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1	The Use of Body-Mapping in Interpretative Phenomenological
2	Analyses: A Methodological Discussion
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7	Abstract
8	The increasing popularity of Interpretative Phenomenological Analysis (IPA) in social research
9	brings an increasing criticism about its validity, robustness and, more recently, its lack of
10	expressive features. Recently, the novel arts-based research approach called body-mapping was
11	recognized as enhancing social science research in creative and nuanced ways. Body-mapping
12	allows for unique insights into participants' lived experiences, the meaning thereof, and into
13	how meaning is impacted by their socio-cultural contexts. This article provides new
14	understanding about the potential use of body-mapping as part of an IPA framework by drawing
15	upon existing literature to critically discuss their philosophical and methodological congruence.
16	The following discussion demonstrates how particular strengths of body-mapping align with
17	weaknesses of IPA and that, when merged, they may be especially useful for research with
18	vulnerable and hard-to-reach populations. Limitations of this discussion and implications for
19	future research are provided.
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21 22	Key words: Interpretative Phenomenological Analysis, body-mapping, qualitative research methodology, arts-based research, emancipatory-based research
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Introduction

2	Interpretative Phenomenological Analysis (IPA) is derived from the field of
3	experimental psychology and continues to develop in format and status as a methodological
4	approach to qualitative research (Pietkiewicz & Smith, 2014). With its primary focus on
5	gathering thick descriptions about an individual's perspective and how the individual derives
6	meaning from their lived experience, IPA specifically attracts social scientists who seek to
7	explore people's encounters with sexual, mental, and physical health (Aldridge, Fisher, &
8	Laidlaw, 2017; Ali & Bokharey, 2015; Cronin & Lowes, 2015; Eatough & Smith, 2017;
9	Groves, Rayner, & Muncer, 2017; Smith & Osborn, 2014; Smith, Flowers, & Larkin, 2009),
10	and, more recently, to understand perspectives on business coaching and engineering
11	education (Kirn, Godwin, Cass, Ross, & Huff, 2017; Nanduri, 2017).
12	Nevertheless, this focus has attracted much debate around the quality and validity of
13	IPA's data analysis process (Brocki & Wearden, 2006; Gee, 2011; Larkin, Watts, & Clifton,
14	2006; Shaw, 2011). The IPA approach allows a researcher to interpret the participant's
15	interpretation of their lived experiences, also referred to as double-hermeneutics, and can
16	therefore be viewed as inviting researcher-bias and decreasing the validity of findings
17	(Chamberlain, 2011; Giorgi, 2010; Wagstaff et al., 2014). On the other hand, this argument is
18	opposed by scientists who stress that the engagement and reflection of one's own
19	predispositions (bracketing) is a central element of the IPA process (Cronin & Lowes, 2015).
20	Further, Smith (2011) stresses that there cannot be a 'one-size-fits-all' approach to judging
21	validity within IPA, as its focus is on individualized subjective accounts. Thus, when judging
22	quality/validity of IPA projects, researchers need to assess each project with uniquely-fitted
23	criteria, rather than measures to which all qualitative research must conform (Lincoln,
24	Lynham, & Guba, 2011; Rolfe, 2006). Consequently, Yardley (2000) provided a modified
25	version of the criteria used for general qualitative research, by having added factors deemed

1 more suitable for IPA, such as rigour, context, transparency and impact. Additionally, 2 scholars have criticized that the highly context-specific element of IPA, also referred to as 3 idiography, diminishes generalizability of findings and breadth of knowledge (Smith, Jarman, 4 & Osborn, 2009). However, researchers employing IPA seek to produce "theoretical rather 5 than empirical generalisability" (Wagstaff et al., 2014, p. 3) and deliberately embrace IPA's 6 idiographic element as to "capture what it is to be human at its most essential" (Smith et al., 7 2009, p. 38). This is plausible, as idiography is concerned with the particular (Vicary, Young, 8 & Hicks, 2016), and in qualitative methodologies the concept of generalizability honors the 9 ability to draw general and concrete conclusions from the particulars of life. In other words, 10 readers are trusted co-investigators who use the thick, rich descriptions of data to extract 11 knowledge and apply it in a way that is congruent with their particular situation (Merriam, 12 2009). Where generalizability was once an area of concern and criticism, leading 13 contemporary qualitative methodologists now esteem the idiographic feature of IPA and 14 consider the issue of generalizability to be resolved.

