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"Are people thinking I'm a vector...because I'm fat?": Cisgender experiences of body, eating, and identity during COVID-19



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ABSTRACT

While a range of studies have shown the negative impact of COVID-19 on disordered eating and body image, few have engaged with how identity and social context interact with these domains. The current study used inductive codebook thematic analysis to understand experiences of body and eating during the pandemic among a diverse (sub)clinical sample of individuals with self-reported disordered eating. We interviewed 31 cisgender participants (18/31 Black Indigenous People of Color (BIPOC), 24/31 women) with a history of disordered eating (diagnosed and undiagnosed). Five themes were identified: Body Surveillance and Dissatisfaction, Movement and Intake Fixation, Food Scarcity and Resource Concerns, Changes in Visibility of Body and Eating, and Bodies Are Vulnerable. We examined the extent to which themes pertained to certain identities over others. Notably, BIPOC, large-bodied, queer participants more commonly spoke to body vulnerability than White, small/medium-bodied, straight participants. BIPOC and large-bodied participants also particularly spoke to feeling relief from discrimination as social distancing and mask wearing reduced their public visibility. Participants related these themes to changed body and eating experiences that spanned distress and resilience. Our analysis offers insight into multifaceted and contextual impacts of COVID-19 on experiences of body, eating, and identity.

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1. Introduction

The spread of COVID-19 and subsequent efforts to mitigate the crisis have disrupted everyday life, reverberating potently within the intimate domains of body and eating experience. Growing evidence shows that COVID-19 has been associated with worsening of disordered eating and body image difficulties, including increased drive for physical activity and decreased access to care (e.g., Castellini et al., 2020; Di Renzo et al., 2020; Flaudias et al., 2020; Brownstone et al., 2021; Monteleone et al., 2021; Phillipou et al., 2020; Schlegl, Maier, Meule & Voderholzer, 2020a, 2020b; Simone et al., 2021;

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Swami, Horne, & Furnham, 2020). Moreover, Richardson, Patton, Phillips, & Paslakis (2020) observed a significantly higher number of contacts to the National Eating Disorder Information Center during versus before the pandemic, which further suggests worsening of disordered eating and overall greater need for help among the general population.

Increased disordered eating, particularly binge-eating and compensatory fasting, has been specifically related to widespread food insecurity caused by the pandemic (Christensen et al., 2021; Hazzard, Barry, Leung, Sonneville, Wonderlich & Crosby, 2021). Furthermore, in a racially/ethnically diverse, nonclinical sample, higher levels of unhealthy weight control behaviors during the pandemic have been associated with financial stress, low stress management, depressive symptoms, and food insecurity, while higher levels of binge eating during the pandemic have been associated with low stress management and depressive symptoms (Simone et al., 2021). More broadly, additional studies have shown an increase in mental health difficulties during the pandemic including symptoms of depression, anxiety, and post-traumatic stress

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disorder, as well as negative affect and loneliness (e.g., Monteleone et al., 2021; Tull et al., 2020; Twenge & Joiner, 2020). As such, the pandemic has clearly had a profound impact on disordered eating and mental health.

Some studies have used qualitative methodology to gain insight into individuals' lived experiences during the pandemic, particularly as they pertain to disordered eating. Most of them, however, have used clinical samples of predominantly White and assumed (or unspecified) cisgender women. In one of the most in-depth of these studies and one of the few not to assume cisgender identities, Brown, Opitz, Peebles, Sharpe, Duffy, & Newman (2021) conducted qualitative interviews with ten individuals from the United Kingdom (9/10 female; 1/10 nonbinary; 10/10 White) with diagnosed eating disorders. Participants reported themes related to restriction in social, functional, and access to care domains, which were further associated with either increased disordered eating or new routes toward recovery. Likewise, a sample of mostly female (race/ethnicity unspecified) individuals with anorexia nervosa (AN) reported difficulties finding "safe" foods, increases in anxiety and distress, and overall exacerbation of disordered eating during "lockdown" in addition to complex changes including increased reliance on family and friends and decreased access to care (Hunter & Gibson, 2021). Among a sample of patients with AN and their caregivers, Clark Bryan et al. (2020) similarly identified themes including reduced access to care, disrupted routines and community activities, increased distress and disordered eating symptoms, and increased attempts at self-managed recovery. Through an online survey, McCombie, Lawrence, Schmidt, Dalton, & Austin (2020) likewise found that those with lifetime eating disorders reported increased disordered eating during lockdown, which participants attributed to isolation, low mood, anxiety, and disrupted routine.

Some of these qualitative studies have highlighted modes of coping or resilience among clinical eating disorder samples, such as McCombie et al. (2020) who found that some participants reported relief from having less pressure to engage in activities and more time for self-care. Furthermore, several other open-ended survey studies also described modes of coping with disordered eating during the pandemic including "enjoyable activities," virtual socializing, and "mild exercise" (Schlegl et al. 2020a, 2020b; Termorshuizen et al. 2020).

Other qualitative studies have examined body and eating experience during the pandemic in nonclinical or subclinical samples or through examination of social media. For example, anxiety and isolation were noted as particularly salient in an analysis of Reddit posts pertaining to disordered eating during COVID-19 (Nutley et al., 2021). Simone et al. (2021) examined qualitative themes in a survey study of a large, racially/ethnically diverse, nonclinical sample regarding disordered eating and found the following descriptive themes: "(a) mindless eating and snacking; (b) increased food consumption; (c) generalized decrease in appetite or dietary intake; (d) eating to cope; (e) pandemic-related reductions in dietary intake; and (f) re-emergence or marked increase in eating disorder symptoms" (p. 1194). Simone et al. (2021) did not situate such themes in relation to experiences of identity.

Indeed, none of the abovementioned studies have situated their findings in the positionalities of their participants despite experiences of the pandemic being far from uniform across identities, communities, and social contexts. Some exceptions include studies situating COVID-19 related body and eating findings in socio-economic status through examining food insecurity and financial stress (Christensen et al., 2021; Hazzard et al., 2021; Simone et al., 2021) and transgender/gender nonbinary identity experience (Brownstone et al., 2021). Individuals' identities and, particularly, inhabitation of marginalized identities have profoundly shaped both perception of the pandemic and material realities of living through it. For example, Potter, Tate, & Patterson (2020) found that queer

women, compared to straight women, reported more COVID-19 exposure through social networks and jobs, and perceived the virus to be a bigger threat. Additionally, individuals who identify as Black, Indigenous, and People of Color (BIPOC) have been shown to be at increased risk for significant infection and mortality due to COVID-19 (e.g., Gross, Essien, Pasha, Gross, Wang & Nunez-Smith, 2020). Furthermore, the uneven demographic distribution of "essential" workers, with BIPOC individuals more likely to be employed in industries such as transportation, food service, healthcare, and social assistance, leaves many BIPOC individuals at greater risk for viral exposure (Hawkins, 2020; Rogers et al., 2020). On top of this, many essential worker positions are not provided with healthcare coverage, therefore exacerbating the consequences of COVID-19 for individuals who are already at increased risk due to occupational exposure (National Medical Association, 2020). Finally, media reports of the disproportionate impact of COVID-19 on certain populations have spurred national blame of individuals for their purported disease risk, racialization of the virus, and increased violence toward BIPOC individuals (Chowkwanyun & Reed, 2020; Liu & Modir, 2020; Taylor, Landry, Rachor, Paluszek, & Asmundson, 2020; Tavernise & Oppel, 2020).

Despite the clear presence of racism during COVID-19, none of the abovementioned studies on disordered eating during the pandemic considered the impact of race or ethnicity. Furthermore, as reviewed in Mikhail & Klump (2021), a growing body of research demonstrates the negative impact of discrimination, acculturative stress, and racism on disordered eating in BIPOC communities. Therefore, further research is needed to better understand the unique ways in which the COVID-19 pandemic has impacted the experiences of BIPOC individuals, particularly as it pertains to their bodies and eating.

In addition to racism, weight stigma has permeated public discourse related to COVID-19. Emergent evidence that higher weight may lend itself to greater viral severity risk has proliferated on news outlets (e.g., Aronne, 2021; BBC News, 2020; Mascarenhas & Rahim, 2021). Additionally, social media has contributed to sweeping panic around the possibility of "Quarantine 15" weight gain (e.g., Sattar et al., 2020; Pearl, 2020). Puhl, Lessard, Larson, Eisenberg, & Neumark-Stzainer (2020) found pre-pandemic internalized weight stigma to be predictive of disordered eating, depression, and stress during COVID-19. Furthermore, Sutin et al. (2021) found that prepandemic experiences of weight discrimination were predictive of greater fear of COVID-19, increased engagement in preventative behaviors, distrust in institutional responses, and decreased community connection. Clearly COVID-19 has brought about new cultural narratives, media messaging, and other distress that has likely impacted individuals' experiences of their bodies and eating.

