

2-22-2023

“Chains Weigh Heavy”: Body Mapping Embodied Experiences of Anxiety

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Recommended APA Citation

Vaughan, P., Tewson, A., Morgan, P., & Boydell, K. M. (2023). “Chains Weigh Heavy”: Body Mapping Embodied Experiences of Anxiety. *The Qualitative Report*, 28(2), 583-606. <https://doi.org/10.46743/2160-3715/2023.5712>

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Abstract

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Keywords

anxiety, body mapping, arts-based research, embodiment

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Acknowledgements

We thank participants for sharing their knowledge, experience and artworks with us. We acknowledge Jill Bennett and George Khut for their attendance of the workshop. We thank the Sydney Science Festival for their support of this project. We acknowledge that this research took place on unceded Aboriginal land and pay our respect to the custodians of the Countries on which we learn and work.

“Chains Weigh Heavy”: Body Mapping Embodied Experiences of Anxiety

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Anxiety has both cognitive and somatic dimensions as is ubiquitous at a population level. We report on an arts-based research workshop gathering data on embodied experiences of anxiety and non-anxiety. We developed an innovative short body mapping workshop to collect data and undertook thematic analysis to analyse textual and visual data. 35 body maps were produced. “Tightness,” “pain,” and “heaviness” were the most frequently expressed embodied sensations of anxiety. By contrast, when not feeling anxious, participants’ bodies primarily felt “energetic,” “ordered,” and “open.” Anxiety was most frequently felt in the stomach, head and heart. 35 Participants mostly used an abstracted, rather than figurative, visual language to depict anxiety. Conclusions: Participants reported diverse bodily experiences of anxiety, some of which correlate with commonly identified somatic symptoms of anxiety. Other symptoms were unique to participants. The richness and diversity of anxiety experiences elicited during workshops indicates that the brief body mapping approach has potential application in future research, and in other settings.

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Introduction

We report on a research workshop undertaken in 2016 with members of the general public during the Sydney Science Festival, a science-themed festival in Sydney, Australia. The workshop utilised body mapping, an arts-based research method, to learn about participants’ embodied experiences of anxiety and non-anxiety. Given the ubiquity of anxiety at a population level, and the embodied quality of anxious experiences, the research aimed to extend knowledge about bodily and other sensations associated with anxious and non-anxious states.

We begin with a brief overview of research regarding embodied experiences of anxiety, and report on project design and methodology. We then share results, outlining the various embodied experiences of anxiety and non-anxiety reported by participants and describing approaches used to visually represent these.

Anxiety

Anxiety is a term that describes common, transitory, every-day experiences of worry, stress, or apprehension (Keane et al., 2021). People who experience high levels of anxiety and/or prolonged anxiety may be diagnosed with a mental health disorder including generalised anxiety disorder (GAD; APA, 2022). On a quotidian level anxiety is ubiquitous, experienced in some capacity by almost everyone at some point in their life; it is often a facet of natural

responses to a possible threat, and, as a “heightened state of readiness,” can have positive outcomes like increasing productivity (Swift et al., 2014, p. 5). For some, the experience of anxiety can become pervasive underscoring daily perceptions of, and engagements with, the world. This intrusive anxiety may sometimes be diagnosed as a facet of an anxiety disorder (Swift et al., 2014).

Anxiety is a common form of mental distress (Nutt et al., 2008). For example, a national survey reported one out of seven Australian’s had experienced an anxiety disorder in the year prior to taking the survey (Department of Health, 2009). Forms of persistent anxiety can often manifest alongside other psychological ailments (Harrington & Antony, 2008, p. 278), and can have “...high personal and social costs” (Nutt et al., 2008, p. 365). For example, GAD is often chronic and can have a course that runs for ten years or more (Nutt et al., 2008).

Research indicates a connection between the experience of anxiety and certain physical phenomena (Belik et al., 2008; Harrington & Antony, 2008). On a general level, there is evidence of comorbidity between anxiety disorders and physical illness (Belik et al., 2008; Harrington & Antony, 2008). The causal relationship, and nature of interactions between, anxiety and physical health are not definitively known (Belik et al., 2008), although there is increased recognition of the “bidirectional relationship” between anxiety and “chronic medical conditions” (Kariuki-Nyuthe & Stein, 2015, p. 85). Connections between anxiety and the following physical conditions have been explored with varying degrees of thoroughness: cardiac conditions (e.g., Albert et al., 2005; Musey et al., 2018), gastrointestinal disorders (e.g., Kaplan et al., 1996), respiratory complaints such as Asthma (e.g., Goodwin et al., 2003), chronic pain (e.g., McWilliams et al., 2004), metabolic disorders (e.g., Kruse et al., 2003), cancer (e.g., Zhu et al., 2017), and diminished autonomic flexibility and lowered perception of bodily states (e.g., Hoehn-Saric et al., 2004).

Aside from physical comorbidities, the experience of anxiety is intrinsically embodied; characterised by both somatic and cognitive sensations (Stein, 2020). These can include unease, tension, and “worried thoughts,” which co-present alongside various physiological sensations (Carlucci et al., 2018, p. 1). In acknowledgement of the embodied nature of anxiety, GAD classifications from the DSM-V and ICD-10 and scales such as the Cognitive-Somatic Anxiety Questionnaire (CSAQ) and the State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA) list a variety of somatic symptoms. These include feeling fatigued, muscle tension and weakness, heart palpitations, increased heart rate, dry mouth, sweating, clamminess, shaking, chest pain, breathing difficulties, stiffness in arms and legs, dizziness, diarrhoea, tension or butterflies in the stomach, chills, hot flushes, numbness, feeling restless, or edgy (Nutt et al., 2008; Ree et al., 2008; Steptoe & Kearsley, 1990). In recognition of the somatic aspects of anxiety, diagnosis of anxiety via a focus on physiological assessment has been mooted (Meer et al., 2016) as has the management of certain types of anxiety via physical exercise (Anderson & Shivakumar, 2013).

While widely used anxiety classifications, such as the DSM, recognise physiological dimensions of anxiety, they have been critiqued for failing to adequately capture the visceral, “felt” experience of anxiety. As health and illness philosopher Kevin Aho (2020, p. 260) notes:

...[while] the DSM is comprehensive in offering descriptions of diagnostic criteria, risk factors, differential diagnoses, and the functional consequences of anxiety, it offers little insight into the first-person experience, into “what it means” or “what it feels like” to be anxious.