15 More recently, scholars have argued that IPA is missing expressive features which better illuminate the voices of participants (Shinebourne, 2011). Such features may include 16 17 artistic and expressive exercises to gain insight and to represent the participant's lived 18 experiences (O'Donoghue, 2009). In qualitative research, expressive methods have been 19 categorized into (a) visual art, (b) sound art, (c) performing art, (d) literary art, and (e) new media (Wang, Coemans, Siegesmund, & Hannes, 2017). For a discussion of the use of 20 21 expressive arts as standalone research methodologies, see Barone and Eisner (2012) and 22 Wang, Coemans, Siegsmund, and Hannes (2017). These types of research strategies are said 23 to be more difficult to justify regarding their quality and validity (Skop, 2016), and thus their 24 prospects to benefitting IPA have yet to be explored.

1	This article addresses this gap in knowledge by exploring the feasibility of using an
2	arts-based research strategy as part of an IPA framework. Specifically, this article will focus
3	on body-mapping, a form of art therapy which was modified in 2012 for use in qualitative
4	research to aide social scientists in exploring people's lived experiences as manifested in their
5	bodies (henceforth embodied knowledge), and to thereby gain understanding about how
6	people make sense of these experiences within their social contexts (Gastaldo, Rivas-
7	Quarneti, & Magalhaes, 2018). Although body-mapping is still seen as novelty among
8	traditional research methods, its unique gathering of perspectives is believed to hold potential
9	for more emancipatory forms of inquiry and merits further investigation (Gough & Deatrick,
10	2015).
11	Drawing on ontological and epistemological perspectives of IPA and body-mapping,
12	this article explores some of their methodological tensions and future promises for social
13	science research, by specifically addressing how body-mapping can fit within IPA to
14	strengthen the overall IPA framework. To this end, both the potential benefits and deficits of
15	using body-mapping in IPA are presented.
16	We begin by describing body-mapping to help clarify its concepts as well as its
17	relevance for social science research. We then outline the philosophical underpinnings of IPA
18	and discuss similarities and differences between both approaches to discern their goodness of
19	fit. Then we present a hypothetical case study to help illustrate the process of integrating
20	body-mapping into IPA. Afterward, we discuss relevant limitations as well as implications for
21	future social science research and practice. We conclude this article with a summary of key
22	arguments.
23	What is Body-mapping?

24 We know not through our intellect but through our experience
25 (Merleau-Ponty)

1 In accordance with this quote, body-mapping esteems the knowledge that is derived 2 from people's lived experiences (de Jäger, Tewson, Ludlow, & Boydell, 2016). Much like the 3 ways in which our minds store experiences as memories, the ontological position 4 underpinning body-mapping recognizes that people's experiences are stored as energy-in-5 motion (emotion) in their bodies (ibid, 2016). As such, the position rejects the traditional 6 Western notion of body and mind being two separate entities, referred to as Cartesian mind-7 body dualism, by acknowledging the body and mind as unified 'mindbody' (Crawford, 2010; 8 Martinez, 2014). The epistemological position represented in this paradigm understands that 9 the "mind influences the body based on how socio-cultural context influences the mind," and 10 thus acknowledges that by identifying how and where perception is experienced in the body, 11 one can gather information that surpasses traditional face-to-face interviewing (Martinez, 12 2017, p. 2).

13 In 2002, the University of Cape Town's 'Memory Box Project' inspired Jane Solomon 14 to develop the body-mapping method (Skop, 2016). Whereas the focus in the Memory Box 15 Project was on facilitating therapy and healing by allowing South African women with 16 HIV/AIDS to share their life experiences, the focus in Solomon's project was on facilitating 17 knowledge and understanding by exploring the lived experiences of South African women 18 with HIV/AIDS and by allowing them to re-create and re-tell their lived experiences via art 19 and imagery (de Jäger et al., 2016). Solomon's project transformed the original art-therapy 20 into art-research used to capture qualitative data (Dew, Dillon Savage, Smith, & Collings, 21 2018), which is now referred to as body-mapping (Gastaldo, Magalhães, Carrasco, & Davy, 22 2012; MacGregor & Mills, 2011). Since then, body-mapping has been used more widely as a 23 therapeutic intervention in trauma work, an educational tool, and a health-related assessment 24 (Ludlow, 2014; Skop, 2016). Recently, its usefulness in research was recognized and inspired

social scientists to develop its features into a framework for conducting arts-based research
(Gastaldo et al., 2018).

