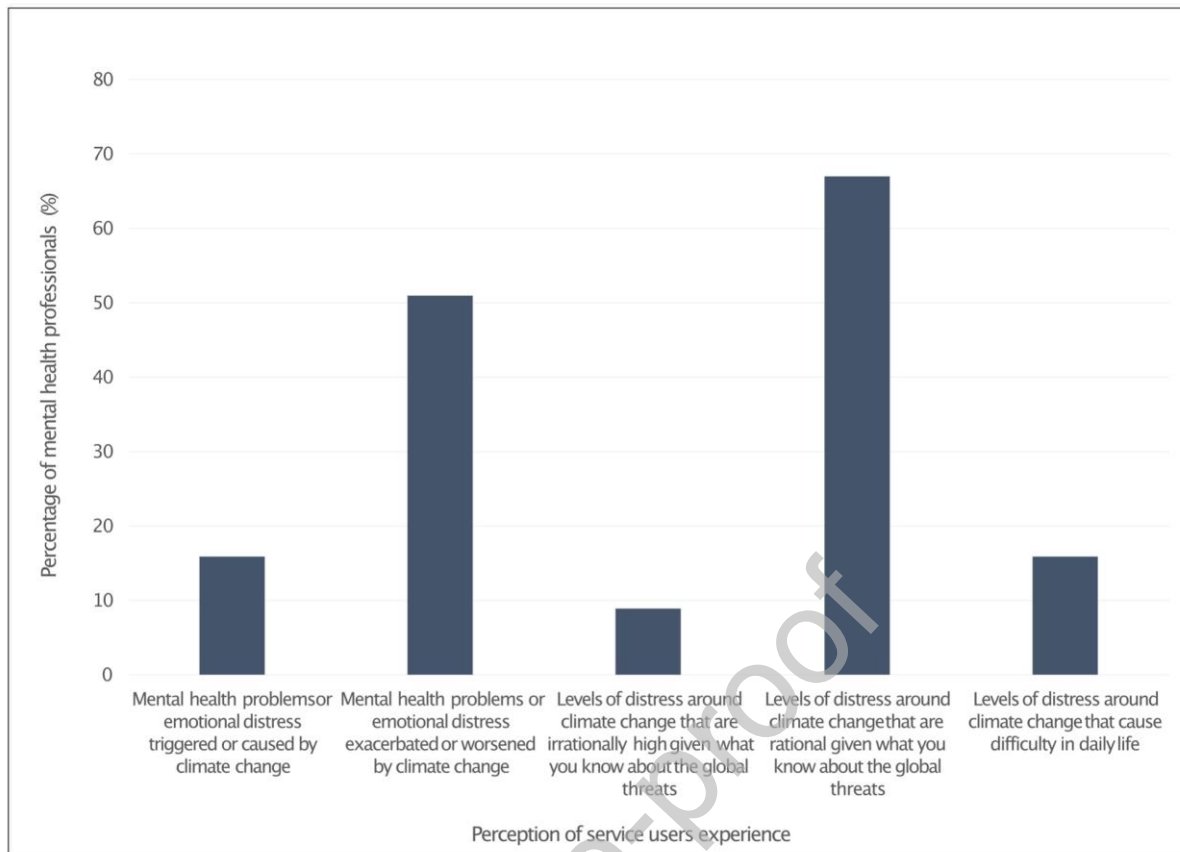


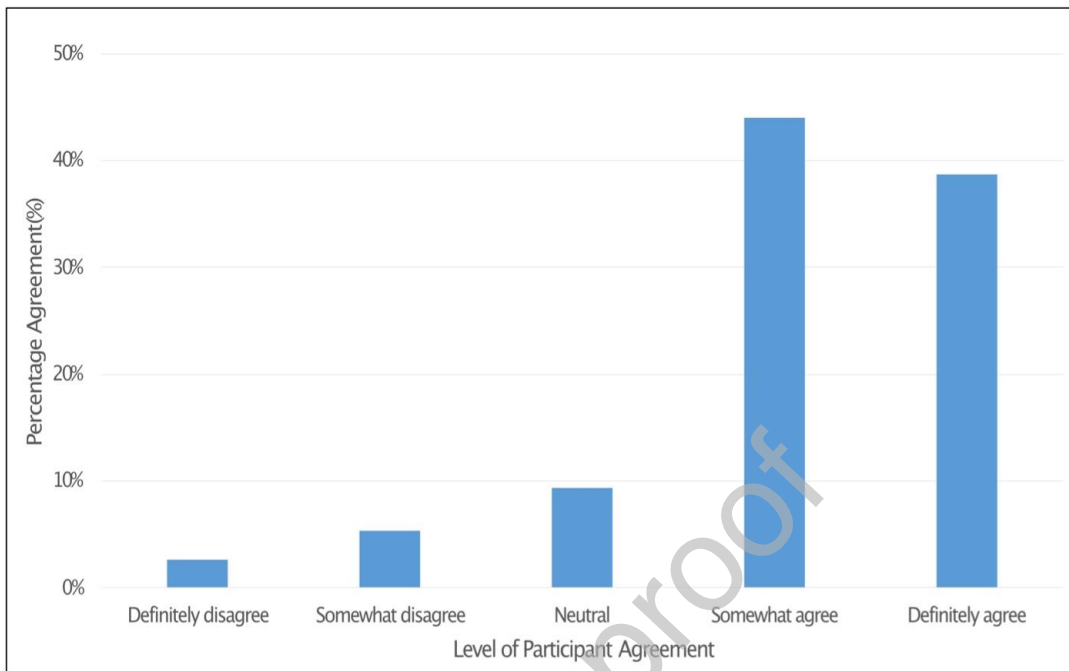
Figure 4: Percentage of mental health professionals who perceive they care for service users whose experiences regarding climate change- related mental health problems or emotional distress fall into the stated category (n=75).

Research Question 4: How equipped do mental health professionals feel to support service users with mental health problems or emotional distress related to climate change, and do they anticipate benefiting from specific training?