Recent research addresses this issue by extending knowledge regarding the lived experience of anxiety. For example, Woodgate and colleagues (2020) show that pain,

experienced somatically, physiologically and psychologically, is a defining characteristic of anxiety disorders for young people (see also, Leone et al., 2013).

In this paper we respond to Aho's call for insights regarding "what it feels like" to be anxious, with the aim of contributing to the corpus of qualitative knowledge about the lived experience of anxiety (e.g., Larsen et al., 2018; Leone et al., 2013; Woodgate et al., 2020). We focus on what anxiety "feels like" in an embodied sense. We use the term embodiment to denote "living in, perceiving, and experiencing the world from the location of our bodies" (Boydell et al., 2020, np; Csordas, 1999). Our focus on embodiment is also informed by warnings that dualistic medical perspectives – that depend on a siloed approach that treats the mental and physical as discrete – can have a limiting, even damaging, effect on health outcomes (Burgmer & Forstmann, 2018; Curtis, 2010; Mayou & Farmer, 2002; McLean, 1990; Mehta, 2011).

Research Methods

Data were collected during the 2016 Sydney Science Festival. The festival is held annually in conjunction with Australia's National Science Week (MAAS, 2020; National Science Week, 2021). The festival seeks to celebrate, explore, and extend public knowledge about, science. We felt the festival was an excellent opportunity to share creative research methods (such as body mapping) with the general public, and felt that, given the ubiquity of anxiety, body mapping might offer a creative and potentially fun means, for the public to explore anxiety in a supported and reflective manner. Ethics approval was gained from the UNSW HREC Ethics Committee in 2016 (protocol number HC16570).

The research team brought a mix of skills and knowledge to the project. KB was the project lead, bringing extensive experience utilising qualitative and arts-based research methods in health research settings, including arts-based research with a variety of young people including those experiencing psychosis, and anxiety and depression. PV and AT were, at the time, research assistants working as part of KB's team. They were steadily gaining experience administering, and undertaking analysis generated from, arts-based research methods having recently completed a body mapping project with young people with psychosis (Boydell et al., 2021). PM brought wide-ranging experience working at the nexus between arts creation, contemplative inquiry, and engagement with qualitative research methods. The whole team were passionate about exploring the body mapping method, and about extending knowledge about lived and embodied experiences of anxiety as experienced by members of the public.

We held a workshop that was free, open to members of the public, and facilitated the creation of body maps to explore embodied experiences of anxiety, and non-anxiety. The workshop was intended as both a fun activity and a research event. We included a focus on anxiety as well as non-anxiety for three reasons: (1) we sought to generate data about the experiential differences between anxious and non-anxious states; (2) we hoped taking a comparative approach between anxious and non-anxious states would extend and deepen participant reflections about their experiences; and (3) we sought to enable participants to explore positive experiences and sensations, alongside difficult ones, to mitigate against any unease caused by reflecting on, and representing, mental distress caused by anxiety.

The three-hour session was held in a large space at the National Institute of Dramatic Arts (NIDA) in Sydney and was designed and facilitated by PM, with assistance from KB, AT and PV. Body maps were produced by 35 participants. Informed consent was sought from participants. As the workshop took place in the context of the festival, and participants were members of the public, they were not screened or asked to report on their health or demographic

information. The research team observed that participants were from a wide age range and that a mix of genders were present, though the majority were feminine presenting.

Body Mapping Method

Reflecting our embodied approach, we utilised body mapping for data collection. This is an arts-based research method that emerged in the social justice space (MacGregor, 2009) and has been used to collect data in a variety of areas of social and health research (i.e., Boydell, 2021). Body mapping represents a deeply personal form of storytelling and is a creative way to represent and explore embodied experiences (De Jager et al., 2016). To create a body map, a participant lies on, or leans against, a large piece of paper or fabric in a position of their choosing, and an outline of their body is traced onto this material. Following prompts and discussion with facilitators and fellow participants, the mapper adorns this bodily outline with painting, writing, drawing, or collage (De Jager et al., 2016; Gastaldo et al., 2012). This process is usually iterative, with map creation taking place over two, three, or more sessions (e.g., Gastaldo et al., 2012; Solomon, 2007; Vaughan et al., 2021). For this research project, we developed a short, single-session workshop in line with the requirements of the festival. We were interested in experimenting with this abridged mode of delivery, as extended body mapping sessions are time-intensive and require a large commitment from participants that is not always tenable.

Innovative Brief Workshop

Holding a single, short workshop was a challenge but also presented the team with an opportunity to explore an abbreviated body mapping approach. Drawing on her expertise in contemplative approaches, PM created an innovative contemplative workshop. The growing field of contemplative inquiry links somatic (bodily) awareness, non-dualism (rejection of the view of the mind and body as separate), contemplative philosophy, and contemplative consciousness (development of awareness or attentiveness, meditative engagement). It uses contemplative practices to support the individual to develop heightened somatic and psychological awareness (e.g., Payne et al., 2015; Tzu et al., 2015). The contemplative, embodied approach was used to mitigate against the cognicentrism inherent in research methods, e.g., focusing on the “use of the mind and its intellectual capacities” (Ferrer et al., 2005), and on the “cognitive-disembodied,” by subjugating the “subjective-somatic” (Brockler, 2021).

PM designed the workshop from an integral perspective (Ferrer, 2000, 2017) that gives equal weight to affective, somatic, and mental experience. PM drew on her extensive experience with contemplative practice to facilitate the workshops. The brief innovative workshop structure is now described.

1. *Orientation* (10 mins): Participants were introduced to the workshop/research aims (e.g., to explore and represent embodied experiences of anxiety and non-anxiety). Key concepts and methods (e.g., embodiment, anxiety, body mapping) were defined. An inclusive, broad definition of anxiety was articulated to participants, with the facilitator acknowledging both every-day experiences of anxiety, and pervasive or clinically diagnosed manifestations of anxiety. Participants were asked to reflect on their own experiences of anxiety, and it was emphasized that that research team was interested in learning about the participants’ subjective, personal experiences of anxiety (as they understood and conceptualized

them). Finally, participants were invited to draw on contemplative, reflective, and meditative techniques introduced by PM in order to release any self-judgement, maintain silence where possible (to support internal bodily focus), let go of striving for a particular creative or artistic outcome (and instead explore their experiences intuitively), and to pay attention to their body and how it felt as they worked creatively.