3 As a research framework, body-mapping includes three parts: (a) the researcher and 4 the participant co-create a life-size body-map by outlining the participant's body with ink on 5 paper, which is then decorated by the participant in response to several prompts during a 6 semi-structured interview; (b) the participant is asked to create a short testimony of their 7 experiences to narrate and explain their body-maps; (c) through transcribing the semi-8 structured interview and with the help of the participant, the researcher creates an individual 9 'symbol key' for interpreting the participant's body-map (Schaefer, Story, Abel, Tullio-Pow, 10 & Barry, 2016; Solomon, 2002). This symbol key is a coding framework uniquely fitted to the 11 participant's perspectives, given that symbols and colors have different meanings to different 12 people (Orchard, 2016). Due to the highly individualized content of each symbol key, this raw 13 data will greatly vary in depth and breadth relative to the level of detail in the body-map 14 imagery as well as the narrative testimony. Although testimonies provide language-based 15 interpretations of imagery, use of data analysis software (e.g., NVIVO) allows for linking of 16 images, texts, audio, and video data.

17 When used for research, both, the body-mapping exercise as well as the following 18 narrative testimony process, can be conducted in an individual or group setting. For example, 19 Boydell et al (2018) selected body-mapping to explore the experiences of youth with 20 psychosis. The authors facilitated three, two-hour long workshops in which body-mapping 21 was introduced and exercised with a total of six participants. In another study, which sought 22 to explore sexual interventions for indigenous youth, researchers collected data from 41 23 participants, through a body-mapping workshop and subsequent interviews with each 24 individual participant (Lys, Gesink, Strike & Larkin, 2018).

1 As all parts of the body-mapping strategy are co-created by the participant and 2 researcher, it maximizes accurate and authentic representations of the phenomena of interest 3 (Ebersohn, 2015). Consequently, de Jäger et al (2016) argued that body-mapping has potential 4 to act as a catalyst for emancipatory-based research designs. For example, the body-mapping 5 strategy shifts power imbalances between the 'expert' and the 'subject' as it positions the 6 researcher as facilitator and the participant as knowledge-producer, who decides and creates 7 all self-representations on their body-map (ibid, 2016). Additionally, body-mapping can 8 facilitate a re-conceptualization of participants' societal-defined narratives by providing a 9 visual representation of the issue under investigation (e.g. the participants' diseases, 10 weaknesses, or otherwise stigmatizing experiences) being only one part of their bodies rather 11 than their whole identity (Brett-MacLean, 2009; Skop, 2016). Further, by sharing their 12 personal testimonies as well as their co-created symbol-keys, participants not only have more 13 influence on the initial interpretation of the data, but also ensure that their voice is heard and 14 represented throughout the research process (Nöstlinger et al., 2015; Schaefer et al., 2016). 15 Conclusively, with its focus on social and political advocacy as well as with its 16 therapeutic and healing attributes, body-mapping seems to be especially pertinent for research 17 with vulnerable participants (e.g., young children) and marginalized populations, such as 18 persons with mental health concerns, substance misuse and dependence, and history of sexual 19 abuse or other trauma (Gastaldo et al., 2018; Orchard, Smith, Michelow, Salters, & Hogg, 20 2014; Schaefer et al., 2016). 21 22 **Comparison of IPA and Body-mapping** 23 This section outlines the ontological and epistemological positions which underpin 24 IPA, then compares features of IPA and body-mapping before exploring ways the body-

25 mapping strategy potentially strengthens or weakens an IPA framework.