The current study used inductive codebook thematic analysis to better understand how a (sub)clinical sample of cisgender people experienced their bodies and eating during the pandemic, as well as how participants' positionalities interacted with these experiences (Braun & Clarke, 2020).² Given how different intersectional identities such as body size, gender, race/ethnicity, and sexual orientation greatly influenced the lived experience of COVID-19, the realities of viral exposure, threats of discrimination, risk perception, and more, it is likely that the pandemic's influence on the domains of body and eating experience were considerably impacted by individuals' intersecting identities and social contexts. As our primary focus was on individuals with a history of disordered eating, we recruited a (sub)clinical sample via snowball sampling in order to include voices

² Brownstone et al. (2021) presents ways in which a sample of trans/gender nonbinary (TGNB) individuals have experienced the impact of COVID-19 on their bodies and eating, as we noted distinct facets of TGNB individuals' experiences in these domains and did a separate thematic analysis accordingly.

of diverse populations since eating disorders are under-diagnosed in marginalized demographics (Becker, Franko, Speck & Herzog, 2003). We directly explored the role of intersecting identities in shaping positive, negative, and ambivalent experiences of body and eating during COVID-19. Our qualitative framework adds nuance to the existing literature of disordered eating and body image concerns during COVID-19 that has mostly been done within homogenous or assumed-to-be-homogenous demographic samples.

2. Method

2.1. Recruitment

We recruited 31 adult (18 years and older), English-speaking participants via snowball sampling (Goodman, 1961) by circulating a study announcement to eating disorder and body justice organizations to distribute through their social networks. Snowball sampling has been shown to be a useful tool when recruiting marginalized populations with less representation in research (e.g., Perez, Nie, Ardern, Radhu & Ritvo, 2013). The study announcement asked for participants interested in speaking to their experiences of body, eating, emotions, and identity amidst COVID-19. Researchers outreached organizations centering eating disorders and/or body justice such as Virgie Tovar, Eating Disorder Foundation, Nalgona Positivity Pride, and Decolonizing Fitness to distribute study information via social media and email networks.

2.2. Procedure

Participants completed semi-structured interviews over Zoom audio (average length = 47 min). Interviews began with verbal informed consent. Following a semi-structured interview script (available upon request), interviewers then asked broad questions to elicit participant experiences of COVID-19 and how they perceived its influence on their bodies and eating. These were followed by more targeted questions specific to domains of participants' identities and contexts including family, community, hobbies, housing, access to resources, gender, sexuality, race/ethnicity, discrimination, stigma, and body image. Interviews were transcribed, de-identified, cross-checked for accuracy against audio recordings, and then sent to participants for feedback in accordance with member checking (Henry, 2015). Only one participant offered corrections to their transcript related to typos, which were corrected. The study was approved by the University of Denver's Institutional Review Board.

Post-interview, participants completed a 5–7 min online survey with items asking: race/ethnicity, gender identity, sexual orientation, body size ("small-bodied," "large-bodied," or "other"), and any other identities they viewed as "important." Most "other" body size descriptions aligned with a medium-bodied size code. In order to minimize participant burden, a subset of items from the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994) were included: number of episodes in the past 28 days of objective binge eating (OBEs), purging by vomiting, purging by laxatives, and hard exercise, as well as how many of the past 28 days participants engaged in dietary restriction and fasting for 8 or more hours. In line with Lavender, De Young, & Anderson (2010) and Mond, Hay, Rodgers, & Owen (2006), we defined any occurrence as more than one episode or day in the past 28 days of the eating disorder behavior, and regular occurrence of eating disorder behaviors as follows in the past 28 days: (1) four or more episodes of OBEs, purging by vomiting, or purging by laxatives, (2) 13 or more days of dietary restriction or fasting for 8 or more hours, and (3) 20 or more episodes of hard exercise. Participants also reported the amount of time they had thought about exercise, obsessing over eating, and worrying about weight gain during versus before COVID-19 using a - 2-2 Likert Scale (much less (-2), slightly less (-1), about the same (0), slightly more (1), much more (2)). We developed these items for the purposes of this study.

2.3. Data analytic plan

We used inductive, codebook thematic analysis with reflexivity to engage with participants' lived experiences in relation to their positionalities and to center their voices (Braun & Clarke, 2020; Terry & Hayfield, 2020). In line with this approach, we delayed our literature review until after data collection to avoid influencing data collection and analysis based on existing findings (Hamill & Sinclair, 2010). Throughout stages of analysis, the team repeatedly engaged in reflexive activities around identities and emotions, noting these explicitly on coding sheets and during lab meetings (Primeau, 2003). Team members engaged in bracketing by reflecting on how individual biases, identities, and assumptions might interact with the study topic prior to data collection (Braun & Clarke, 2006). The team shared common hypotheses including that COVID-19 would lead to increased disordered eating behaviors and body image struggles. We also noted our general assumption that eating disorder and mental health recovery is contingent upon social support. Our team included ten individuals: four interviewers, four transcribers, and two coders. All interviewers and transcribers coded transcripts in addition to other tasks. The coding team identifies as: 10/10 cisgender women, 6/10 White, 5/10 queer, 5/10 small-bodied, and 3/10 eating disorder survivors.

The first phase of the thematic analysis was informed by Galletta's (2013) framework for semi-structured interviewing and interview analysis. This included a post-interview memo by the interviewer and coding memo creation based on the audio recording and transcript of the interview by two additional team members. Galletta (2013) provided a scaffolding for familiarization processes in thematic analysis. Following the completion of these memos, the entire team read each transcript and met to discuss impressions each week as data collection took place. The first authors maintained notes to track these discussions and shared meeting notes with the team for feedback. We stopped at 31 interviews, as the team agreed that we had reached "information power" in a diverse sample (Braun & Clarke, 2021). The four interviewers then re-read all interview transcripts and, after considerable discussion, finalized the codebook. Six team members then undertook coding all interviews in teams of two that met to establish consensus around the presence of codes in each interview. This process of collective consensusbuilding was a tactic for prompting further reflexive discussion about the interviews as opposed to testing intercoder reliability. Our team used this codebook as an analytic tool to determine main themes and compare (sub)theme frequencies across multicultural identities. The goal with this approach was to see which themes appeared to be more common among certain groups (Joffe & Yardley, 2004). More specifically, we compared proportions of participants who mentioned (sub)themes in each identity group and only comment below on striking differences in proportion (i.e., at least 25% more participants in one group mentioning a (sub)theme than the other group or 100% of those with an identity mentioning the (sub) theme). Given our substantially smaller subsample of men, we did not do systematic comparisons of (sub)theme proportion between men and women, and focus on comparisons between BIPOC and White, large-bodied and small/medium-bodied, and queer and straight.

3. Results

We reference participants with pseudonyms, race/ethnicity, age rounded to nearest five years (number only), sexual orientation (straight (s) or queer (q)), self-identified body size (small-bodied (s-b), medium-bodied (m-b), and large-bodied (l-b)), and gender

Table 1Summary matrix with pseudonyms, identities, during versus before pandemic data, and eating disorder history.

Pseudonym	Age	Gender	Race/Ethnicity	Sexual Orientation	Body Size Descriptor	Time Exercise	Time Eating Obsessing	Time Weight Gain Worry	Eating Disorder History
Afra	30	Woman	MEA	Straight	Large	-1	0	1	S (o, d)
Anne	30	Woman	White	Straight	Medium	-1	-2	-2	S (d)
Beatriz	25	Woman	Latina	Queer	Medium	0	1	1	S (d)
Bella	22	Woman	Latina, White	Straight	Large	1	-1	-1	S (o)
Benito	45	Man	Latino	Straight	Large	0	1	2	S (d)
Beth	25	Woman	AAPI	Straight	Small	-2	0	0	Y (r)
Celestina	25	Woman	Latina	Asexual	Small	-1	1	1	S (d)
Chelsea	45	Woman	White	Straight	Large	-2	0	1	Y (r)
Diana	35	Woman	White	Straight	Large	-1	1	0	Y (r)
Eva	30	Woman	White	Straight	Small	2	2	2	Y (r)
Fadil	35	Woman	MEA	Straight	Medium	-2	-1	1	S (d)
Fiona	25	Woman	White	Straight	Medium	-1	1	1	Y (r)
Gale	25	Woman	AAPI, Black, Latina	Bisexual	Medium	1	1	1	Y (r, b/p)
Geraldo	50	Man	Latino, White	Straight	Large	0	1	1	S (d)
Grant	55	Man	White	Gay	Large	0	2	1	Y (o, r)
Hannah	30	Woman	White	Straight	Medium	2	1	1	Y (r, b/p)
zzy	50	Woman	White	Straight	Large	-2	2	2	Y (r, b/p)
anice	30	Woman	Black	Pansexual	Large	-2	0	2	S (d)
ulio	25	Man	Latino, White	Straight	Small	0	1	1	Y (r)
Karina	40	Woman	Latina	Straight	Large	1	1	0	Y (r)
Maria	25	Woman	Latina	Bisexual	Large	1	1	2	Y (r, b/p)
Mark	20	Man	White	Straight	Small	-2	-2	2	S (d)
Marta	25	Woman	Black, Latina	Bisexual	Large	1	1	1	Y (r)
Matt	25	Man	White	Queer	Small	-1	1	2	Y (r)
Nora	55	Woman	White	Lesbian	Large	1	1	-1	Y (o)
Olinda	30	Woman	Latina	Straight	Small	0	-1	-1	S (d)
Phoebe	40	Woman	White	Straight	Medium	1	0	0	Y (r)
Sonya	35	Woman	Black	Straight	Large	-2	2	2	S (o)
Готту	30	Man	AAPI	Straight	Large	-2	0	1	S (d)
Yazz	20	Woman	Black	Lesbian	Large	0	1	1	S (d, o)
Zoe	40	Woman	White	Straight	Small	2	1	2	Y (r)