2. *Practice One – “First Impulse”* (20 mins): Participants were introduced to, and then guided through a Yoga Nidra practice (a guided meditation in which a participant brings awareness to different parts of their body, and through this, develops a sense of their thoughts, somatic feelings and emotions). Next, using a somatic focus on art materials (e.g., bringing awareness to the feeling of a pencil in their hand) participants were guided to visually represent their thoughts and emotions.
3. *Practice Two – “Focusing”* (15 mins): Participants were led through a breath awareness exercise, where attention was placed to the sensation of breathing. This practice engaged interoceptive (perception of internal sensations in the body), proprioceptive (awareness of bodily actions, location, and movement) and exteroceptive (sense of the body in relation to external stimulus) awareness. Participants moved between focusing on the inner body and sensing exteroceptively. Experimenting with these bodily forms of awareness was intended to strengthen a participant’s ability to focus on their bodies and their experiences. This was followed by an art activity in which participants used colour, mark-, and symbol-making to represent their experience of internal and external bodily awareness. Participants were invited to take a short break (5 mins).
4. *Preparing to Trace* (20 mins): Participants were guided through a longer Yoga Nidra practice to support their internal somatic reflection. Participants then undertook a short contemplative movement practice called “the little dance” derived from Steve Paxton’s Contact Improvisation (Smith & Nelson, 1997) intended to further facilitate focus on embodied experience. Participants were then invited to trace two body shapes on their maps: one representing their anxious body, and one their non-anxious body. Participants were encouraged to purposefully chose body shapes that would communicate something of their anxious/ non-anxious experience to others viewing their maps.
5. *Mapping* (1hr 30 mins): Drawing on reflections undertaken across previous steps, participants illustrated their maps to represent their experience of anxiety and non-anxiety. When representing non-anxiety participants were encouraged to consider what helped them alleviate or manage their anxiety. This was done to help participants to reflect on their experience of non-anxiety. When participants finished their maps, they were guided through a short breath and body awareness exercise to ground and extrovert their awareness.
6. *Reflection* (40 mins): Rather than the extended one-on-one interview that typically follows the completion of a body map, participants were asked to

explain what they had represented in their map by writing on two sticky-notes (one describing the anxious body, and one the non-anxious body) and affixing these to their map. This was done to enable participants to narrate or explain their maps and the significance and meaning of visual features they had utilised. It was anticipated that this would enhance the research teams' analysis of visual features in maps and help to establish a lexicon around individual experiences of anxiety. To debrief and encourage further reflections, participants were invited to form small groups and discuss their work. They were also asked to elect a representative to narrate an overview of what was discussed in small groups to the wider group. This was done to enable participants to look at the maps created by others, and to share their own experiences (if they felt comfortable doing so). In previous workshops we have found that participants enjoy being able to look at the work of others, and to share common (or disparate) experiences, and that this process can act as a "wind-down" activity that helps participants transition to leaving the workshop.

Data and Data Analysis

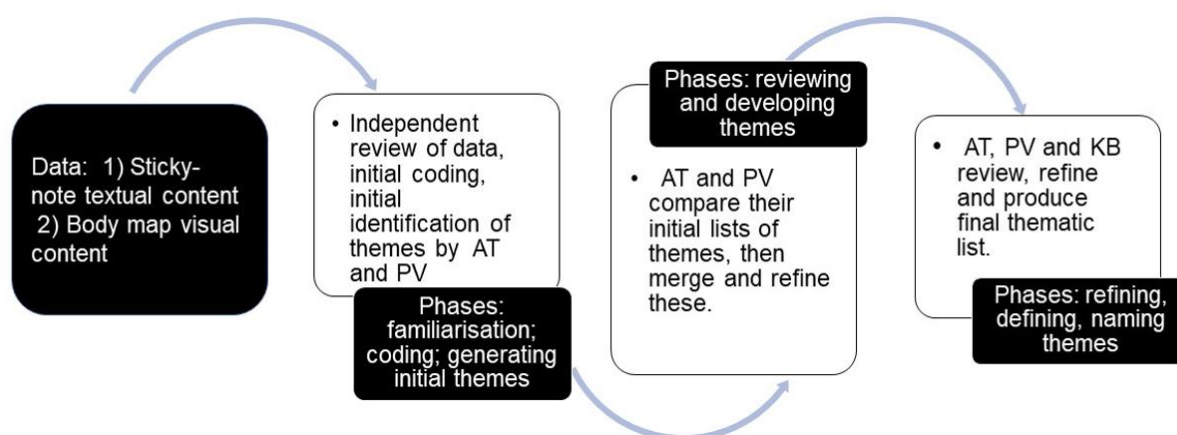
Data collected during the workshop took the form of body maps and accompanying sticky-notes. Body maps contained two life-sized body outlines, one representing the anxious body, and one the non-anxious body. These were decorated with visual forms – both abstract and representational – and occasionally text. Sticky-notes contained text handwritten by participants that described and interpreted the anxious and non-anxious states and experiences represented by participants. These took one of the following forms: a list of words (e.g., "CONTRACTED. FOETAL POSITION. TENSE HEAD. HEADACHE. CLAMP. BUZZING IN MY BODY"); sentence fragments (e.g., "thousands of pins to the heart/ hear sinks/ skin tingles, anxiety though the skin"); or a brief descriptive statement (e.g., "The symbols and lines on the brain area represents my thinking when stressed/anxious. My thinking becomes very foggy, and I can hardly think. Plus [I] lose control of myself in every way...").

Body maps and sticky-notes were analysed by PV and AT using the iterative, thematic analysis method outlined by Braun and Clarke (2020). This approach involves six recursive phases: familiarisation; coding; generating initial themes; reviewing and developing themes; refining, defining, naming themes; and writing up (Braun & Clark, 2008, 2020). In view of goals of the workshop, PV and AT used this recursive process to identify: (i) the experiences of anxiety and non-anxiety described by participants on sticky-notes, (ii) the visual forms used to represent anxious and non-anxious experiences on body maps, (iii) the relationship between somatic sensations of anxiety/non-anxiety and specific body parts as described on sticky-notes, and (iv) any unexpected or outlier data that was not directly connected to points i-iii. Braun and Clarke's approach was used as it enabled the research team to identify common threads and repeated patterns of meaning embedded in the data, while also ensuring unique experiences were identified and analysed.

