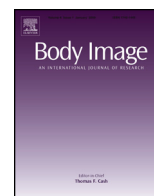




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#quarantine15: A content analysis of Instagram posts during COVID-19



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ABSTRACT

There has been a surge in “quarantine15” social media posts during the self-isolation and lockdowns associated with the COVID-19 global pandemic. Given the influence of other body and weight-centered social media content (e.g., *Fitspiration*, *Fatspiration*) on body image and weight stigmatizing thoughts and attitudes, characterizing the features of quarantine15 content is an imperative first step towards understanding its impact on those who view it. Therefore, the present study is a content analysis of quarantine15 content on Instagram. A total of 668 posts were sampled using the hashtag quarantine15, and systematically analyzed for features related to positive and negative body image, as well as weight stigma. The results showed that the posts containing human figures (57.5 %) showcased individuals who were perceived as lower-weight (88.8 %), White (70.3 %), and women (87 %). Approximately one-third (34.4 %) of the images containing individuals were considered objectifying. Posts also perpetuated the controllability of weight through diet (51.5 %) and physical activity (27.5 %), while 46.9 % expressed dislike towards higher-weight bodies. Future experimental research in this area will be important for understanding both the acute and long-term effects of viewing quarantine15 content on body image, weight stigmatizing attitudes and thoughts, and internalized weight stigma.

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1. Introduction

COVID-19 is a global pandemic that has had widespread economic, social, and health implications (World Health Organization, 2020). In order to reduce the transmission of COVID-19, many countries temporarily went into lockdown and enforced strict physical distancing. To address the need for social closeness amidst physical distancing (Abel & McQueen, 2020; Pearl, 2020), individuals used social media share their experiences during self-isolation and stay connected with others (Király et al., 2020). During this period, the hashtag *quarantine15* emerged on social media platforms such as Instagram and Twitter. Quarantine15 (stemming from the phenomenon of “freshman-15”) is rooted in a fear of the “inevitable” weight gain due to changes in eating, physical activity, and sedentary behaviors resultant from self-isolating (Pearl, 2020). Since the emergence of COVID-19, over 60,000 posts with the quarantine15 hashtag have been uploaded on Instagram alone. A description of

the content associated with the quarantine15 hashtag will provide insight into the images and messaging individuals are consuming during the COVID-19 pandemic. Given the centrality of weight in the hashtag, both weight stigma and body image perspectives are important to consider.

Weight has been positioned as a strong predictor of COVID-19 outcomes, such that higher-weight¹ individuals are described as being at higher risk of severe symptoms and mortality than lower-weight individuals due to COVID-19. Examples of this positioning include the identification of “obesity” as a risk factor for symptom severity (Centers for Disease Control & Prevention., 2020), which has since been extensively covered and negatively framed in the news (Flint, 2020). Some governments even began recommending weight loss to citizens during self-isolation, and regulating foods

¹ Higher-weight is utilized throughout this article to reflect the weight-inclusive approach of the research team, and the rejection of the pathologized terminology of “overweight” or “obese” and weight-normative assumptions. Higher-weight is used as person-first language, to denote that weight isn’t something individuals need to be othered or separated from. When used, “obesity” is placed in quotations to represent the rejection of the pathologized term (Meadows & Danielsdóttir, 2016).

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perceived to contribute to “obesity” (United Kingdom Department of Health & Social Care, 2020). The COVID-19 pandemic represents yet another example of Westernized society’s weight-normative approach to health. Assumptions within this approach include that: weight is a critical predictor of morbidity and mortality, weight represents health, weight is controllable at the individual level through diet and physical activity, and weight loss is sustainable and will improve health (Bacon & Aphramor, 2011; Calogero, Tylka, Mensinger, Meadows, & Daniélsdóttir, 2019). Given the influence of government and news mediums on shaping public perceptions and opinions (Flint, 2020), it is not surprising that a focus on weight and similar narratives may be reflected within quarantine15 content on social media.

Quarantine15 content may be problematic in its perpetuation of weight stigma, or negative thoughts and attitudes towards higher-weight individuals (Meadows & Calogero, 2018). For example, the belief that weight gain is solely a result of food overindulgence and a lack of physical activity reflects the oversimplified narrative that weight is controllable at an individual level. This perpetuates the stereotypes that higher-weight individuals are lazy, gluttonous, and lacking will power (Puhl & King, 2013). Catastrophizing weight gain on social media also reinforces that fat is inherently bad, and that thinness should be strived for (Bacon & Aphramor, 2011; Calogero, Tylka, & Mensinger, 2016). Non-systematic commentaries on quarantine15 content identified its weight stigmatizing nature through comedic representations of higher-weight individuals, a lack of control over eating, and catastrophizing weight gain (Pearl, 2020; Todisco & Donini, 2020). However, a systematic examination of whether stereotypes, as well as negative attitudes towards higher-weight individuals, are being promoted using the quarantine15 hashtag has yet to be conducted.