Note. All participants were cisgender. Age has been rounded to the nearest five years. Time = Amount of time spent during versus before pandemic (-2 = much less; -1 = slightly less; 0 = about the same; 1 = slightly more; 2 = much more). Body Size = Self-reported body size (large bodied, medium bodied, small bodied). AAPI = Asian/Asian American Pacific Islander. MEA = Middle Eastern American. Y = Self-reported eating disorder history with formal diagnosis. S = self-reported subclinical disordered eating not formally diagnosed. r = self-reported history of restrictive eating and/or dieting. o = self-reported history of over/binge eating. d = self-reported history of dieting. b/p = self-reported history of binge eating/purging behaviors.

(woman (w) or man (m)) throughout results (see Table 1 for other participant information). In accordance with Onwuegbuzie (2003), we use terms: all, most (27 or more), many (18–26), half (15–17), some (five to 14), a few (two to four) and one to indicate how many participants spoke to the theme or subtheme.

3.1. Demographics and disordered eating history

Participants were 31 cisgender individuals. 24 identified as women and 18 identified as BIPOC. Average age was 32.48 years (*SD* = 10.45; range: 19–57). Twenty-one identified their sexual orientation as straight and 16 identified as large-bodied. Seventeen reported a history of diagnosed eating disorder, while 14 reported undiagnosed, but self-identified histories of disordered eating. See Table 1 for pseudonym, demographics, and eating disorder history for each participant.

3.2. Disordered eating symptoms during COVID-19

Table 2 provides the distribution of current disordered eating symptoms and other quantitative variables. During interviews, most participants reported that COVID-19 coincided with increased dietary restriction behaviors or urges. Furthermore, in the past 28 days, many participants reported engaging in any dietary restriction, while some reported regular and half reported any occurrence of fasting for 8 or more hours. Also in the past 28 days, some participants reported regular episodes of objective binge eating (OBE), while half reported any occurrence of OBEs. During the interviews, most participants also stated that concerns about exercise or

sedentariness increased with the pandemic, while some reported increased driven or compensatory exercise. The average rating of time spent "exercising" was – 0.71 (approaching slightly less during the pandemic than before), average rating of time spent "worrying about weight gain" was 0.87 (approaching slightly more during the pandemic than before), and average rating of time spent "obsessing over eating" was 0.55 (approaching slightly more during the pandemic than before).

On the other hand, some participants explicitly commented on how the pandemic had helped their recovery. For Hannah (White, 30, s, m-b w), COVID-19 seemed to clarify the fragility of her eating disorder recovery and prompt growth in her treatment process: "COVID has really helped to clarify what behaviors are still common and existing and what I'm at risk for...[this knowledge has helped] support how and what direction I'm going in my own therapy...That I maybe would not have...had as much time to reflect on." Likewise, Matt (White, 25, q, s-b m) described advancing his recovery during COVID-19, as the lockdown seemed to enable him to maintain a routine around following his meal plan that diminished his calorie counting. These participants both self-reported histories of AN and were engaged with treatment teams.

4. Main themes

4.1. Body surveillance and dissatisfaction

All participants expressed a heightened sense of surveillance of their bodies, frequently paired with body dissatisfaction, during COVID-19. At the same time, some participants elaborated that their

Table 2 Eating disorder symptom occurrence.

	Any occurrence (n, %)	Regular occurrence (n, %)	Mean (SD)	Range
# Days Dietary Restriction	25, 80.65%	15, 48.39%	2.81 (2.40)	0-28 days
# Days Fasting 8 + Hours	11, 35.48%	3, 16.13%	1.13 (1.91)	0-28 days
# Episodes Hard Exercise	10, 32.26%	3, 9.68%	4.10 (8.43)	0-28
# Episodes Laxative Misuse	5, 16.13%	2, 6.45%	0.65 (1.89)	0-9
# Episodes Objective Binge	14, 45.16%	9, 29.03%	2.29 (3.40)	0-13
# Episodes Self-Induced Vomiting	1, 3.23%	0, 0%	0.16 (0.90)	0-5

Note. # Days = Number of days in the past 28 when the person experienced each symptom (0 = no days; 1 = 1-5 days; 2 = 6-12 days; 3 = 13-15 days; 4 = 16-22 days; 5 = 23-27 days; 6 = every day). # Episodes = Number of episodes in the last 28 days. Per Nagata et al. (2020), we categorized frequencies of reported eating disorder behaviors by Any occurrence (more than zero reported behaviors or days of behaviors). Regular occurrence of dietary fasting was defined periods of time (\geq 8 h) without eating anything to influence shape or weight for \geq 13 days over the past 28 days. Regular occurrence of dietary restriction was defined as \geq 13 days over the past 28 days. Regular occurrence of hard exercise was defined as exercising in a driven or compulsive way as a means of controlling weight, shape or amount of fat, or burning off calories for \geq 20 episodes over the past 28 days. For other behaviors, regular occurrence was defined as \geq 4 occurrences over the past 28 days.

surveillance was associated with body appreciation or improvements in body image. In describing their experiences of body surveillance, participants discussed body checking, elevated awareness of bodily sensations and physical changes, and self-observation on video interfaces.

4.1.1. Pandemic stress fuels body judgement: "A snowball of negativity" (Sonya, Black, 35, s, l-b w)

Many participants shared how overall distress related to the pandemic negatively impacted their body image and no proportional differences were observed across identities. As Sonya put it: "it's like it's a spiral. I think about COVID, I think about all the bad things that come as a result of that, and then I start nitpicking...I've put on weight or the house is a mess...it's a snowball of negativity." Janice (Black, 30, q, 1-b w) also described her experience as "a snowball, it just picks up...what other things are you're unhappy with?" She stressed that, regardless of where her negative ruminations began: "my body usually ends up being the stopping point." While participants used a range of negative language to describe how they felt about their bodies, disgust was repeatedly expressed. For example, Zoe (White, 40, s, s-b w) shared feeling "disgusted" with herself when describing increased "body consciousness" and shame about not using the pandemic to transform her body. "Gross" (Anne, White, 30, s, m-b w; Phoebe, White, 40, s, m-b w) and "body hate" (Diana, White, 35, s, l-b w) were other ways participants described feeling about their bodies during COVID-19.

4.1.2. Time affords body surveillance opportunities: "More time to pick apart my body" (Phoebe, White, 40, s, m-b w)

Half of participants stressed that decreased commute times, social engagements, and, for some, employment during COVID-19 created "more time" for negative rumination and monitoring of their bodies. A higher proportion of participants who identified as small/medium-bodied mentioned this theme compared to individuals who identified as large-bodied. Eva (White, 30, s, s-b w), who lost her job during the pandemic, clearly synthesized: "it's given me so much more time, approximately 40 h a week more, to focus on how much I dislike my body...I don't know if I've ever felt so bad about myself as I do now." Likewise, Phoebe commented on how "more time," particularly gaps between virtual meetings, increased negative self-surveillance: "I have more downtime when I'm waiting for some-body to respond on the computer. I can look at my thighs, I can look at my arms...I'm less engaged with conversations and people around me."

Notably, some participants reported a less distressing quality to body surveillance. For example, Gale (Asian/Asian American Pacific Islander (AAPI), Black, Latina, 25, q, m-b w) shared: "I began to take it on more gracefully...accepting that my body will change, probably it'll get softer." Likewise, Fadil (Middle Eastern American (MEA), 35, s, m-b w) reflected on the positive impact of "sitting with" discomfort associated with changes in her body during the pandemic as

opposed to turning to dieting. Beth (AAPI, 25, s, s-b w) took a maximally neutral stance: "I noticed my body became thinner because I didn't exercise as much. I just noticed it...I'm okay with that. I can sit with that."