AT and PV first independently engaged in initial analysis (phases: familiarisation; coding; generating initial themes). They each reviewed the content of sticky-notes, coding each mention of an embodied sensation, and instances when participants had identified connections between somatic sensations and specific body parts. AT and PV also used NVivo 12 to independently code visual dimensions of maps (e.g., images, symbols, mark-making used by participants). AT and PV each independently reviewed the resultant coding lists they had produced and generated an initial list of preliminary themes. AT and PV then compared, refined and ultimately merged their theme-lists to produce a single, overarching list of themes (phases:

reviewing and developing themes). KB, AT and PV then collaboratively reviewed this theme list to further refine the coding structure (phases: refining, defining, naming themes). See Figure 1 for an overview of this process.

Figure 1
Data Analysis Process



Results

Anxious Bodies

Participants represented a diverse range of embodied experiences resulting from anxiety, with 46 categories of sensation represented across maps. What follows is an overview of sensations – “tightness,” “pain” and “heaviness” – that each account for more than 5% of those cited by participants. Collectively, these sensations account for a little over 32% of all sensations reported (see Table 1).

Table 1
All Anxiety-Related Sensations

<i>Sensation</i>	<i>Including</i>	<i>% of Count</i>
<i>Tightness</i>	Tension, Knots, Clenched, Grasping.	19.3
<i>Pain</i>	Random Aches, Hurt That Can Be Painful, Barbs Inflaming, Darts.	8.7
<i>Heaviness</i>	Weighed Down, Weigh Heavy, Heavy Weight, Feeling the Weight of Expectations.	5.3
<i>Sick</i>	Poison, Upset Stomach, Nausea.	4.0
<i>Loss of Control</i>	Chaos, Unstable.	3.3

<i>Buzzing</i>	Over Stimulated, Thoughts Racing, Buzzing Feeling, “What If?” Thoughts Won’t Stop.	3.3
<i>Constricted</i>	Enclosed, Locked In, Pressing In, Contracted.	3.3
<i>Curled Up</i>	Crouching Over, Foetal Position, Small Positions.	3.3
<i>Foggy Thinking</i>	Confused, Can’t Organise, Can Hardly Think, Muddled.	3.3
<i>Nervous</i>	Fearful, Worried.	3.3
<i>Overwhelmed</i>	Everything Feels Too Much, Everything Socially Is Too Much, Many Things Going On, Failure of Body Systems.	3.3

Sensations accounting for <3%: Anger, Blocked, Breathing Effected, Inadequate, Isolated, Shaking, Sharpness, Broken, Emotional, Palpitations, Sorrow, Stressed, Tingles, Stuck, Under Attack, Explosions, Can’t Push Away Anxiety, Depressed, Desire to Escape, Dirty, Disassociating, Discordant, Dry, Frozen, Hot, Insomnia, Lack of Energy, Numb, Patronised, Screaming, Shattered, Sinking Feeling, Stiff, Strong Sensations, Sweat, Uncomfortable.

“Tightness” was the somatic experience of anxiety most frequently mentioned by participants (~19% of all mentions). The designation of Tightness was associated with sensations of rigidity, clenching, and tension. For example, one participant wrote that their anxious body was characterized by “stomach/abdomen in a knot. Right shoulder radiating tightness...” Tightness was reported as both a diffuse or whole-body sensation,¹ and was also specifically felt in the stomach, throat, shoulders, hands, jaw, head, neck, muscles, and chest. Participants took various approaches to the visual representation of tightness in their maps. When tightness manifested in specific body parts, often a particular visual symbol (designating this tightness) was drawn onto the impacted area. For example, the creator of Body Map (BM) 20 (Figure 2), chose ultramarine to represent somatic sensations of anxiety. They drew a narrow blue line starting at the neck, bisecting the lungs, and extending into the gut to represent “tightening in my throat and stomach.” This line was bordered by small yellow arrows pointing towards the centre of the line, evoking a sense of pressure pushing inwards. At the neck this line is augmented by a gridded rectangle, also adorned with arrows, further emphasizing the neck as a site of anxiety.

¹Where participants have not specified the bodily location sensations are felt, we have inferred this sensation impacts their whole body. There were also occasions when participants explicitly described sensations as impacting their whole body.

Figure 2
BM20

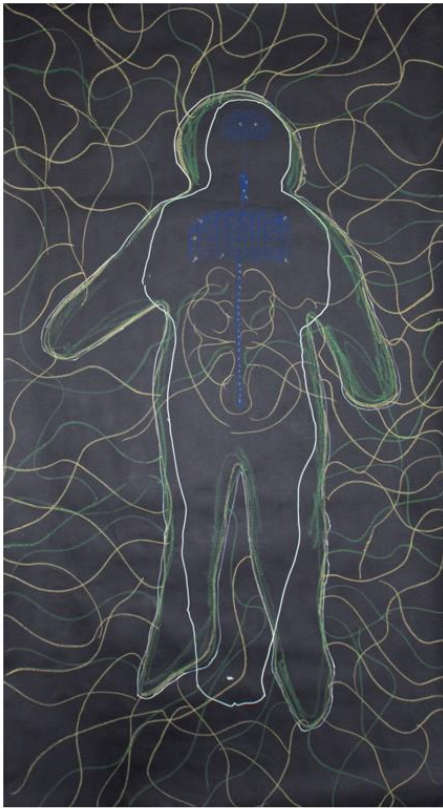
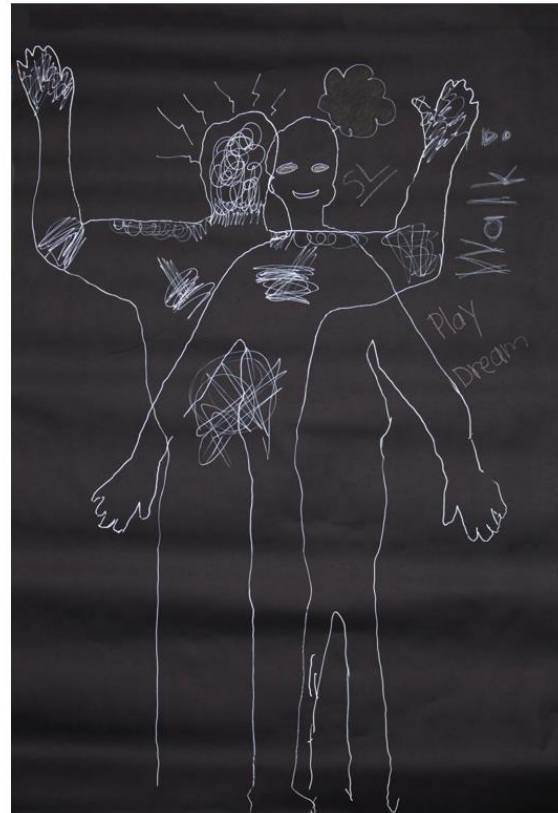


