The Paradox of Fat Embodiment

by

Clea Moutrie Beale Sturgess
B.A., University of Victoria, 2015
M.Sc., University of Victoria, 2018

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

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In the Department of Psychology

I acknowledge and respect the lək^{w}əŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

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Abstract

Fat people frequently and regularly face discrimination due to weight stigma, which can result in a stigmatized. or spoiled, identity, and can ultimately result in psychological distress. This dissertation examined the ways in which public weight stigma might result in psychological distress, and the activities fat people are engaged in that help mitigate these processes. Data was collected from students at the University of Victoria and from fat people who were engaged with fat liberation-focused social media. Results showed that public weight stigma was associated with increased internalized weight stigma, which in turn was associated with lowered embodiment, which was in turn associated with increased psychological distress. The research also found that both positive physical engagement and understanding of societal weight bias and its impacts on fat people helped to attenuate these pathways. These findings indicate the need for societal shifts in weight-based discrimination, as well as potential avenues for individual and group-based interventions. A number of considerations for measurement of various constructs were also explored.

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Dedication

For my grandmothers.

Introduction

Fatness and Weight Stigma

> In 2008 I made a decision to stop hating my body when I realized that I might live my whole life wishing I had eaten that cake, gone on that date or worn that skin tight pencil skirt and crop top. When people say they want to lose weight they often mean "I want to be respected. I want to be loved. I want to be seen. I want liberation from fear and self-loathing." Weight loss culture will NEVER give us those things because it is founded on fear/hate based systems like sexism, racism, classism and ableism… Self hate is an ideology that we were taught so we would stay in line. Self love is a practice based in the ideas that health is holistic, self-love is infinite, and your body is yours.
>
> Virgie Tovar (2014, para. 2)

In the quote above, writer and activist Virgie Tovar describes how she recovered from fat-phobic self-hate. As a fat person, Tovar was indoctrinated into a system that taught her to hate herself. Through self-love, Tovar claimed her body and became an activist who promotes liberation for fat people. Tovar's compassionate re-claiming of her body and comfort in her body is a form of *embodiment*, which is associated with signs of thriving life satisfaction (Gattario et al., 2020), self-esteem (Piran et al., 2020), and agency (Piran, 2016). Some psychological treatments and well-being practices like body psychotherapy, mindfulness-based cognitive therapy, and yoga include practices that are explicitly aimed at helping people to become more fully embodied, through activities like mindfulness meditation (Matko & Sedlmeier, 2019), grounding (Hauke & Kritikos, 2018), and movement therapy (Payne et al., 2019).

As Tovar explains, fat people are encouraged to hate themselves because they are stigmatized by a culture that values thin bodies. In this dissertation, this form of self-hate is

conceptualized as *internalized weight stigma*, which results from *public weight stigma* that is part of what Tovar (2014) calls "weight loss culture" (para. 2). I propose that public and internalized weight stigma are traumatic and disrupt fat people's embodiment, which further results in poor mental health outcomes. Therefore, I also propose that increasing embodiment could improve fat people's mental and physical health by bolstering the integrity of the self, allowing them to resist and recover from weight stigma. Fat embodiment is a potentially health-promoting practice that supports fat justice, connects fat people to their bodily needs and desires, and supports self-care and bodily fulfilment. However, paradoxically, while fat embodiment may support well-being it may also bring people closer to the source of their trauma by forcing them to more directly confront weight stigma in their daily lives. This dissertation will explore these possibilities.

My Philosophical Approach

My philosophical approach to this topic is one of *critical realism.* While I respect the philosophical traditions of the post-positivist scientific framework in which I operate – one that is based on the notion that there is an objective truth to be discovered and in which the researcher must remain objective – I cannot be truly objective in this work because I am a fat person who is researching fat experiences. In fact, I do not want to be objective, because I want to create work that is meaningful and inclusive of fat experiences and so I recognize that the truth I seek is inevitably understood through the lens my own subjective experiences. Therefore, I take a *reflexive* approach to the research. This means that I acknowledge, and bring to the forefront, that the knowledge I am seeking and creating is situated and shaped by my identities (both privileged and marginal), values, and perspectives. *Critical realism* is a philosophical position that

> "can be understood as combining ontological realism (the truth is out there) with epistemological relativism (it's impossible to access the truth directly) to provide a

> position that retains a concept of truth and reality but recognises that human practices always shape how we experience and know this – human practices can be said to give rise to perspectival and contextual truths (Braun & Clarke, 2022, p. 169).

This position is most often undertaken in qualitative research. The research in this dissertation is quantitative, and so I operate within a *post-positivist* lens (i.e., assumes that reality exists, but it can only be imperfectly understood) for the statistical analyses, but my interpretation and theorizing will be within a critical realist framework, and reflexivity will be the dominant tone of this dissertation. I acknowledge the tension between these two positions but maintain that important insight can be gained by occupying that uncomfortable space.

A Brief History of Anti-Fat Culture

Before we can begin to understand how fat people might recover from the trauma of weight stigma, we must first understand why Western culture is so antagonistic towards fat bodies. Being fat is unacceptable in the current Western cultural context in that society holds anti-fat beliefs about health, beauty, and abilities. These anti-fat beliefs have historical roots in anti-Black racist colonialism and Christianity in 18th-Century America (Saguy, 2013; Strings, 2019). At that time, European Christian academics developed a concept of "race" that implied natural differences between what were presumed to be separate species of humans. The "White[1]" race/species, which included people of European descent, was imbued characteristics like discipline, gentleness, inventiveness, and intelligence (Mazzolini, 2014). In contrast, the "Black" race/species, which included people of African descent, was imbued traits like sensuousness, laziness, low intellect, and lack of capacity for self-control (Strings, 2019). This distinction was

[1] Here and elsewhere I will use quotation marks to indicate words and phrases representing the racist theorizing and thinking that characterizes the ideas of the time period that I am describing, to make clear that these racist terms and phrases are not my own and are no longer acceptable to use.

convenient for advocates of slavery, who believed and propagated these myths as justification to enslave those whom they believed to be inferior. According to racist scholars at the time, Black people's lack of self-control inevitably led to abandoned gorging in the primal so-called sins of the flesh, namely lust and gluttony. These racist scholars also argued that this inherent lustiness and gluttony led to fatness, and thus Black people's bodies, especially the bodies of Black women, were naturally fat (Strings, 2019). Thus, fatness became a way to distinguish the "uncivilized" and "godless" races from the thinner, "civilized" and Christian races.