1 Philosophical Stances within IPA

The seminal works of Smith (1996) identified three foundational principles which 2 3 underpin IPA as research method: (a) phenomenology, which follows Husserl's notion that 4 phenomena of interest can be seen and described (Shinebourne, 2011); (b) hermeneutics, 5 which follows Heidegger's notion that phenomena of interest must be interpreted to be 6 understood (Smith, 2009); and (c), idiography, which focuses on the "particular, rather than 7 the universal case" (Pietkiewicz & Smith, 2014, p. 8). Ontologically, and in line with these 8 three key principles, IPA recognizes that knowledge/truth is socially constructed within the 9 individual, and thus subject to the socio-cultural context (Todres & Holloway, 2006). 10 As IPA continued to develop as a research method, it further aligned with notions of 11 symbolic interactionism in its focus on how people construct meaning within their social 12 context, as well as with critical narrative theory (Langdridge, 2018; Willig, 2008). Although 13 this variety of principles has been declared as weakness to traditional research (Wagstaff et al., 2014), numerous scholars within the social sciences have defended it as strength by 14 15 providing flexibility and creativity (Cronin & Lowes, 2015; Eatough & Smith, 2017). 16 In light of this appraisal, postpositivist scholars and academics now recognize 17 potential applications of IPA in mixed-methods research (Groves et al., 2017). For example, 18 the descriptive element of phenomenological analysis allows researchers to understand every phenomenon as having features which can be universally defined and inferred to the wider 19 population (Todres & Holloway, 2006). This descriptive element further aligns with the 20 21 postpositivist key factor of esteeming the researcher's objective stance (ibid, 2006). However, 22 the interpretative element of phenomenological analysis is more difficult to merge with 'pure' 23 quantitative research designs, as it invites the researcher's own presumptions into the 24 interpretation of data (Eatough & Smith, 2017). As such, it aligns with its double-hermeneutic element in which the researcher interprets the data, which is comprised of the participant's 25

1	own interpretation of their lived experience (ibid, 2017). Despite IPA's double-hermeneutic
2	feature, the process of member-checking is encouraged by some (Dimler, McFadden &
3	McHugh, 2017). Member-checking refers to the process in which researchers invite their
4	participants to verify and/or revise the researcher's initial interpretations (Matthews &
5	Semper, 2017). Although Smith & McGannon (2017) have recently argued that member-
6	checking cannot guarantee the validity of findings, researchers who have engaged in member-
7	checking throughout their IPA studies confirmed its contribution to credibility, rigour and
8	overall validation of the participant's data (Dimler et al., 2017). For these reasons, the
9	descriptive element of IPA stands in contrast to traditional, postpositivist research which
10	seeks to keep the data objective (Mayoh & Onwuegbuzie, 2013; Pietkiewicz & Smith, 2014).
11	Nevertheless, Mayoh and Onwuegbuzie (2013) stressed that the use of IPA in mixed-
12	methodology research cannot and should not be undermined. A deductive approach can serve
13	as preliminary sifting of data before the inductive IPA approach can provide case-specific
14	insights, thereby overcoming criticisms of generalizability and validity (ibid, 2013).
15	Conclusively, the potential of IPA's flexibility and meaningful data gathering

processes is recognized by scholars and academics within various philosophical traditions andresearch paradigms.

18 Body-mapping and IPA: Goodness of Fit

How body-mapping fits within IPA can be illuminated by noting several shared key features, including philosophical underpinnings, aims and foci, and reflexivity. IPA draws from the seminal works of Merleau-Ponty and Sartre (Pietkiewicz & Smith, 2014), who considered the individual as being "embedded in a particular historical, social, and cultural context" (Shinebourne, 2011, p. 18). Similarly, the epistemological position within bodymapping acknowledges that selfhood is shaped through socio-cultural context and coauthored between the mind and the body (Martinez, 2014; Martinez, 2017). When combined

with an overall IPA framework, this special regard for how social context and culture shapes
 the participant's ways of embodying knowledge seems to be particularly helpful in
 strengthening Yardley's (2000) criterion of context.

4 A second key feature shared by IPA and body-mapping is the central aim of wanting 5 to understand participants' perspectives on the phenomenon of interest. For example, the 6 body-mapping strategy can be used to explore lived experiences via creative methods which 7 tap into the knowledge that is embodied, and, in most cases, unconscious (Lys et al., 2018). 8 Throughout the interpretative part of IPA, the lived experiences are interpreted by the 9 participant during the interview, and again interpreted and made sense of by the researcher in 10 the analysis process (Smith et al., 2009). This double-hermeneutics in IPA has been 11 developed to go beyond simplistic first-order analysis (Vicary et al., 2016) and to address 12 criticisms about the exclusion of participants' voices from final accounts (Shinebourne, 13 2011). This aligns with the emphasis in body-mapping on the use of participant narratives in 14 scholarly reports. Further, similar to the co-creation of symbol keys in body-mapping, the 15 member-checking process encouraged in IPA preserves a focus on the participants' life 16 stories.