4.1.3. Screen time catalyzes involuntary body surveillance: "Being able to see myself in the interface" (Karina, Latina, 40, s, l-b w)

Some participants highlighted that negative body surveillance was triggered by seeing themselves on virtual platforms; this was particularly reported by a high proportion of participants who identified as large-bodied compared to small/medium-bodied. Izzy (White, 50, s, l-b w) expressed effusive hatred for Zoom: "having to see myself on a damn video that is a beat down beyond all beat downs...It's funny-normally I can forget what I look like. But then Zoom is like 'hey, let me show everybody now." Afra (MEA, 30, s, 1-b w) also discussed the impact of filming videos for social media during the pandemic: "when you film yourself a lot at the beginning, it's like, 'oh my god, is this angle okay? Oh, look at my double chin.' Like, it's so easy to be self-critical." However, Afra shared that continued support from her online community helped her "take a step back" from those critical feelings. On the other hand, Karina experienced a sense of affirmation during video calls with her boyfriend: "I really liked being able to see myself in the interface I was like 'oh my god I'm so cute." Karina also spoke to the progress she made along her body acceptance journey: "ten years ago this would have triggered me unbelievably."

4.2. Movement and intake fixation

Most participants reported increased fixation on movement or eating during the pandemic. All who reported increased fixation on food or movement also reported increased dietary restriction, over/binge eating, or both behaviors. Notably, this theme was mentioned by all participants who identified as queer.

4.2.1. Disrupted movement routine leads to anxiety and a sense of "should": "I shouldn't be stagnant" (Yazz, Black, 20 q, l-b w)

Half of participants reported disruption to their regular exercise regimen which was paired with heightened anxiety (e.g., "I found myself getting kind of antsy" (Hannah, White, 30, s, m-b w)) as well as shame or regret regarding sedentariness. Yazz noted: "you watch news...see how many people are dying...it just felt like the same day over and over...I felt like things were really stagnant, but that I shouldn't be stagnant and I definitely blamed myself if I gained weight or if clothes stopped fitting." Fadil (MEA, 35, s, m-b w) described a similar sense that she should be maintaining routine despite pandemic stress, stating: "I felt like I was not moving enough." Both participants spoke to a sense that they "should" be able to maintain control over their changing capacities for movement during the pandemic. This experience was reported in higher

proportions by participants who identified as large-bodied compared to small/medium-bodied.

4.2.2. Sedentariness leads to energy input and output calculation: "I didn't move a lot today. So that means I shouldn't eat" (Gale, AAPI, Black, Latina, 25, q, m-b w)

For some, increased sedentariness during COVID-19 provoked anxiety around dietary restriction. For example, Eva (White, 30, s, s-b w), who, as noted above, had been spending more time thinking about how much she disliked her body, also spent time fixated on "how I can move my body more and feed it less." This fixation was connected to observation of her neighbors going on walks and thinking: "maybe I should do that more...I didn't want to be the lazy one." For Fiona (White, 25, s, m-b w), sedentariness became an obstacle to her eating: "I just feel like if I'm not up, moving...it becomes more difficult to understand why it's important that I eat." Julio (Latino, White, 25, s, s-b m), like other participants, spoke to the impact of decreased activity levels on dietary restriction during the pandemic: "I get very anxious if I'm sitting down all day.I wasn't moving around as much so I didn't need as much food even though I was still hungry." This subtheme appeared to be reported in higher proportions of participants who identified as small/medium-bodied compared to large-bodied.

In stark contrast, some participants reported seeking movement for coping or pleasure during the pandemic, with some reporting that they reached a new capacity for "joyful movement" that was not compensatory. Maria (Latina, 25, q, l-b w) stated: "I started skateboarding as a quarantine hobby...it is the first type of exercise I have found that makes me feel good...I have goals that have nothing to do with calories."

4.2.3. Movement and intake become sites to seek control: "I needed to hold on to something that I could control" (Mark, White, 20, s, s-b m)

For half, the unpredictable nature of COVID-19 drove attempts to gain "control" through tracking calories or exercise, or restricting food intake; this theme did not differ in frequency across identities. Julio (Latino, 25, White, s, s-b m) reflected: "I was looking for something to control. I think that caused more disorder symptoms to come back." Zoe (White, 40, s, s-b w) also reported that engaging in restriction and over-exercise was an attempt to "hold on to something that [she] could control," sharing "I can't really, but it feels like I can control my weight."

4.3. Food scarcity and resource concerns

Half of participants reported that COVID-19 complicated their relationships with their own, loved ones', or communities' access to food. Most of these participants reported increased problematic eating (dietary restriction, over/binge eating, or both). There were no broadly observed differences in reporting of this theme across multicultural identities; however, positionality was an important feature in the interviews. Our discussion of subthemes therefore interweaves identity and context complexities.

4.3.1. Food insecurity and grocery stores cause stress: "The first time we went to the market was hard, I came home and cried" (Geraldo, Latino, White, 50, s, l-b m)

Some participants identified the grocery store as a key location of stress about their bodies and eating. Although Geraldo managed to avoid engaging in binge eating or restrictive behaviors throughout COVID-19, he explained that "the food insecurity part was very triggering," sharing that he "came home and cried" after he and his girlfriend went to the store for the first time during the pandemic. This anxiety also followed him home as he "devolved into this sort of World War II mindset that everything is going to be rationed" and felt himself closely monitoring not only his own food intake, but that

of his entire family. Benito (Latino, 45, s, l-b m) expanded on a similar experience of grocery store stress, and explicitly connected it to his gender identity: "I'm the one that needs to go to the grocery store...so that my wife doesn't have to be in direct risk...it's embedded in me from society and growing up as a man." Notably, those who identified as straight reported this theme at a higher proportion than those who identified as queer.

4.3.2. Scarcity drives restriction: "I don't know when they're going to need it" (Zoe, White, 40, s, s-b w)

Some participants found that concerns for others' or their own access to food encouraged dietary restriction. For example, Zoe shared: "if this is something my mom or dad would eat, I'm just not going to eat it anymore because I don't know when they're going to need it.. I cut back on eating a lot, but it wasn't just food for myself. It was food for them." Similarly, Eva (White, 30, s, s-b w) reported: "I went to the grocery store and I wanted fresh strawberries, but if there were only two or three packs of strawberries, [I thought] this means someone else who comes to the store later won't have any." Eva and Zoe's worries about others compounded already challenging experiences around food unavailability, which were tied to restrictive eating habits. Those who identified as White compared to BIPOC reported this theme at a higher proportion.

4.3.3. Bulk food triggers loss of control: "I would...buy a lot of things that I would want to take it home and eat it" (Marta, Black, Latina, 25, q, l-b w)

Some described difficulties coping with more access to food at home due to bulk shopping trips and reported distress around emotional and binge eating. Hannah (White, 30, s, m-b w) shared that she "stockpiled" food and restricted her eating to make sure she would have enough food, but would find herself "bingeing" late at night. Marta reported a similar struggle: "Especially because I wasn't going to the supermarket often, so when I would buy something or buy a lot of things that I would want to eat and take it home and eat it." Furthermore, Marta, who reported temporarily relying on her parents for financial support due to job loss, shared that she would feel an obligation to secretly buy her own "binge foods" separate from her family's shopping trips. This navigation of resource management and secrecy led to feelings of "shame." Celestina (Latina, 25, q, s-b w) also reported that increased access to food during the pandemic catalyzed new emotional eating behaviors: "I get anxious and I just start eating...and then the next day I'm not hungry. So the way it's changed is sometimes I overdo it." Notably, Celestina reported that working from home brought her more time and energy to shop for and prepare foods; whereas, her pre-COVID-19 commute time to and from work greatly hindered her ability to use her food stamps and frequently forced her to choose between purchasing gas and fast food. In contrast, Janice (Black, 30, q, l-b w) reported that food scarcity led to decreased binge eating behaviors: "a scarcity mindset like I can only eat what I portion for myself because I don't want to go to the store." No proportional differences were observed by identity regarding this subtheme, but it is worth marking that four of the five who discussed this subtheme identified as BIPOC.

4.4. Changes in visibility of body and eating

Many participants also commented on the impact of spending less time in public during the pandemic, which, for some, prompted relief from eating disorder triggers, judgement from others, worry about presenting the self in public, and discrimination. Relief regarding discrimination exposure was particularly notable among individuals who identified as large-bodied. New living situations due to the pandemic meant that some participants felt their body and eating habits to be newly visible, which led some to feel scrutinized

and others to feel more supported by people with whom they were cohabitating.