By the early- to mid-19th Century, these views morphed into a full-scale diet culture that prized restrained eating and thinness for health (Farrell, 2011, Strings, 2019). Newspaper articles suggested that (presumably White) women should not eat too much if they wanted to maintain their lithe beauty, and corsets became fashionable. By the 20th Century, medical practitioners like Kellogg, who began his career as a Christian evangelical leader, preached the benefits of dieting and thinness as a solution to health problems, including the sins of the flesh, like gluttony. Modern diet culture inherited this evangelical-medical stance that erroneously conflates thinness with health and morality and fatness with sin (Saguy, 2013). Fat people are expected to pursue weight-loss because weight is incorrectly believed to be a controllable, external sign of embodied virtue (Rothblum & Solovay, 2009). Fat phobia and prejudice against fat people have subsequently been systematized as acceptable and sometimes even laudable outward displays of righteousness (Fraser, 2009).

Today, governments, media, and the scientific community have sounded the alarm on the so-called "obesity"[2] epidemic, generally concluding that fatness is the cause of many health

[2] Quotations are used to demarcate the problematic terms of "overweight" and "obesity," as suggested by Wann (2009) and in keeping with my earlier practice of demarcating words and phases that are used to stigmatize.

problems and therefore the solution to many health problems is weight loss (for a critique of these conclusions, see Harrison, 2019). Health science research both extends and perpetuates these prejudices. Fatness is typically examined through a fat-phobic, weight-centric lens, which assumes that fat people are at higher risk than thin people for poor health outcomes and that fat people can and should lose weight to improve their health (Tylka et al., 2014). Critically, the current cultural obsession with fatness and its connection to poor health can be understood as the extension of a neoliberal ideology (King-White et al., 2013) that is rooted in racism. Neoliberalism is a socio-economic ideology that prioritizes the individual over the state, and this ideology is now widespread in all spheres in Western society, including social, political, and economic systems and institutions (King-White et al., 2013). In the case of a neoliberal conceptualization of health, both health problems and solutions to health problems are situated within the individual. For example, higher weight is the fault of the individual, is associated with poor health in the individual, and so the obvious solution to the individual's poor health is the individual pursuit of weight loss. This focus on the individual occurs at the expense of broader causal models that incorporate social and political contexts. It also absolves the state from the responsibility of ensuring that its citizens have access to physical and mental health-supporting social services and ways of life.

Anti-Fat Bias in the Psychological Science of Weight

It is difficult to understand the psychological experiences of fat people by accessing the majority of psychology research literature to date. The current racist, fat-phobic, and weight-biased cultural and scientific context contains insidious and generally unrecognized biases that make it difficult to research fatness accurately. This is particularly grievous as research on fatness feigns scientific objectivity, simultaneously perpetuating fat phobia while remaining

completely oblivious to its own biases and racist origins. These are systematic problems with the research that must be addressed before psychological scientists can begin to truly understand fat people's lived experiences.

The discipline of psychology developed in the same colonial and racist cultural contexts that created diet culture. In the early 20th Century, the field deliberately aligned itself with the biomedical approach (Moola et al., 2014) and continues to research mental health with the same neoliberal lens. In terms of researching fatness, mainstream psychology research has joined forces with other health research disciplines in the fight against the "obesity epidemic". The neoliberalist lens focuses on causes for problems that lie within the individual and solutions that do the same. In the simplest example, the "cause" is fatness, the "problem" is depression or other psychological disorders, and the "solution" is weight loss. Or the converse: the "cause" is psychological disorders, and the "problem" is fatness, again supposing the solution is weight loss (see Pausé et al., 2021). Therefore, psychology research on fatness fails to understand complex causes of psychological distress or to find meaningful, helpful, or practical solutions to problems that fat people face.

One area of psychology research on weight focuses on associations between fatness and mental health. This is an important area of research because fat people are marginalized and oppressed (Puhl & Heuer, 2009), and people who are marginalized and oppressed often experience health problems, including psychological distress (Lupton, 2015; Malterud & Ulriksen, 2011; Puhl & Heuer, 2010). Therefore, one might reasonably assume that fat people experience worse mental health outcomes than their thin peers. Although this area of research is important and could be conducted in a sensitive manner, the reality is that the field is riddled with anti-fat bias. Following from earlier critical literature (e.g., Medvedyuk et al., 2018;

Watkins & Gerber, 2016), I have identified four specific flaws in psychology research on "obesity" and mental health that reveal this bias.

Problem One: Poor Evidence for a Direct, Causal Association Between Higher Weight and Psychological Distress. The dominant discourse in research and health practice purports that fatness is a direct cause of psychological distress, including depression, low self-esteem, disordered eating, and poor quality of life (Bean et al., 2008; Luppino et al., 2010; Medvedyuk et al., 2018). However, the evidence used to make these claims is weak because it is primarily correlational and studies body weight and psychological outcomes as variables in isolation without considering possible social mechanisms that might influence both outcomes. For example, Luppino and colleagues (2010) conducted a meta-analysis and found a reciprocal association between higher body weight and depression in longitudinal studies. They first propose many biological mechanisms including inflammation, dysregulation in the hypothalamic-pituitary-adrenal axis, insulin resistance, or neuroendocrine disturbances as the reason for the link between fatness and depression. Because the association was stronger for studies of Americans compared to Europeans, the authors briefly suggest one possible sociocultural mechanism: that American culture might be different than other cultures. However, this is an afterthought and not well explained. Despite this paper's conclusions and other extensive research attempting to find a direct association between fatness and poor mental health, there is no credible evidence for a direct link between fatness and poor mental health (Castelnuovo et al., 2013).