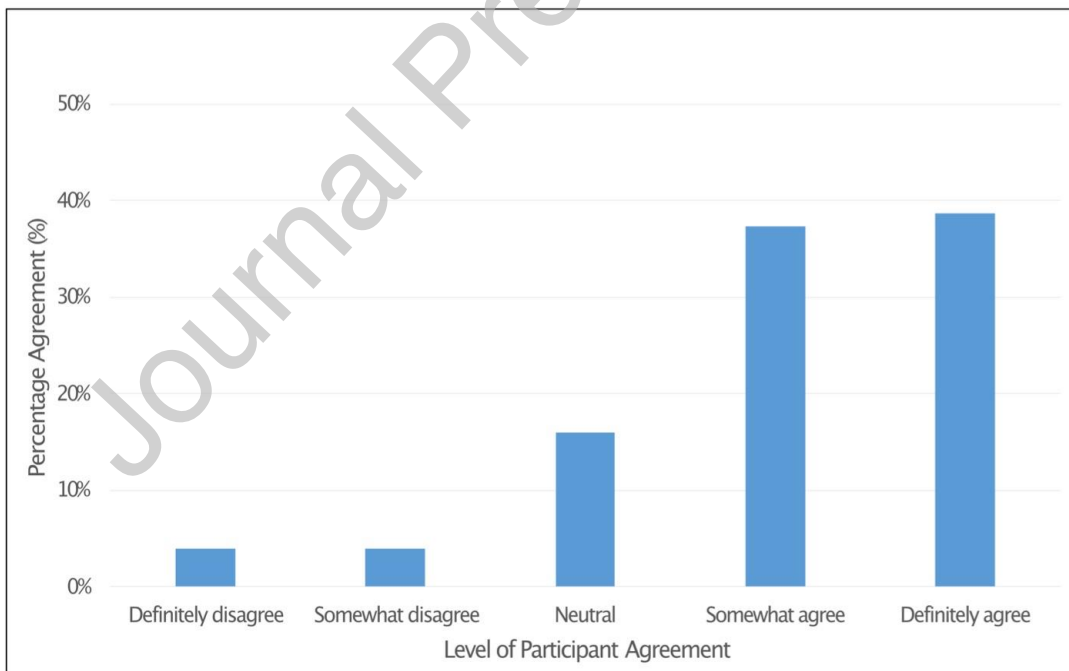
Participants generally agreed they felt able to use existing resources to support a service user with mental health issues related to climate change (39% definitely agree; 44% somewhat agree) (Figure 5a), but also stated that they would benefit from specific training (39% definitely agree; 37% somewhat agree) (Figure 5b). Again, this was reflected in qualitative data:

“Training would be invaluable. As it stands, I only feel able to provide general coping strategies in the face of climate anxiety...Because I don’t feel skilled in formulating or responding to climate anxiety, I would never bring it up, I would only take it on board if the service user brings [sic] it up themselves.” Participant no. 33, Psychologist

“I am a climate aware therapist and so feel relatively prepared and equipped to work with clients presenting with distress related to climate change. However, many colleagues do not feel this way and so would benefit from being informed and supported to work with such issues.” Participant no. 39, Psychotherapist



5a: Mental health professionals' views on whether they felt able to use existing resources to support service users with distress related to climate change



5b: Mental health professionals' views on whether they would benefit from receiving training specifically focused upon treating distress related to climate change

Figure 5: Mental health professionals' views on training and resources for climate change related emotional distress (n=75)

## Discussion

This study provides novel data and a unique insight into how mental health professionals (MHPs) view the impact of climate change on the mental health and emotional distress of service users. We demonstrate that UK MHPs perceive that their service users are discussing climate change in the context of their mental health or emotional distress more now (in 2021) than they were five years ago and that this will continue to increase. To our knowledge, this is the first piece of empirical evidence to demonstrate this. Approximately eight in ten respondents agreed that climate change will become an increasing issue for their service users' mental health in the next five years. These data do not represent a quantitative measure of the true value of prevalence change in climate-related emotional distress as they rely on subjective reporting; however they demonstrate a strong signal that this distress is increasing, should be investigated further, and acted upon.

Of note, UK MHPs typically view their service users' emotional distress in response to climate change as rational (67% of respondents). Only 9% perceived service users as exhibiting irrationally high levels of emotional distress. Our data support the general consensus that emotional distress as a response to the threat of climate change is rational [24, 39-42], but also that climate-related emotional distress is occasionally perceived by MHPs as 'irrationally high' [16, 17, 20, 43]. With climate-aware MHPs and professional bodies highlighting the non-pathological nature of even severe distress in the face of the climate emergency [20], it is important to understand more about the circumstances in which the distress of service users is being perceived as irrationally high. Sixteen percent of respondents felt that (even if rational) they supported service users who exhibited levels of climate-related emotional distress that made it difficult to function in daily life (16%). MHPs must therefore know the potential consequences of climate change related emotional distress, be capable of validating service users experiences and equip them with healthy coping strategies. It is interesting to note that none of the MHP's who described service users as having irrational emotional distress were skeptical of the human causes of climate change. The numbers of participants in each subgroup of climate perceptions were too small to draw robust conclusions or look for statistical relationships between this and their perceptions of service user's emotional distress. Nevertheless, it would be useful to explore the potential impact of MHP bias in future work.

The perceived rational nature of the reported emotional distress suggests that third-wave therapeutic approaches such as acceptance and commitment therapy (ACT) may be appropriate. This focuses upon validating experienced emotions and changing the individual's relationship to their thoughts and cognitions, rather than questioning their validity. Using such approaches, MHPs can improve their service users' resilience to climate change and help them cope with the emotional distress [24]. Research also suggests that increasing hope and agency (such as 'meaning-focused coping' or 'active hope' strategies [44, 45]) can be protective for mental health in the face of climate-related emotional distress [46]. However, it is vital that the burden for climate action is not put on service users but on leaders, which would itself help climate-related distress [22]. There are calls for thinking beyond traditional Western clinical models to understand and support those experiencing climate-related distress, and to shift away from individualized perspectives of distress to understanding these experiences in the context of collective traumas [47]. Climate-aware MHPs have noted that others in their profession may "need to adapt and change to develop a far richer lens of mental health and wellbeing"[48]. MHPs have recommended practices that help people connect with themselves and others, [47] including bringing nature and nature restoration into practice [49, 50].