Quarantine15 content is not the first to emphasize body weight on social media. Specific examples of appearance and weight focused content, such as *thinspiration* and *fitspiration*, are posted with the intention to inspire or motivate individuals to strive for a particular idealized body (Talbot, Gavin, van Steen, & Morey, 2017). *Thinspiration* promotes and glorifies thinness, often featuring tips and suggestions for weight loss, and perpetuating food-related guilt (Boepple & Thompson, 2016). In contrast, *fitspiration* is intended to inspire individuals to be healthy and active, through physical activity and nutrition advice and demonstrations containing seemingly “fit” individuals (Carrotte, Prichard, & Lim, 2017; Tiggemann & Zaccardo, 2015). Critically, both forms of content often contain elements that negatively impact viewer body image (defined as how one thinks, feels, perceives, and acts towards their body’s appearance and function; Cash & Smolak, 2011). For example, only a singular and idealized lower-weight body type is portrayed, and images of women in particular are objectifying (i.e., individuals are viewed as an object for others’ use and pleasure; Ghaznavi & Taylor, 2015; Tiggemann & Zaccardo, 2016). Both *fitspiration* and *thinspiration* also perpetuate restrictive eating and guilt surrounding weight control behaviors (Alberga, Withnell, & von Ranson, 2018; Boepple & Thompson, 2016). Indeed, viewing *fitspiration* and *thinspiration* images has been associated with body dissatisfaction, restrictive eating, and negative affect (Griffiths & Stefanovski, 2019; Prichard, McLachlan, Lavis, & Tiggemann, 2018; Tiggemann & Zaccardo, 2015). Given the weight-focus of the quarantine15 hashtag, research exploring this content and whether the content contains similar features to other body- and weight-centered content (i.e., objectification, perpetuation of a singular lower-weight body type) is imperative.

However, it is also important to consider how quarantine15 content may be unique from *fitspiration* and *thinspiration* social media content. In contrast to images showcasing a socially idealized body, quarantine15 posts may draw attention to weight gain. Societal standards have imposed the idea that weight gain is bringing one’s

body further away from the thin-ideal (Tiggemann, 2012). Fear of weight gain (especially in women) is common across the lifespan (Slof-Op’t Landt et al., 2017), and weight gain has been associated with negative body-related self-conscious emotions such as shame (Troop & Redshaw, 2012), body dissatisfaction (Thomas, Hamm, Borrero, Hess, & Thurston, 2019), and weight control behaviors. Therefore, it is also important to explore whether quarantine15 posts reflect facets of negative body image attributed to or related to weight gain during self-isolation that are not often apparent in *fitspiration* and *thinspiration* content.

Finally, it is important to contextualize quarantine15 content within social media movements that aim to reject weight stigma and narrow standards of beauty, and instead promote body diversity and weight inclusivity. For example, fat acceptance movements are intended to normalize, embrace, and celebrate higher-weight individuals, who are oppressed in many aspects of life (Dickins, Thomas, King, Lewis, & Holland, 2011; Harding & Kirby, 2009). Body positivity (which began within the fat acceptance movement) more broadly represents love, appreciation, and respect towards the body and its features that are inconsistent with narrow beauty standards, across different body sizes (Tylka & Wood-Barcalow, 2015). These tenets are reflected in body positive social media content, such that Instagram posts are inclusive of physical attributes that misalign with beauty standards (e.g., cellulite), and express acceptance, appreciation, and adaptive investment towards the body (Cohen, Irwin, Newton-John, & Slater, 2019; Lazuka, Wick, Keel, & Harriger, 2020). Furthermore, in line with their intention to reject sociocultural standards, approximately half of *fatspiration* posts and *Health at every size*[®] posts explicitly use and reject the term *thinspiration* (Webb, Vinoski, Bonar, Davies, & Etzel, 2017). It is possible the quarantine15 hashtag is being used in a similar way. However, weight-inclusive content has also been found to maintain a focus on appearance and objectification, as well as still portray a high proportion of lower-weight individuals (Cohen, Irwin et al., 2019; Webb et al., 2017). Therefore, it is important to explore quarantine15 content broadly and with an inclusive lens pertaining to body image and weight stigma.