In addition to a lack of finding a direct link between fatness and mental health, results in research on fatness are often overstated. Menachemi et al. (2013) conducted a systematic review of 937 peer-reviewed articles on nutrition or "obesity" published in either 2001 or 2011 and

found that 8.9% of studies reported overstated results. These included associations reported as causal, recommending policy based on these associations, and generalizing to populations that were not represented by the samples in the studies. They also found that overstated results increased over time: more articles published in 2011 had overstated results than those published in 2001. These findings represent the bias that is entrenched in weight research and are likely responsible for consequences that have detrimental effects on society at large and fat people in particular. Overstated results and correlations that are reported as causal lead to conclusions unsupported by data (e.g., Menachemi et al., 2013; Tylka et al., 2014). For example, correlational research that concludes that: "obesity may really cause a clinically relevant and severe psychiatric outcome" (Luppino et al., 2010, p. 227).

Considering fatness and poor mental health as direct causal/reciprocal associations ignores social determinants of health. Social determinants of health include low income as well as food, housing, and employment insecurity (Graham, 2004). Psychology research on fatness and mental health rarely examines social determinants of health directly and rather uses variables like socioeconomic status as controls in their models (Medvedyuk et al., 2018). Moreover, when social determinants of health are included in models of health, the assumptions are still problematic. Medvedyuk and colleagues discussed two dominant models of the hypothesized associations between fatness and physical health outcomes that consider social determinants of health but continue to be fat phobic. Although these models were developed to explain physical health, the critique is equally applicable to research concerning mental health. In the first model, social determinants of health cause fatness, which in turn cause adverse health outcomes (i.e., social determinants -> fatness -> health problems). In the second model, fatness moderates the adverse health outcomes which are caused by social determinants of health (i.e., social

determinants of health -> different health outcomes for fat and thin people). The authors argue that both models continue to allow researchers and public health officials to focus on fatness as the main problem to be solved, rather than focusing on improving social determinants of health. This continues to locate the problem with the individual and does nothing to address social problems through policy.

Problem Two: A Neoliberal Conceptualization of Health: Locating the Problem and/or Solution to the Individual. In addition to social determinants of health, there are complex and contextual aspects of fat people's experiences that likely influence mental health. Being a member of a marginalized group has negative health consequences (Lupton, 2015; Malterud & Ulriksen, 2011; Puhl & Heuer, 2009, 2010). Recent research on the association between weight bias and mental health attempts to look at the sociocultural context to better understand the mechanisms underlying fat peoples' mental health. For example, a meta-analysis of 105 studies found a medium to large association between weight bias and mental health (Emmer et al., 2020). In some ways, this research is moving in the right direction. It begins to locate the problem outside the individual, in this case on the sociocultural context. However, it continues to be infused with anti-fat bias that goes unrecognized by the researchers. For example, Emmer et al. (2020) hypothesized that coping skills would moderate the association between weight bias and mental health. Presuming coping skills will solve the problem that weight bias causes for fat people continues to focus on the individual, though this time it relies on the fat person to provide the solution to the prejudice they suffer. Perhaps unsurprising for people who have lived experience with weight bias, this research showed that coping strategies are not enough to mitigate the harmful effects of weight bias.

Weight research also often promotes weight loss as a solution to fat people's psychological distress (e.g., Bean et al., 2008; Castelnuovo et al., 2013). This solution is problematic at best, because this proposal locates the solution to the problem entirely within the individual and because weight loss may worsen both physical and mental health (Bacon & Aphramor, 2011; Tomiyama et al., 2013). At worst, when this weight-loss solution is used in therapy, it prevents fat clients from forming trusting relationships with the therapists who are meant to help them and perpetuates an unhealthy cycle. Fat clients who seek help for their mental health are shamed when they are told to lose weight to solve their problems (Tylka et al., 2014).

Problem Three: Attempting to Solve the Problem while Perpetuating Biased Language and Concepts. Societal weight bias is endemic in psychology research on weight. Weight researchers perpetuate societal weight bias and do so without recognizing their own sociocultural context (Watkins & Gerber, 2016). Anti-fat biased problems and solutions continue to be accepted as fact and pervade the academic discourse, perpetuating stigma and causing researchers to overlook solutions that could create real change. Biased psychology research on fatness perpetuates harmful stereotypes, creating even more problems for fat people. Examples of both problems can be found in the research that I have discussed so far, all of which uses stigmatizing language and concepts. For example, a meta-analysis by Magallares and Pais-Ribeiro (2014) interpreted their finding that fat men experience less psychological distress than both thin men and fat women as evidence for a so-called "jolly-fat hypothesis" (p. 296), a stereotypical and heavily biased term invoked by many other psychology researchers to explain why not all fat people are depressed. The same paper ironically discusses the need for measures

of marginalization to be included in future research on fat peoples' mental health without recognizing the prejudiced language and dissemination of stereotypes they perpetuate.

Very little work has been done to attempt to understand fat experiences using a humanizing and person-centered approach, except for a few qualitative studies. In one such study, Lewis et al. (2011) interviewed participants with the goals of describing and classifying marginalizing experiences, investigating the ways participants were influenced by, and responded to these experiences. While this study filled a huge gap in understanding weight bias and its consequences on fat people, it also perpetuates stereotypes and uses biased language. For example, the authors are concerned with barriers to supposedly "health-promoting activities" (Lewis et al., 2011; p.1349) like weight loss, which perpetuates the incorrect assertion that weight loss is healthy. Additionally, the authors chose to conduct interviews by phone because they were "concerned about how participants' narratives may have been impacted by the weight of the interviewers who were younger women in the 'normal' BMI weight range" (p. 1351). Was it necessary to explain this reason for phone interviews? Many psychology studies use phone interviews and do not explain why. This type of rhetoric is problematic because a) the researchers' weight bias led them to assume that fat people would not be comfortable being honest about their experiences with young, thin interviewers; and b) explaining this reason perpetuates the idea that fat people should be uncomfortable discussing their stories with thin people. One solution to this problem would be to pose the problem from the other side: discrimination perpetuated by thin researchers could influence the stories fat people tell and may be more influential in an in-person interview. Another solution would be to work with people with relevant lived experience, or in other words, fat researchers and research assistants, which

also would better inform the research (see Manokaran et al., 2021, for a full review about how fat people must be included in fat research).