4.4.1. Being seen less produces relief: "I didn't have the pressure to be seen by people" (Hannah, White, 30, s, m-b w)

COVID-19 social distancing gave half of participants relief from situations that previously challenged their relationship with their bodies and eating. Nora (White, 55, q, l-b w) mentioned that there were "fewer opportunities to sit and eat" at social engagements that in the past could "trigger a binge." Janice (Black, 30, q, l-b w) also spoke to her reprieve from eating in public: "I'm kind of grateful that I don't have to navigate going out to eat and then doing all the mental gymnastics of what's okay for me to eat, what's not okay." For Fadil (MEA, 35, s, m-b w), social distancing provided relief from diet culture during social meals with friends who would frequently comment on how much they had eaten. Anne (White, 30, s, m-b w) similarly described relief from diet culture exposure at work.

Many of these participants commented on the relief they felt around not being "seen" by others which, in turn, eased feelings of distress around their body's physical presentation and judgement from others. For Hannah, social distancing saved her from her usual routine of obsessive body checking prior to leaving her home. For others, face mask requirements offered reprieve from similar worries. Janice explained that she has facial hair growth due to a medical condition and stated: "before COVID, that was something that really dictated whether or not I left the house...having to wear a mask outside...that means not having to have that mental battle of 'Is it noticeable?'...my face is covered." Karina (Latina, 40, s, I-b w) likewise expressed relief and even joy at how working from home allowed her to wear less "structured clothing" that was more comfortable for her "fat" body.

4.4.2. Precautions yield some reprieve from in-person discrimination exposure: "I think I just read as a lot more white with a mask on" (Maria, Latina, 25, q, l-b w)

COVID-19 brought a few participants with marginalized identities a reprieve from their everyday experiences of discrimination, particularly around weight stigma and racism. Karina (Latina, 40, s, lb w) reported not only being more physically comfortable, but also less worried about being seen and judged for her larger body: "I can...be in my body and nobody's going to be around...Because we're all social distancing, I don't have to worry about like what my rolls look like." Relief around not being seen was connected to a sense of personal safety and relief from external weight stigma. For Maria, the relief was related to her racial identity as a person of color: "it's basically gone from almost every day experiencing microaggressions...to being so rare or so imperceptible that I think of it a lot less...I think I just read as a lot more white with a mask on than I do without." Only individuals who identified as large-bodied mentioned this subtheme. Weight stigma may have interacted with other multicultural identities to amplify the burden of in-person discrimination pre-pandemic and therefore led to greater reprieve for individuals at such intersections due to social distancing.

4.4.3. Being seen less coincides with concerns about being seen post-pandemic: "I'm not a before and after pic" (Gale, AAPI, Black, Latina, 25, a, m-b w)

A few participants also ruminated on how others might perceive changes to their body once social distancing measures were released. Zoe (White, 40, s, s-b w) reported that feelings of body dissatisfaction flared as restrictions loosened, which drove her dietary restriction. Additionally, Maria (Latina, 25, q, l-b w) worried that weight gain would appear more noticeable after social distancing: "if they had seen the weight gain slowly they might not have noticed, my anxiety is that they will see me...six months after they last saw me and be like, 'she's gained so much weight!" Gale (AAPI, Black,

Latina, 25, q, m-b w) expressed similar concerns about her weight loss being more noticeable than it otherwise would have been. She mentioned that she was frustrated by others' focus on her changed body when she did see them in person: "I'm not a before and after pic."

4.4.4. New living situations make private food habits newly visible: "At first they were critiquing me about how much I was eating" (Afra, MEA, 30, s, l-b w)

With changed social contexts (e.g., greater exposure to fewer people), some participants reported challenges and some reported improvements in terms of eating and body related pressures at home. No proportional differences in this subtheme were observed across identities. For example, Anne (White, 30, s, m-b w) reported struggling to collaborate with her parents about communal groceries and expressed frustration around comments from her parents like: "why do you need that? you know that's not great for you'...or 'wow you ate a lot of those." Fiona (White, 25, s, m-b w) was also confronted with her brothers' restrictive diets and her parents' "food shaming" when she moved in with her family during the pandemic. These new pressures were problematic for Fiona's eating disorder recovery process since she had arrived at her parents' house only days after discharging from higher level of care treatment. Marta (Black, Latina, 25, q, l-b w) and Mark (White, 20, s, s-b m) also reported increased exposure to diet talk, while living with their mothers during COVID-19.

A number of participants who experienced conflicts with family members around food found ways to enforce new boundaries or seek new support. Afra (MEA, 30, s, l-b w) reported that increased contact with her family during the pandemic demanded she place boundaries around how they communicated about food: "at first they were critiquing how much I was eating and I finally...told them like 'you have to stop. I have a plan. I know what I'm doing." Afra's success in setting boundaries seemed to help her establish deeper, easier communication with her family around her body and eating. Nora (White, 55, q, l-b w) reported a similar deepening of connection with her wife during the pandemic that helped disrupt binge eating urges; she reported having "more time" to explain to her wife how best to support her recovery.

4.5. Bodies are vulnerable

Many participants reported vulnerability in the bodies of themselves and others during COVID-19 and shared how this has influenced patterns of restrictive and over/binge eating, concerns for the nutritional content of food, and exercise patterns. In particular, the majorities of participants who identified as BIPOC, large-bodied, or queer reported concerns for the vulnerability of bodies in comparison to smaller proportions of White, small/medium-bodied, and straight participants. Of all of the themes, this one was the most starkly variable depending on participants' intersectional identities.

4.5.1. Healthcare disparities drive vulnerability: "People of color aren't getting the same quality of care" (Janice, Black, 30, q, l-b w)

Some participants shared that their bodies felt particularly vulnerable during COVID-19 due to their positionalities as members of marginalized communities. This experience was markedly more common for individuals who identified as BIPOC or large-bodied. For example, Janice shared: "Hearing information that people of color aren't getting the same quality of care when it comes to being treated for COVID...that definitely makes me anxious that if I go to the doctor, are they God forbid I ever felt like I was having symptoms, are they going to take me seriously?" For Janice, these worries seemed to complicate her relationship with exercise as she felt compelled to exercise as a measure to maintain her health in the face

of COVID-19, but was worried about exposure to COVID-19 while walking outside.

Regarding the salience of her racial identity and vulnerability during COVID-19, Marta (Black, Latina, 25, q, l-b w) shared: "you can see online like the negative [racist] things people have to say. Well, you know those people online are your neighbors, they are people in the store...I didn't know if someone was going to try to hurt me. I was very aware of my surroundings." Alongside these feelings of hypervigilance and anxiety, Marta reported increased engagement in binge eating during the pandemic: "the stress that came with it and the anxiety...I was probably like eating a lot more out of comfort." However, Marta found her voice in activism, sharing: "I feel like I have to use my voice and speak up for those who can't." Additionally, Sonya (Black, 35, s, 1-b w) expressed concern for the overall wellbeing of the "African American community" due to potential predispositions to negative outcomes, stating: "It makes me sad. I haven't personally felt that, but I've always identified closely with my race and it hurts me to know that my people are just having a really rough time with all of this." Sonya shared that a general increase in distress during COVID-19 coupled with existing difficulties with anxiety, both of which were influenced by concerns for her community, prompted her to turn to food "to cope."

4.5.2. Illness vulnerability managed through eating concern: "Strive to be healthy and then in case we get it, we have antibodies to fight the COVID" (Celestina, Latina, 25, q, s-b w)

COVID-19 inspired feelings of fear around physical health for some participants, particularly if they perceived themselves or those close to them as high risk. This was reported at higher proportions among large-bodied and queer versus small/medium-bodied and straight identified participants. For example, Maria (Latina, 25, q, 1-b w) shared that concern for her and her spouse's physical health due to pre-existing medical conditions complicated her relationship with her body, stating: "I was resenting my body for being sick and being so much likelier to get really sick if I do get COVID...that just felt pretty cosmically unfair." Similarly, feelings of anxiety prompted some participants to pay closer attention to their nutritional habits to prevent negative outcomes associated with COVID-19, as Celestina shared: "I started to kind of introduce veggies to my kids.we changed our milk from regular milk to almond milk...It is just like those small changes we're doing it to strive to be healthy." Interestingly, two participants found that this sense of vulnerability motivated engagement in their prescribed meal plans in order to prevent eating disorder hospitalization where they might be vulnerable to COVID-19 exposure.

