ELSEVIER

Contents lists available at ScienceDirect

Body Image

journal homepage: www.journals.elsevier.com/body-image



"I feel more protective over my body:" A brief report on pregnant women's embodied experiences during the COVID-19 pandemic



Erin Nolen^a, Jaclyn A. Siegel^{b,*}, Madeleine Pownall^c, Catherine Talbot^d, Charlotte Dann^e

- a Steve Hicks School of Social Work, University of Texas at Austin, USA
- ^b Department of Psychology, San Diego State University, USA
- ^c School of Psychology, University of Leeds, UK
- ^d Department of Psychology, Bournemouth University, UK
- ^e Department of Psychology, University of Northampton, UK

ARTICLE INFO

Article history: Received 21 March 2022 Received in revised form 24 May 2022 Accepted 10 June 2022 Available online 16 June 2022

Keywords:
Embodiment
Body image
Pregnancy
COVID-19, Coronavirus, healthcare

ABSTRACT

The COVID-19 pandemic has dramatically altered the experiences of pregnant people. For example, the pandemic has disrupted access to healthcare, social distancing has reduced social support, and vaccine rollout has led to safety concerns. Consistent with the Developmental Theory of Embodiment, which posits that our experiences of our bodies are influenced by social factors, studies have revealed an uptick in body dissatisfaction and disordered eating during this time. However, research on pregnant people's experiences of their body and body image during the pandemic has been largely overlooked. In this exploratory qualitative study, we aimed to broadly understand how the pandemic and quarantine have impacted the way pregnant women (N = 190) in the US and UK relate to their bodies. We used Consensual Qualitative Research-Modified (CQR-M) to analyze pregnant women's brief textual accounts of their embodied experiences during the pandemic and identified eight core domains across the dataset. Some participants reported no change in their embodied experiences, whereas others reported accounts of appearance and weight concerns, health behavior self-judgment, gratitude for isolation, body appreciation, maternal healthcare concerns, COVID health concerns, and health and safety strategies. We conclude with implications and recommendations for supporting pregnant people and their embodied well-being during health crises.

 $\hbox{@ 2022 Published by Elsevier Ltd.}$

CC_BY_4.0

1. Introduction

The COVID-19 pandemic and public safety measures undertaken to prevent the spread of the disease caused social upheaval and radically altered our lives. Notably, the pandemic brought heightened attention to the body, and experiences of the body have largely been mediated by public health recommendations (see Vallee, 2020). During the time of COVID-19, the human body became a potential site for disease and contagion, and a site to be masked, vaccinated, and distanced. However, it is not only the body's ability to stay free from disease which has been subjected to heightened surveillance. Running parallel to the cultural narrative of avoiding infection has been an uptick in weight stigmatizing messaging about maintaining a "healthy" body (i.e., slim, toned; see Lessard & Puhl, 2021). Combined with fear mongering about pandemic weight gain (i.e., "the quarantine fifteen;" Lucibello et al., 2021), reduced access

to groceries and restaurants, and closures of outlets for exercise or joyful movement, conditions were ripe for body-related concerns (see Cooper et al., 2020). Indeed, during the COVID-19 pandemic, both women and men have reported an increase in body dissatisfaction and disordered eating (see Brownstone et al., 2021; Robertson et al., 2021).

One population that has largely been absent from the research literature about COVID-19 is people experiencing pregnancy. This gap is striking, given that pregnant people, and minoritized pregnant people in particular, are a high-risk group for COVID-19 infection (Brooks et al., 2020; Poon et al., 2020). Further, competing media messaging and medical advice has led to increased vaccine hesitancy among pregnant people (Ayhan et al., 2021; Iacobucci, 2021). The scant literature on pregnant people's experiences during the pandemic has revealed that pregnant individuals report heightened anxiety and depression, compared to pre-pandemic cohorts and non-pregnant individuals (Caparros-Gonzalez & Alderice, 2020; Harrison et al., 2021; Kolker et al., 2021; Schaal et al., 2021). However, to date, no research has explored pregnant people's experiences of their bodies and body image during the pandemic.

^{*} Correspondence to: 6363 Alvarado Court, Suite 101, San Diego, CA 92120, USA. E-mail address: jsiegel@sdsu.edu (J.A. Siegel).

E. Nolen, J.A. Siegel, M. Pownall et al.

Body Image 42 (2022) 197–204

Pregnant embodiment is a unique experience, as the body becomes home to self *and* other. Given that the health of the child is constantly monitored in pregnancy, it is a period of heightened health surveillance and anxiety. This is particularly true for fat women, whose pregnancies are often regarded as "risky" (McPhail et al., 2016). In pregnancy, people experience bodily changes that are often met with mixed feelings (see Watson et al., 2015, 2016). Some studies suggest that body image dissatisfaction is heightened during all stages of pregnancy, but qualitative research often reveals more complex and competing feelings such as body appreciation and fear of being perceived as fat, or acceptance of the body and a desire to lose baby weight quickly (e.g., Chang et al., 2006; Hodgkinson et al., 2014).