Our data highlight that UK MHPs believe they would benefit from specific training to best support climate-related emotional distress and reduce the mental health impacts of climate change for their

service users. Whilst training on the health impacts of climate change are currently available for NHS professionals [51] (acknowledged by participants), this provision is limited and inconsistent, both in terms of geography and specialism. Indeed, despite calls for it, there is a notable absence of training covering mental health impacts of climate change and how to best respond [52]. Since the Royal College of Psychiatrists (RCPsych) and other mental health professional bodies agree that the climate emergency is a health emergency [6, 7, 24, 53], mental health professional bodies have a key role to play in ensuring that members have access to appropriate training and education. Effective therapeutic models and interventions include hearing and validating people's experiences of emotional distress in response to the climate crisis [29]. There are increasing numbers of organizations that MHPs could signpost their service users to in the UK, including the Climate Psychology Alliance, Climate Cafes, Climate Cares, Force of Nature and The Resilience Project.

### Implications for Policy and Practice

The data in this study highlight how important it is for future mental health policy and practice to incorporate support for those experiencing climate-related emotional distress and its mental health impacts. This is currently not included in any mental health policy approaches, despite a focus on improving both provision of and access to mental health services [54-56], and tackling climate change as a key driver to improve human health [53, 57].

MHPs reported climate-related emotional distress as a main or secondary cause for current service users seeking support, and our data suggest this is an increasing trend. The need for professional support could be reduced by appropriate community-based strategies, equipping people to process their climate-related emotions, learn healthy coping strategies and build agency to respond. Initiatives such as green social prescribing linked to climate action could also minimize the impact on mental health systems [58], as channeling emotional responses into action appears to have therapeutic value [46]. As climate-related distress is also linked to insufficient action from leaders [22], visible and proportionate climate action may reduce the mental health burden.

### Limitations

The participant sample was relatively small with 75 respondents, although this offered sufficient power for the planned analyses to capture statistically relevant changes in service users engagement with climate change in the context of their mental health support. We did not attempt to capture a representative sample of all UK mental health professionals. While we aimed for diversity across professional sub-groups using an opportunity sampling approach, the sample had a very high proportion of psychotherapists (51% of respondents) and psychologists (25% of respondents), and low numbers of other MHPs. As such, comparisons between different types of MHP were not possible.

It is worth noting that the respondents in this survey reported high levels of climate awareness and concern [37]. It is important that practicing MHPs are armed with knowledge about current events and priorities so they are aware of the pressures and triggers that their service users may experience [59]. However, these high levels of climate change awareness and concern in our respondents indicate a risk of sampling bias. MHPs who are aware of climate change may be more open to discussing it with service users and identifying it as the cause of distress. They may also go further and incorrectly attribute emotional distress to climate change or artificially inflate their importance, when there are other, more pressing triggers that require addressing. It is also noted that we

included MHPs who had been practicing for at least five years, so that they could reflect on relevant changes over that period. However this means that any recent inclusion of climate materials in MHP trainings would not have been noted by this cohort. Finally, we focused here on the mental health implications of distress arising from climate crisis awareness, though there are many other important avenues by which climate change contributes to mental health burden relevant to MHPs, including via the effects of heat, extreme weather events and associated disruptions to healthcare.