For many participants, particularly those in medium and large bodies, concern around viral vulnerability appeared to be heavily influenced by cultural messaging around weight stigma and health. Geraldo (Latino, White, 50, s, 1-b m) shared: "I worry if I get this I'm gonna die...that I'll be the younger guy who dies because of my weight." He noted that this worry has been fortified by media reports of the possible ineffectiveness of COVID-19 vaccines on those with large bodies. These messages associating weight with viral vulnerability, in turn, appeared to motivate weight loss efforts in order to reduce risk for negative outcomes from COVID-19. For example, Beatriz (Latina, 25, q, m-b w) shared: "Sometimes you see these articles where it's like if you're obese then you're more likely to die of COVID...maybe I should lose some pounds so I don't have to worry about COVID-19." Notably, Beatriz also reported increased experiences of "stress eating," as well as increased binge eating and restrictive eating during COVID-19, a pattern likely influenced by weight stigma messaging. Moreover, Nora (White, 55, q, l-b w) stated: "I've been hearing things on the news about how it tends to be the women who are overweight or if you have a pre-existing condition...it has kind of pushed me in the direction of 'I've got to get the extra weight off and be more steady." Nora, who also spoke

to her experience of vulnerability as someone with a chronic health condition, reported increased restrictive eating with the hope of losing weight to manage disease risk.

4.5.3. Being seen as a viral threat stokes both vulnerability and resilience: "It kind of makes me feel like I'm public enemy number one" (Tommy, AAPI, 30, s, l-b m)

A few participants' experiences of body vulnerability also manifested in concerns that others perceived them as vectors of COVID-19. All participants who discussed this theme identified as BIPOC. For example, Tommy expressed concern for his safety due to racialized narratives around COVID-19 and blaming of Asian American individuals for the virus. Tommy responded by strengthening his racial pride and speaking out against this racist rhetoric: "this is my heritage, my ethnicity." Gale (AAPI, Black, Latina, 25, q, m-b w) also spoke to racialized narratives around COVID-19 transmission, particularly regarding immigrant communities, reporting: "people are like, 'oh you're a person of color maybe there's more chances that you're going to have COVID, so I'm going to stay away from you.' So it's kind of like this weird mindset of like, oh, did that person cross the street because we need to social distance or did they do it because they see the color of my skin and they're like: 'oh, she definitely has COVID." Regarding the impact of this on her wellbeing, Gale shared: "I feel very vulnerable.like I'm losing a piece of my own sense of agency...It makes you feel less empowered." Gale reported increased dietary restriction urges and movement fixation amidst this lost agency. Poignantly, Karina (Latina, 40, s, 1-b w) also noted how weight stigma influenced her sense of physical safety in public: "there's this extra level of obesity scapegoating happening, I'm sometimes aware of, you know, am I more at risk of aggression? Are people thinking I'm a vector...because I'm fat?".

5. Discussion

While previous research shows how the pandemic has exacerbated disordered eating and body image difficulties, our inductive, thematic analysis illuminates multifaceted ways in which experiences of body and eating have interacted with identity and contextual changes caused by COVID-19 in a diverse sample. Corroborating earlier work in nonclinical and clinical samples, our study indicates that, for many individuals, the pandemic has been associated with increased disordered eating symptoms and body dissatisfaction (e.g., Simone et al., 2021; Swami et al., 2020; Hunter & Gibson, 2021). Additionally, findings from this study align with other research highlighting relationships between increased disordered eating, anxiety, stress, and food insecurity (Christensen, et al., 2021; Hazzard, et al., 2021; Simone et al., 2021). Our study extends understandings of these responses, highlighting how they are embedded in forms of body surveillance that emerged out of the pandemic's peculiar contexts and increased exposure to one's own image on screen. Additionally, our participants' narratives offer insight into how movement and intake fixation has not only been a response to body dissatisfaction or lessened support systems, but has also been tied to routine changes, increased sedentariness, body vulnerability, and control seeking. These findings align with and build upon previous studies showing increased compensatory movement and related experiences during COVID-19 (e.g., Castellini et al., 2020).

BIPOC and large-bodied participants reported that the pandemic structured their experiences of being seen. For many, it created feelings of relief from the stress and judgment of public visibility. Being seen carried duress — racism and weight-stigma manifested through the visuality of these identity constructions. Thus, control over one's visibility may have resulted in temporary relief, especially as news outlets headlined misleading information around weight, viral susceptibility, and risk factors, that then exacerbated weight

stigma and prompted insecurity among large-bodied individuals (Aronne, 2021; Mascarenhas & Rahim, 2021). These experiences around visibility appeared both in terms of how participants perceived identity as connected to their bodies' physical characteristics and habits.

Participants remarked that eating and exercising, daily habitual behaviors, were experientially impacted by how much or little they might be seen and witnessed by others. Maria (Latina, 25, g, 1-b w) described how decreased visibility either due to social distancing or the facial coverage offered by masks led people to read her more often as White: as a consequence, she felt relieved in public spaces and she noted fewer microaggressions. This experience entwined her social materiality with her political positioning, elaborating on the connection between racial identity and the saliency of being seen. Others expressed similar relief during social distancing due to decreased contact with diet culture and stressful food-related situations like eating out at restaurants. Reduced public visibility also limited participants' perceived exposures to appearance-based judgements from others as well as actions like body-checking associated with the anticipation of such judgements. These findings build upon McCombie et al. (2020), which noted relief as a positive response to social restrictions caused by COVID-19 among those with AN, but importantly draws attention to the role of positionality in influencing what kinds of relief these restrictions offered.

Maria's story also offers a helpful vantage on the relationship between identity and the experience of viral vulnerability. As research outlined in the literature review illuminates, marginal identity experience entwined with the pandemic shaped an experience of higher risk, death, and social/physical violence for demographics including BIPOC, large-bodied, and queer (e.g. Potter et al., 2020; Gross et al., 2020; Hawkins, 2020; Rogers, et al., 2020; Chowkwanyun & Reed, 2020; Liu & Modir, 2020; Taylor et al., 2020; Tavernise & Oppel, 2020). Accordingly, in our findings the majorities of participants who identified as BIPOC, large-bodied, or queer reported concerns for body vulnerability, rendering vulnerability as both an internalized and externalized experience of identity and the pandemic. This construction of vulnerability parallels identity and harm by connecting the perception of disease (e.g., through media and social interactions) with the material stress, fear, and violence born by these subjects. The latter complicates Celestina's (Latina, 25, q, s-b w) description of her increased dieting by connecting her position as an essential worker and her housing situation in a primarily Latinx neighborhood with her daily habits as a way of managing her and her family's perceived COVID-19 susceptibility. Across an array of intersecting identities, it is also likely that identification as large-bodied may have amplified individuals' concerns for body vulnerability given compounding experiences of weight stigma and consistent exposure to rhetoric naming "obesity" as a COVID-19 risk factor.

Our findings suggest that the pandemic has not only brought about challenges within the domains of body and eating, but also has prompted new forms of coping and resiliency. Maria (Latina, 25, q, lb w), for example, found "joyful movement" in skateboarding, while Geraldo (Latino, White, 50, s, l-b m) found comfort in experiencing his body in a swimming pool. Some participants, like Nora (White, 55, q, l-b w) and Afra (MEA, 30, s, l-b w), were able to use new living situations or time spent at home to improve their communication with family about body and eating. And for Karina (Latina, 40, s, 1-b w), video calls and taking pleasure in seeing her own image helped her affirm how much progress she had made towards body acceptance. Notably, by interpreting bodily vulnerability as inherently connected to racial identity, this study's participants demonstrated remarkable resistance and resilience in their decisions to identify more closely with their racial identities. Marta (Black, Latina, 25, q, lb w) and Tommy (AAPI, 30, s, l-b m), for instance, were spurred to speak up for communities to which they belonged and that they felt

were especially negatively impacted by the pandemic. In alignment with other studies, these findings showcase that, despite the turbulent stressors of COVID-19, individuals are capable of immense adaptability as seen through the means of self-care, coping skills, and community engagement (McCombie, et al., 2020; Termorshuizen, et al., 2020).

5.1. Strengths and limitations

Our methodology lends itself to a complex understanding of COVID-19's multifaceted impact on people's experiences of their bodies and eating. We recruited a diverse sample in terms of racial/ethnic, body size, and queer related identities, allowing for an intersectional discussion. Our coding team was also diverse in terms of racial/ethnic identity, body size, and sexual orientation and these positionalities likely contributed to a richer and more attuned meaning-making process. Another strength of our study is that we did not presume cisgender identities of our participants. On the other hand, our sample included few cisgender men and we recommend that future research recruit a more even distribution of men and women in studies of this nature to allow for intersectional analysis of themes particularly salient among cisgender men versus women.

Our sample appeared to have more pronounced difficulties with eating disorder symptoms than nonclinical samples, as demonstrated by more individuals in our sample with any or regular occurrence of disordered eating behaviors compared to normative presumed cisgender samples (e.g., Lavender et al., 2010; Mond et al., 2006). This was expected and in line with our goal to recruit a diverse sample of individuals with (sub)clinical disordered eating who may or may not have accessed formal diagnosis or treatment. That said, our findings likely do not generalize to nonclinical samples and may be of interest to clinicians who would benefit from greater attunement to themes that may arise with distressed, diverse clients during and in the aftermath of COVID-19.