While pregnancy brings heightened attention to the body, body image is only one element of pregnant embodiment. Engaging with the world in a body extends beyond attitudes toward one's appearance (Piran & Teall, 2012). The Developmental Theory of Embodiment (Piran, 2017) posits that social factors and equitable access to resources shape experiences of the body. Embodiment includes positive dimensions (e.g., body connection and comfort) and negative dimensions (e.g., disrupted body connection/discomfort; Piran, 2016). Pregnancy-specific experiences of embodiment are lacking the research literature, and studies on COVID-19 and pregnancy embodiment is virtually nonexistent.

In this exploratory study, we aimed to develop an initial understanding of the ways pregnant people related to their bodies during the COVID-19 pandemic. By taking an inductive approach, we aimed to amplify and analyze pregnant women's lived experiences during this unprecedented time.

2. Method

2.1. Participants and design

The initial sample comprised 194 participants recruited from Prolific Academic. Participants with missing data on the free-text response were removed, leaving 190 participants in the final sample. While people of all genders may become pregnant, all participants identified as women. Participants were from either the US (n = 114) or the UK (n = 76) and were each paid the equivalent of £ 6.50 (\$9.03) per hour. Data were collected during August 2021, when neither the US nor UK had formal lockdown restrictions, but masks were mandatory in the UK and many parts of the US. Our sample was mainly White (74.7 %), working either full or part time (71.1 %), married (56.8 %), and heterosexual (86.3 %). Most participants were in the 26–30 age group (33.2 %). Participants were well distributed in weeks pregnant and were generally split between first (44.2 %) and multiple pregnancies (55.8 %).

2.2. Procedure

This study was approved through the Institutional Review Board at the University of Texas at Austin. The study took place online and was hosted via Qualtrics. After answering survey questions that formed part of the wider study on body image and health behaviors, participants received the following question with a free text essay box: "Has the COVID-19 pandemic impacted the way you relate to your body in pregnancy? This might include any feelings, behaviors, or attitudes toward your body or pregnancy during the pandemic." Participants were asked to describe their experiences in as much detail as they felt comfortable sharing and were reminded at this stage of data anonymity.

2.3. Analytical approach

We used Consensual Qualitative Research-Modified (COR-M; Spangler, Liu, & Hill, 2012) to analyze the data. COR-M is a rigorous, inductive method that lends itself well to short segments of textual data. In CQR-M, members of the coding team first read through the full list of responses, then develop and establish a coding scheme before consensually applying these codes to the textual data (Hill et al., 2005). The second author generated a list of initial codes, which was then discussed and amended with the coding team. Using the initial list of codes, the first four authors individually applied the codes to the data. We then engaged in collective triangulation through ongoing discussion to find shared meaning in responses. This was achieved through regular online meetings to discuss code attribution of each piece of text individually. During these online meetings, we worked together to code each individual piece of textual data and amend the initial coding scheme as necessary to fit our collective analysis. When disagreements arose, we discussed our viewpoints until consensus was achieved. Responses could fit into more than one domain or sub-theme.

We appreciate how who we are as researchers guides the lens through which we view data (Lazard & McAvoy, 2020); therefore, we engaged in collective reflexivity throughout the coding process. Given that COR-M "is constructivist, with a hint of post-positivism" (Hill et al., 2005, p. 197), it is important that we socially locate ourselves within the context of our work. The initial coding team comprised four White, early-career scholars who do not have lived experience of pregnancy. By approaching this work as "outsiders," we hoped to approach the data with curiosity, rather than assumptions (Lazard & McAvoy, 2020). However, given the power of the insider perspective, this work was then thoroughly reviewed by the fifth author ([C.D.]), who has lived experience of pregnancy throughout the pandemic. This review process involved feedback on the results from our analysis, refining our codes, and finalizing the manuscript. Our reflexivity process included keeping individual notes and having group discussions about pregnancy, the pandemic, body image and embodiment more broadly.

3. Results

We generated eight domains including, no change, appearance and weight concerns, health behavior self-judgment, gratitude for isolation, body appreciation, maternal healthcare concerns, COVID health concerns, and health and safety strategies. See Table 1 for the full list of domains, sub-themes, prevalence counts, and exemplary quotes.

3.1. No change

Several participants noted that they did not experience any change in the way they relate to their bodies due to the pandemic. Responses in this category included answers such as "The pandemic has not changed the way I relate to my body in pregnancy." Nonetheless, instances of no change often co-occurred with other domains.