Figure 3
BM4



“Pain” was the second most frequently cited somatic experience (8%). Pain was described as both an overarching physiological experience, and was also experienced in the stomach, chest, heart, and shoulders. Pain was often described evocatively by participants using words such as “darts,” “barbs,” “inflaming.” Depictions of pain in maps are diverse, with various figurative and abstracted forms used to draw attention to the specific bodily locations where pain is felt. For example, the creator of BM4 (Figure 3) noted that they had used “crossed lines” as a symbol for “pain, hurting, [and] fear.” These crossed lines mark the stomach, chest, elbows, throat, and hands of the anxious body. Here a single graphic technique – creating a cross hatching of lines – is used to represent different, though potentially connected, embodied experiences of anxiety.

“Heaviness” was the third most frequently cited sensation (5%) and was typically described as being connected to the sensation of bearing weight or being weighed down. Heaviness was almost universally described as being felt across the whole body, with only one participant linking the sensation to a particular body part (the chest). In BM23 (Figure 4) the sensation of heaviness is represented by a chain suspended between two intricately drawn multi-faceted crystals. The creator of BM23 evocatively described their use of this symbol on their sticky-note: “Anxiety feels like time has stood still, shattered and suspended in fear. Chains weigh heavy...”

Figure 4
BM23



Anxiety in Body Parts

As indicated above, somatic experiences of anxiety were both directly connected to specific body parts and described as all-over bodily experiences. Sticky-note analysis reveals the parts of the body most frequently associated with anxiety (See Table 2).² The stomach was most frequently identified as the site of anxious experience (21% of all body parts mentioned). The stomach was the site of sensations of “tightness,” “pain,” “general anxiety,”³ “sickness,” “sharpness,” and being “blocked.” The head was the second most frequently cited (14%). Sensations associated with the head were “general anxiety,” “constriction,” “tightness,” “foggy thinking,” and “screaming.” The heart (9%) was associated with “palpitations,” “pain,” “sharpness,” and a “sinking feeling.” Hands (7%) experienced sensations of “tightness,” “shaking,” “sweating,” and “tingles.” The prevalence of the stomach and heart as sites of anxiety reflect the somatic symptoms and measures used to detect anxiety in the diagnostic and scale tools mentioned above. The association of anxiety with the head and hands are not as common in these tools although the sensations experienced in these sites do connect to common somatic traits of anxiety.

² We have counted instances when body parts were directly identified by participants.

³ General Anxiety denotes that the body part in question was identified by participants as a site of experiences of anxiety, but the qualities of this anxiety were not described by a participant.

Table 2
Body Parts Associated with Anxiety

<i>Body Part</i>	<i>% of count</i>
<i>Stomach</i>	21.5
<i>Head</i>	13.8
<i>Heart</i>	9.2
<i>Hands</i>	7.7
<i>Chest</i>	6.2
<i>Eyes</i>	6.2
<i>Shoulders</i>	6.2
<i>Throat</i>	6.2
<i>Arms</i>	4.6
<i>Mouth</i>	3.1
<i>Neck</i>	3.1
<i>Skin</i>	3.1

Body parts accounting for <3%: Collarbone, Feet, Jaw, Legs, Limbs, Muscles.

Non-Anxious Bodies

Body mappers were also asked to represent their bodies when they were not experiencing anxiety (here described as non-anxious bodies). What follows is an overview of non-anxious sensations accounting for more than 5% of those identified in sticky-notes. These four sensations – “Energetic,” “Ordered,” “Open,” “Calm” – make up just over 55% of all sensations mentioned. In contrast to descriptions of anxious bodies, mappers only very infrequently described non-anxious sensations as connected to specific parts of their body. The stomach (experiencing “contentment”), feet (feeling “energetic”), heart (feeling “open”), legs (associated with “relaxation”), and skin (connected with “calm” sensations) were each mentioned once.

Table 3
All Non-Anxious Sensations

<i>Sensations</i>	<i>Including</i>	<i>% of count</i>
<i>Energetic</i>	Active, Motivated, Outward Energy, Bubbly, Vibrance	17.5
<i>Ordered</i>	Organised, Controlled	15.9
<i>Open</i>	Expansive, Heart Open, Open Mind, Open to Sound and Energy of Universe	12.7
<i>Calm</i>	Peaceful, At Peace with My Own Skin, General Sense of Calm	9.5
<i>Balanced</i>	Centred, Stability, Grounded	6.3
<i>Light</i>	Floating, Airy	6.3
<i>Positive feelings</i>	Joy, Feeling Okay, Contentment	6.3
<i>Embodied</i>	Wholeness, Feel All of My Body and All of Me, Joy in My Body	4.8
<i>Self-aware</i>	Reflective	4.8

Sensations account for <3%: Clarity, Effortless, Flexibility, Flowing, Growth, Harmony, Protected, Return to normal, Softness, Warmth.

The most cited sensation related to non-anxious bodies was the feeling of being “Energetic” (17%), described by participants as feeling “energised,” “active,” “motivated,” etc. Energetic sensations were often represented using lines radiating from non-anxious bodies or circulating within them. For example, the creator of BM1 (Figure 5) uses a series of concentric white lines, emanating from the head of their non-anxious body to represent “energy radiating out.”