17 A third key feature of IPA and body-mapping is the requirement of reflexivity by the 18 facilitator/researcher. It is expected that social scientists are aware that interpretations in IPA 19 will be shaped by their own biases and presumptions, and therefore actively engage with, and 20 reflect upon them throughout the IPA protocol (Cronin & Lowes, 2015). Processing and 21 debriefing is likewise highlighted as an essential element in the body-mapping strategy, here 22 called bracketing, where the data gathering phase is more interactive and interdependent 23 between the researcher and the participant (Coetzee, Roomaney, Willis, & Kagee, 2017). 24 **Benefits of Combining Body-mapping and IPA**

1	Although body-mapping and IPA share these key features, several differences
2	between the approaches remain, which, when combined, could be useful in meeting identified
3	challenges to IPA methodology and enhancing robustness. For example, concerning the
4	hermeneutic elements of IPA, body-mapping could be helpful in addressing bias as the
5	researcher and participant here collaborate in the data gathering (i.e. body-map) and data
6	analysis process (i.e. symbol key) (Gastaldo et al., 2018). Furthermore, the unique way of
7	gathering data in body-mapping is recognized as a potential strength, in that it accentuates
8	knowledge which "would otherwise be overlooked or rendered invisible" (de Jäger et al.,
9	2016, p. 5). Whereas traditional IPA depends on interview data, Gastaldo et al. (2012)
10	stressed that body-mapping can provide insights beyond what can be gathered by interviewing
11	by engaging the participant in a reflective dialogue about their personal experiences. This
12	positive effect was noted in Lys et al's (2018) study upon which the authors recorded that
13	"body mapping was enjoyed by participants and led to self-reflection, introspection, identity
14	building, and a greater sense of gratitude and self-empowerment" (p. 10).
15	Another way in which body-mapping could benefit IPA is by its triangulation of data.
16	In qualitative methodologies, data triangulation is a well-known tactic for bolstering internal
17	validity by comparing and cross-checking multiple sources or methods of data collection
18	(Merriam, 2009). The interview is the sole source of data in IPA, and this could be
19	triangulated with the visual, oral, and written data that is produced through the decorative and
20	narrative aspects of body-mapping (Orchard, 2016). From a postmodern perspective, the
21	inherent double-hermeneutics of IPA fits with the newer strategy of data crystallization,
22	wherein "what we see depends on our angle of response" (Merriam, 2009). In other words,
23	rather than triangulating data by looking at a fixed point from three sides, data is crystallized
24	by looking at the data from multiple angles with the understanding that there is a multitude of
25	ways data can be interpreted, much like the ways prisms refract and reflect light. The

collaborative and reflexive process between researcher and participant in the creation and
interpretation of the body-map data could also serve as a means of data crystallization. As
such, the use of body-mapping can heighten methodological rigor and is particularly useful
for addressing the potential limitations of IPA related to robustness and validity (Yardley,
2000).

6 Finally, the use of artistic elements in body-mapping answers the criticism about 7 missing expressive features, while enhancing emancipatory attributes of traditional IPA. With 8 its emphasis on artistic presentations of stories, body-mapping provides an avenue through 9 which data can be gathered from participants with limited literacy (Skop, 2016). This creates 10 potential for wider sample population and a more participant-friendly data gathering approach 11 that welcomes non-verbal expression and reduces perceived judgment pertaining to spoken 12 and written language capability. With these emancipatory elements, body-mapping allows for 13 the participant to shape the research process and collaborate with the research facilitator, 14 thereby mitigating power imbalances between the researcher and the researched (Huss et al., 15 2015; Skop, 2016). Further, body-mapping empowers the participant to contribute to the dissemination of findings, as most often their finalized and consented body-maps are 16 17 displayed to the public (Gastaldo et al., 2018; Orchard, 2016).

In addition to providing transparency about the ways in which researchers derive their findings from raw data, displaying the body-map aides in disseminating research results to an audience who may have little prior knowledge about the research topic (Huss, Kaufman, Avgar, & Shouker, 2015). This creates the possibility of greater impact and public engagement when the audience can access the results in a manner that facilitates learning; in this case a visual presentation of data that is accessible to consumers who may not have experience reading typical graphic depictions of data (Gastaldo et al., 2018). In doing so,

body-mapping potentially strengthens Yardley's (2000) criteria of transparency as well as
 impact.