3.2. Appearance and weight concerns

Several participants indicated that they experienced heightened appearance and weight concerns due to social isolation. One participant wrote, "having access to a mirror more often has given me more opportunity to assess my body and I'm therefore more critical." Others reported a *fear of reactions* to their pregnancy body after quarantine. Because they were not being seen by others regularly, participants reported concern about how others would react to their changed body once they emerged from isolation. Similarly, a few participants indicated that they felt pressure to lose baby weight

 Table 1

 Table of domains, subthemes, operational definitions, and exemplary responses.

| Domain | Subthomo | Eron. | Oncertional definition | Lyomnian rocaonco |
|---|---|-------|---|--|
| Domain | amenne | rıed. | טאבו שנו סוושו מבוווונוסוו | Exemplary response |
| No change | | 22 | Participant indicates that they have not experienced any change in their | "The pandemic has not changed the way I relate to my body in pregnancy" |
| Appearance and weight concerns | (General) | 17 | body attitudes use to the particular. Participant indicates that they are experiencing unspecified self-conscious emotions about their body (e.g., shame, embarrassment, or anxiety) | "Transcipant 12) "Due to the pandemic I haven't really been able to get out as much which have a negative impact on the way I look at my own body" (Darticinant 102) |
| (15 - 11) | Weight gain during pandemic | 7 | Participant expresses dissatisfaction with weight gained during the pandemic (not due to weight of child) or a desire to lose weight quickly | (rattictpain, 132) "I wornty for my health and my babies health during this pregnancy and I lead live gained more weight than I am supposed to with this pregnancy," (Darticinan 193) |
| | Fear of reactions to pregnant body | 2 | Participant expresses anticipatory anxiety that people will evaluate them negatively due to the shape of their pregnant body | pregnancy (transcription 132) "Teed like I haven't seen as many people in person due to COVID-19, which sometimes makes me self conscious of my baby bump, afraid that people will not think it's a baby bump" (Participant 139) |
| | Appearance surveillance/ checking | 2 | Participant indicates that they are examining their body more regularly (e.g., looking in mirrors, pinching) | "I work from home which having access to a mirror more often has given me more opportunity to assess my body and I'm therefore more critical" (Participant 1861) |
| Health behavior self- judgment (n = 17) | Less physical activity during pandemic | 12 | Participant expresses dissatisfaction with exercise habits during the pandemic | "I definitely have spent more time at home and have been getting less exercise because of the pandemic, so that has effected how I feel about my hody" (Particinant 28) |
| | Eating "unhealthy" food | 5 | Participant expresses dissatisfaction with types of food eaten during the pandemic (e.g., "junk" food, "unhealthy" food) | "Yes. During the pandemic, there was more of lonely time and depressed "Yes. During the pandemic, there was more of lonely time and depressed mood due to the lockdown. That lead to spend more time eating unhealthy food which led to increased weight. This weight I still carry it with me during this pregnancy." (Participant 131) |
| Gratitude for isolation $(n = 19)$ | (General) | 7 | Participant generally states that they are grateful to have been away from others | "I don't feel the pandemic has effected me particularly. It was definitely a blessing having to be home through first trimester as I was able to sleep when I needed without having to come home from work etc. I believe this helped me with my morning sickness as I was able to rest when needed" (Participant 135) |
| | Relaxing of beauty standards | 10 | Participant expresses that they feel less concern about their appearance because they see fewer people/do not go out and/or have fewer points of comparison | "I think being home more because of COVID has helped me care less about how I look and care more about how I am feeling. I don't feel pressure to dress nice if I don't feel like it" (Participant 33) |
| | Less external observation of body | 2 | Participant expresses gratitude that others do not see them and make comments about their bodies | "I think with not being seen and having events as normal due to the pandemic, I feel that I have had less thought and worry about how I look in clothes etc. As I do not feel I am being judged by as many people as I am not seeing as many people" (Participant 21) |
| | No non-consensual touching | 2 | Participant indicates that isolation prevented other people from touching their bodies without their consent | "On the plus side, random strangers have not approached me and tried to touch my belly and our family has also respected the fact that I do not want to be touched without being asked first" (Participant 152) |
| Body appreciation $(n = 18)$ | (General) | 33 | Participant generally states that they are grateful for their body | "If anything it has given me more time to appreciate what my body is doing and give it the appropriate rest" (Participant 76) |
| | Gratitude for staying healthy | ∞ | Participant explicitly indicates that they are grateful that their body stayed healthy during the pandemic | "I am hyper aware of any sensations that might indicate covid. The thought of getting covid in pregnancy really worries me. I feel grateful that my body is generally healthy and can hooefully fight it off" (Participant 126) |
| | Feeling more in tune with body | 4 | Participant indicates that they feel more connected to or aware of their body, including sensations and bodily changes | "I feel like it changed my view on what is acceptable for my body, now I know I need to listen to even the smallest detail to what my body is telling me because working for hours straight without a sit down break, water or bathroom break causes my body to feel shirty" (Participant 103) |
| | Appreciation of capacity to carry child | m | Participant explicitly indicates that they are grateful that their body has the ability to be pregnant | "My body image isn't its strongest on some days, just because It's doing something I've never gone through before. But I'm so amazed as what it has been able to continue to do while growing a human!" (Participant 63) |