The purpose of the present study was to explore quarantine15 content on Instagram, and to examine how this content reflects weight stigma, and positive and negative body image. The research question was as follows: What are the features of the visual and textual content associated with quarantine15 Instagram posts? Given the recent emergence of quarantine15 content and therefore the exploratory and timely nature of this research question, no a priori hypotheses were identified.

2. Material and method

2.1. Image selection

A total of 800 distinct images were collected from Instagram. After signing into the authors’ research lab Instagram account (The Mental Health & Physical Activity Research Center; @mparc.uoft), images were searched on Instagram’s explore page using “#quarantine15”. The top Instagram posts were collected in June 2020 (approximately 3 months following the declaration of the global pandemic) from public accounts. Specifically, “#quarantine15” was entered into the Instagram search feature every day at 11:00AM for a week (seven days), to include content posted on weekdays and weekends. An average of 114 images were retrieved per day, and duplicate posts were only included once (Ghaznavi & Taylor, 2015; Wick & Harriger, 2018). Generally, Instagram identifies top posts based on rate of engagement; such that top posts have the largest ratio of likes, comments, and saves by account followers on each post. The top posts were targeted in order to assess #quarantine15

content with high audience interaction and easy accessibility when searching the hashtag, therefore identifying the content most likely to have the broadest impact. Notably, the coders did not engage with any collected content (i.e., did not like or share any posts) and the Instagram account had not been used in the three months preceding the search activity. Of the 800 posts that were retrieved, videos ($n = 35$) and text-only images ($n = 36$) were excluded.

2.2. Coding procedures

The coding instrument was developed based on positive and negative body image research (Tracy & Robins, 2004; Tylka & Wood-Barcalow, 2015), weight stigma research (Calogero et al., 2019), and previous body- and weight-centered content analyses (Boepple & Thompson, 2016; Cohen, Irwin et al., 2019; Lazuka et al., 2020; Tiggemann & Zaccardo, 2016; Webb et al., 2017).

The third author (AK) and a research assistant (TDH) acted as coders for this analysis. The coders met with the first author (KL) for training sessions on how to code posts using the coding scheme. The coders then independently coded 15 images for variables within the codebook and assessed their level of agreement for each code as a percentage (number of congruent codes/15). The average level of agreement on pilot posts was 88 %. Coding conflicts were discussed before moving on. AK then proceeded to code all posts, and TDH coded 10 % of the posts (Tiggemann & Zaccardo, 2016). Similar to previous content analyses (Boepple & Thompson, 2016; Lazuka et al., 2020), discrepancies were discussed between coders. Since the codebook was not altered between the pilot and main data collection, the pilot images were retained in the final sample. Across all posts, the average percentage of agreement between coders was 89 %, indicating a high degree of agreement. Inter-rater reliability was calculated using Cohen’s Kappa (Cohen, 1960), and values for each code fell within an acceptance range from .65 to .98 (McHugh, 2012). Kappa values for each variable can be found in Table 1.

2.3. Coding attributes and themes

Three levels of coding were used for each post. First, the post was coded based on what type of content was in the image. Second, the attributes of the content in the image were coded. Lastly, overall themes of the post were coded.

2.3.1. Image content

The primary visual content within the posts was coded as (a) animal images (non-animated images only), (b) food images, and (c) human images (one or two human figures). Group images (three or more figures; $n = 10$) and images of objects (e.g., home décor, plants, cars; $n = 51$) were excluded. Images containing human figures were more extensively coded than those containing food or animals (Tiggemann & Zaccardo, 2016).

2.3.2. Animal images

Since the humorous portrayal of weight and higher-weight individuals as animals has been found within content analyses (Webb et al., 2017), the presence of animals was inductively coded based on species (i.e., cat, dog).

2.3.3. Food and beverage images

Food and beverage codes were adapted from previous content analyses (Pila, Mond, Griffiths, Mitchison, & Murray, 2017; Webb et al., 2017), and based on whether the image featured (a) desserts (e.g., cookies, cake), (b) nutrient-dense foods (e.g., salads), (c) calorie-dense foods (e.g., foods high in calories and/or fat but minimal nutritional content; burgers, fries), and/or (d) alcohol (e.g., glass of wine, can of beer). Desserts and calorie-dense foods were

Table 1
Inter-coder agreement and reliability for coding variables.