Figure 5
BM1

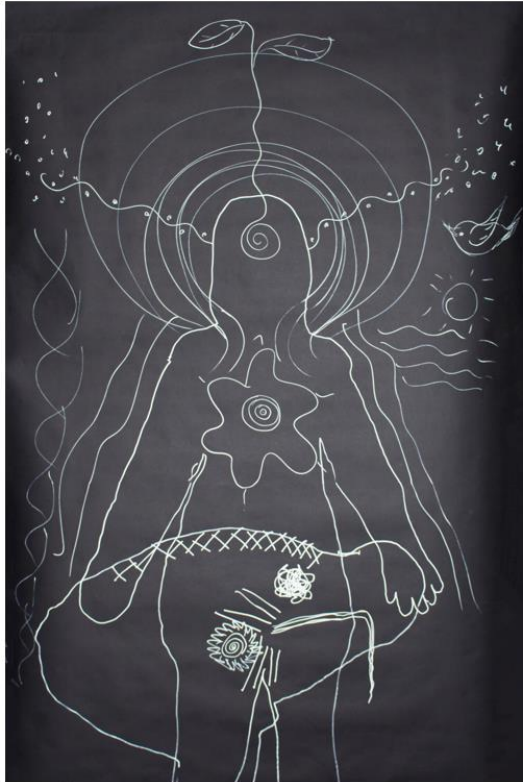
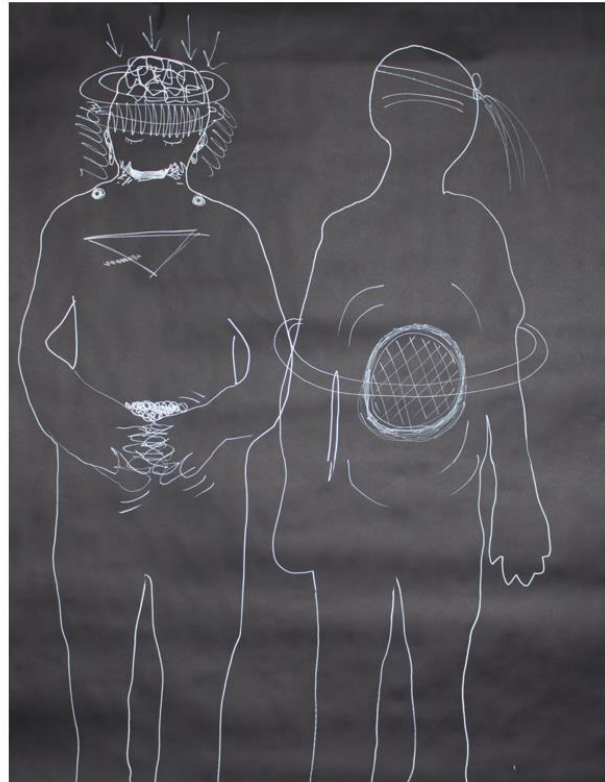


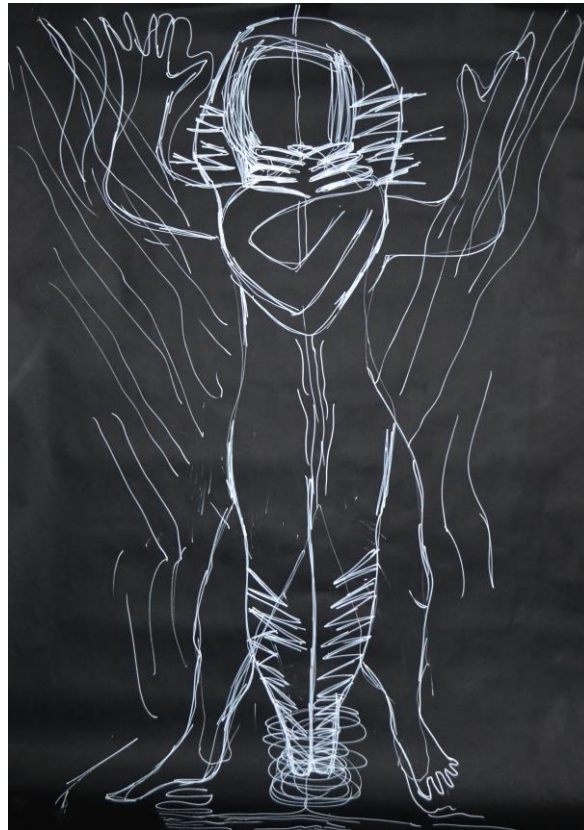
Figure 6
BM5



Feeling “Ordered” (including feeling “in control” and “organised”) was the second most discussed sensation (under 16%). Representations of this sensation were diverse, with no unifying approach. The creator of BM5 (Figure 6) circled the head of their non-anxious body with two fine white lines which meet at the right side of the face and spill like a cascade of water toward the right shoulder. This was done to evoke the experience of “thoughts [moving] in one direction with an outlet. Flowing in a controlled way, not spinning out of control.”

The sensation of feeling “Open” accounted for ~13% of mentions. Openness was associated with feeling expansive, and receptive. As one participant wrote, “I connect with people and feel expansive.” Frequently this sensation was represented by the pose taken by the non-Anxious body; with arms lifted towards the sky or spread-wide like wings. BM28 (Figure 7) typifies this approach; here the non-anxious body’s arms are lifted above the head, with open palms turned upwards.

Figure 7
BM28



A feeling of “Calm” (also described as feeling peaceful) was the fourth most frequently mentioned sensation (9%). Representations of calm were not unified, with no single visual feature used to represent this experience.

Visual Characteristics

Participants used diverse approaches to visualising their embodied experiences of anxiety and non-anxiety. While it is difficult to generalise about the aesthetic approach of participants, visual analysis reveals certain trends relating to the pose of bodies, and the prevalence of figurative versus abstracted forms.

Poses

During the body mapping workshop, participants were directed to select two poses (the positions their body was to be traced in) to represent their experience of feeling anxious or non-anxious.⁴ A hunched pose – with the body turned on its side with limbs drawn towards the torso – was the position most frequently chosen by mappers to represent their anxious body (Figure 8). Participants described this position as being “curled up,” or in the “foetal position,” as inhabiting “small positions,” being “closed but full,” or as “crouching over protecting my sensitive parts.” This pose communicates a sense of vulnerability, perhaps even fear, evoking

⁴ Some participants chose to overlap their body-outlines. In these cases, anxious and non-anxious bodies were not clearly designated.

the action of hunching over to protect oneself from an onslaught. In contrast, a neutral stance was most frequently used to represent the non-anxious body. Here, the body was positioned with legs hip-width apart and arms positioned by the side, or a little elevated from the side of the body, conveying a sense of balance, stability, and openness (Figure 8).