(continued on next page)

(continued on next page)

| ₹ | ż |
|---------|---|
| 0 | ذ |
| - | ŧ |
| - | 3 |
| ء. | 3 |
| T | 3 |
| 2 | ٠ |
| Ċ | 5 |
| | |
| | |
| Continu | د |
| ٢ | ۷ |
| 7 | _ |
| 7 | |
| 7 | |
| 7 | 1 |
| 7 | 1 |

| Domain | Subtheme | Fred | Operational definition | Exemplary response |
|----------------------------------|---|------|--|---|
| Maternal healthcare | (General) | 1 | Participant indicates that they have a general concern about maternal | "I have had more telephone appointments then I did with my first |
| concerns $(n = 40)$ | Potential labor and birth complications | 15 | healthcare or experienced general change in health care. Participant indicates that they are afraid of the labor and delivery process due to COVID | pregnancy" (Participant 29) "I am a little concerned that I will have to wear a mask during labor and delivery in the hospital where I am giving birth, as I think that will make it |
| | Going to appointments alone | 12 | Participant expresses that they dislike attending appointments alone due to COVID | more difficult to breathe and be quite irritating" (Participant 89) "Covid-19 has meant that my partner has not been their during scans this has impacted the emotions of feeling alone which impacts the way I viewed my body as they were surprised by stretch marks and bellybutton which they wouldn't have been if they were allowed with me during the |
| | Reduced quality of maternal care | 12 | Participant comments on the lack of quality of maternal care, whether feeling like they were not prioritized in the medical system due to preventing/treating COVID-19 or because of a shift to telehealth appointments. | seans (rantchant 20) "I feel like maternity care wise pregnant women have been forgotten. They haven't seen people nearly as much as they should and phone consultations are not adequate enough" (Participant 120) |
| COVID health concerns $(n = 72)$ | (General) | εn | Participant expresses unspecified concern regarding the pandemic | "I don't feel that the pandemic has impacted how I relate to my body, however it has made me more anxious regarding my pregnancy. I am inclined to do less, worry more, and am all around more anxious about things that are ultimately out of my control" (Participant 43) |
| | Fear of contracting COVID | 36 | Participant expresses concern about contracting COVID for themselves | "I think it's a scary time to be pregnant right now. There isn't just the worry of getting ill myself, but there is a worry of it affecting my baby. I have tried to avoid interacting with people as much as possible and to always wear a mask but it's difficult" (Participant 62) |
| | Health surveillance | 16 | Participant indicates anxiously monitoring their health and any symptoms that could indicate disease or something wrong with their baby. | "I feel more protective over my body now that I am pregnant and there is a pandemic. I protect myself whenever in public, and try to avoid unnecessary trips out in public. If I feel warm or have a cough, I tend to worry too much whether it can be COUNT" (Participant 54) |
| | Concern about vaccine safety | 15 | Participant explicitly states that they are uncertain about whether the vaccine is safe for them | "Not really. The only impact was deciding whether to have the Covid vaccine. It was available to me until quite late in my pregnancy. I wanted it but was also really worried about the unknown effects on the baby or my baby. I worried and thought a lot about it before I reached a decision I was comfortable with. If I wasn't pregnant I would of been at the front of the vaccination queue." (Participan 50) |
| | Concern about virus legitimacy | 7 | Participant indicates that they have doubts about the severity of the virus | "I really don't feel like Covid-19 itself has affected my pregnancy, but the fear has. Honestly, I don't believe the virus is as harmful as most people think it is. But the way people are acting and how the world is going, it's frightening" (Participant 19) |

 Table 1 (continued)