Variable	Inter-rater agreement (%)	Reliability (Kappa)
Image content	94	0.91
Animal images		
Animal species	98	0.88
Food images		
Food: desserts	93	0.84
Food: nutrient-dense foods	94	0.86
Food: calorie-dense foods	91	0.82
Food: alcohol	95	0.87
Human images		
Demographic information		
Gender	99	0.98
Race/ethnicity	93	0.88
Body-related information		
Body size	82	0.72
Degree of muscular definition	85	0.78
Clothing, activity, and objectification		
Clothing: revealing	93	0.89
Activity	99	0.98
Objectifying	91	0.86
Objectification: body shot	97	0.94
Objectification: headshot/selfie	97	0.94
Post themes		
Negative body image		
Negative body-related self-conscious emotions	85	0.93
Body-related shame	86	0.91
Body-related guilt	86	0.91
Body-related embarrassment	87	0.86
Body-related envy	89	0.90
General self-consciousness	85	0.91
Body dissatisfaction	87	0.78
Positive body image		
Body appreciation	94	0.86
Adaptive investment in body care	95	0.87
Body-related pride	90	0.81
Appearance-focused themes		
Weight change	89	0.86
Weight change: type	86	0.86
Weight change cause: diet	84	0.73
Weight change cause: physical activity	83	0.71
Weight change cause: sedentary	87	0.77
Weight change cause: other	89	0.80
Westernized ideal endorsement	86	0.79
Weight/fat stigmatizing	78	0.65
Food shame/guilt	85	0.74
Normalizing binge eating	80	0.84

coded separately to align with narratives within dietary and “obesity” guidelines/research that separately evaluate the consumption of foods with elevated refined grains and added sugars versus elevated fats (e.g., Mozaffarin & Ludwig, 2015; Rose, Birch, & Savage, 2017).

2.3.4. Human images

2.3.4.1. Demographic information. In line with previous research (Lazuka et al., 2020; Webb et al., 2017), human figures within images were coded for perceived gender (woman, man, gender non-binary), and race/ethnicity (Asian, Black, Indigenous, Latinx, Middle Eastern, White, Other).

2.3.4.2. Body-related information. Similar to Tiggemann and Zaccardo (2016), coders rated the individual’s body size and degree of muscular definition. Body size categories included a thin and slight frame (minimal visible fat), average and medium frame (moderate visible fat), and higher-weight frame (high visible fat). Degree of muscular definition categories included visibly none to minimal, visible definition, high-level definition, and not visible (covered by clothing).

2.3.4.3. Clothing, activity, and objectification. The degree to which the subject's clothing was revealing was coded based on the categories of not revealing (no body parts exposed), slightly revealing (less than 50 % of body parts exposed), and revealing (50 % or more body parts exposed). The subject's activity was coded as either active (engaging in activity such as running or cooking) or non-active (glamour posing or passive posture; Cohen, Fardouly, Newton-John, & Slater, 2019; Lazuka et al., 2020). Whether the image was deemed objectifying (e.g., defined as having a specific body part as the main image focus, the individual is in a sexually suggestive pose (i.e., winking, alluring gaze, posing sexually, or sexual teasing [e.g., unbuttoned or partially open clothing]), and/or head/face is not visible; (Ghaznavi & Taylor, 2015; Tiggemann & Zaccardo, 2016) or not, and whether the image was a body shot (capturing the whole body) or a headshot/selfie (Webb et al., 2017) was also coded. The specific body part(s) that were featured were not further coded.

2.3.5. Post themes

The post image and accompanying caption (including the content creator's hashtags) were both examined to capture the overall post themes. Comments on the posts were not included. Posts were coded for the presence or absence of (1) negative body image (negative self-conscious emotions, general self-consciousness, body dissatisfaction; Lazuka et al., 2020; Tracy & Robins, 2004), (2) positive body image (body appreciation, adaptive investment in body care, body-related pride; Cohen, Irwin et al., 2019; Tracy & Robins, 2007), and (3) appearance-focused themes (weight change, Westernized ideal endorsement, weight/fat stigmatizing, food shame/guilt, and normalizing binge eating; Boepple & Thompson, 2016; Lazuka et al., 2020). A more detailed description and examples for each theme can be found in Table 2.

3. Results

3.1. Image content

Consistent with previous sample sizes (Cohen, Irwin et al., 2019; Tiggemann & Zaccardo, 2016), following exclusions a total of 668 posts were retained in the final analysis. Of these 668 images, 57.5 % of images contained human figures (89.0 % one person, 5.7 % two people, 4.9 % pre-post comparison of one person), 26.0 % were food content, and 16.5 % of posts contained an animal.

3.2. Animal images

Overall, posts with animal images contained dogs (65.5 %), cats (20.0 %), and other animals (14.5 %). Examples of other animals included walrus (1.8 %) and hippos (1.8 %). Other than cats and dogs, no single species of animal was seen in more than two posts.

