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# Body mapping Refugees and asylum seekers' perspectives of embodied trauma: an innovative method for psychotraumatology research & practice

Charlotte O'Brien and Divine Charura

School of Education, Language & Psychology, York St John University, York, UK

**ABSTRACT**

With the population of displaced individuals reaching over 25 million people worldwide, exacerbated by recent humanitarian emergencies there is an urgent need to rapidly assess manifestations of trauma, with a focus on providing culturally informed methods for those in distress. The novel concept of 'embodied trauma' is body mapped and explicated using a sample of 13 displaced individuals in the United Kingdom. This study operationalises a qualitative, semi-structured interview, incorporating the Trauma Screening Questionnaire, exploratory open questions, and body mapping exercises, utilising reflexive thematic analysis of the interview data. Results map how trauma and associated emotions are experienced in the body, generating key themes to elucidate the novel term 'embodied trauma,' encompassing its holistic bio-psycho-social-sexual-spiritual-existential presentations. The implications of this study make the case for the innovative use of body mapping in psychotraumatology research and practice, as part of a culturally informed approach.

With the population of displaced individuals seeking refuge and asylum worldwide now reaching over 25 million people (United Nations High Commissioner for Refugees [UNHCR] 2022a) in combination with over 53.2 million internally displaced individuals following recent humanitarian emergencies in the Ukraine, Afghanistan, Syria, Yemen, Africa, Central America and Venezuela (United Nations High Commissioner for Refugees [UNHCR] 2022b), there is an urgent need to better understand and rapidly assess for manifestations of embodied trauma, with a focus on providing a culturally informed psychological assessment method, formulation, treatment plan, and early intervention for those in distress (O'Brien and Charura 2022).

When individuals experience traumatic events, such as those often inherent in the refuge and asylum-seeking process, they can develop somatic symptoms

**CONTACT** Charlotte O'Brien   c.obrien1@yorksj.ac.uk   School of Education, Language & Psychology, York St John University, York, UK

which are the body's expression of deep psychological issues (Caizzi 2012). Trauma is purported to become stuck in the body, which oscillates between states of hypo or hyper arousal, resulting in the constant dysregulation of the autonomic nervous system (Buckley and Punkanen 2021; Levine 2010; O'Brien and Charura 2022; Van Der Kolk 2014). Caizzi (2012) describes trauma as becoming embodied in the subsymbolic mode which can include the sensory, somatic, affective, and also motor modes of mental processing. Trauma can also be seen to be a non-verbal experience due to the suppression of Broca's area of the brain which is responsible for language (Van Der Kolk 2014), resulting in trauma being mediated non-verbally through the body.

Therefore, if trauma research in the psychological therapies is going to be impactful, effective and authentic within our contemporary and diverse world, then it is important that we address trauma at both its conscious and unconscious levels, understanding that trauma can be portrayed as a type of verbal and non-verbal 'body language' (Arizmendi 2008, 443). We must also maintain an open and curious stance as practitioners about engaging with embodied trauma creatively across cultural expressions and contexts. Embracing differences in language, expression and understanding, being inclusive of different ways of being and other world views (Rogers 1980). Understanding the need to address social justice and the diverse lived experiences of displaced individuals who may struggle to communicate their trauma in therapy.

Body mapping has emerged as a useful research method and therapeutic assessment intervention which draws the attention of participants to their bodies and embodied experiences, making visible otherwise obscured or oppressed perspectives (D'Souza et al. 2020; Jager et al. 2016). Body mapping exercises also enable access to knowledge about complex levels of lived, embodied experiences using creative methods which go beyond verbalisation and attend to bodily aspects of storytelling (Chadwick 2017; D'Souza et al. 2020; Perry and Medina 2015). Engaging these embodied notions is particularly useful for becoming consciously aware of bodily changes in relation to identity, self-image, sexuality, and trauma (Coffey and Watson 2015; D'Souza et al. 2020), and when working with vulnerable participants or those with limited language or verbalisation (D'Souza et al. 2020). However, despite its relevance and suitability as a research method for vulnerable individuals, the use of body mapping in the field of trauma research is limited. The purpose of body mapping in this paper, therefore, is to explore and exemplify the use of this innovative and culturally accessible assessment method in psychotraumatology research and practice. Furthermore, this research highlights the potential impactful application to psychological assessment, formulation, medical and legal reporting, whilst maintaining the authentic emic voice of displaced individuals' and allowing for their own interpretation.

Embodied trauma is a novel term recently defined by O'Brien and Charura (2022), as

' . . . the whole body's response to a significant traumatic event, where mental distress is experienced within the body as a physiological, psychological, biological, cultural, or relational reaction to trauma. Embodied trauma may include psychosomatic symptoms alongside the inability to self-regulate the autonomic nervous system and emotions, resulting in states of dissociation, numbing, relational disconnection, changed perceptions or non-verbal internal experiences which affect every-day functioning'. (O'Brien and Charura 2022, 6)

The concept of 'embodied trauma' is commonly valued by practitioners and researchers who orient their assessment, intervention, and treatment strategies towards the physiological aspects of trauma manifesting in the body (Buckley and Punkanen 2021). There is, however, a paucity of qualitative insights into how displaced individuals experience embodied psychological distress, in the now widely accepted absence of mind-body dualism (Descartes 1641; O'Brien and Charura 2022).

Instead, much of the existing research literature focusses upon the quantitative codification of mental health according to diagnosable conditions (Murphy, Keogh, and Higgins 2021; O'Brien and Charura 2022). These include, for example, the use of psychometric screening tools such as the Trauma Screen Questionnaire [TSQ] (Brewin et al. 2002) measuring the symptoms of Post-Traumatic Stress Disorder [PTSD] and complex PTSD according to the ICD-11 proposal for diagnosis (Brewin et al. 2017); or the revised Harvard Trauma Questionnaire, measuring torture and trauma in refugee populations according to the DSM-5 PTSD symptoms (Berthold et al. 2019), leaving little room for the voice of displaced individuals regarding their own personal perspectives and experiences of trauma.

The emic voice of each displaced individual must be heard if we are to provide effective culturally informed psychological care, which honours previously subjugated ways of knowing (Rose and Kalathil 2019). Pilgrim (2016) asserts that this a challenge for many practitioners who prefer a non-pathologising lens when making sense of people and their mental health problems, which are often seen to be pre-emptively solved by a checklist approach to diagnosis, tied nosologically to systems such as the DSM-5 (American Psychiatric Association 2013). However, the merit of using the term embodied trauma instead of a diagnostic categorisation such as Post Traumatic Stress Disorder [PTSD], is that it allows for a collaborative, formulation-driven approach, which empowers emic voices and enables an understanding of each individual's own personal meaning, causation, and values within a framework of critical realism (Pilgrim 2016).

## Aims and objectives of the research

The aims of this research were to qualitatively explore the embodied trauma experiences of displaced individuals, mapping the areas of the body associated with their trauma.