#### Opportunities for future research

Future research should look to expand the participant group to provide more power for sub-group comparisons. It would be useful to investigate whether MHPs' climate views influence their view of climate-related emotional distress (e.g. as rational), exploring the potential influence of bias as a result of MHP's own opinions. While our sample size precluded such analysis, such a finding would suggest that professionals' pre-existing views affect how they work with service users. It is also possible that service users experiencing climate-related emotional distress are more likely to keep seeking mental health support from a professional whose views align with their own. It would be useful to compare the responses for professionals who see service users of different ages, based upon existing research that demonstrates younger people are particularly vulnerable to climate-related emotional distress. More qualitative research could provide a greater depth of understanding of the findings outlined above. It remains to be seen whether the predictions made by MHPs are valid, but they are uniquely placed to observe and hear service users' concerns. The predicted increases in climate-related distress could be evaluated using a longitudinal study design, correlating them with real world events and the ongoing incidence of climate-related distress.

Another opportunity for future work is to collect service user demographic data and explore differences in perceived climate-related emotional distress between subgroups (for example different socio-economic groups or those whose distress centres on direct exposure to climate impacts (e.g. flooding)). This is primarily of interest because certain groups (e.g. Indigenous communities, poorer communities) are known to be disproportionately impacted by climate change. Therefore, climate-related distress is likely to be disproportionately experienced and may exacerbate other compounding vulnerabilities to poor mental health due to historic and current social inequalities and injustices [15]. These same groups may be less likely to have access to mental health services. It would be pertinent to target responses from MHPs working directly with these communities in third sector and other services.

Climate-aware MHPs and researchers are clear that climate-related distress and emotions should not be pathologized, and can constitute a caring, healthy, and adaptive response to climate change and the inaction of leaders [20, 22]. Future research could aim to identify the approaches currently being used by MHPs to support service users experiencing climate-related emotional distress. Creating climate specific education and training for MHPs may ensure they are not pathologizing understandable distress, while providing appropriate support to enable service users to express their experiences and develop appropriate coping strategies [25], as desired by young people globally [28]. This would benefit from a coordinated approach across the NHS, representative bodies such as (in the UK) the RCPsych, the General Medical Council (GMC) and relevant specialists. Finally, as the climate emergency affects everyone, albeit unequally, it will be important to understand how MHPs themselves are experiencing the climate emergency and how this informs and interacts with their professional experiences [48].

## **Conclusion**

The data in this study highlight that mental health professionals are reporting an increased incidence of climate-related mental health concerns in their service users and that they believe this incidence will increase. Climate change appears to be regarded as an important trigger and exacerbator of emotional distress and worsening mental health for some service users, making it an important issue to be addressed in future mental health policy. Our data also suggest that training should be introduced by appropriate bodies to support MHPs to work with service users experiencing climate-related emotional distress, and that such an introduction would be supported by professionals working in this field.

Mental health professionals have a key role to play in ensuring that the general population can adapt to a future where climate change becomes far more tangible. This must take place on both a population and individual level. This study begins to unpick what those roles are and how policy can help ensure mental health services are providing appropriate support, but this is only the beginning of the conversation.

## **Acknowledgements**

The authors express gratitude to Sheraz Markar, for helpful conversations during the design of the study. They particularly thank everyone who reviewed the survey and provided feedback while it was being drafted, including Sarah Niblock, Lisa Page, Jacob Krzanowski, Gareth Morgan, Annie Mitchell, Lucy Johnstone, Martin Milton, Lorraine Whitmarsh and especially Patrick Kennedy-Williams, and everyone who shared the survey to support data collection for the study.

## **Declarations of Interest**

No declarations of interest

## **Funding**

No funding was received for this study.

## **Contributor Statement**

EL and NJ conceptualized the project. KC, EL and NJ designed the study methodology. KC collected the data, and analysed it with JM, supervised by EL and NJ. KC, EL and NJ interpreted the data. KC, KG, EL and NJ drafted the paper. KG made the figures. All authors edited the paper. KG and EL finalized the paper.