3 Nevertheless, several key issues need to be borne in mind when using body-mapping 4 techniques, which could potentially weaken an overall IPA framework. The roles of 5 confidentiality and anonymity in body-mapping are ripe for critique if not adequately 6 considered and addressed (Skop, 2016). Informed consent must be an ongoing process 7 throughout the research, as participants may elect to include highly detailed information on 8 their body map (Coetzee et al., 2017). For example, if a participant chooses to include visual 9 depictions of potentially identifying characteristics, such as unique scarring or body art, a 10 check-in and reminder about informed consent as it relates to later public use of the drawing is merited. On the other hand, the body-map could protect the anonymity of the participant to 11 12 a higher degree, in that participants can remain hidden in their individual life-size outline and 13 simultaneously can be 'displayed' in public for teaching, advocacy or other dissemination 14 purposes (Orchard, 2016).

15 Another potential dilemma could be encountered in the analysis phase, as the researcher might be caught between justifying the validity of body-map's visual arts-based 16 17 principles and research principles at the same time (Cox & Boydell, 2015). This provides 18 fodder for construction of a body-map evaluation guide that equally balances artistic and 19 theoretical elements and is adaptable to each unique case. Without such a guide, this dilemma 20 could instead be resolved through IPA's idiographic feature which stresses the 21 inappropriateness of an overall generic evaluation and which defends the use of a case-22 specific and case-sensitive guide (Smith, 2011; Van Manen, 2001).

Finally, and in contrast to the argument above, body-mapping is devalued by some researchers for not reaching saturation of data because of its highly case-specific focus and time-consuming methods (Orchard, 2016; Skop, 2016). This proposed weakness of both IPA

and body-mapping methods overlooks their central aim of providing thick, rich qualitative
 description over broad quantitative description, which is defended by their philosophical
 underpinnings, as previously discussed.

- In summary, there is clear alignment between attributes of body-mapping and
 criticisms of traditional IPA methodology, the blending of which creates the potential of
 resolving the array of long-standing and recently identified methodological limitations. The
 following hypothetical case study is offered as a potential example of how body-mapping
 could be merged with IPA in a research study.
- 9

A case study using IPA and body-mapping methodologies

10This study explored the lived experiences of asylum-seeking Latina women11in Britain. The central aim of this study was to provide new insights into the12lived experiences of asylum-seeking Latina women in Britain, considering how13they interpret and conceptualize living as a refugee. Thus, the research questions14central to this proposed study were as follows:

- 15 16
- What are the lived experiences of asylum-seeking Latina women in Britain?
- 17 18

How do asylum-seeking Latina women in Britain make sense of their lived experiences?

19 In alignment with these questions, as well as with the vulnerable nature of 20 our sample, we chose a bricolage of Interpretative Phenomenological Analysis 21 (IPA) as our methodological framework and body-mapping as our data 22 collection approach. Through promoting our study participant information 23 brochure at our partner organization (a non-profit organization in England), we 24 recruited a homogenous sample of nine participants, all of whom were asylum-25 seeking Latina women living in Britain. We invited all participants to a body-26 mapping workshop in which we explained the study in more detail and 27 conducted the body-mapping exercise. Participation included an artistic 28 exercise, where life-size body maps were created and decorated as response to 29 several prompts (question guide) which we gave. This was followed by an 30 individual interview in private, where we audio-recorded the detailed narrative 31 of each participant's decorated body-map.

The body-mapping workshop session took approximately three hours. We provided large sheets of paper and arts/crafts material (e.g. colored fabric, pens, crayons, water color, shaped scissors, and printed images) for the body-mapping exercise. Participants helped each other outline their bodies on their body-map. We then asked participants to decorate their body-maps individually in response to six questions about their lived experiences as asylum-seeking Latina women in Britain. This task took up to two hours, during which time ambient background music was playing and we walked around to observe how participants color and draw. Afterwards, we requested that each participant prepare their personal narrative describing their body-map, and subsequently return individually, for their in-depth interview.

This second session took up to 1.5 hours and was audio-recorded. Upon commencing the interview, we requested to take a picture of the decorated bodymap as to prevent misinterpretation during the data analysis. We then heard about the story behind the body-map and noted each individual color, image, drawing, and symbol. We collaborated with the participant on assigning codes to each visual piece. This we repeated with each individual participant.