| Domain | Subtheme | Freq. | Operational definition | Exemplary response |
|---|--|-------|---|---|
| Health and safety strategies $(n = 97)$ | (General) | 21 | Participant indicates that they are protective of their body, or are cautious/careful in an unspecified way | "I am more nervous about my health and take more precautions to ensure mine and my babies health" (Participant 74) |
| | Avoiding crowded places/ social distancing | 31 | Participant states that they are staying home more regularly or avoiding crowded places to avoid getting sick (e.g., supermarket) | "Since I belong in a vulnerable group due to my pregnancy, and although I am double vaccinated, I still avoid crowded places and meeting with people outside my household as much as possible. I think I have become extremely cautious and socially isolated, which I believe I wouldn't do if there wasn't a bandemic going on" (Participant 187) |
| | Getting vaccinated | 41 | Participant states that they have received a COVID-19 vaccination to stay safe | "I chose to get vaccinated in my first trimester as soon as it was available to me because I work in a high risk environment, and the fact that I have a baby inside me was a big reason for getting it as soon as I did. I want to do everything possible to keep my baby healthy while she is still growing inside me." (Participant 116) |
| | Wearing masks/Personal Protective Equipment | 9 | Participant states that they wear masks/gloves/other protective equipment | "Yes, I am way more careful and I stay home often and wear a mask everywhere I do have to go" (Participant 155) |
| | Exercising | 9 | Participant indicates that, due to quarantine, they have found additional time to move their body | "COVID 19 hasn't made me change my diet, but I have tried to be more active" (Participant 142) |
| | Not getting vaccinated | 2 | Participant states that they have <i>not</i> received a COVID-19 vaccine out of concerns over safety | "I have chosen not to get the vaccine while pregnant because I do not like the thought of putting things in my body that I'm unsure how my body will respond. Instead, I have been extra sensitive to the diet that I eat to make sure I am feeding my immune system in a healthy way to keep it |
| | Regular washing/cleaning | 4 | Participant states that they wash themselves or their surroundings more regularly than pre-pandemic | Strong (Tartuchant 100) "With Covid I feel more dirty than normal so I try to make sure to keep my hands clean, & I don't enjoy being out as much as I used to" (Participant 153) |
| | Nutrition | 4 | Participant states that they are conscious of their nutrition in order to avoid getting sick | "started exercising and eating vegetable and good fruits more" (Participant 49) |
| | Staying hydrated | m | Participant states that they are consuming more fluids in order to stay safe | "I have formed the habit of taking more water even though it makes me uncomfortable most times. I formed the habit so as to avoid sickness of any kind" (Participant 40) |
| | Resting | ы | Participant states that they have been able to get additional rest due to quarantine | "Covid has had a no effect on me, I have been extremely careful and taken all precautions. Eating and resting well" (Participant 96) |

E. Nolen, J.A. Siegel, M. Pownall et al.

Note. Freq = Frequency. Comments were allowed to be double coded (categorized under more than one domain or sub-theme). Exemplary responses represent verbatim quotes from participants, inclusive of grammatical errors. The average number of words for each response was 40.79, and the average number of characters for each response was 214.14. The general category for each domain refers to the number of responses that did not fit into a subdomain, as they were broad in nature.

E. Nolen, J.A. Siegel, M. Pownall et al. Body Image 42 (2022) 197–204

quickly – the pandemic provided an opportunity to hide their pregnant body, but they noted a desire to drop weight as quickly as possible.

Some participants indicated that they felt self-conscious about weight gain during the pandemic. One participant wrote, "I worry for my health and my babies [sic] health during this pregnancy and I feel like I've gained more weight than I am supposed to with this pregnancy."

3.3. Health behavior self-judgment

A few participants also expressed concern about the health behaviors in which they did or did not engage during the pandemic. Several participants expressed judgment of perceived poor food choices, or eating foods that they felt were not particularly nutritious (e.g., "junk food"). Others expressed that they engaged in less *physical activity*, such as walking or actively exercising, during the pandemic.

3.4. Gratitude for isolation

Some participants reported general appreciation for their time in isolation. A few indicated that they were grateful that they felt less pressure to adhere to unrealistic beauty standards while in quarantine. One example of this was, "I think being home more because of COVID has helped me care less about how I look and care more about how I am feeling. I don't feel pressure to dress nice if I don't feel like it." Others noted that, in isolation, they experienced *fewer observations of their bodies*, and two participants expressed gratitude for *no non-consensual body touching* while in isolation. For example, one participant wrote, "On the plus side, random strangers have not approached me and tried to touch my belly and our family has also respected the fact that I do not want to be touched without being asked first."

3.5. Body appreciation

Several participants also expressed appreciation for their bodies during the pandemic. Specifically, some participants indicated that they were grateful for their bodies' *ability to stay healthy*, and others indicated that they appreciated that their bodies were capable of carrying a child. For example, one participant wrote, "My body image isn't its strongest on some days, just because it's doing something I've never gone through before. But I'm so amazed as what [sic] it has been able to continue to do while growing a human!" Finally, some participants indicated that they feel more connected to or aware of their body, including sensations and bodily changes.

3.6. Maternal healthcare concerns

Several participants indicated general concerns with healthcare that they received throughout their pregnancy. Commonly, participants expressed concerns about *labor and delivery* specifically, including being concerned about partners not being present in the delivery room due to hospital COVID protocols. Others expressed concern about attending *appointments alone* or felt that they experienced a *reduced quality of maternal care* during the pandemic. For example, one participant said, "I feel I like [sic] maternity care wise pregnant women have been forgotten. They haven't seen people nearly as much as they should and phone consultations are not adequate enough."