The objectives were to understand participant's experiences of:

- Embodied trauma and its psychological impact(s)
- The relationship to their body and self-concept
- The impact on the individual of dislocation from their cultural context of origin
- Use of body mapping as an assessment method in the aftermath of trauma

## Materials and methods

### *Research philosophy*

Qualitative research cannot be categorised as a single approach under-pinned by a single theory, but rather as an umbrella term for those approaches which share common features, overlapping methods or assumptions (Braun and Clarke 2022b). Arguably, qualitative research is of a radical typology, grounded in multiple paradigms, including poststructuralist, (post)positivist and interpretive (Braun and Clarke 2022b; Lincoln, Lynham, and Guba 2011).

This research adopted a qualitative *experimental orientation*, which focussed on what people feel, think, and do, and how they make sense of their reality (Braun and Clarke 2022b). This type of approach was particularly fitting to this research as it was concerned with exploring the individual's perspective of embodied trauma, their own phenomenological experiences and the personal meaning given to them. As Braun and Clarke (2022b) suggest, this approach gives voice to people's lives.

This qualitative, experimental orientation approach was also underpinned by the assumption that *language* was the main vehicle for communicating meaning, and offered a window into the mind, frame of reference, and world view of the participant (Braun and Clarke 2022b). This was closely in keeping with the use of a qualitative, semi-structured interview, which enabled the participant's own account of embodied trauma experiences, supported in their own language where requested.

The research did not, in contrast, look at the function and effect of the language, or interrogating, negotiating, or constructing meaning, it used instead the hermeneutics of empathy rather than suspicion, working with the philosophy of interpretation rather than checking truth within the dataset (Braun and Clarke 2022b).

The ontological stance of this research was *critical realism* (Braun and Clarke 2022b), which proposes that there is a reality independent of the researcher, but which acknowledges that human practices also give rise to contextual truth. This ontological stance helped to ground this research not only in understanding how it can be performed, but also helped drive the practical procedures.

By utilising a critical realist underpinning alongside a reflexive thematic analytic [RTA] approach, we have also enabled ourselves as researchers to move away from a stagnant assertion of pure self-positionality, towards a critical form of reflexivity which emphasises the inherent role of the researcher, necessitating a fluid process of reflexivity to examine biases, agendas and explore the interpretations of others (Barad 2007; Gemignani 2017).

This research did not embrace an ontology of perspectivism, but maintained a realist commitment, noting that our knowledge always starts from *somewhere*, being culturally and historically situated (Massimi 2019). This research assumed that we have scientific knowledge about trauma that serves us well across multiple perspectival disagreements, and that we use knowledge from *within* the boundaries of what is historically and culturally conceivable, yet with a commitment to walking along the plentiful paths of inferential forking ahead (Massimi 2019).

The epistemology, or way of knowing, was based on *phenomenology* (Willig 2013), which aimed to gain knowledge about the participant's subjective experiences, using a broadly contextualist approach. These ontological and epistemological approaches, using critical realism and phenomenology, meant that there was an assumption in the research that the participants were reasonably reliable in representing their experiences of embodied trauma, and were focussed on their own subjective motivation and meaning (Braun and Clarke 2022b).

This research, therefore, adopted an experimental qualitative approach, grounded ontologically and epistemologically in critical realism and phenomenology (Braun and Clarke 2022b). Phenomenology is uniquely positioned to assist health professionals in learning from the experiences of others by qualitatively focussing on the study of an individual's lived experiences within the world (Neubauer, Witkop, and Varpio 2019). This study also utilised person-centred, humanistic theory (Maslow et al., 1970; Rogers 1951, 1957; Rogers 1959), within a relational framework (Main and Ko 2020; Paul, Pelham, and Holmes 1996) to conduct the semi-structured interviews, using RTA of the data (Braun and Clarke 2006, 2019, 2022b).

### *Method of data collection*

The method of data collection during this study consisted of seven main stages:

(1) Participant recruitment
(2) Preliminary meeting with participant to aid informed consent
(3) Informed consent (prior to interview)
(4) Collection of demographic data to describe the participant group
(5) Semi-structured interview
(6) Body mapping exercise of self and others
(7) Study debrief

The full interview protocol including questions and procedure can be found in Appendix S3.

Reflexively, we also felt that it was important to explicate what we mean when using the word *data*, as there is no simple dichotomy of numbers vs words in quantitative vs qualitative research (Ragin 1994). Instead, we define *data* in this study as all empirical materials being collected and analysed (Aspers and Corte 2019), including interview transcripts, significant artefacts, body maps, demographic and psychological data (e.g. trauma screening results). Our study particularly focussed on the collection of embodied emotions, cognitions, bodily sensations and affect collected during the interview and body mapping process.

### Participant recruitment

Participants for this research are clearly and individually described by the self-reported demographic data in Table S2. All participants were adults, recruited from a convenience sample of service-users at a refuge and asylum-seeking charity in Yorkshire, United Kingdom [UK], spanning across four regional sites.

In alignment with Alessi and Kahn's (2022) recommendations for approaching trauma-informed qualitative research, including attending to community entry, a number of knowledge sharing meetings were held with the charity in advance of starting the research data collection. The aim of the meetings was to help the researchers gather historic information about the local refuge and asylum-seeking community, to introduce the research and researchers, to have a frank dialogue with the community partners and service users about the research, to gain community support for the research, validate its ethical integrity and purpose, demonstrate a commitment to impactful research, and allow time for holistic knowledge exchange.

Data collection for this research was designed to take place solely in person due to the traumatic nature of the content explored, giving easy access to support services and to the safeguarding processes within the charity. There was a distinct preference for face-to-face meetings for this research, as it better supported and cultivated the therapeutic presence, relationship or working alliance (Bordin 1979; Rogers 1957&b), which can be notably challenged when using other mediums (Geller 2020).

Sample size was anticipated to be between 2–400 according to Braun and Clarke's (2006) recommendation for thematic analysis. However, due to the vulnerable and traumatised nature of the participant group it was anticipated to be small, where 12 participants were likely to provide sufficient data for the qualitative research (Boddy 2016).

The research abided by the British Psychological Society's ethical framework, codes, guidelines, and ethical control plan (2017; British Psychological Society 2018, 2020, 2021), and the Health and Care Professions Council (2015) Standards of Proficiency for Practitioner Psychologists.

### Preliminary meeting

A preliminary meeting was organised with each participant with the aim of explaining the purpose, method, and requirements of the research, and to answer any initial questions. It was important to explain during this meeting that the participant could withdraw at any point without any form of detrimental impact on the individual. The meeting was also used to assess any additional requirements, requests for an interpreter, or the use of translated documents.

### Informed consent

Prior to each interview, a participant information sheet and consent form were shared verbally with the assistance of an interpreter. Each statement was initialled, and the overall consent form was signed. Verbal consent was also obtained when the recording began.

A culturally inclusive approach was taken, offering an interpreter to all participants in any local dialect and translated documents if requested. An accessible approach to partaking in the research was operationalised as proposed by Kaihlanen et al., 2020. No digitized methods were used, and no participants were excluded due to socio-economic factors such as poverty or low levels of education (Kaihlanen et al. 2022; Yoon, Huang, and Kim 2017). Travel expenses were reimbursed and there was no level of language or reading requirements needed to engage in this research. Fourteen participants chose to take part in this study, with one participant withdrawing at the end of the data collection process ($n = 13$).