3.3. Food and beverage images

Food and beverage imagery predominantly contained desserts (44.3 %), followed by calorie-dense foods (38.5 %), nutrient-dense foods (17.8 %) and alcohol (2.3 %).

3.4. Human images

3.4.1. Demographic information

Of the imagery that contained human figures, 87.0 % were perceived to contain a woman, 10.7 % were perceived to contain a man, 2.1 % were perceived to contain both a man and a woman, and 0.3 % were perceived to contain a drag queen (gender not presumed by coders). Of these images, 70.3 % featured a person perceived as

White, 14.1 % perceived as Black, 7.8 % perceived as Asian, 1.6 % perceived as Latinx, 4.2 % perceived as Middle Eastern, 1.6 % could not be identified (e.g., face blocked), and 0.5 % contained two people of different perceived races/ethnicities.

3.4.2. Body-related information

Just over half of the images (58.9 %) contained individuals with a body size perceived as an average and medium frame, 29.9 % as a thin and slight frame, and only 11.2 % of the images contained an individual with a body size perceived as a higher-weight frame. The muscular definition of people portrayed in the imagery was perceived as not visible (47.1 %), visibly minimal to none (31.5 %), visible definition (16.1 %) and a high level of muscular definition (5.2 %).

3.4.3. Clothing, activity, and objectification

Imagery containing human figures depicted individuals in clothing that was not revealing (44.8 %), slightly revealing (34.4 %) and revealing (20.8 %). The imagery predominantly portrayed individuals in a non-active pose (90.9 %) with few being portrayed as actively engaging in an activity (9.1 %). Approximately one third of the posts were coded as objectifying (34.4 %). Finally, 84.4 % of the images were a body shot and 15.6 % were a headshot/selfie.

3.5. Post themes

3.5.1. Negative body image themes

Overall, 14.5 % of the posts expressed negative body-related self-conscious emotions. Of the posts that expressed negative body-related self-conscious emotions, 61.9 % expressed body-related shame, 49.5 % body-related guilt, 14.4 % body-related embarrassment, 1.0 % body-related envy, and 25.8 % expressed general body-related self-consciousness. Additionally, 17.5 % of the posts expressed dissatisfaction toward the body.

3.5.2. Positive body image themes

The expression of body appreciation (4.2 %), adaptive investment in body care (8.7 %), and body-related pride (13.5 %) in the posts were low.

3.5.3. Appearance-focused themes

Roughly half of the posts verbally emphasized a change in weight (50.6 %) and the type of weight change described was predominantly weight gain (74.0 %), followed by weight maintenance (17.2 %), weight loss (6.2 %), weight fluctuations (2.1 %), and the direction of change unspecified (0.6 %). The perceived cause of weight change described in the posts included diet (51.5 %), physical activity (27.5 %), sedentary behavior (5.6 %) and other causes not specified (3.6 %). Just under half of the posts endorsed Westernized societal body ideals for women or men (48.4 %). In addition to the previously coded features that are inherently weight stigmatizing (e.g. controllability of weight), 46.9 % of all posts directly expressed negativity towards being higher-weight. Shame and guilt about one's food behavior (24.7 %) and the normalization of binge eating (26.8 %) were also endorsed within a quarter of the posts.

4. Discussion

The purpose of the present study was to explore the content of quarantine15 posts on Instagram. Overall, the findings suggest that quarantine15 content showcases appearance-focused images of lower-weight individuals, oversimplifies weight gain as an issue of food consumption and lack of physical activity, and demonstrates dislike towards weight gain and being higher-weight.

Similar to *fitspiration* (Simpson & Mazzeo, 2017), and *fatspiration/health at every size*[®] (Webb et al., 2017) content analyses, the

Table 2
Post themes.