3.7. COVID health concerns

Another domain we identified was pandemic-specific concerns. For example, many participants expressed concern about contracting COVID-19, either for themselves or for their unborn child. Others expressed concern about *vaccine safety* in pregnancy or *pandemic legitimacy*. One participant wrote, "The only impact was deciding whether to have the Covid vaccine. It was available to me until quite late in my pregnancy. I wanted it but was also really worried about the unknown effects on the baby or my baby." Other responses were coded as *health surveillance of physical health symptoms*. One example of health surveillance included "COVID makes me more aware of symptoms I would normally not stress about. If I feel sore one day or if my nose and throat are slightly itchy I worry more now than I did pre-COVID because of potential impacts to the baby."

3.8. Health and safety strategies

The final domain was *health and safety strategies* participants used to prevent disease and to take care of their bodies. The most frequent health and safety strategy was social distancing or maintaining safe space from others to avoid contracting COVID-19. Several indicated that they got vaccinated to prevent disease. On the other hand, some participants noted that they did *not* get vaccinated (primarily out of concern about vaccine safety). Others indicated that they wore masks and other personal protective equipment to avoid COVID-19 contamination. Participants also wrote that they got more rest, stayed hydrated, got regular COVID tests, or washed their hands more frequently.

4. Discussion

In this study, we analyzed open-text responses to initially characterize a range of embodied experiences of pregnancy during the COVID-19 pandemic. Participants reported psychological and behavioral experiences of inhabiting a pregnant body in a social context of heightened health anxiety, exacerbated healthcare inequities, and reduced social interaction. Findings represent pregnant women's increased sense of vulnerability in, and protectiveness over, their body due to a double sense of precarity: carrying an unborn child and doing so during a global health crisis. While the majority of responses were categorized into negative dimensions, we identified a few positive dimensions, as well. Domains represent a more comprehensive conceptualization of body image that extends beyond appearance evaluation to include broader feelings and experiences of the body, consistent with embodiment (Cash, 2004; Piran & Teall, 2012).

Negative embodied experiences in our data consisted of *appearance and weigh concerns and health behavior self-judgment*, which influenced participants' feelings of bodily disconnection, discomfort, or experiencing the body from the outside in (Piran, 2016, 2017). Some participants indicated they scrutinized their behaviors, including food choices they believed were not "healthy," or engaging in less physical movement which led to additional weight gain, feeling more lethargic, and/or experiencing lower mood. Others reported increased appearance anxiety or fearing others' reactions to their changing bodies once they enter back into public spaces. Even in isolation, some participants experienced their bodies as an objectified site, worrying or anticipating how others view them and how their bodies have changed (see Beech et al., 2020).

Negative embodied experiences also included *COVID health concerns* and *maternal healthcare concerns*. Participants reported fears of contracting COVID-19 and monitoring their health symptoms. Structural factors, including access to quality health care, are

E. Nolen, J.A. Siegel, M. Pownall et al.

Body Image 42 (2022) 197–204

essential in shaping the quality of embodiment in women (Piran, 2016, 2017). Participants underscored inequalities in maternal care, including not feeling safe to seek out necessary medical care due to the threat of COVID-19 or because medical protocols made seeking out care more challenging. This is consistent with other qualitative research which underscores the toll of disrupted maternal services on mental health during the pandemic (McKinlay et al., 2022).

While some participants experienced worsened body image or negative embodiment, participants also reported a renewed connection to the body during the pandemic, consistent with evidence suggesting that mixed body image experiences in pregnancy are possible (Watson et al., 2015). These comments consisted of body appreciation, gratitude for isolation, and exercising agency through health and safety strategies. Several participants indicated a sense of relief in opting out of social expectations of beauty and experiencing fewer instances of inter-personal objectification thanks to social isolation. Others identified the reasons they appreciated their body, both in terms of its ability to carry their unborn child and to stay healthy during the pandemic. Some participants reported feeling more attuned to their bodies' needs because they had time to focus on themselves, including engaging in protective behaviors like social distancing, resting, and eating nutritiously. These domains aligned with positive embodiment dimensions of attuned self-care and experiencing agency and functionality in the body (Piran, 2016, 2017). Notably, evidence supports the protective role of body functionality appreciation in health and well-being (Alleva & Tylka, 2021), making this theme particularly salient in terms of influencing health behavior and potentially disease prevention. For example, pregnant women who experience high levels of body surveillance may still be protected against engaging in unhealthy prenatal behaviors if they appreciate their body's functionality (Rubin & Steinberg, 2011). Finally, data were often double coded under domains considered negative and positive embodiment experiences, or even no change, underscoring the varied and complex reality of living in a body with a heightened sense of vulnerability and protectiveness during the pandemic.

This study is not without limitations. Our data were relatively short and collected online, with no opportunity to follow-up with participants or to probe issues further. CQR-M is a useful analytical tool for this type of data; however, future research should adopt more interpretive qualitative methodologies to investigate how pregnant women resist, embrace, or negotiate unique body-related experiences prompted by the COVID-19 pandemic. Furthermore, women of color, non-binary or trans people, individuals in larger bodies, and those without healthcare access are disproportionately marginalized in body image literature and therefore require further research and advocacy attention.