### Demographic data

Basic anonymised demographic data was gathered including gender, age, country of birth, ethnicity, level of education, employment status, relationship status and number of children (see Table S2). This data is commonly collected in qualitative research to describe the sample of people involved the study (American Psychological Association [APA] 2009; Connelly 2013). The demographic datasheet was informed by the recommendations of the Office for National Statistics' Office for National Statistics [ONS] (2013) harmonised

ethnicity measure recommended for use in social surveys,Connelly, Gayle, and Lambert (2016) ethnicity and ethnic group measures used in social survey research, and Flanagin, Frey, and Christiansen (2021) latest guidance on reporting race and ethnicity in the fields of medicine and science.

To empower and respect the sensitivity of the individual's socio-economic data, the participant was given the demographic datasheet and asked to fill it in themselves, with the option to leave out any information they did not want to disclose (Flanagin, Frey, and Christiansen 2021).

### Semi-structured interview protocol

A semi-structured interview was written and operationalised based on the interview protocol for qualitative research proposed by Jacob and Furgerson (2012). As per Jacob and Furgerson's (2012) guidance, the interview protocol was informed by a comprehensive scoping review of embodied trauma literature (O'Brien and Charura 2022). The semi-structured interview consisted of the Trauma Screening Questionnaire [TSQ] (Brewin et al. 2002) to evidence experience of trauma, moving on to the open questions, using prompts where necessary (Jacob and Furgerson 2012). The interview was designed to fit within a counselling hour of fifty minutes, with a flexible debrief, allowing for any distress or safeguarding issues to be dealt with appropriately. An additional support leaflet was also provided.

### Pilot test

A pilot test of the semi-structured interview was performed as part of a commitment to reflexivity in this research, allowing the opportunity to change the open questions according to their level of effectiveness (DeJonckheere and Vaughn 2019). Based on two pilot tests, minor adjustments were made to the open questions to phrase them in more simple language. Additional adjustments were made to pace and conversational tone to allow participants extra time for translation and working with an interpreter, this also allowed for exploration of additional topics that transpired during the moment.

### Reflexivity and power with participants

This research acknowledged the existence of an inherent power differential between the researchers and participant as part of a larger system of oppression and systemic discrimination (Alessi and Kahn 2022). The researchers also acknowledged that participants may have endured prolonged trauma due to being held captive, having their basic needs denied, and having experiences where their intrinsic value or agency was not recognised (Alessi and Kahn 2022; Haskell and Randall 2009; Herman 1992, 1997; Timulak 2015). These

aspects of power and discrimination were held in mind throughout the planning and design of the research interview and protocol, by taking a person-centred, humanistic approach and offering the core conditions of empathy, unconditional positive regard, congruence in contrast to incongruence, and psychological contact to each participant (Rogers 1951, 1957&b).

Additionally, the researchers took an active stance of offering power with, not power over the participant (Proctor 2021). This was shown in action, for example, through the empowerment of participants to select their own ethnicity, country of origin and demographic data, empowering the participant to take breaks during the interview when needed, or to stop or withdraw from the study at any point.

### Interview structure

The semi-structured interview consisted of verbal consent, a scripted beginning and end to guide the process, engagement with a significant artefact, a section of structured questions proceeded by unstructured exploratory open questions (see **Appendix S3**) as per Jacob and Furgerson's (2012), followed by body mapping exercises and a debrief. The interview was designed to fit within a counselling hour of fifty minutes due to the traumatised nature of the participant group, with a flexible ten minute debrief according to the participant's needs.

### Bridging the cultural distance gap

In this study we offer three examples of how we bridged the cultural distance gap:

1. Firstly, at the preliminary meeting each participant was invited to bring an artefact culturally significant to them to the interview which symbolised for them their refuge or asylum-seeking experiences. The significant artefact not only acted as a warm-up to stimulate conversation and build the therapeutic presence, relationship or working alliance during the data collection process (Bordin 1979; Rogers 1957&b), but also aimed to aid memory recall and elicitation of migration experiences (Burden, Topping, and O'Halloran 2015; Taylor et al. 2020).

This activity replicated Taylor et al. (2020) method and was an intimate process whereby insight was gained into the participant's worldview, life circumstances, cultural norms, and values. Any artefact could be brought by the participant that would help them to express or represent their refuge or asylum-seeking experiences. Where an artefact was not available, the participant was asked what they would like to have brought if they could. The significant artefact was noted down and recorded as part of the transcript,

but was not photographed for confidentiality purposes to keep the data sample anonymous.

2. Secondly, cultural distance was negotiated in the interview by using a pilot study to check the questions with the participants, negotiating understanding together through dialogue to ensure the researcher, participant, and interpreter where present, each understood one another. Here is one example:

Researcher: 'I am going to move on now to something called the Trauma Screening Questionnaire . . . I would like to check how you would like to go ahead with this, would you like [the interpreter] to read it out as it is, or would you like me to read it out and then we can translate it? Which would you prefer?'

Interpreter: 'Yes I will read it, but [the participant says] what if they don't understand the questions?'

Researcher: 'Then check with me?'

Interpreter: 'I definitely will [interpreter translates first question]. Please explain here, so we get it right.'

Researcher: [Explains the statement: 'Acting or feeling as though the event were happening again'].

Interpreter: 'Thank you. That is exactly right, [the participant says] I am experiencing a lot of this, particularly dizziness and fainting, it is happening often, and I completely lose consciousness.'

3. Thirdly, we paid attention to the importance of clarifying language to ensure the understanding of the language of emotions in a way that does not assume a universal understanding. An example excerpt of this is as follows:

Participant: 'Disgust, what is disgust the word? And surprise? Surprise could be . . . ? Love I know this, I don't know the other ones.'

**Table 1.** Themes and sub-themes generated by reflexive thematic analysis.

| Themes | | | |
|---|---|---|---|
| Experiences of Embodied Trauma | Lost in Translation | Narratives of Time | Activities and Therapies |
| **Sub-Themes** | | | |
| I feel everywhere the pain (bio) | Cultural expressions of distress | A long time waiting | Talking & therapy |
| There are problems in my head (psycho) | Not all emotions translate | Waiting for a decision is unbearable | Exercise & Nature |
| I have nothing (social) | Importance of interpreters | You can die waiting | Holistic treatments |
| You can be raped as well (sexual) | Simple language please | Life is passing by | Connection to others |
| God will help me (spiritual) | | | Keeping busy |
| A caged life (existential) | | | |

Finally, we explored how the participants felt during the research interview process:

Participant: 'To be honest, talking and offloading, I feel comfortable.'

Interpreter: 'You know, asking me to do this, I feel and I understand as an interpreter, of course I do. [The participant] is saying that [they] felt at ease crying, you know, and not being asked why are you crying?'

Researcher: 'I'm so glad that you were able to feel that, to feel safe to express yourself in that way, in any way that you felt.'

Interpreter: '[The client says] Yes that is right.'

Another example of the experience of the research interview:

Participant: 'I'm feeling easy. Yeah. I'm feeling very light … it's like I don't have any burden, something like when you share you feel very light.'

No participants in this study reported any adverse experiences of the research process in the debrief, but commonly found it positive to be able to talk about their experiences as reflected in the sub-theme 'Talking & Therapy' (see Table 1). The interpreters all reflected what a positive experience it had been for them also, and reflected a sense of relational depth collectively in the interviews (Mearns and Cooper 2017).