Variable	Definition	Examples
Negative body image themes		
Negative body-related self-conscious emotions	Post emphasizes negative body-related self-conscious emotions (i.e., body-related shame, guilt, envy, and/or embarrassment)	Image of a woman with her stomach and thighs exposed and the caption “I also critique and squeeze and bemoan and judge myself so harshly it’s any wonder I could even take a picture of myself at all.”
General self-consciousness	Post emphasizes self-consciousness in general without expression of a specific body-related self-conscious emotion	Image of young woman posing with glamorous hair and make-up with caption “Considered using FaceTune to make my elbow look less broken n weird.”
Body dissatisfaction	Post emphasizes body dissatisfaction	Image of woman in athleisure clothing and caption “snapped with this waist trainer battling the #Quarantine15”
Positive body image themes		
Body appreciation	Post encourages appreciating body features, functionality, and/or health	Image of subject in bikini with stomach rolls with caption “be gentle with your body during this time. Thank it for being healthy and for supporting you every day when so many others haven’t been so lucky. Your body is a superhero, an everyday miracle - treat it as such”
Adaptive investment in body care	Post emphasizes taking care of one’s body by engaging in positive health-promoting self-care behaviors	Image of woman taking a photo of herself in the mirror with the caption “Here are some few ways I have been using to stay #healthy: Make sure water is the first thing that goes in your mouth every morning; Be appreciative for what you have. . . Breath and smile”
Body-related pride	Post emphasizes body-related pride	Image of woman taking a photo of herself in the mirror with the caption “I was busy taking this challenge & turning it into an opportunity to come out of this better than I started. & GUESS WHAT, I’d like to think I did. So here I am, clapping for my damn self, because I DESERVE TO.”
Appearance-focused themes		
Weight change	Post emphasizes weight change (i.e., gain, loss, maintenance, fluctuations, direction of change unspecified)	Image of man picking up a woman with caption “back when hubs was able to pick me up”
Weight change cause	Post attributes weight change to a specific cause (i.e., diet, physical activity behavior, sedentary behavior, and/or other)	Image of woman walking outside with caption “It’s so easy to get loose with what we eat and want to lay around all day”
Westernized ideal endorsement	Post praises or endorses Westernized societal ideals	Image of young woman with blonde hair and caption “#tb to sunkissed(ish) skin + better (hair) days”
Weight/fat stigmatizing	Post endorses an overall dislike or negativity towards overweight people, becoming overweight, gaining weight, and/or body changes	Image of sweating man outside with caption “Because #tx is opening back up and we have to start looking presentable ☐ #quarantine had me getting #thicc (with 2 C’s)
Food shame/guilt	Post expresses guilt or shame about one’s food behaviors	Before and after photo where the subject in the ‘before’ photo appears thinner and caption “the one where I gained five pounds. And not in muscle. In like chips, pizza and vegan ice cream. . . whoops.”
Normalizing binge eating	Post normalizes binge eating	Image of sandwich and caption “I think I had at least 5 of these (gotta finish that loaf you know?)”

quarantine15 images predominantly included people perceived as lower-weight White women. This majority representation furthers Westernized ideals such as thinness (Uhlmann, Donovan, Zimmer-Gembeck, Bell, & Ramme, 2018) while minimizing representation of higher-weight individuals and People of Colour. However, a lack of higher-weight individuals within this content may be due to the voluntary avoidance of including their body in a stigmatizing movement that draws attention to weight. Critically, the choice for some individuals to associate themselves and their body with weight gain in part diminishes the experiences of higher-weight individuals who may perceive they cannot control their subjection to weight stigma (Pearl, 2020). Furthermore, higher-weight women making upward social comparisons to lower-weight women are more likely to engage in dieting and physical activity to control weight, alter body shape, or burn calories (Rancourt, Leahey, Larose, & Crowther, 2015). The negative consequences of upward social comparisons are also exacerbated in those already high in negative body image and eating psychopathology (Leahey, Crowther, & Ciesla, 2011). Although outside the scope of the present findings, this evidence suggests that viewing quarantine15 content showcasing

lower-weight individuals could be detrimental for individuals’ psychological well-being and health behaviors.

Similarly, the majority of the quarantine15 content was focused on the body itself: images were often posed and passive body shots that involved somewhat to revealing clothing, and/or contained appearance-focused text. A third of these images were also considered to be objectifying. A focus on body appearance and objectification is consistent with previous content analyses (Cohen, Irwin et al., 2019; Lazuka et al., 2020; Simpson & Mazzeo, 2017). Critically, coupling appearance-oriented and objectifying imagery with narratives related to weight reinforces that the value of a woman’s body is solely rooted in how it looks to others (Fredrickson & Roberts, 1997). This message is exacerbated within the context of COVID-19, such that the importance of body weight is prioritized even during a global pandemic that has threatened the physical and mental health of billions of people. Since appearance preoccupation and self-objectification are established predictors of negative body image and disordered eating (Fairburn, Cooper, & Shafran, 2003; Tiggemann, 2013), and viewing appearance-focused social media images is associated with negative body image (Holland &

Tiggemann, 2017; Meier & Gray, 2014), experimental studies investigating the impact of viewing quarantine15 content represent an important avenue for future research.