This begets another problem in research: people with lived experience in this area are rarely found in academic settings because of weight discrimination in universities (Canning & Mayer, 1966; Stevens, 2011). For example, one study found that fatter applicants were less likely to receive post-interview offers of admission to graduate programs in psychology than thin applicants, with an even lower rate of admission for fat female applicants (Burmeister et al., 2013). Putting the much greater issue of weight discrimination in university settings aside (see Stevens [2011] for a thorough qualitative study on this topic), the problematic actions by researchers and clinicians discussed thus far amount to ethical code violations, which I will discuss in detail next.

Problem Four: Ethical Code Violations. Researchers such as Medvedyuk et al. (2018) and Watkins and Gerber (2016) have identified important problems with weight science that can be understood as violations of the Canadian Psychological Association's ethical code (2017). I have outlined these violations in Table 1. A full exploration of this issue is beyond the scope of this dissertation, but weight research in psychology is seriously problematic, so much so that it contravenes every code to which psychologists must adhere. It is also important to note that these violations are often not overtly malicious and the perpetrators often claim to be well-intentioned, but the biases fueling those intentions create harm, nonetheless.

Table 1

Weight Research in Psychology Ethical Code Violations

Ethical Code	Focus	Violation
1. Respect for the dignity of persons and peoples	Non-discrimination, moral rights, and social justice	Weight research in psychology is stigmatizing and does not promote social justice for fat people (Watkins & Gerber, 2016).
2. Responsible caring	Minimize harm	Weight research in psychology causes harm to fat people (Watkins & Gerber, 2016).
3. Integrity in relationships	Consider and understand how one's own culture, experiences, beliefs, context, etc. influence one's research and practice. Be objective and unbiased.	Weight bias is infused into psychology weight research and goes unrecognized and unaddressed by researchers (Watkins & Gerber, 2016).
4. Responsibility to society	Do work that benefits society at large	Biased weight research in psychology contributes to anti-fat attitudes that perpetuate incorrect societal beliefs, harmful government policies and programs, and media headlines (Medvedyuk et al., 2018).

Can Anything Be Salvaged from the Literature? Despite these real and valid problems with the literature concerning fat people and psychological distress, there are some potentially informative findings from the studies detailed above that can help guide better research moving forward. For example, although research has not examined gender differences in experiences of weight stigma across the entire gender spectrum, research has shown that fat cisgender women experience worse mental health than fat cisgender men (Magallares & Pais-Ribeiro, 2014). Though there is a dearth of research on the topic, weight bias is moderated by anti-Black racism (see Reece, 2019), and thus it is important to consider fat people's experiences through an intersectional lens (Crenshaw, 1989). Another important finding is that experiencing and

perceiving weight bias predicts psychological distress much better than body size (Emmer et al., 2020). Therefore, researchers should examine prejudice as one aspect of context that leads to psychological distress and they should seek avenues to protect fat people from its harmful consequences. In addition, fat people face multiple types of prejudice, blame themselves when they experience bias, and are preoccupied with changing their bodies (Lewis et al., 2011). These experiences should inform future psychology research on weight through researchers centering fat people in the research and considering alternative, fat-inclusive theories on how weight and psychological distress intersect (see Manokaran et al., 2020, for further review and suggestions for fat-allied scholarship in the social sciences). All these findings should be used to inform future research on weight and mental health, and I will discuss them in greater detail later in this dissertation. At the same time, because the current research literature uses a fat-phobic lens, it must be interpreted with extreme caution. We should not research the experiences of marginalized people while adopting the perspective of the oppressor. Instead, researchers must reorient their perspective to centre fat people in the research, to understand the pathways linking fatness and psychological distress, and to find meaningful, person-focused avenues for recovery.

A Weight Inclusive Approach

Some researchers have taken critical perspectives in response to the current fat-phobic and stigmatizing way of researching weight and propose fat-centred approaches to research. These perspectives and subsequent recommendations for research are examined in this section (see Tables 2 and 3).

Table 2

Critical Perspectives in Weight Research (Lupton, 2013)

Critical Perspective	Argument
1. Critical biomedical perspective	Focusing on higher weight as a cause of health problems is not only incorrect (e.g., McNaughton, 2013) but also jeopardises health. It also misses important positive health connections including protective factors (e.g., Donini et al., 2012).
2. Ethical and critical weights perspective	The negative health effects associated with fatness may be due to *stigma*.

In their critique of the health science research on weight, Medvedyuk et al. (2018) review these perspectives and recommend that health science researchers and public health workers stop identifying fatness as a cause of health problems. This is detailed in Table 3.

Table 3

Recommendations for Weight Research (Medvedyuk et al., 2018)

Reason for recommendation	Recommendations for ending the "anti-obesity perspective"
1. There is a lack of evidence for the poor health effects of fatness.	1. Review and distribute the evidence that higher weight is not a primary cause of disease
2. Models that blame individuals for health problems distract from social determinants of health as primary causes of poor health outcomes.	2. Review and distribute the evidence that more equitable social determinants of health predict better population health.
3. Models that blame individuals for health problems perpetuate health problems rather than solving them.	3. Researchers must show how the anti-fat perspective harms health outcomes because of stigmatization.