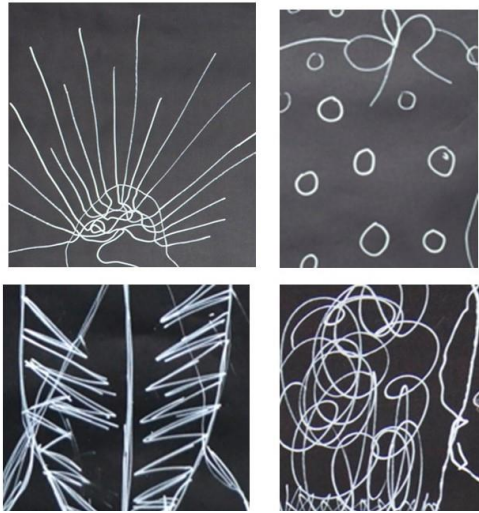
Figure 8

BM10



Figurative and Abstract Representation

The diverse visual forms used to adorn anxious and non-anxious bodies were coded into 51 categories. Review of these categories shows that participants used both figurative forms (e.g., depictions or recognisable objects, people, or places and common symbols such as the “peace sign”) and abstract forms (e.g., non-figurative images, lines, shapes, repeated patterns) in decorating their maps. Abstract forms – the most common of which include straight lines, circular shapes, scribbles and jagged lines (Figure 9) – appear most frequently across maps (making up just over 67% of all forms used). Figurative forms – such as hearts, human and animal figures, and depictions of flora (Figure 10) – make up just under 33% of all forms used. Abstract and representational forms are sometimes co-present on a single map.

Figure 9*Common Abstract Forms***Figure 10***Common Figurative Forms*

Abstract forms were most associated with anxious bodies (although they also frequently appear on non-anxious bodies). Conversely, figurative forms, although less commonly used, appeared most often on non-anxious bodies.

Discussion

Anxious and Non-Anxious Bodies

As described above (and illustrated in Table 2), body maps and sticky-notes captured a diverse array of somatic sensations associated with anxiety; 20 out of the 47 sensations listed on sticky-notes were unique to individual maps. This suggests that although there are clear points of commonality, embodied experiences of anxiety can be varied and highly specific to the individual. Despite this diversity, broadly, sensations were described as a hindrance that caused sensations of agony, confusion and disorientation, and particular forms of impaired bodily function (such as shortness of breath, or heart palpitations).

In contrast to the diversity of anxious bodily experiences, analysis of sticky-notes revealed only 19 broad categories of sensation associated with non-anxiety (see Table 3). There are various factors that might account for this. For example, our team speculated that participants might have had less experience reflecting on, and discussing, non-anxious states, as the absence of anxiety does not require the same level of reflection as feeling anxious does (e.g., anxiety could prompt individuals to seek therapeutic support, while non-anxiety could be conceived as a “normal” state of being). Alternatively, the exercises undertaken at the start of the workshop may have primed participants to reflect on their anxiety, but not facilitated the same extended consideration of non-anxiety. Or, finally, perhaps there is a greater level of homogeneity in the experience of non-anxiety.

There was greater unity in terms of non-anxious sensations, than with those listed for anxiety. In contrast to categories of anxious sensation, only ten sensations of non-anxiety were unique to individual maps. Broadly, experiences of non-anxiety can be classified as positive and characterised by the absence of distress, pain, and confusion. Further, a comparison between anxious and non-anxious sensations reveals points of symmetry. For example, “heaviness” in the anxious body contrasts with “lightness” in the non-anxious body. Similarly,

“constriction” is juxtaposed by “openness,” and “buzzing” finds its opposite in a sense of “calm.” This may reflect the binary approach (comparing anxious and non-anxious experiences) taken in the body mapping workshop, and/or could reflect participants’ own conceptualisation of anxiety and non-anxiety as oppositional states.

Somatic GAD Classifications and the Interconnection of Somatic, Social and Emotional Sensations

The body maps described here provide insights regarding points of convergence and difference in embodied experiences of anxiety, and non-anxiety. Many of the anxiety-sensations reported by participants correlate with those present in GAD classifications in the DSM-V and ICD-10 and in scales such as the CSAQ and STICSA. There were a small number of items that were not represented on maps or sticky-notes, most notably clamminess, diarrhea, dizziness and muscle weakness. Where there are points of correlation, the language used by participants adds descriptive depth to the somatic dimensions of anxiety outlined in these classifications and scales. For example, the ICD-10 symptoms of chest or muscle pain correlate with the participant’s identification of “Pain” as a feature of anxiety. Participant representations of pain (see for example, Figure 3), and the language they used to evoke this experience – for example, “random aches,” “barbs inflaming,” “darts” – add a vivid, embodied dimension to common anxiety symptoms.

There were various anxiety sensations described by participants that did not correspond to DSM, ICD, CSAQ or STICSA items. These include potentially somatic sensations such as “heaviness” (also described as feeling weighed down). Other unique sensations described by participants – such as “feeling dirty” or “under attack” – could be classified as psychological or emotional components of anxiety, rather than somatic ones, this raises an important issue which emerged during data analysis. While the workshop was oriented towards exploration of embodied sensations, and we have described anxious and non-anxious sensation-categories under discussion as embodied, it is revealing that many of the identified sensation-categories are not purely somatic and have cognitive, emotional, and social dimensions. For example, the sensation of “heaviness” encompasses both the body feeling heavy, and the socio-emotional sensation of bearing the weight of other people’s expectations. Similarly, “buzzing” describes physical restlessness as well as the psychological sensation of racing thoughts. In sensational categories such as these somatic, cognitive, emotional and social experiences of anxiety cannot be easily disentangled. Rather, these supposedly discrete forms of experience appear to coalesce to produce a particular embodied sensation.. The presence of these experiential categories also affirms the sensational interconnections between the psychological and physical dimensions of anxiety, and, more broadly, the intersections of somatic and emotional states (Craig, 2004; Dalgleish, 2004; Damasio, 1999, 2010; Dunn et al., 2009).