Negative self-conscious emotions and body dissatisfaction were expressed in a small portion of the quarantine15 posts. The association between weight gain and negative body-related emotions and dissatisfaction is consistent with previous evidence (Thomas et al., 2019; Troop & Redshaw, 2012). However, the lack of evidence of negative body image from the posts that recognize weight gain may be attributable to multiple mechanisms related to concealing negative body image. Firstly, positive self-presentation (showing an unrealistic and idealized version of the self) is common on social media (Vogel & Rose, 2016), suggesting individuals may be unlikely to openly disclose the negative body image they are experiencing. Similarly, positive self-presentation is associated with more engagement from viewers (Metzler & Scheithauer, 2017), suggesting posts expressing negative body image may have elicited less engagement and therefore did not become a top post. Alternatively, the body-related shame which is often associated with internalized weight stigma can lead to avoidance of situations that put the body on display (i.e., body shot on social media; Tomiyama, 2014; Tracy & Robins, 2004). Therefore, those experiencing body-related shame due to weight gain during self-isolation may avoid posting body-centered imagery on their social media. However, it is also important to consider that those posting quarantine15 content may not be experiencing negative body image. Some posts displayed weight maintenance or loss as opposed to weight gain, which may not be associated with negative body image. Furthermore, the inherent assumption that weight gain and/or being higher-weight is homogeneously experienced as negative further reflects societal assumptions and negative stereotypes towards higher-weight individuals (Sarwer, Thompson, & Cash, 2005).

Positive body image (i.e., body appreciation, pride, and adaptive appearance investment) was also expressed in a small portion of the quarantine15 content. While this is in contrast to the increasing prevalence of body positivity content on social media (Cohen, Irwin et al., 2019; Lazuka et al., 2020), it is not necessarily surprising. The underlying intention of the quarantine15 hashtag (i.e., drawing attention to negative weight gain; Pearl, 2020) contradicts positive body image content and theoretical definitions, which aims to celebrate and appreciate the body's functions and features, minimizing the focus on perceived imperfections and rejecting sociocultural standards such as thinness (Cohen, Irwin et al., 2019; Tylka & Wood-Barcalow, 2015). Importantly, experiencing positive body image is associated with higher engagement in self-care behaviors and well-being (Gillen, 2015; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010), which may be even more important during times of high-stress, such as a global pandemic. Additionally, not seeing those who are reporting weight change display positive body image fails to normalize and destigmatize the experience, reinforcing to viewers that individuals that gain weight do not warrant appreciation, love, or respect (Afful & Ricciardelli, 2015).

Many features of quarantine15 content perpetuated the controllability of weight at an individual level. For example, half of the captions that indicated weight gain attributed it to changes in diet, while a quarter attributed it to a lack of physical activity. Similarly, a quarter of the quarantine15 images contained food, the overwhelming majority of which were calorie-dense foods or desserts. Some of the captions also expressed food-related shame, while others expressed a lack of control over eating. Collectively, the various associations between weight gain and the over- or uncontrolled consumption of “unhealthy” foods and lack of physical activity reiterates the assumption that weight gain comes down to the choices of an individual. This oversimplified narrative is widely perpetuated through government policies both during and outside of COVID-19 (United Kingdom Department of Health & Social Care,

2020; Ramos Salas, Forhan, Caulfield, Sharma, & Raine, 2017), and ignores the many uncontrollable factors that contribute to weight, including genetics, socioeconomic status, food access, and stigma (Rohde et al., 2019; Sutin & Terracciano, 2013; Vargas, Stines, & Granada, 2017). These narratives also perpetuate that weight gain is inherently bad, and the stereotypes that higher-weight individuals lack the will power to resist calorically-dense foods, and that they are to blame for their weight (Puhl & King, 2013). This negative messaging may have important implications for quarantine15 viewers, as adopting negative stereotypes and blame towards higher-weight individuals may motivate enacted stigma (e.g., teasing, social exclusion, discrimination) or internalized weight stigma (Puhl & King, 2013), which has been shown to contribute to disadvantage and inequity for higher-weight individuals (Hatzenbuehler, Phelan, & Link, 2013).