### Structured questions

The interview began with the structured questions of the TSQ (Brewin et al. 2002) to evidence the participant's experiences of trauma, as many studies have not explicitly assessed or use screening measures for trauma (Jowett, Karatzias, and Albert 2020). A score of five or above signified likely PTSD (Brewin et al. 2002). Each statement was read out in English and translated where necessary by an interpreter. No translations of the TSQ were requested by participants, preferring instead to work with an interpreter when required. Each participant then answered yes or no to ten statements which may have occurred at least twice in the past week (see Appendix S3).

### Open questions

The interview then moved on to a section of open questions, using prompts where necessary (Jacob and Furgerson 2012). There was a total of seven open questions covering the sub-topics of the research question, including embodied trauma and its psychological impact(s), the relationship to the body and self-concept, and the impact of the refuge or asylum-seeking process and being dislocated from their own cultural context (see Appendix S3). The interview then progressed fluidly on to the body mapping exercises.

### Body mapping exercises

Each participant took part in a body mapping exercise following Coetzee et al. (2019) proposed method, to ensure methodological rigor and ethical aspects of body mapping. The participant was shown a basic body map image consisting of a gender-neutral outline of a person, printed in black and white on A4 paper (see Figure S1 &amp;amp ; Appendix S3). They were asked to mark on the body map using any colouring pen(s) of their choice from a selection of twelve, where in the body they had experienced embodied trauma, or any distress in their body related to their refuge or asylum-seeking experiences. Participants were then prompted to describe what they had mapped to stimulate reflection, which was captured as an audio transcript.

The exercise was repeated, this time asking participants to mark on the body map where other individuals may experience embodied trauma as a result of their refuge or asylum-seeking experiences. The purpose of the second exercise was to utilise the psychological concept of externalisation, where expression of their own thoughts, feelings, or experiences, when attributed to the external world, independent of oneself, become safer to express (American Psychological Association [APA] 2022.

Participants were then shown an image of bodily maps of emotions from the study by Nummenmaa et al. (2014) and asked to identify any emotions that they associated with their embodied trauma (see Figure S2). They were

asked if they felt activated in the hot parts of the body (red/orange) when they felt this emotion or deactivated in the cooler parts of the body (blue/black). This image was shown after the body mapping exercise so as not to influence the way that the participant's image should look, enabling free expression.

In our methodology we drew on the neuroscientific and arts-based research (Coetzee et al. 2019; Nummenmaa et al. 2014, 2018) in the novel field of body mapping, which has not yet successfully mapped trauma. We were also guided in this methodology by the pioneering work of Van Der Kolk (2014) whose research described trauma as a speechless horror due to the suppression of Broca's area of the brain during trauma experiences. Therefore, in order to assist the participant in verbalising and also expressing their trauma non-verbally through creative mediums, we provided a semi-structured interview and a body mapping exercise as a creative non-verbal medium for expression of trauma in the body.

### Debrief

A debrief took place after each semi-structured interview. This gave the participant the option to explore their experiences of the research and to assess any follow up needs with the researchers (see Appendix S3).

## Data analysis

A six-phase process of RTA (Braun, Clarke, and Hayfield 2022) was broadly operationalised (see Table S1). The interview data was transcribed and verified three times for accuracy and immersion into the data. The data was then semantically and latently coded with up to four individual codes (single meaning or concept) or code labels (pithy, analytically meaningful descriptions) as per Braun's, Clarke, and Hayfield (2022) suggestion. Once generated, the themes and sub-themes were reflexively reviewed and agreed by the authors (see Table 1).

Data analysis for the body mapping exercise consisted of analysis of both the body mapping narrative and the body maps themselves. Notably, Coetzee et al. (2019) state that many body mapping studies often fail to report how they analysed the data (MacGregor 2009; Senior et al. 2014; Tarr and Thomas 2011), or do not analyse the body maps at all, just using them as a tool to elicit narratives (Maina et al. 2014).

Currently there are no recommended or generally utilised methods of data analysis for body mapping due to the variable nature of the approaches, from using full body maps drawn around the individual, to artistic expressions of body mapping using an individual's artwork (Orchard 2017). For this reason, a reflexive approach to the body mapping

data analysis was taken in this study, based on collating the observable patterns encountered across the participant data from the body mapping process, which clearly included the marking of the head, legs, shoulders, arms, and stomach (see Figure S3).

### Methodological reflexivity

As this study employed a reflexive method (Braun and Clarke 2022b), it was important at this stage to note that the data did not speak for itself, and that our role as a researchers was to give voice to the participants' data, telling a story that was formulated through the dataset (Braun and Clarke 2022b). It was also an important reflexive requirement to situate ourselves as researchers within this data, as the themes that have been generated are not only a result of the data gathered in this study, but also a result of the chosen theoretical literature cited, the overarching philosophical ontology and epistemology utilised, and a product of our Eurocentric positionality and idiosyncratic intersectional lens of ourselves as a Black man of African heritage and White female of European heritage which we bring to the research.

In fact, there has been some emphasis within Braun & Clarke's writing (Braun, Clarke, and Hayfield 2022) to suggest that themes do not emerge, in agreement with the work of Fine (1992) and Taylor and Ussher (2001), as they suggest that it is impossible, and indeed unethical for the research to dissociate from the knowledge production process (Braun, Clarke, and Hayfield 2022). RTA (Braun and Clarke 2022b) instead considers the researchers' own subjectivity, which is why an examination of our own positionality and lens through which we came to this research was an essential consideration in establishing the theoretical framework.

The data was also impacted by our chosen research method and data analysis approach. Thematic analysis generally takes a flat approach to data, but RTA allowed for a deeper examination of underlying structures and ideas, with fewer in-depth themes, forming an *interpretative story of the data* (Braun and Clarke 2022a).

We also reflexively considered our research method, noting the importance of using cultural humility in our approach by engaging with a significant artefact to provide a stance of power with participants (Proctor 2021) to be able to share their narratives of trauma during this research in a culturally congruent way. Additionally, we thought about the lack of transculturally informed approaches available to assist in this research, and indeed a lack of transculturally informed guidance or modalities available within psychology as a whole (Charura and Lago 2021), and the urgent requirement to use studies such as this to move the field forward.

We also reflected on our desire to reflexively move qualitative research forward by bringing it back into the community, engaging with research

methodologies which move away from Eurocentric, one-to-one approaches, taking a more culturally informed community-based approach (Paul, Pelham, and Holmes 1996; Zehetmair et al. 2018). Therefore, we took a reflexive decision to disseminate our study back in the community we gathered it from, to enhance further reflection and reflexivity on our findings. This consideration also sat well with a reflexive stance, as it implies the relational nature of qualitative inquiry, questioning the possibility of a finite and stable reality that can merely be observed, and bringing to attention the contextual and discursive aspects of research and interpretation (Gemignani 2017).

However, we did also use reflexivity though out this study by using a pilot test to establish the validity and comprehensibility of our questions with participants. We also engaged in reflective practice using Gibbs (1988) reflective cycle concerning our own experiences of trauma, and debriefed with one other to establish our own diffusion, prevention of vicarious trauma, ethical bracketing of our own experiences so as they did not impact the participant (Corey, Corey, and Corey 2019), and also gave and received 360-degree feedback during our research via a group supervision process. We also reflected on the data and our findings together as researchers, holding up a reflective mirror, offering an opportunity for further reflexivity, a different take or perspective, and in order to bounce innovative ideas around, noting any assumptions that we had made (Braun and Clarke 2022a).