Watkins and Gerber (2016) also call for new approaches to weight research based in fat studies, which emphasizes eradicating weight bias to further social justice. They explain that weight-centric research is supported and propagated by funding from pharmaceutical companies and governments, each of which have their own self-interested reasons for perpetuating the myth of the pathology of fatness. Researchers who want to study fat mental health need to make a

conscious decision to shift focus to a more humanistic, person-centered approach that reflects the complex, nuanced reality of fat people's lived experiences. Watkins and Gerber (2016) propose three new directions for psychology researchers to address the problems they outline, which I have summarized as follows:

1) Psychologists who conduct weight research must examine their own weight bias, examine their motives for conducting studies that perpetuate weight bias, and ask themselves who the research benefits.
2) Researchers must embrace qualitative findings, even if such methods are often devalued by quantitative scientists who falsely believe that their research method is superior because it is supposedly less subjective (a negative attribute of research in their view).
3) Researchers must recognize psychology's influence on the wider sociocultural context and therefore use the research process and findings to actively seek and achieve social justice.

I aim to use these recommendations to guide this research, so I will continue to examine my own weight bias. As a fat person, I am not immune to weight bias and have and continue to experience unwanted automatic or implicit anti-fat attitudes, which I may project onto other fat people. In reviewing the literature for this paper, I noticed how easy it is to fall into an automatic acceptance of the biased notions some researchers put forward as fact. It is essential in research to constantly examine one's biases and consult other researchers to check on unnoticed assumptions and presumed facts, and I will use these tools to identify and hopefully overcome bias in my work. Additionally, I will weigh qualitative and autoethnographic accounts equally to quantitative results, both in literature I review and in the methods I use for my own research.

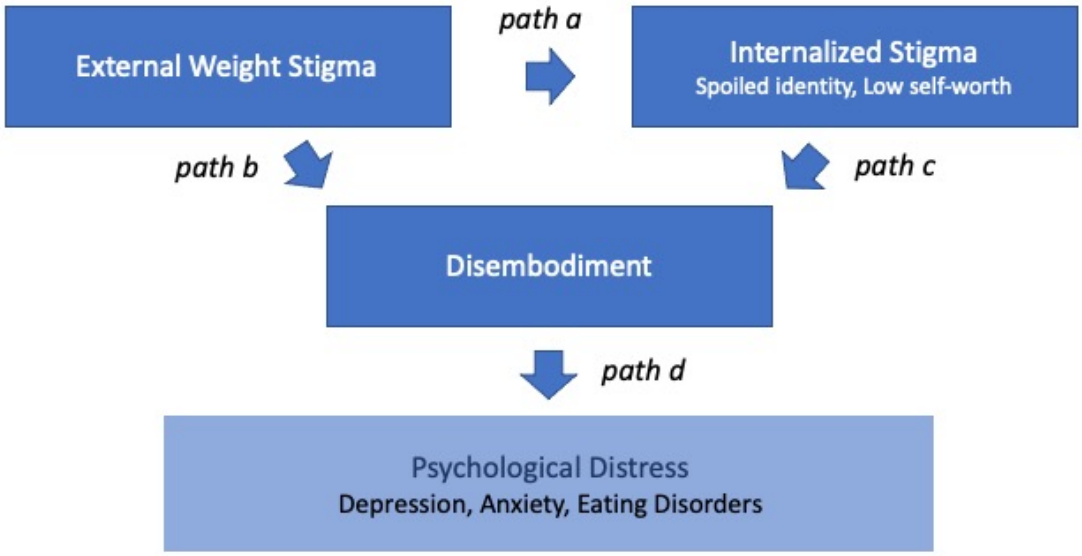
Finally, I will adopt a social justice perspective in my work and consider the potential for my work to further social justice. Adopting a social justice perspective means that I recognize that all people are not equally safe and secure, nor are they given equitable access to resources. My work seeks to actively decrease the oppression of marginalized people through the dismantling of paradigms that maintain oppressive societal structures (for a full examination of weight bias as a social justice issue in psychology, see Nutter et al., 2018).

Fatness and Mental Health: A New Theoretical Perspective

As an antidote, or counterpoint, to the harmful perspectives I have reviewed thus far, I propose a new theoretical perspective on fatness and mental health that rejects anti-fat biases and embraces a weight-inclusive perspective. My model takes a humanistic, person-centred approach grounded in objectification theory (Fredrickson & Roberts, 1997) and fat studies, following the ethical and methodological roadmap provided by Watkins and Gerber (2016). My model centers fat bodies in a sociocultural context, and in doing so, my work will shed light on fat people's lived experiences and the mental health risks of enduring weight stigma. As I will explain in more detail, I propose that experiencing weight-based stigma is traumatizing, resulting in internalized stigma and, in turn, *disembodiment*, which is the separation of the self from the body that is the opposite of embodiment. Disembodiment disrupts biological and psychological self-regulatory processes which contribute to a feedback loop causing further disembodiment. This creates a self-reinforcing or recursive cycle that ultimately causes psychological and interpersonal distress (see *Figure 1).* My model will also suggest avenues for resistance to and recovery from internalized weight stigma, which I will explain at the end of this section.

Figure 1

Conceptual Model Depicting the Processes Through Which Weight Stigma Contributes to Psychological and Interpersonal Distress via Disembodiment



Note. It is highly probable that there are other paths in this model (e.g., *path a* could be bi-directional because people with higher internalized stigma may be more likely to perceive public stigma), but I am focusing on the main developmental paths in this paper, and thus only depict those paths in the model.

Associations between variables in the model are complex and likely to be reciprocal and recursive over time. In this paper, I focus on the paths that are depicted, both to make it simpler to explain and to highlight one of the primary developmental pathways through which public weight stigma affects mental health and well-being. It is also important to note that though this model focuses on the individual, it does not reflect a neoliberal approach. For example, a neoliberal approach to the processes studied in this paper might focus on internalized stigma by depicting fat people as responsible for their suffering and therefore responsible for either avoiding suffering (e.g., by losing weight) or finding ways to cope with it. While the ultimate

solution to the problem of weight stigma would be radical cultural, social, and institutional change, fat people must figure out how to survive in their environment. The approach I propose is constructivist or humanistic, centering the individual as the victim of a social context that results in distressing personal outcomes, and empowering the individual as the arbiter and author of their own recovery.