18 During the data analysis phase, we transcribed each interview, verbal and 19 non-verbal communication, verbatim and anonymized these by using 20 pseudonyms. Each body-map image, anonymized transcript, and symbol key 21 document was then inserted into data analysis software (Nvivo 11). We linked 22 the data in Nvivo and analyzed the data following the initial IPA guidelines by 23 Smith et al (2009). This included careful, line-by-line interpretation of the 24 participants' responses. These initial interpretations were noted and further 25 summarized into subordinate themes. Later, these subordinate themes were 26 color-coded, further grouped into higher order themes (superordinate themes), 27 and ordered in table format, as to gain structure using Nvivo software.

In the last phase of this project, we checked back with each participant over the phone and requested their feedback on our initial findings. Finally, we invited all participants to attend a public event in which we showcased (subject to participants' consent) the body-maps and disseminated our findings.

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Limitations and Implications

1 This article focused on the fit of body-mapping within IPA research, a topic area 2 absent from the research literature and with scant scholarly writing from which to draw. The 3 ability to compare and contrast body-mapping with IPA was restricted as body-mapping is 4 still considered a novelty qualitative research method. To date, there are only two guides on 5 how to conduct research using the body-mapping strategy (see Gastaldo et al., 2012; 6 Solomon, 2002), and overall scarce background literature. Therefore, we focused on key 7 comparison factors and acknowledge that more information is needed to present a thorough, 8 balanced response to the guiding questions.

9 Drawing on these suppositions, one implication for researchers and academics in the 10 social sciences is to further critically investigate the supplemental use of body-mapping in 11 IPA and other research methods. Although this essay has shown that body-mapping has 12 potential to enhance IPA, philosophical conclusions cannot be assumed. Rather, this is the 13 first discussion of body-mapping in relation to IPA, and applied research is needed to fully 14 address this gap in the literature, including a study that blends body-mapping with IPA.

15 Another implication is the need for scholars and practitioners to educate social scientists on the body-mapping strategy and to establish context-specific guidelines to the 16 17 method, so that the quality and potential of body-mapping as a research tool will not be 18 diminished. Body-mapping has emerged as a standalone arts-based methodology; however, as indirectly illuminated in this discussion, IPA may benefit body-mapping by offering a 19 20 standardized method of interpreting the body-mapping symbol key. IPA could also enhance 21 the body-mapping framework by providing an approach to extrapolating nuanced, intricate 22 data from the body-maps and relevant interviews, where meaning-making of the lived and 23 embodied experiences is at the forefront. There may be additional benefits due to IPA being a 24 more established approach that has shared aims with body-mapping. Although the premise of

this paper has been to clarify how body-mapping can fit within IPA, it may be worth
 consideration in future research how by enhancing one, the other is also enhanced.

3 Mindful of the fact that body-mapping originated in South Africa, a final implication 4 is the need for further investigation into the subcultural and cross-cultural strengths and 5 limitations of body-mapping. Body-maps use culture-bound symbolism, which may result in 6 different challenges during the facilitation/interpretation processes, depending on the emic 7 versus etic positioning of the researcher. When working with vulnerable and difficult to reach 8 populations, it is always pertinent to examine the cultural sensitivity, fit, and efficacy of the 9 approach. As use of body-mapping extends to various groups of interest (i.e., inclusion 10 criteria based on identities such as nationality, ethnicity, gender and sexual/affectional 11 identities, age, socioeconomic status, health status, etc.), this will be a useful and important 12 tool for researchers to consider and address.

13

Conclusion

14 This essay explored the use of body-mapping as extension to a traditional IPA 15 framework. This methodological discussion has shown how both approaches share common features, such as their ontological presuppositions, their central aims and objectives, as well as 16 17 their focus on researcher reflexivity. By critically discussing several differences between both 18 approaches, the ways in which body-mapping can benefit IPA were highlighted. Through the 19 collaborative data gathering process in body-mapping, critique of validity in IPA's 20 interpretative feature can be decreased and the criterion of context can be strengthened. 21 Further, body-mapping can strengthen the criterion of rigour through the triangulation of oral, 22 written and visual data, thereby also justifying critique of robustness and validity within IPA. 23 Finally, body-mapping provides an avenue through which participants can become 24 empowered and engaged in the dissemination process, by displaying their body-maps in 25 public and thereby providing transparency and trustworthiness of findings. The merging of

1	body-mapping and IPA provides qualitative research with an innovative and unique way of
2	understanding human experience, thereby rendering the potential for cutting-edge research
3	valuable for the advancement of the social research methodology field.
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