Examining how the pandemic has altered embodiment during pregnancy is crucial so that researchers, clinicians, and healthcare providers can fully support and advocate for pregnant people's health and well-being. The mental, physical, and structural repercussions of the pandemic are likely enduring and our collective response to COVID-19 offers a template for future health crises. Practitioners can provide pregnant people with evidence-based positive body image and embodiment support, including brief and lowcost interventions (Guest et al., 2019), but issues of access and equity must also be addressed. Embodiment is influenced by broad social factors, which the pandemic has revealed as needing further attention, including equitable healthcare access and paid maternity and family leave policies. This study should be considered a starting point for a wider consideration of pregnant people's body relationships during the COVID-19 pandemic and beyond. We hope the results of this study can also be incorporated into future research on supporting individuals through changes to their bodies during the peri and postnatal period.

CRediT authorship contribution statement

Erin Nolen: Conceptualization, Investigation, Writing – original draft, Writing – review & editing, Project administration, Formal analysis. **Jaclyn Siegel:** Conceptualization, Methodology, Investigation, Writing – original draft, Writing – review & editing, Supervision, Formal analysis. **Catherine Talbot:** Writing – original draft, Formal analysis, Writing – review & editing. **Madeline Pownall:** Conceptualization, Writing – original draft, Funding acquisition, Formal analysis, Writing – review & editing. **Charlotte Dann:** Writing – review & editing, Formal analysis.

Conflicts of interest

We have no conflicts of interest to disclose

Acknowledgements

This study was funded by an internal research fund within the School of Psychology at University of Leeds. We thank Emily Cooper, an undergraduate student at the University of Leeds, for her assistance with the questionnaire.

References

- Alleva, J. M., & Tylka, T. L. (2021). Body functionality: A review of the literature. Body Image, 36, 149–171. https://doi.org/10.1016/j.bodyim.2020.11.006
- Ayhan, S. G., Oluklu, D., Atalay, A., Beser, D. M., Tanacan, A., Tekin, O. M., & Sahin, D. (2021). COVID-10 vaccine acceptance in pregnant women. *International Journal of Gynecological Obstetrics*, 154(2), 291–296. https://doi.org/10.1002/ijgo.13713
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8
- Brownstone, L. M., Kelly, D. A., Maloul, E. K., Dinneen, J. L., Palazzolo, L. A., Raque, T. L., & Greene, A. K. (2021). "It's just not comfortable to exist in a body": Transgender/gender nonbinary individuals' experiences of body and eating distress during the COVID-10 pandemic. Psychology of Sexual Orientation and Gender Diversity. https://doi.org/10.1037/sgd0000519
- Caparros-Gonzalez, R. A., & Alderice, F. (2020). The COVID-19 pandemic and perinatal mental health. *Journal of Reproductive and Infant Psychology*, 38(3), 223–225. https://doi.org/10.1080/02646838.2020.1786910
- Cash, T. F. (2004). Body image: Past, present, and future. Body Image, 1(1), 1-5.
- Chang, S. R., Chao, Y. M., & Kenny, N. J. (2006). I am a woman and I'm pregnant: Body image of women in Taiwan during the third trimester of pregnancy. 147-15 *Birth*, 33(2), https://doi.org/10.1111/j.0730-7659.2006.00087.x
- Cooper, M., Reilly, E. E., Siegel, J. A., Coniglio, K., Sadeh-Sharvit, S., Pietsky, E. M., & Anderson, L. M. (2020). Eating disorders during the COVID-10 pandemic and quarantine: Overview of risks and recommendations for treatment and early intervention. Eating Disorders Journal of Treatment and Prevention, 9, 1–23. https://doi.org/10.1080/10640266.2020.1790271
- Guest, E., Costa, B., Williamson, H., Meyrick, J., Halliwell, E., & Harcourt, D. (2019). The effectiveness of interventions aiming to promote positive body image in adults: A systematic review. *Body Image*, 30, 10–25. https://doi.org/10.1016/j.bodyim.2019. 04 002
- Harrison, V., Moulds, M., & Jones, K. (2021). Perceived social support and prenatal wellbeing: The mediating effects of loneliness and repetitive negative thinking on anxiety and depression during the COVID-19 pandemic. Women and Birth. https:// doi.org/10.1016/j.wombi.2020.12.014
- Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology*, 52(2), 196–205. https://doi.org/10.1037/0022-0167.52.2.196
- Hodgkinson, E. L., Smith, D. M., & Wittkowski, A. (2014). Women's experiences of their pregnancy and postpartum body image: A systematic review and meta-synthesis. BMC Pregnancy and Childbirth, 23(14), 330. https://doi.org/10.1186/1471-2393-14-330
- Iacobucci, G. (2021). COVID-19 and pregnancy: Vaccine hesitancy and how to overcome it. British Medical Journal, 375. https://doi.org/10.1136/bmj.n2862
- Kolker, S., Biringer, A., Bytautas, J., Blumenfeld, H., Kukan, S., & Carroll, J. C. (2021). Pregnant during the COVID-19 pandemic: An exploration of patients' lived experiences. BMC Pregnancy and Childbirth, 21, 851. https://doi.org/10.1186/s12884-021-04227-0
- Lazard, L., & McAvoy, J. (2020). Doing reflexivity in psychological research: What's the point? What's the practice? Qualitative Research in Psychology, 17(2), 159-177. https://doi.org/10.1080/14780887.2017.1400144
- Lessard, L. M., & Puhl, R., M. (2021). Adolescents' exposure to and experiences of weight stigma during the COVID-19 pandemic. *Journal of Pediatric Psychology*, 46(8), 950–959. https://doi.org/10.1093/jpepsy/jsab071