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# APPENDIX 1

## Survey questions

### A. Consent

1. I confirm that I have read and understood the participant information sheet version 1.1 dated 11/08/2021 for this study and have had the opportunity to ask questions which, if asked, have been answered fully
  - Yes
  - No
2. I understand that my participation is voluntary, and I am free to withdraw at any time, without giving reason and without my legal rights being affected
  - Yes
  - No
3. I give permission for Imperial College London to access my research records that are relevant to this research
  - Yes
  - No
4. I give consent for information collected about me to support other research in the future, including those outside of the European Economic Area (EEA)
  - Yes
  - No
5. I consent to take part in the above study
  - Yes
  - No
6. I understand that any written answer I provide may be quoted anonymously in a research publication of other outputs, or influence future research

- Yes
- No

7. I consent to being contacted about the potential to take part in other research (if yes, please enter your details when prompted at the end of the survey)

- Yes
- No

8. I confirm that I have worked professionally to provide mental health support in the UK for 5 years or more

- Yes
- No

#### B. Survey questions

##### About you

9. What role title do you use most often to describe yourself?

- Psychologist
- Psychiatrist
- Psychotherapist
- Psychological Wellbeing Practitioner/High Intensity Therapist in IAPT
- Counsellor/psychotherapeutic counsellor
- Other [filters to additional question asking them to self-define their profession]

10. In which year did you first start seeing clients/service users? This may have been during training

*[free text response]*

11. Where do you work? Please tick all that apply

- NHS
- Private practice
- Charity

- Other [filters to additional question asking them to self-define their service]

12. What age of clients/service users do you see? Please tick all that apply

- Adult only
- Child and adolescents only
- Transition service
- Any age
- Family groups
- Other [filters to additional question to self-define age range]

Your beliefs about climate change (adapted from

<https://www.europeansocialsurvey.org/data/themes.html?t=climatech>)

13. How much do you agree with the following statements?

	Definitely disagree	Somewhat disagree	Neutral	Somewhat agree	Definitely agree
The world's climate is change					
I have thought a great deal about climate change before today					
Climate change is caused by human activity, not natural processes					
I am worried about climate change					
I believe that there are significant interactions between climate change and mental health or emotional distress					
I am aware of the evidence on the interactions between climate change and mental health or emotional distress					

Your experiences with clients/service users

14. Do any of your clients'/service users' experiences fall into the following categories?

- Mental health problems or emotional distress triggered or caused by climate change
- Mental health problems or emotional distress exacerbated or worsened by climate change

- Levels of distress around climate change that are irrationally high given what you know about the global threats
- Levels of distress around climate change that are rational given what you know about the global threats
- Levels of distress around climate change that cause difficulty functioning in daily life

15. Roughly what proportion of your clients/service users mentioned climate change as a factor affecting their mental health or levels of distress...

	None (0%)	A few (up to 25%)	Some (26%-50%)	Quite a lot (51%-75%)	Most (76% or more)
5 years ago?					
In the past year?					

16. How much do you agree with the following statements?

	Definitely disagree	Somewhat disagree	Neutral	Somewhat agree	Definitely agree
Climate change has become more of a factor in the mental health or levels of distress in the clients/service users I see than it was 5 years ago					
Climate change will become more of a factor in the mental health or levels of distress in the clients/service users I see in the next 5 years					

Your professional experiences

17. How much do you agree with the following statements?

	Definitely disagree	Somewhat disagree	Neutral	Somewhat agree	Definitely agree
My profession would benefit from receiving training specifically focused on treating clients/service users with distress related to climate change					
I would feel able to use existing resources in my clinical toolbox to support					

a client/service user who presented to me with distress related to climate change					
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18. Do you have anything to add that you feel has not been covered by this survey? Your responses may be quoted anonymously in any publications or write up of this work, and may be used to inform future work. *[Free text response]*

19. Are you happy for us to contact you regarding this study and related studies in the future? All contact details will be stored securely and separately from your responses.

- Yes [filter to add email]
- No

20. Please confirm that you are happy for your responses to be recorded and used in our analysis. If you are not, please simply close the window containing this survey without answering any more questions.

We are not storing any personal details alongside your results, which will mean we are unable to remove your responses after you have submitted.

- Yes, I'm happy for my responses to be recorded and used in analysis



**Declaration of interests**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Journal Pre-proof