We acknowledge, however, that as researchers in a WEIRD (Westernised, Educated, Industrialised, Rich, and Democratic) society, we are still imposing our westernised methodologies seeking westernised solutions to what we perceive as cultural problems (Hansen and Heu 2020). It could be argued that a copy and paste approach of westernised research designs onto different countries to facilitate cross-cultural replication is not appropriate, as constructs may not carry the same meaning in different cultural contexts (Hansen and Heu 2020). To avoid detribalising, and loss of indigenous ethnic identity or community, Galperin et al. (2022) also propose that researchers add an additional layer in their emic-etic-emic cycle of research methodology to enhance the rigor and relevance of the research. This cyclical methodology provides further depth and breadth of cultural knowledge by additionally testing the findings back within the cultural context of origin, which we have done reflexively with our participants.

## Results

### *Demographic data results*

Participant demographics were self-reported using the demographic data-sheet, supported by an interpreter where necessary. The bi-modal age group

of participants was 35–44 and 45–54 with a span of 25–64 years. Eight participants described themselves as female and five as male. Full details of ethnicity, education, employment, country of birth, number of children and relationship status can be found in Table S2.

### *Trauma screening Questionnaire results*

The results of the TSQ in Table S3 clearly show that every participant had likely Post Traumatic Stress Disorder [PTSD] with a score of over five, and an average participant score of nine out of ten. All statements on the TSQ were experienced by at least ten or more participants. Most notably for this study, all participants experienced bodily reactions when reminded of traumatic refuge or asylum-seeking experiences, and all had difficulties falling or staying asleep.

None of the participants interviewed in this study had yet been given a formal diagnosis of a mental health condition such as PTSD, depression, or anxiety. Displaced individuals often cited difficulty understanding and navigating the National Health System [NHS], fear of going to the General Practitioner [GP], and cultural implications for seeking mental health support:

> I started to experience so much pain in my body when I arrived. And I went to the GP multiple times and they said at the end, we do tests, there is nothing physically that we can find. So they thought this is all psychological. And it's due to the trauma that I experienced in the war and all of the terrors that I went through. So they said we think that you need a psychotherapist, really that would be the solution. At the start, I refuse the idea completely because in my culture when you are suggested to see a psychotherapist, it means you are mad, like means you are you are not good in your head. And it's not something that we do. So I thought about it. And then my husband said, give it a try. You never know maybe you would feel comfortable, comfortable when you actually go through the therapy … I was anxious before, very anxious, before the first session. And I had fear again, inside me. Luckily, the therapist was very kind and very understanding. And really, I started to feel a waiting for the time to see her and to talk with her. It felt like this is the only exit, this is the only way I can offload and share things with her that I could not share with my husband or with anybody else in my life.

As exemplified by the quote above, the participant relayed via consultation with the GP, a potential formulation of embodied trauma due to the medically unexplained symptoms they experienced. The quote also shows a cultural sensitivity to attending psychotherapy due to a fear of being 'mad' or 'not good in your head'. Given these complexities, the body maps that we employed in this research paid attention to cultural sensitivities by empowering the participant to engage in marking their embodied trauma and experiences on the body map in a personally and culturally congruent way.
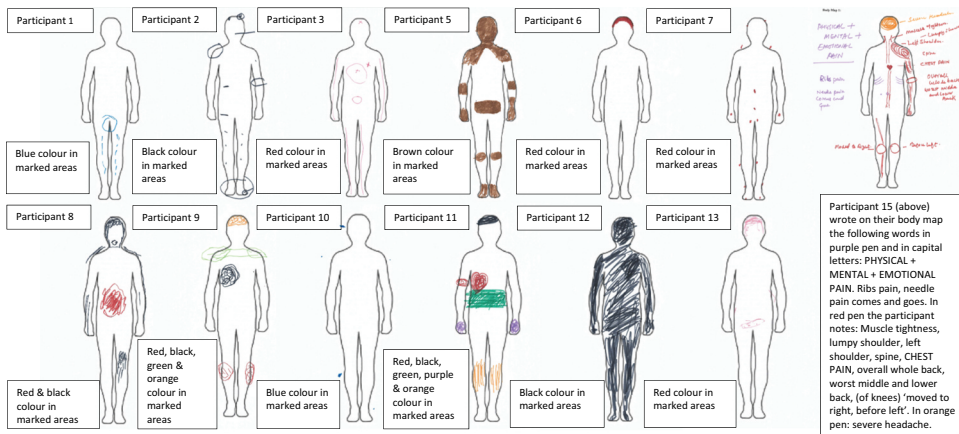
**Figure 1.** Results of body mapping exercise (images of self of conceptions of embodied trauma for each participant). Participant 4 withdrew from the study and is not listed in these results. There is no participant 14 due to randomised number generation.

## Body mapping exercise results

The results of the body mapping analysis in Figure S3 show that the main areas of impact of experiences of embodied trauma across both exercises were the head, legs (including knees, feet, ankles, and toes), shoulders, stomach, arms (including hands and elbows), heart and body as a whole. Figure 1 shows the results of the first body mapping exercise relating to the self (Figure S4 show the results of the images of others).

The most frequently selected colours were red (used twelve times) and black (used ten times) out of a colour spectrum of 12 pens (see Table S4). Participants noted that red was a warning sign, a colour of worry or blood (pressure), pain and fear, or a powerful colour, and that black was something indescribable, everywhere, and symbolised bruising. Colours that were not selected at all were yellow, grey, dark blue and dark green, but no reason was given for their exclusion, except for dark green which symbolised nature to one participant.

The results of Table S5 reveal that the most frequent emotions associated with experiences of embodied trauma are depression, anxiety, sadness, anger, fear, love, and happiness. No participants experienced neutrality or envy. Commonly, participants asked for an explanation of the emotions mapped by Nummenmaa et al. (2014) in their study, particularly disgust, surprise, envy, and contempt. Participants also regularly referred to stress in the body during their interview which was not mapped by Nummenmaa et al. (2014) research.

Seven participants reported experiencing their emotions as hot and activated, three reported them as cold and deactivated, one reported them as both, and two did not know. Participants who reported hot and activated emotions described them as anxiety that does not calm down, aggression and shouting

that comes out unconsciously, anxiety about their home country, and as anger or a fire inside. Participants who reported cold and deactivated emotions described them as depression, like being handcuffed, totally floppy and tired.

### *Reflexive thematic data analysis results*

Following the Braun's, Clarke, and Hayfield (2022) method of RTA (see **Table S1**), four main themes were generated through reflexive discussion by the authors (see Table 1).