The Beginning: Public Weight Stigma Becomes Internalized

As described earlier in this paper, Western culture is an anti-fat culture, and anti-fat attitudes are prevalent and continuing to grow within it (Puhl et al., 2015). As a result, fat people are *stigmatized.* Goffman (1963) defines stigma as an undesired difference that isolates the stigmatized individual from society, a process that *spoils* identity and creates profound feelings of shame. Thus, *fat stigma*, or *weight stigma*, is a social process that ascribes undesired difference and negative stereotypes to fat people (e.g., lazy, stupid, uninterested in their health; Puhl & Heuer, 2009). As a result of these attitudes, fat adults confront discrimination in virtually every facet of their social lives: at work (Giel et al., 2010), at university (Allison & Lee, 2015), when seeking medical treatment (Alberga et al., 2019), when shopping (Greenleaf et al., 2020), and most painfully, from their family, friends, and romantic partners (Collisson & Rusbasan, 2016; Hunger & Tomiyama, 2014; Lewis et al., 2011; Pearlman et al., 2019). Ellen Maud Bennett's story offers a particularly tragic yet frightfully common example of the kinds of medical discrimination that fat people experience (McKenzie & Bresge, 2018). Ms. Bennet died in Victoria, BC in 2018 from inoperable cancer, which was only diagnosed shortly before her death. For years before her death, Ms. Bennett sought medical intervention for the symptoms she was experiencing, but her concerns were overlooked. Instead, she was fat shamed by doctors and

told to lose weight. Her cancer may have been treatable if her requests for medical attention had been respected and the cancer had been found earlier.

Fat people are also bombarded with anti-fat messaging from the media (Ata & Thompson, 2010). For example, the COVID-19 pandemic generated headlines that aimed to induce panic about weight gain, such as "Battling the 'Quarantine 15': Experts fear COVID-19 weight gain could lead to health complications, weak immune systems" (Dastmalchi, 2020). News coverage concerning COVID-19 and weight used exploitative *headless fatty* (Cooper, 2007) images and video in which fat people's bodies were portrayed with their heads, and thus their humanity, cropped out of the image (e.g., "Obesity Emerging as Major COVID-19 Risk Factor," 2020).[3] Despite demonstrated associations between experiencing weight stigma and weight gain (Puhl et al., 2017), weight stigma is even promoted as a public policy tool to promote weight loss (Callahan, 2013a, 2013b), all in the name of tough love and motivation for change. It is worth noting that in Canada, hospitalizations for eating disorders increased significantly since 2020, likely due to a myriad of factors, including increased societal preoccupation with weight (Toigo et al., 2024).

It is unsurprising, then, that experiencing weight stigma predicts negative physical and mental health consequences (Bacon & Aphramor, 2011)[4]. One of those relatively unexamined consequences is that fat people develop a self-concept that includes the stigmatized identity. In other words, fat people experience *internalized weight stigma*. The process of how public weight stigma becomes internalized in fat adults is not well studied. Longitudinal studies of other types of stigmas have demonstrated that public stigma becomes internalized over time (Vogel et al.,

[3] Perhaps unsurprisingly, the claim that "obesity" was a major risk factor for COVID-19 is spurious (see Ioannou et al., 2020).
[4] Much of the research described here has similar problems to the research described in the previous section. I have chosen to focus on salvageable findings for this section.

2013). In their seminal work about internalized sexism, Fredrickson and Roberts (1997) explain the process of internalization using the *theory of psychological socialization* (Costanzo, 1992), and I will adapt their arguments to explain the process of internalizing weight stigma (*path a* in *Figure 1*).

First, seemingly small and inconsequential social pressures influence people to believe negative stereotypes and associations about fatness. For example, when a child is exposed to negative stereotypes about fat people through movies such as *Inside Out 2* (Mann, 2024), an animated film with the aim of teaching children about their emotions. In this film, the fat characters represent sadness, anger, and embarrassment. This teaches children implicitly that fat people are sad, pathetic, unlovable, and shameful. In turn, this exposure is followed by a process of interpersonal identification (Stets & Burke, 2000). The self-concept develops through interpersonal interactions, such that people see themselves reflected in the opinions and feedback of others, and through that reflection, come to know who they are and what social groups they belong to. So, when parents, siblings, peers, teachers, and medical professionals bully, tease, and pressure a child to lose weight – an all-too-common occurrence (Eisenberg et al., 2003; Puhl & King, 2013) – that child begins to understand that the negative things they have learned about fat people also apply to them. The child learns that they belong to the social group "fat people." Finally, these beliefs are unconsciously incorporated into the child's emerging sense of self, or, for most people who become fat as adults (Serdula et al., 1993), anti-fat beliefs are incorporated into their ever-evolving self-concept. But whether someone comes to a fat identity during childhood, adolescence, or adulthood, the result is essentially the same: most fat people develop internalized weight stigma (e.g., Puhl et al., 2018). When public stigma is internalized, negative judgements come from inside, making them more insidious. Thus, healing from the damage

caused by living in a fat-phobic world may not be fully possible while internalized stigma resides within the self, disrupting the relationship between mind and body.

Prior research concerning weight stigma has focused almost exclusively on *external or public stigma*, that is, stigma that comes from other people or institutions (e.g., (Alberga et al., 2019; Allison & Lee, 2015; Ata & Thompson, 2010; Brochu, 2018; Carr & Friedman, 2016; Hunger & Tomiyama, 2014). This research convincingly demonstrates that experiencing weight stigma is associated with higher levels of depression, anxiety, and psychiatric distress and lower levels of self-esteem and body image satisfaction (Carr & Friedman, 2016; Friedman et al., 2008; Puhl & Brownell, 2006). Yet these associations are not universally true. Although all fat people experience public stigma, not all fat people experience clinically significant psychological distress (Castelnuovo et al., 2013), and it is important to understand why some people suffer more than others. I propose that internalized stigma may help to explain these varied outcomes.