- Lucibello, K. M., Vani, M. F., Koulanova, A., deJonge, M. L., Ashdown-Franks, G., & Sabiston, C. M. (2021). #quarantine15: A content analysis of Instagram posts during COVID-19. *Body Image*, 38, 148–156. https://doi.org/10.1016/j.bodyim.2021.04.002
- McKinlay, A. R., Fancourt, D., & Burton, A. (2022). Factors affecting the mental health of pregnant women using UK maternity services during the COVID-19 pandemic: A qualitative interview study. *BMC Pregnancy and Childbirth*, 22(1), 1–15. https://doi.org/10.1186/s12884-022-04602-5
- McPhail, D., Bombak, A., Ward, P., & Allison, J. (2016). Wombs at risk, wombs as risk: Fat women's experiences of reproductive care. Fat Studies, 5(2), 98–115. https://doi.org/10.1080/21604851.2016.1143754
- Piran, N. (2016). Embodied possibilities and disruptions: The emergence of the experience of embodiment construct from qualitative studies with girls and women. Body Image, 18, 43–60. https://doi.org/10.1016/j.bodyim.2016.04.007
- Piran, N. (2017). Journeys of embodiment at the intersection of body and culture: The developmental theory of embodiment. Academic Press.
- Piran, N., & Teall, T. (2012). The developmental theory of embodiment. In G. McVey, M. Levine, N. Piran, & H. B. Ferguson (Eds.). Preventing eating-related and weight-related disorders: Collaborative research, advocacy, and policy change (pp. 169–198). (1st ed.). Wilfrid Laurier University Press.
- Poon, L. C., Yang, H., Kapur, A., Melamed, N., Dao, B., Divakar, H., ... Hod, M. (2020). Global interim guidance on coronavirus disease 2019 (COVID-19) during pregnancy and puerperium from FIGO and allied partners: Information for healthcare professionals. *International Journal of Gynecology & Obstetrics*, 149(3), 273–286. https://doi.org/10.1002/ijgo.13156

- Robertson, M., Duffy, F., Newman, E., Bravo, C. P., Ates, H. H., & Sharpe, H. (2021). Exploring changes in body image, eating and exercise during the COVID-19 lockdown: A UK survey. *Appetite*, 159, Article 105062. https://doi.org/10.1016/j.appet.2020.105062
- Rubin, L. R., & Steinberg, J. R. (2011). Self-objectification and pregnancy: Are body functionality dimensions protective? Sex Roles, 65(7), 606–618. https://doi.org/10. 1007/s11199-011-9955-y
- Schaal, N. K., Hagenbeck, C., Helbig, M., Wulff, V., Märthesheimer, S., Fehm, T., & Hepp, P. (2021). The influence of being pregnant during the COVID-19 pandemic on birth expectations and antenatal bonding. *Journal of Reproductive and Infant Psychology*. https://doi.org/10.1080/02646838.2021.1962825
- Spangler, P. T., Liu, J., & Hill, C. E. (2012). Consensual qualitative research for simple qualitative data: An introduction to CQR-M. In C. E. Hill (Ed.). Consensual qualitative research: A practical resource for investigating social science phenomena (pp. 269–283). American Psychological Association.
- Vallee, M. (2020). Doing nothing does something: Embodiment and data in the COVID-19 pandemic. *Big Data & Society*, 7(1), https://doi.org/10.1177/2053951720933930
- Watson, B., Broadbent, J., Skouteris, H., & Fuller-Tyszkiewicz, M. (2016). A qualitative exploration of body image experiences of women progressing through pregnancy. *Women and Birth*, 29(1), 72–79. https://doi.org/10.1016/j.wombi.2015.08.007
- Watson, B., Fuller-Tyszkiewicz, M., Broadbent, J., & Skouteris, H. (2015). The meaning of body image experiences during the perinatal period: A systematic review of the qualitative literature. *Body Image*, 14, 102–113. https://doi.org/10.1016/j.bodyim. 2015.04.005