The reflexive thematic data analysis storyline (Braun, Clarke, and Hayfield 2022) follows the participant voices through the themes of their *experiences of embodied trauma*, including the bio-psycho-social-sexual-spiritual-existential patterns found in the dataset, moving onto those aspects which are often *lost in translation* due to cultural expressions of distress, emotions that are not universally translated and noting the importance of using interpreters in the refuge and asylum-seeking process. The storyline then considers the theme of *narratives of time* both phenomenologically and chronologically throughout the refuge and asylum-seeking journey, noting that displaced individuals' mental health is impacted by the long time waiting for the asylum process, the unbearable nature of waiting for a decision, and feeling that life is passing by, or at worst, that death can come before a decision is made. We conclude with the final theme of *activities and therapies* which have helped participants cope with these traumatic experiences, including talking and therapy, exercise and nature, holistic treatments, connection to other and keeping busy.

### Discussion

### *Mapping embodied trauma*

This study has successfully mapped embodied trauma as experienced by its participants, a convenience sample of displaced individuals seeking refuge and asylum from diverse cultural origins of context, accessing a UK charity. The pattern of findings of the RTA (Braun, Clarke, and Hayfield 2022) across the dataset reflects the bio-psycho-social-sexual-spiritual impact of refuge and asylum-seeking experiences on the body, in alignment with the finding of a recent comprehensive scoping review of embodied trauma by the authors (O'Brien and Charura 2022).

This research has also generated an additional sub-theme on the existential impact of refuge and asylum-seeking experiences (Breitbart 2017; Butler 2021; Yalom 1980). It has begun to conceptualise embodiment in existential terms by capturing the pain and distress of displaced individuals who could, for example, feel like 'a caged bird with clipped wings,' experiencing existential isolation and suffering from a lack of hope and freedom which should be

human givens (Yalom 1980). We drew our understanding of the existential impacts on the participants from their descriptions, such as their hearts being 'entirely black or broken', or experiencing deep emotions and having to '... swallow [them] in silence, suffocating now in this cage[d] life', pondering '... how to live to my last breath?'. In line with these reflections, most of the participants also noted the impact of existential isolation and relational stress at continual levels of arousal that greatly exceeded what they could regulate prior to the trauma. Yet, the existential impacts of distress on the body are crucially under-researched, with this study being on the cutting edge of discoveries into the existential, phenomenological, and narrative areas of embodied trauma which focus on the individual's deeper sense of self (Butler 2021; O'Brien and Charura 2022). Each of these concepts (existential, phenomenological, and narrative) in themselves require further in-depth reflection and analysis as subjects for future psychotraumatology research with displaced individuals.

### Physical impacts of embodied trauma

Physically, the body mapping process in this study revealed experiences of pain and distress all over the body, specifically in the limbs (shoulders to hands, and legs to feet), joints, stomach, and head in the aftermath of trauma. With some individuals noting the sexual impact of their experiences on the genitals, torture across the body, bruising and scarring from flesh wounds, and the physical degeneration of overall health with the onset of diseases such as diabetes, thyroid problems, high blood pressure and a lowered immune system. No other existing literature has yet mapped these physical areas of embodied trauma as experienced by displaced individuals, noting the specific patterns of embodied trauma across the dataset. However, there is much research literature identifying the impact of trauma and torture on displaced individuals (Freedom from Torture 2022; Sigvardsdotter et al. 2016).

Graham et al. (2020) state that physical symptoms are a clinical feature of PTSD (Gupta 2013) more so than other psychological disorders (Andreski, Chilcoat, and Breslau 1998), noting that despite the reason for the symptoms remaining unclear (Quartana et al. 2015), their strength, prevalence, and consistency with PTSD makes them an extremely useful assessment method in the aftermath of trauma (Graham et al. 2020). This study therefore proposes that these mapped areas of embodied trauma found in displaced individuals could be utilised as a culturally informed assessment method for rapidly screening for embodied trauma and likely PTSD.

A useful factor of the presentation of physical symptoms of embodied trauma is that they are usually cause for individuals to seek help from healthcare professionals who may not do so otherwise, due to the stigmatising nature of psychological ill health in certain cultures (Graham et al. 2020;

Landrine and Klonoff 1992; Simon et al. 1999). Graham et al. (2020) note that despite physical symptoms playing a minor role in historic diagnostic manuals, citing symptoms such as marked physiological reactivity and difficulties falling or staying asleep, which are physical symptoms consistent with the findings of this study as evidenced by the TSQ (Brewin et al. 2002), they may not be seen as important diagnostics by all medical practitioners, leading to underdiagnosis and lack of access to appropriate psychological treatments.

### *Limitations of existing trauma screening tools*

Studies into the physical symptoms of PTSD in displaced individuals seeking refuge and asylum have shown that simple yes/no screening tools of physical symptoms such as headaches, fatigue and sleep problems offer a low face validity for a likely PTSD diagnosis (Graham et al. 2020; Gulden et al. 2010; Westermeyer et al. 2010), acting as a useful alternative to more wordy screening tools such as the TSQ (Brewin et al. 2002) which are not always universally and transculturally understood. Both Gulden et al. (2010) and Westermeyer et al. (2010)'s studies found a positive association between physical symptoms in displaced individuals and the PTSD checklist scores, but were limited by small sample size and the assessment of only four physical symptoms (Graham et al. 2020). This study, however, builds on this knowledge and furthers the known list of physical symptoms and the locations of embodied trauma for likely PTSD assessment. Future studies could also be undertaken to correlate specific cut off points between physical symptom presentation and a PTSD checklist (e.g. Brewin et al. 2002; Weathers et al. 1993) for diagnosis.

Screening tools for physical symptoms of embodied trauma could also be useful where it is culturally preferable not to confront symptoms of psychological emotional trauma due to cultural stigmatisation, or where there is a cultural desire not to express emotions such as shame (Westermeyer and Wahmanholm 1989), which was also one of the findings of this study. This study found that the emotions which were strongly associated with experiences of embodied trauma were depression, anxiety, sadness, anger, fear, alongside love and happiness. Notably, emotions such as shame, surprise, pride, envy, neutrality, disgust, and contempt were infrequently selected due to a lack of cultural translation, or perhaps due to being culturally inappropriate emotions to express (Westermeyer and Wahmanholm 1989).

A recent study by Berfield et al. (2022) also notes that PTSD has a strong and robust relationship with negative emotional dysregulation, including emotions such as fear and sadness, but also explores the likelihood for post-traumatic growth after challenging events which could lead to opportunities for experiencing positive emotions, such as those found in this study of love and happiness.

Pain experienced in the body which had no organic cause is also most likely linked to post-traumatic distress disorder (Brewin et al. 2002). This was evidenced by the Trauma Screening Questionnaire where all participants scored extremely highly, with an average score of nine out of ten (with likely PTSD being a score of five or more). Crucially, all participants in this study experienced bodily reactions when reminded of their refuge and asylum-seeking experiences, giving further evidence for the existence of embodied trauma and an absence of dualism (Descartes 1641; Holifield 2020; Jung 1943, 1966; Ramos 2004; Schore 2009; Van Der Kolk 2014). Such cultural conceptualisations of mental distress found in the literature included the Ethiopian expression of worms in the ear (Grisaru et al. 2016), Congolese descriptions of a boiling hot brain (Murphy, Keogh, and Higgins 2021), Southern Sudanese body talk of traveling pains, burning sensations, or local dialectic expressions of lafa rasi which is a description of the dizzy tendency to fall down (Coker 2004). In this study, participants spoke of the experiencing the connection between strong thoughts, emotions and physical sensations of headaches or migraines which are also often linked within a cognitive behavioural longitudinal formulation (Beck et al. 1979). When describing their body map participants highlight the mind-body connection:

> [...] sometimes when I'm angry too much, holding inside, that's where it goes, my headache, I have headache. . .mental health is like a headache, like migraine.