5.2. Practice implications and future research

Well beyond the context of COVID-19, trauma-informed practice must acknowledge the complex impact of the pandemic as a form of collective trauma. Clearly even individuals who may have never sought eating disorder treatment or been formally diagnosed have had challenging experiences of their bodies and eating amidst COVID-19. Thus, clinicians should listen for themes related to body surveillance and dissatisfaction, movement and intake fixation, scarcity and resource concerns, and body vulnerability, as these seemed greatly impactful. They should also be attentive to the fact that many of these themes and subthemes are unequally distributed and experienced across different positionalities and sociocultural contexts. For example, it is striking that feelings of bodily vulnerability were experienced among majorities of BIPOC, large-bodied, and queer participants. Clinicians should be sensitive to the ways the experience of embodiment might be differently charged during a health crisis based on clients' inhabitation of already marginalized identities. In particular they should be attentive to the fact that COVID-19 has frequently interacted with or amplified pre-existing experiences of feeling othered or stigmatized.

Clinicians should also take an intersectional and individualized approach to understanding how their clients' interpersonal contexts have been impacted by COVID-19. For example, asking clients about what it has been like to be seen less often in public or more often by family may relate to each client's unique identities and could therefore helpfully inform treatment planning. Furthermore, exploration of these factors may inspire innovative interventions to improve the wellbeing and quality of life of individuals during COVID-19, such as turning off one's self-view on Zoom to decrease the impact of self- and body-surveillance.

We additionally believe that our study points to a number of fertile areas of future research. Some of the connections between experiences of body and eating during the pandemic and identity were explicitly and thoughtfully articulated by our participants. While at present we can only make informed speculations about, for example, why Movement and Eating Fixation was so common among queer participants, future research can more directly address such questions to determine their generalizability and deepen understandings of how identity interacts with disordered eating and body image concerns during times of crisis.

Finally, it is our hope that this research may inform future investigations of the long-term impact of COVID-19 on the experience of bodies and eating. In particular, while it is critical to understand the ways in which social isolation and absence of in-person treatment services negatively impacts those who experience both threshold and subthreshold disordered eating, the results of this study complicate our understanding of the ways in which social detachment and telehealth services may promote healing and recovery. Finally, the unsettling nature of COVID-19 and social distancing provides a critical context to investigate pathways of coping and resilience (e.g., use of virtual support- or identity-related groups). Additionally, this research could lead to a better understanding of the undiagnosed population in eating disorders who cannot or choose not to receive traditional eating disorder treatment. Post-COVID-19, it will be critical to analyze the nature of transitioning from primarily virtual and socially distant to in-person interaction and its subsequent impact on individuals' experiences of bodies and eating. Just like the experience of the pandemic itself, the effects of this transition will likely be unevenly distributed across and felt by individuals according to their unique multicultural positionalities.

6. Conclusions

This qualitative study sought to examine the impact of COVID-19 on participants' experiences of their bodies and eating. While our results echo previous findings on increased disordered eating symptoms and negative affect, our inductive approach and diverse sample allowed us to discern a more complex range of experiences. This study's themes provide nuance and temper existing data through narratives of coping and resilience while considering experiences of bodies and eating as entwined with contextual changes caused by COVID-19 and participants' unique positionalities.

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Conflicts of Interest

The authors have no conflicts of interest to disclose.

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References

- Aronne, L. (2021). Obesity and COVID-19: A dangerous disease pairing. US News & World Report. (May 18). (www.usnews.com/news/health-news/articles/2021-05-18/obesity-and-covid-one-complex-disease-worsens-impact-of-another).
- BBC News. (2020). Coronavirus: Obesity "increases risks from Covid-19." BBC News. (August 26). (https://www.bbc.com/news/health-53921141).
- Becker, A. E., Franko, D. L., Speck, A., & Herzog, D. B. (2003). Ethnicity and differential access to care for eating disorder symptoms. The International Journal of Eating Disorders, 33(2), 205–212. https://doi.org/10.1002/eat.10129
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in
- Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238
- Braun, V., & Clarke, V. (2021). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. Qualitative Research in Sport, Exercise and Health, 13(2), 201–216. (https://doi-org.du.idm.oclc.org/10.1080/2159676X.2019.1704846).
- Brown, S., Opitz, M. C., Peebles, A. I., Sharpe, H., Duffy, F., & Newman, E. (2021). A qualitative exploration of the impact of COVID-19 on individuals with eating disorders in the UK. Appetite, 156. https://doi.org/10.1016/j.appet.2020.104977
- Brownstone, L. M., Kelly, D. A., Maloul, E. K., Dinneen, J. L., Palazzolo, L. P., 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-19 pandemic. Psychology of Sexual Orientation and Gender Diversity. https://doi.org/10.1037/sgd0000519
- Castellini, G., Cassioli, E., Rossi, E., Innocenti, M., Gironi, V., Sanfilippo, G., & Ricca, V. (2020). The impact of COVID-19 epidemic on eating disorders: A longitudinal observation of pre versus post psychopathological features in a sample of patients with eating disorders and a group of healthy controls. The International Journal of Eating Disorders, 53(11), 1855–1862. https://doi.org/10.1002/eat.23368
- Chowkwanyun, M., & Reed, A. L. (2020). Racial health disparities and Covid-19 Caution and context. *The New England Journal of Medicine*, 383(3), 201–203. https://doi.org/10.1056/NEJMp2012910
- Christensen, K. A., Forbush, K. T., Richson, B. N., Thomeczek, M. L., Perko, V. L., Bjorlie, K., ... Mildrum Chana, S. (2021). Food insecurity associated with elevated eating disorder symptoms, impairment, and eating disorder diagnoses in an American University student sample before and during the beginning of the COVID -19 pandemic. *International Journal of Eating Disorders*, 54(7), 1213–1223. https://doi.org/10.1002/eat.23517
- Clark Bryan, D., Macdonald, P., Ambwani, S., Cardi, V., Rowlands, K., Willmott, D., & Treasure, J. (2020). Exploring the ways in which COVID-19 and lockdown has affected the lives of adult patients with anorexia nervosa and their carers. *European Eating Disorders Review*, 28(6), 826–835. https://doi.org/10.1002/erv.2762
- Di Renzo, L., Gualtieri, P., Cinelli, G., Bigioni, G., Soldati, L., Attinà, A., & De Lorenzo, A. (2020). Psychological aspects and eating habits during COVID-19 home confinement: Results of EHLC-COVID-19 Italian online survey. *Nutrients*, 12(7), 2152. https://doi.org/10.3390/nu12072152
- Fairburn, C. G., & Beglin, S. J. (1994). Eating Disorder Examination Questionnaire (EDE-Q) [Database record]. APA PsycTests. https://doi.org/10.1037/t03974-000
- Flaudias, V., Iceta, S., Zerhouni, O., Rodgers, R. F., Billieux, J., Llorca, P. M., & Guillaume, S. (2020). COVID-19 pandemic lockdown and problematic eating behaviors in a student population. *Journal of Behavioral Addictions*, 9(3), 826–835. https://doi.org/10.1556/2006.2020.00053
- Galletta, A. (2013). Mastering the semi-structured interview and beyond: From research design to analysis and publicationVol. 18. NYU press.
- Gross, C. P., Essien, U. R., Pasha, S., Gross, J. R., Wang, S. Y., & Nunez-Smith, M. (2020). Racial and ethnic disparities in population-level Covid-19 mortality. *Journal of General Internal Medicine*, 35(10), 3097–3099. https://doi.org/10.1007/s11606-020-06081-w
- Hamill, C., & Sinclair, H. A. H. (2010). Bracketing Practical considerations in Husserlian phenomenological research. Nurse Researcher, 17(2), 16–24. https://doi. org/10.7748/nr2010.01.17.2.16.c7458
- Henry, P. (2015). Rigor in qualitative research: Promoting quality in social science research. Research Journal of Recent Sciences, 4(IVC-2015), 25–28.
- Hawkins, D. (2020). Differential occupational risk for COVID-19 and other infection exposure according to race and ethnicity. *American Journal of Industrial Medicine*, 63(9), 817–820. https://doi.org/10.1002/ajim.23145