Visualising Anxiety and Non-Anxiety

The visual approaches utilised by participants were diverse and difficult to uniformly categorise or classify. However, as outlined above, analysis revealed that abstract forms were most commonly used in the representation of anxious bodies (although they also frequently appear on non-anxious bodies). Conversely, figurative forms, although less commonly used in general, are most often featured on non-anxious bodies. There are a number of ways to account for the predominance of abstract forms on maps. For example, participants may not have had artistic experience, and so may have felt more comfortable using an abstracted visual language, rather than undertaking the potentially daunting (and time consuming) task of illustrating a map with figurative forms. Further, during preparatory drawing exercises participants were

encouraged to experiment freely with gestural mark making and this might have inspired the use of abstract forms. Abstract forms may also have been used because of their expressive potential; the evocative, non-representational mark making used by many participants has an affective power which has the potential to communicate something of the experience of anxiety to a viewer. For example, BM29's creator described their experience of anxiety as feeling "like every blood cell is a dart...everything sharpens inside me... *What if* thoughts won't stop" (Figure 11). This sensation is represented by a flurry of swiftly drawn straight lines which seem to shoot around the hunched anxious body. A circle of jagged lines surrounds the stomach, further contributing to the impression that the anxious body is in turmoil. The application of these lines – which are loosely drawn, with little attention paid to neatness, or exactitude – give a clear impression of the mapper working in haste, and applying lines assertively. This imbues the anxious body with a sense of frenetic energy, something which clearly correlates with the maker's experience of anxiety. Figurative forms were often used to illustrate things which help to alleviate anxiety, such as friends, family, relaxation activities, or nature. There is an aesthetic logic at play here, with participants strategically utilising the visual language which best evokes and communicates the subject being represented. For example, actions (like visiting the beach), experiences (help seeking with friends), or things (books, or pets) were predominantly represented in figurative ways. Whereas haptic, internal, and transitory sensations of anxiety and non-anxiety were represented using abstracted forms.

Figure 11
BM29



Generalisability

In sharing the body maps created by participants, we seek to provide an insight into subjective and embodied experiences of anxiety. We do not make claims that our findings are generalisable beyond the research cohort, indeed given the unique sensations of anxiety

experienced by participants, we seek to highlight the heterogeneous and subjective lived experience of anxiety. As a result, we seek to contribute to the growing body of research which documents the sensational and emotional nuances of lived mental health experiences (e.g., Larsen et al., 2018; Leone et al., 2013; Stubbs et al., 2021; Woodgate et al., 2020).

Limitations

There are several project-limitations that we would like to acknowledge. Firstly, our engagement with members of the general public, rather than a clinical population, has likely impacted the type of data that was produced during the workshop, perhaps contributing the diversity of anxiety experiences captured. Further, lack of participant screening or collection of demographic information (including participant mental health diagnosis) has meant we have not been able to draw conclusions or make inferences about any correlations between participant characteristics/health status and experiences of anxiety and non-anxiety. There are also limitations associated with our use of the abbreviated body mapping approach. For example, during the short mapping session there was only limited time for participants to engage in extended reflection about their experiences (as compared to longer body mapping workshops). There was also no opportunity for participants to work iteratively on their body map and make changes or additions (as there is in body mapping sessions that run across several days). There was little time to foster trusting connections between researchers and participants which can be central to building a safe research environment within which to address difficult issues (Vaughan et al., 2021). All this may have resulted in data that was less richly detailed than that elicited across extended body mapping sessions. However, there were also positives associated with the abbreviated method: the brief timeframe encouraged participants to be intuitive and experimental, and to connect with, and represent, what they were feeling “in the moment.” Further, the contemplative process appears to have largely mitigated stress resulting from reflecting on experiences of anxiety. Finally, while sticky-notes provided useful insights regarding the creative intentions of mappers, there were instances when additional information from participants regarding features in maps, would have helped to extend and deepen our analysis. Post-mapping interviews offer an easy way to collect detailed information about a participant’s body map, and the experiences represented within it.

Conclusion: Future Research

In this paper we have sought to contribute to a small but expanding body of research that extends knowledge about lived experiences of anxiety using evocative and creative research approaches. By way of conclusion, we share our reflections about future research that might further extend knowledge about lived, and felt, experiences of anxiety.

In view of the limitations associated with this project, we feel that body mapping could fruitfully be undertaken with clinical and other populations to extend knowledge about subjective and lived experiences of anxiety. Undertaking this research with specific cohorts (e.g., those with a GAD or PTSD diagnosis) has the potential to further our understanding of the shared, and unique, emotional/experiential/somatic characteristics of anxiety. Further, evaluative research is required to test the relative efficacy and impact of the short body-mapping approach utilised in this project. Given the detailed information about anxiety elicited during this project, future research might also explore the potential clinical application of this body mapping method. Building on other arts-based assessment approaches in development (e.g., Hamama & Alshech, 2020), an abridged body mapping intervention could be used in processes of diagnosis and treatment of anxiety. For example, a short body mapping intervention could be paired with web-based (Ludlow, 2021), virtual reality (Ticho, 2021) or

wearable (Edwards, 2021) body mapping technologies to provide on-the-spot, dynamic tools through which to discern and alleviate embodied experiences of anxiety. Finally, analysis of the visual approaches utilised by participants supports our belief that exhibiting maps could be a powerful means of translating research knowledge to health users regarding the embodied, lived experience of anxiety (Boydell et al., 2016; Boydell et al., 2017). Evaluative research discerning the impact of such knowledge translation efforts would support best practice in arts-based knowledge translation.

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Acknowledgements: We thank participants for sharing their knowledge, experience, and artworks with us. We acknowledge Jill Bennett and George Khut for their attendance of the workshop. We thank the Sydney Science Festival for their support of this project. We acknowledge that this research took place on unceded Aboriginal land and pay our respect to the custodians of the Countries on which we learn and work.

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Article Citation

Vaughan, P., Tewson, A., Morgan, P., & Boydell, K. M. (2023). "Chains weigh heavy": Body mapping embodied experiences of anxiety. *The Qualitative Report*, 28(2), 583-606. <https://doi.org/10.46743/2160-3715/2023.5712>