### *Psychological impacts of embodied trauma*

The psychological impacts of embodied trauma are clearly highlighted by the sub-theme of *There are Problems in my Head* from the reflexive thematic data analysis, showing the impact of over thinking and rumination on embodied presentations of distress. For example, participants note that overthinking causes stress and pain in the body, fainting, headaches, and migraines. A systematic review by Kaiser et al. (2015) has shown that thinking too much is a common idiom of mental distress, revealing that a hundred and thirty-eight research articles cited it between 1979–2014 alone. This idiom also covers a multitude of transcultural expressions of distress including anxiety, rumination, and intrusive thoughts resulting in a range of perceived complications, physical and mental illnesses, or even death, with symptoms frequently overlap with common constructs of depression, anxiety, and PTSD (Kaiser et al. 2015). Kaiser et al. (2015) state that the presentation of thinking too much should be engaged with not on a unitary basis, but as a part of a culturally appropriate screening process for those individuals who may require access to psychological services, bolstering the appropriation of culturally informed interventions, and strengthening public health communication for individuals to engage with culturally informed treatments which aim to reduce stigmatisation.

Recent research by Singh et al. (2020) also suggests that there may be benefit in treating single specific target symptoms of multifaceted mental disorder diagnoses, such as intrusive thoughts or overthinking in PTSD, instead of attempting to treat the full array of symptoms. With a significant lack of scientific advances in psychological treatments over the past decade (Goodwin et al. 2018), Singh et al. (2020) consider it critical to focus on novel treatments arising from new research such as this. Therefore, there may be merit in stepping back from a full diagnosis of multifaceted mental disorders and focusing on a core clinical feature (Kupfer and Regier 2011) such as these. Working with practitioners across all fields of research may help to find new solutions to treating each aspect of embodied trauma, including overthinking or intrusive thoughts which are typical of PTSD in displaced individuals (Kanstrup et al. 2020).

Lewis-Fernandez and Kirmayer (2019) note that over thinking is acknowledged within the DSM-5 as a cultural concept of distress. They state that all categorizations and constructs of distress and psychopathology (whether idioms, syndromes, or explanations) are locally patterned by culture, with some cultural concepts like thinking too much, nerves or fright-related illness having a wide geographic range with similar features despite their local variation (Lewis-Fernandez and Kirmayer 2019). Lewis-Fernandez and Kirmayer (2019) advocate for a better cultural understanding of expressions of distress so that the communicative function and context can contribute to new thinking about the origins, coping strategies, and sources of healing for individuals, moving away from the mental-disorder centric view of current practices.

This study has linked overthinking and ruminations in the psychological sub-theme of *There are Problems in my Head*, not only with psychological distress but also with embodied trauma, where psychological presentations of distress are also manifested and mapped in the body. This not only helps to aid the potential screening of embodied trauma and psychological distress, but also begins to build a holistic bio-psycho-social-sexual-spiritual-existential picture of the experiences of embodied trauma in its entirety.

### Relationship to the body and self-concept

Interestingly, the participants' relationship to their own body and self-concept did not generate a key theme within this research. Some participants noted that they felt dead inside, or that their body was in a different place to their mind, which is in line with the findings of a systematic review of literature of trauma and self-identity by Kouvelis and Kangas (2021). They noted that whilst trauma has an overall negative impact on self-identity (a term which Kouvelis and Kangas (2021) describe as being inclusive of the self-concept or sense-of-self) across the lifespan, it should be addressed on an individual basis. For example, as part of a person-centre formulation, which is culturally informed by the

individual's preferred way of being in relationships (e.g. as part of a cultural community, or cultural philosophy such as the African conceptualisation of Ubuntu or 'I am because we are') as part of a psychological assessment. This is because there is no common, reliable, and valid assessment of self-identity in this field (Kouvelis and Kangas 2021). Participants also found it hard to conceptualise the self and thoughts about their own body, rather relating thoughts of the self-concept in relation to others. Participants described themselves as not being good enough like others, noting internal schemas they hold about trusting others, intimacy, power, and safety (Resick, Monson, and Chard 2014), but were generally unable to address their self-concept directly. Marin and Shkreli (2019) note that the ability for self-reflection and meaning making in trauma can be assisted by narrative storytelling which may have implications for psychotherapeutic interventions, assisting displaced individuals in making sense of fragmented parts of themselves established through traumatic experiences and promote positive self-integration across contexts and time and lowering distress.

### Impact on the individual of the refuge and asylum-seeking process

Relational trauma, however, was a key theme throughout this study. Ogden (2021) notes that trauma and relational stress can result from adversities that occur in important relationships and with society at large. This is acutely demonstrated by displaced individuals in this study who have not only experienced traumatic separation from children and family members, but have also experienced relational stress and othering from the homogenous whole or collective society by the global population (Butler and Spivak 2007; El-Tayeb 2011; Himmel and Baptista 2020).

One of the key therapeutic themes found in a recent comprehensive scoping review (O'Brien and Charura 2022) was that of relational belonging which highlights the inherent relational qualities and needs of human beings, showing how relationships can be restorative (Hocking 2021; Paul, Pelham, and Holmes 1996; Strømme et al. 2020; Weiss 1999). These findings were verified in this study by the sub-theme of *Connection to Others* within the theme of *Activities and Therapies*, which noted the importance of connection to children and family members, with many displaced individuals being separated from them during the refuge and asylum-seeking process, and having a strong desire to be reunited. Children were often cited as a blessing, bringing with them an existential feeling of joy and happiness. They were also noted to be a protective factor against suicide. Vijayakumar (2016) acknowledges that there is a significant deficit in our knowledge regarding protective factors against suicide in displaced individuals, but reports that communication and connection to family, friends and ethnic and religious groups may have additional value which is supported by the findings of this study.

### Dislocation from the cultural context of origin and cultural macro system

The findings of this study note that whilst dislocation from the individual's cultural context of origin was physically and geographically manifested, participants still felt strongly connected to their families, culture, and religion. From the perspective of religion, this is evidenced in the RTA generation of theme one, where the spiritual sub-theme of *God Will Help Me* revealed the vital importance of a connection to God from their religion of origin, and the usefulness of prayer, meditation, and connection with spiritual texts for coping with the experiences of seeking refuge and asylum. This is in keeping with recent studies which found that displaced individuals reported more perceived support by their faith than the local population, and that religious faith maybe a protective factor in the face of psychological distress (Schlechter et al. 2021; Sleijpen et al. 2016). These studies are, however, limited by small sample sizes and local samples, yet this research provides additional evidence and emic voices to support these findings.

Theme four's sub-theme of *Connection to Others* reports the importance of connection with religious groups and communities in coping with experiences of seeking refuge and asylum. Whilst some participants noted the impact of being in a host country with different spiritual beliefs to theirs, they also noted, for example, their experiences of being welcome by the general public during Eid with culturally appropriate expressions such as Eid Mubarak. However, some participants noted feeling shunned by their religion of cultural context in the host country as a displaced individual. This is in keeping with recent studies such as El-Awad et al. (2022) who revealed that whilst religiosity can promote mental health, it has also been linked to separation-orientated acculturation among displaced individuals, particularly of Muslim faith, resulting in reduced mental health. Therefore, the function of religiosity may be different for each displaced individual dependent on their migration context, traumatic experiences, and the nature of their cultural interactions (El-Awad et al. 2022).