Approximately half of the captions also exemplified direct dislike towards being higher-weight. Additionally, a third of the images represented messages of weight and weight gain alongside images of animals, which can be a stigmatizing form of social media content (e.g., depicting a higher-weight individual as a walrus; Webb et al., 2017). This is consistent with the generally negative and stereotypical representations of higher-weight individuals in television, movies, and the news (Ata & Thompson, 2010). Importantly, viewing content where higher-weight individuals are portrayed stereotypically or negatively increases the viewer's dislike towards higher-weight individuals and their belief that weight is controllable (Domoff et al., 2012), while also increasing preoccupation with one's own weight and appearance management (Hinman, Burmeister, Kiefner, Borushok, & Carels, 2015). For those who perceive themselves as higher-weight, viewing weight stigmatizing content also activates acute psychological and physiological stress that cumulatively diminishes physical and mental health over time (Hunger, Major, Blodor, & Miller, 2015). Furthermore, it is important to recognize that when these negative messages and attitudes towards higher-weight individuals were accompanied by images of people as opposed to food or animals, these individuals were predominantly perceived as lower-weight. Witnessing a lower-weight person make disparaging comments about their weight decreases body dissatisfaction to a greater degree than hearing the same comments from a higher-weight individual (Corning, Bucchianeri, & Pick, 2014). This suggests the potentially negative implications of viewing self-directed weight stigmatizing messages in quarantine15 content could be particularly detrimental to higher-weight individuals.

Quarantine15 content may be furthering the problematic messaging surrounding weight that has been pervasive for some time (Ata & Thompson, 2010; Puhl & King, 2013; Ramos Salas et al., 2017), although repackaged specifically for COVID-19. While some advocate that shaming higher-weight individuals is an effective motivator for weight loss (e.g., Callahan, 2013), the overwhelming evidence suggests this strategy will only negatively impact the health and well-being of higher-weight individuals (Major, Tomiyama, & Hunger, 2017; Tomiyama, 2014). Specifically within COVID-19, the stigma surrounding “obesity” and risk may also deter or delay higher-weight individuals with symptoms to seek treatment (Townsend, Kyle, & Stanford, 2020). Quarantine15 content appears to contribute to this stigma, and therefore has the potential to negatively impact not only health-seeking behaviors and well-being during the pandemic, but also anti-fat attitudes, internalized weight stigma, and positive and negative body image that may persist beyond COVID-19.

4.1. Limitations

There are several study limitations that need to be addressed. First, the content analysis was restricted to Instagram. Other social

media platforms (such as Twitter, TikTok, Tumblr) also disseminate body-focused and weight stigmatizing content (Lydecker et al., 2016; Wick & Harriger, 2018), and investigating how quarantine15 content on these sites compares to Instagram is important to consider in future research. Variants of the primary hashtag (e.g., #quarantine15isreal) and associated hashtags within quarantine15 post comments should also be considered across platforms. Additionally, since the analysis was conducted in June (a season of warm weather in many countries), a higher proportion of revealing clothing may have been seen relative to conducting the analysis in winter months. Relatedly, this warmer context may have supported more outdoor physical activity and thus more images may have been posted displaying individuals engaging in physical activity compared to the colder months of the pandemic. Pandemic-related restrictions varied worldwide, and thus the ability to engage in physical activity or social engagements inevitably differed across posts and could not be controlled for. Furthermore, although consistent with previous content analyses (e.g., Lazuka et al., 2020; Webb et al., 2017), race and gender were based on the coders' perception, which may limit the accuracy of the reported frequencies of identity representation in quarantine15 content. Importantly, although the top posts were selected, it is impossible to determine content reach and generalizability to an individual's social media feed. Additionally, precise details on the algorithm that generates top posts, and the extent to which the algorithm is influenced by the searching account, are not released by Instagram. As such, it is unclear if or to what extent our searched top posts were influenced by the account used to search and collect the posts (The Mental Health & Physical Activity Research Center). Lastly, the consequences of viewing this content can be hypothesized based on theoretical tenets and empirical evidence, but cannot be demonstrated based on these findings alone. Further experimental studies that expose participants to this content are important for understanding the repercussions associated with viewing quarantine15 content (Pearl, 2020). Considering the proportion of the population that has been exposed to COVID-19, future research should also examine how those who have contracted, recovered from, and/or are experiencing post COVID-19 syndrome, express their weight-related experiences on social media.

4.2. Conclusions

In conclusion, this study provides novel insight into quarantine15 content that emerged on social media during self-isolation of the COVID-19 pandemic. Consistent with other weight-centered social media movements (e.g., Boepple & Thompson, 2016; Webb et al., 2017), quarantine15 content on Instagram largely showcases lower-weight individuals, appearance preoccupation and comparisons, and weight-normative assumptions. Critically, these features are established contributors to negative body image, low positive body image, and weight stigmatizing thoughts and attitudes towards others and the self. Future research in this area will provide insight into how viewing quarantine15 content that began during the COVID-19 pandemic may have implications that far outlast the pandemic itself.

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Declaration of Competing Interest

The authors report no declarations of interest.

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