Stigma Causes Disembodiment

I propose that fat people are chronically traumatized by public and internal stigma, and this trauma disrupts essential connections between the self and the body (*paths b* and *c* in *Figure 1*). Chronic, cumulative, or complex trauma is conceptualized as the result of multiple, continuous exposures to environmental and interpersonal stressors, including prejudicial attitudes and discrimination (see Williams et al., 2018a). This argument conflicts somewhat with current, mainstream definitions of psychological trauma. The American Psychiatric Association (2013) defines trauma as the resulting psychological consequence of a single, or time-limited, life-threatening experience. Worldwide, at least 70% of people have experienced one traumatic event in their lifetime (Benjet et al., 2016). When someone experiences a traumatic event, they have a fight or flight response that triggers physiological changes such as raised blood pressure,

increased heart rate, and sweating. In addition, common symptoms after a traumatic event include negative emotions, shock, and denial. For some people, these feelings persist over time and lead to long term psychological distress, including depression, anxiety, and other symptoms of psychological distress that, together, are called *post-traumatic stress disorder* (PTSD). Common symptoms of PTSD include persistent and exaggerated negative beliefs or expectations about oneself, others, or the world, hypervigilance, sleep disturbances, and intrusive symptoms such as unwanted memories or thoughts associated with the trauma (American Psychiatric Association, 2013). The most recent reported lifetime prevalence rates of PTSD were estimated to be 9.2% in Canada (using DSM-IV diagnostic criteria; Van Ameringen et al., 2008), and 8.3% in the United States (using DSM-5 criteria; Kilpatrick et al., 2013).

The present version of the DSM does not include chronic trauma as a cause of PTSD. Recently, scholars who are critical of this perceived oversight have proposed that societal oppression can also cause trauma, an experience that Burstow (2016) calls “insidious trauma” (p. 1296; see also Doyle, 2003, and Williams et al., 2018b, for scholarship on racism and cumulative trauma). Insidious trauma wears down oppressed and marginalized people because they live in a social context in which they are devalued, abused, and alienated. Burstow further proposes a radical understanding of trauma that includes rejecting the psychiatric concept of PTSD as a disorder all-together. Instead, she suggests that what is currently understood as PTSD is a “reaction to a kind of wound” (p. 1302), and so trauma is an *embodied experience*, or an experience that is simultaneously psychological and physical, felt and expressed by the body and mind together. By this definition, trauma can occur when there is no overt physical assault, but rather, it can occur when one is robbed of one’s humanity through oppressive systems.

Based on this radical, embodied understanding of trauma, I suggest that public weight stigma and the process of internalizing weight stigma are traumatic processes (Sturgess & Stinson, 2022). Fat people experience a kind of slow burn of trauma from public and internal stigma over their lifetime. Public weight stigma comes from teasing and body monitoring from family that persists from childhood to adulthood; fat jokes from their friends or the media; medical professionals who insist that their symptoms are only explained by their weight; workplace discrimination; unsolicited health and fitness advice by strangers, family, or friends; or media coverage of a worldwide pandemic that disparages and punishes fat bodies. These are but a few examples of the daily, external, commonplace reminders that fat people are different, and "other" (i.e., *microaggressions*; Sue, 2010), that together form an assault of fat-phobic abuse that fat people must endure. Worst of all, because the self is formed through reflected appraisals and social feedback during psychological socialization, these messages are believed and absorbed to form internalized weight stigma, and so the abuse becomes the call that comes from inside the house. In other words, fat people are stigmatized, marginalized, wounded, and traumatized by abuse that comes at them from every angle, including from inside themselves. The association between public and internal stigma may also be recursive (see *path b* in *Figure 1*), because those who internalize stigma may become more aware of or sensitive to public stigma, or to cues that may be perceived as neutral by those who are less aware. For example, a recent study on cortisol levels in those who experience ethnic microaggressions showed an association between sensitivity and cortisol reactivity patterns (Majeno et al., 2021).

If I am correct to propose that fat people are traumatized by public and internal stigma, then the literature should reveal that fat people exhibit common symptoms of trauma, including disembodiment. Traumatized individuals often feel unsafe, ungrounded, and view the world as

dangerous (Johnson, 2009). Following from this loss or absence of grounding, trauma results in spatial and temporal disorientation, or *dissociation* (Herman, 1992), which can include *somatic dissociation* between the self and the body (Johnson, 2009), also known as disembodiment. This somatic form of dissociation is often the result of trauma that is inflicted upon the body, such as sexual abuse or physical violence (Burstow, 2016). Dissociation through disembodiment can be an adaptive response to trauma because it serves to disconnect the self from the traumatic experience while it is happening. In this way, the body mediates the effect of trauma on the self (Johnson, 2009). In other words, the body is the carrier of or channel for the trauma, so the self is protected, at least temporarily, by disengaging from the body. As I described previously, mainstream researchers have not studied the potential trauma of social oppression. Yet Johnson (2009) found that all five participants in their qualitative study of oppression and embodiment had experienced disconnection from their bodies in response to oppression. Many of the participants only realized that they experienced somatic dissociation, or disembodiment, when they began to recognize and process the impact of their oppression.

Based on this work and based on Burstow's (2016) radical understanding of trauma, I suggest that fat people experience chronic bodily trauma because their bodies are the site of their oppression. People shame, revile, fear, and hate fat bodies, and fat people are well aware of this fact. Public stigma may directly cause disembodiment through trauma (*path b, Figure 1)*. As explained earlier, fat people are exposed to daily experiences of public stigma from myriad channels, all of which could potentially cause traumatic reactions including disembodiment. Another potentially more powerful pathway by which public stigma comes to create a trauma response is that it is mediated through internalized stigma (*path c, Figure 1*). While neither path has been studied, I argue that *path c* likely causes more long-term damage because internalized

stigma becomes part of one's identity. More specifically, I suggest that fat people experience disembodiment because of the trauma of the chronic, inescapable, systemic, and relational oppression they face.