Finally, in terms of connection to the displaced individual's culture of context, many of the participants in this study held in mind their home country, and worried about its political, social, and familial wellbeing. Berry and Taban (2021) take this idea one step further in acknowledging the need to preserve displaced individual's cultural intersectionality and identity whose impact may have implications which are not immediately obvious, for example, undermining the displaced individual's dignity and inhibiting their options for participating in the host society. This was gravely evident in this study in terms of inhibiting the displaced individual's right to work, which impacted their ability to engage in all aspects of everyday life. Berry and Taban (2021) advocate for the right for displaced individuals to assert their cultural identity and intersectionality, without which risks further oppression and lack of access to fundamental human rights which is seen throughout this study.

### *Individual ways of coping with embodied trauma*

The findings of theme four of the RTA have highlighted a number of activities and therapies that have helped the participants cope with their experiences of seeking refuge and asylum, and the impact that embodied trauma has had on their physical and mental health. These results can help to inform practitioners by enhancing our understanding of holistic interventions, which cover not only the aspects of embodied trauma, but which encompass the full bio-psycho-social -sexual-spiritual-existential impacts of embodied trauma experienced throughout the process of seeking asylum and refuge (O'Brien and Charura 2022).

Notably, the findings of this research cite the usefulness of talking, be that within charitable organisations, religious groups, with other displaced individuals, or during talking therapies, yet there is little current research in this area. This study has also cited the usefulness of exercise, including activities such as walking, swimming, going to the gym and engaging with nature which has a positive impact on wellbeing (Gerber et al. 2021). Connection to others is also vital, including re-connecting with children and other displaced family members (Hampton et al. 2021) and members of religious and cultural communities (Fennig and Denov 2022; Grupp et al. 2022), citing the need to make trusting relationships with others who are understanding of the impact of the trauma these individuals have been through, which perhaps has implications for the importance also of building a trusting therapeutic relationship which includes not only the therapist but also an interpreter (Birger and Nadan 2022; Mirdal, Ryding, and Essendrop Sondej 2012).

Keeping busy with meaningful endeavours is another way that individuals in this study have coped with embodied experiences of trauma (Smith 2015), protecting against overthinking and rumination (Kaiser et al. 2015), and the impacts of physical and existential loneliness (Yalom 1980). The usefulness of a combination of treatments also advocates for a holistic approach to culturally informed care, where participants benefit not only from therapeutic interventions, but also from combinations with psychopharmaceuticals and pain management medications (Sonne et al. 2016), homeopathic medicines (Reichenberg-Ullman and Ullman 2018), body and breath work including massage (Cesko 2020), and help with sleep (Sandahl et al. 2021).

### Conclusion

In conclusion, the authors summarise the findings of this study, the suitability of the definition of embodied trauma (O'Brien and Charura 2022), the use of body mapping as an intervention method in the aftermath of trauma, and make suggestions for future research and psychotraumatological practice. We also advocate on behalf of the strong connection between trauma symptoms

and the relationship with the body (see Table 2 that follows), this connection is not only personal, but bio-psycho-social-sexual-spiritual-existential (O'Brien and Charura 2022).

### Suitability of definition of embodied trauma

Crucially, the findings of this study support the suitability of the definition of embodied trauma (O'Brien and Charura 2022) see Appendix S1. This study has also explicated the specific nature of the emotions, areas of the body and bio-psycho-social-sexual-spiritual-existential impacts associated with embodied trauma with displaced participants mapped in Table 2.

This study proposes that the bio-psycho-social-sexual-spiritual-existential manifestations of embodied trauma are as follows:

### Suggestions for an intervention method for embodied trauma using body mapping

Based on the findings of this study, it is proposed that the following culturally and trauma-informed practices should be used as an innovative intervention method for embodied trauma as experienced by displaced individuals. This method could serve as a rapid triage for a referral to a culturally appropriate, trauma-informed psychological intervention service in the aftermath of trauma:

(1) **Body Mapping Assessment** (following our first method for self), enabling the individual to elucidate their experiences and manifestations of trauma in the body, better identifying those at higher risk of developing post-traumatic psychopathology.
(2) **Culturally & Trauma-Informed PTSD Screening Questionnaire** revised to consider cultural expressions of distress, utilise the globally translated and universally accepted emotions of depression, anxiety, sadness, anger, fear, and stress, provided in clients mother tongue.
(3) **Screening of Common Impacts of Embodied Trauma** to include a brief yes/no screening form of the bio-psycho-social-sexual-spiritual-existential impacts detailed in Table 2.

This innovative method could be utilised by appropriately trained individuals at charities, religious organisations, places of worship, camps for displaced individuals, and for use by government, crisis, and health care responders and beyond, in order to raise awareness and make more timely and appropriate referrals to culturally and trauma informed care.

**Table 2.** Reported bio-psycho-social-sexual-spiritual-existential manifestations of embodied trauma.

| Biological | Psychological | Social | Sexual | Spiritual | Existential |
|---|---|---|---|---|---|
| Generalised pain (often of unexplained origin) | Likely PTSD | Withdraw from others | Physical trauma to sexual organs or genitals | Signs of spiritual distress (e.g. continued prayer, fasting or meditation) | Lack of hope |
| Pain or distress in limbs, joints & stomach | Emotional distress (e.g. depression, anxiety, sadness, fear, anger, stress) | Feelings of isolation | Possible exposure to experiences of sexual abuse, rape, or torture | Desire for contact with religious communities and practices | Lack of freedom |
| Headaches or migraines | Cultural expressions of overthinking or rumination | Lack of connection to family & children | Possible contraction of sexually transmitted disease | | Existential isolation |
| Malnutrition | | Potentially oppressive living conditions | | | |
| Poor physical health or low immune system | | Extreme poverty and lack of right to work | | | |
| Possible abuse (e.g. physical, domestic, torture) | | | | | |
| Poor sleep | | | | | |

## Disclosure statement

## Funding

## Notes on contributors

*Charlotte O'Brien* is a counselling psychologist and BACP-registered psychotherapist. Charlotte has a special interest in humanistic approaches to psychotherapy and social justice and working with under-represented individuals who have limited access to psychotherapeutic interventions. Her research Interests include trauma and using compassionate methodologies in practice.

*Divine Charura* is a counselling psychologist and is registered with the Health and Care Professions Council in England. Over the last 17 years, Divine has worked with refugees and asylum-seekers internationally and his research interests are in psychotraumatology and mental wellbeing across the lifespan.

## ORCID

Charlotte O'Brien   http://orcid.org/0000-0002-9903-3325
Divine Charura   http://orcid.org/0000-0002-3509-9392

## Data availability statement

The data that support the findings of this study are openly available in [DOI provided on publication].

## Ethical & funding approval

## Limitations

The authors acknowledge the limitations of using a convenience sample of participants in the UK and advocate for wider, global samples to replicate their findings.

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