- Hazzard, V. M., Barry, M. R., Leung, C. W., Sonneville, K. R., Wonderlich, S. A., & Crosby, R. D. (2021). Food insecurity and its associations with bulimic-spectrum eating disorders, mood disorders, and anxiety disorders in a nationally representative sample of U.S. adults. Social Psychiatry and Psychiatric Epidemiology. https://doi. org/10.1007/s00127-021-02126-5
- Hunter, R., & Gibson, C. (2021). Narratives from within 'lockdown': A qualitative exploration of the impact of COVID-19 confinement on individuals with anorexia nervosa. Appetite, 105451. https://doi.org/10.1016/j.appet.2021.105451
- Joffe, H., & Yardley, L. (2004). Content and thematic analysis. In D. F. Marks, & L. Yardley (Eds.). Research methods for clinical and health psychology (pp. 56-66). Sage Publications
- Lavender, J. M., De Young, K. P., & Anderson, D. A. (2010). Eating Disorder Examination Questionnaire (EDE-Q): Norms for undergraduate men. Eating Behaviors, 11(2), g/10.1016/j.eatbeh.2009.09.005
- Liu, S. R., & Modir, S. (2020). The outbreak that was always here: Racial trauma in the context of COVID-19 and implications for mental health providers. Psychological Trauma, 12(5), 439-442. https://doi.org/10.1037/tra0000784
- Mascarenhas, L., Rahim, Z. (2021). Covid-19 death rates 10 times higher in countries where most adults are overweight, report finds. CNN. (March 4)
- McCombie, C., Lawrence, V., Schmidt, U., Dalton, B., & Austin, A. (2020). "Now it's just old habits and misery"- Understanding the impact of the Covid-19 pandemic on people with current or life-time eating disorders: A qualitative study. Frontiers in Psychiatry, 11, 589225. https://doi.org/10.3389/fpsyt.2020.589225
- Mikhail, M. E., & Klump, K. L. (2021). A virtual issue highlighting eating disorders in people of black/African and Indigenous heritage. International Journal of Eating Disorders, 54, 459-467. https://doi.org/10.1002/eat.23402
- Mond, J. M., Hay, P. J., Rodgers, B., & Owen, C. (2006). Eating Disorder Examination Questionnaire (EDE-Q): Norms for young adult women. Behaviour Research and Therapy, 44(1), 53-62. https://doi.org/10.1016/j.brat.2004.12.003
- Monteleone, A. M., Marciello, F., Cascino, G., Abbate-Daga, G., Anselmetti, S., Baiano, M., & Monteleone, P. (2021). The impact of COVID-19 lockdown and of the following "re-opening" period on specific and general psychopathology in people with Eating Disorders: The emergent role of internalizing symptoms. Journal of Affective Disorders, 285, 77-83, https://doi.org/10.1016/j.jad.2021.02.03
- National Medical Association. (2020). COVID-19 Underscores Wealth and Health Disparities in the African American Community—National Medical Association. (https://www.nmanet.org/news/500673/COVID-19-Underscores-Wealth-and-Health-Disparities-in-the-African-American-Community.htm
- Nutley, S. K., Falise, A. M., Henderson, R., Apostolou, V., Mathews, C. A., & Striley, C. W. (2021). The impact of COVID-19 on disordered eating behavior: A qualitative analysis of social media users' responses to the global pandemic. JMIR Mental Health https://doi.org/10.2196/26011
- Onwuegbuzie, A. J. (2003). Effect sizes in qualitative research: A prolegomenon. Quality and Quantity, 37(4), 393–409. https://doi.org/10.1023/A:1027379223537
 Pearl, R. L. (2020). Weight stigma and the "Quarantine-15". Obesity, 28(7), 1180–1181.
- Perez, D. F., Nie, J. X., Ardern, C. I., Radhu, N., & Ritvo, P. (2013). Impact of participant incentives and direct and snowball sampling on survey response rate in an ethnically diverse community: Results from a pilot study of physical activity and the built environment. Journal of Immigrant and Minority Health, 15(1), 207-214.
- Phillipou, A., Meyer, D., Neill, E., Tan, E. J., Toh, W. L., van Rheenen, T. E., & Rossell, S. L. (2020). Eating and exercise behaviors in eating disorders and the general population during the COVID -19 pandemic in Australia: Initial results from the COLLATE project. International Journal of Eating Disorders, 53(7), 1158-1165. https://doi.org/10.1002/eat.23317
- Potter, E. C., Tate, D. P., & Patterson, C. J. (2020). Perceived threat of COVID-19 among sexualmiinority and heterosexual women. Psychology of Sexual Orientation and Gender Diversity, 8(2), 188-200. https://doi.org/10.1037/sgd0000454 (Advance online publication).

- Primeau, L. A. (2003). Reflections on self in qualitative research: Stories of family. The American Journal of Occupational Therapy, 57(1), 9-16. https://doi.org/10.5014/ajot.
- Puhl, R. M., Lessard, L. M., Larson, N., Eisenberg, M. E., & Neumark-Stzainer, D. (2020). Weight stigma as a predictor of distress and maladaptive eating behaviors during COVID-19: Longitudinal findings from the EAT study. Annals of Behavioral Medicine, 54(10), 738-746. https://doi.org/10.1093/abm/kaaa077
- Richardson, C., Patton, M., Phillips, S., & Paslakis, G. (2020). The impact of the COVID-19 pandemic on help-seeking behaviors in individuals suffering from eating disorders and their caregivers. General Hospital Psychiatry, 67, 136-140, https://doi.
- org/10.1016/j.genhosppsych.2020.10.006 Rogers, T. N., Rogers, C. R., VanSant-Webb, E., Gu, L. Y., Yan, B., & Qeadan, F. (2020). Racial disparities in COVID-19 mortality among essential workers in the United States. World Medical & Health Policy, 12(3), 311-327. https://doi.org/10.1002/
- Sattar, N., Ho, F. K., Gill, J. M., Ghouri, N., Gray, S. R., Celis-Morales, C. A., ... Welsh, P. (2020). BMI and future risk for COVID-19 infection and death across sex, age and ethnicity: Preliminary findings from UK biobank. Diabetes & Metabolic Syndrome, 14(5), 1149–1151. https://doi.org/10.1016/j.dsx.2020.06.060
- Schlegl, S., Maier, J., Meule, A., & Voderholzer, U. (2020a). Eating disorders in times of the COVID-19 pandemic - Results from an online survey of patients with anorexia nervosa. International Journal of Eating Disorders, 53(11), 1791-1800. https://doi.
- Schlegl, S., Meule, A., Favreau, M., & Voderholzer, U. (2020b). Bulimia nervosa in times of the COVID-19 pandemic — Results from an online survey of former inpatients. European Eating Disorders Review, 28(6), 847-854. https://doi.org/10.1002/erv.
- Simone, M., Emery, R. L., Hazzard, V. M., Eisenberg, M. E., Larson, N., & Neumark-Sztainer, D. (2021). Disordered eating in a population-based sample of young adults during the COVID-19 outbreak. International Journal of Eating Disorders, 54, 1189-1201. https://doi.org/10.1002/eat.23505
- Sutin, A. R., Stephan, Y., Luchett, M., Aschwanden, D., Strickhouser, J. E., Lee, J. H., ... Terracciano, A. (2021). BMI, Weight Discrimination, and the Trajectory of Distress and Well-Being Across the Coronavirus Pandemic. Obesity, 29(1), 38-45. https:// doi.org/10.1002/obv.23048
- Swami, V., Horne, G., & Furnham, A. (2020). COVID-19-related stress and anxiety are associated with negative body image in adults from the United Kingdom. Personality and Individual Differences, 170, , 110426. https://doi.org/10.1016/j.paid. 2020.110426
- Tavernise, S., Oppel, R.A. (2020). Spit on, yelled at, attacked: Chinese-Americans fear for their safety. The New York Times. (June 2). (https://www.nytimes.com/2020/ 03/23/us/chinese-coronavirus-racist-attacks html)
- Taylor, S., Landry, C. A., Rachor, G. S., Paluszek, M. M., & Asmundson, G. G. (2020). Fear and avoidance of healthcare workers: An important, under-recognized form of stigmatization during the COVID-19 pandemic. Journal of Anxiety Disorders, 75, , 102289. https://doi.org/10.1016/j.janxdis.2020.102289
- Termorshuizen, J. D., Watson, H. J., Thornton, L. M., Borg, S., Flatt, R. E., MacDermod, C. M., & Bulik, C. M. (2020). Early impact of COVID-19 on individuals with self-reported eating disorders: A survey of ~1,000 individuals in the United States and the Netherlands. International Journal of Eating Disorders, 53(11), 1780-1790. https://doi.org/10.1002/eat.23353
- Terry, G., & Hayfield, N. (2020). Reflexive thematic analysis. Handbook of qualitative esearch in education. Edward Elgar Publishing.
- Tull, M. T., Edmonds, K. A., Scamaldo, K. M., Richmond, J. R., Rose, J. P., & Gratz, K. L. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life. Psychiatry Research, 289, , 113098.
- Twenge, J. M., & Joiner, T. E. (2020). Mental distress among U.S. adults during the COVID-19 pandemic. Journal of Clinical Psychology, 76(12), 2170-2182. https://doi. org/10.1002/jclp.23064