Internalized Weight Stigma and Disembodiment. Theories of embodiment can help to explain how fat people come to internalize the weight stigma that they experience. Embodiment theories exist in many disciplines, including psychology (Piran, 2016), sociology (Cregan, 2006), anthropology (Mascia-Lees, 2011), and gender studies (Price & Shildrick, 1999). These theories are rooted in the philosophical theory of *phenomenology* (Merleau-Ponty, 1962), which emphasizes the body over the mind as the primary site of knowledge. Merleau-Ponty argues that consciousness is not the primary source of knowledge. Rather, the body is the central source of knowledge. Because the body is essential to perception, each component of the body and of perception influences, and is influenced by, every other component. Thus, the body is interwoven with consciousness and the external world. Similarly, Butler (1993) theorizes that bodies construct identity through performativity – a process of acts and gestures – meaning that bodies and identity are inextricably linked. One cannot exist without the other. So, if bodies are a primary source of knowledge, and are inextricably linked to identity, consciousness, and the external world, what happens when the connection between the body and the self is disrupted? One's ability to *know*, to relate to and understand the self and the external world, is broken, and they become disembodied.

Constructivist theories also inform my understanding of how disembodiment can occur in marginalized bodies, including the bodies of fat people. Constructivist theories posit that reality is historically and socially constructed and are contrary to neoliberalism in that the individual is not entirely responsible for their context (Mahoney & Granvold, 2005). Rooted in

constructivism, Piran's (2017) developmental theory of embodiment exposes how gender oppression is absorbed and expressed throughout development. For example, girls learn that they are externally evaluated based on their bodies and internalize this idea to monitor their own bodies for acceptability. The external oppressor is therefore absorbed into the psyche and now stands between the self and the body. This notion also links to objectification theory (Fredrickson & Roberts, 1997), where the connection between the oppressed self and the body is manipulated by the oppressor, so that the subject self-objectifies, or has an internalized, oppressive perspective on their own body. Similar ideas about these processes emerge from critical race theory. Doyle (2003) discusses how the traumatic oppression of racism causes disembodiment. Racialized bodies are quite literally bodies that have been colonized and taken over by the oppressor. For example, Doyle argues that a group is only racialized when they are perceived to be different by a dominant group, and those differences usually involve the body. Groups who have been racialized are defined by what they are not (i.e., white), and then they are ascribed negative characteristics, which are internalized, once again through the process of psychological socialization. Thus, what should be a one-to-one relationship between the self and the body becomes a relationship that is mediated by the oppressor.

In all of these theories, the term *gaze* is used to denote the domineering perspective of the oppressor. In objectification theory, the oppressor is male, so the body is subjected to the *male gaze* (Mulvey, 1975). In critical race theory, the oppressor is white, so the body is subjected to the *white* or *imperial gaze* (Kaplan, 1997). Fat studies scholars have also suggested that fat people are similarly subjected to the *thin gaze* (Fuller, 2018), whereby the perspective of the oppressor – in this case, the idealized thin and purportedly healthy body that is valued under white-supremacist, colonial, neo-liberalism – is inserted between the self and the fat body.

Piran (2001) has also developed a more expansive theory of embodiment and disembodiment that can be adapted to understand fat people's experiences. According to this theory, social oppression leads to disembodiment via three mechanisms. One mechanism involves violations of body ownership. Piran (2001) describes this mechanism as "events that…disrupt [a] sense of respectful ownership of [the] body" (p. 173), which can include external control of food/eating and appearance and other types of external monitoring of the body. Fat people commonly experience these violations of body ownership. For example, family, friends, health professionals, and strangers often discuss and judge fat people's food choices and appearance (Hunger & Tomiyama, 2014; Pont et al., 2017; Pudney et al., 2019; Puhl & Brownell, 2006). Fat people's bodies are constantly monitored, most notably in medical settings where fat patients are often weighed or measured without their consent and when they have health inquiries unrelated to weight (Alberga et al., 2019).

Another mechanism involves the oppressive use of the body to express prejudicial attitudes towards a group. For example, Piran describes how derogatory terms for women's bodies and appearance, like 'bitch' or 'dumb blonde,' are used against women to devalue, disempower, and belittle them. Similarly, fat people are subjected to a multitude of prejudicial terms about their bodies (Puhl & Brownell, 2006), all of which are used to hurt, shame, disempower, devalue, and belittle. Piran's third and final mechanism of disembodiment involves the social construction of gender. This concerns idealized images of women that are constraining and disempowering, such as *nurturer* or *sexual object without agency*. These idealized images interrupt women's connections between themselves and their bodies because they influence behaviour and identity. Similarly, fat people confront idealized images of thin people or of fat people who have lost weight. They are taught to believe that there is a thin person waiting inside

them to get out. I propose that fat people's oppression leads to disrupted relationships with their bodies, which has significant consequences for psychological health, including depression, anxiety, and disordered eating.

Disembodiment Causes Psychological Distress

Disembodiment is an important mediator of the link between trauma and psychological distress. *Path d* of the theoretical model (*Figure 1)* depicts how disembodiment causes psychological distress, which results from the trauma of public and internalized stigma. Disembodiment as a trauma response may cause nervous system dysregulation because it disrupts communication between mind and body (Van der Kolk, 2015). Typically, the body is regulated by the parasympathetic nervous system, which facilitates bodily functions like digestion and salivation and supports rest and relaxation (Van der Kolk, 2015). In contrast, the sympathetic nervous system is activated in response to stress or threat. Also known as "fight or flight" mode, the sympathetic nervous system increases heart rate and prepares the body to run away or defend itself. In a non-traumatized person, an automatic, complex feedback-loop between mind and body regulates the activation and deactivation of these two nervous systems in response to situational affordances. However, trauma disrupts this regulatory system, in part because it disrupts the mind-body connection via dissociation and disembodiment, and the results are also non-conscious processes. One of these is *hyperarousal,* whereby the sympathetic nervous system is constantly activated and preparing to respond to threat. The psychological consequences of hyperarousal include anxiety, panic, intrusive thoughts, exaggerated startle responses, restlessness, hypervigilance, rage, and insomnia (Schell et al., 2004). Common therapeutic approaches to acute anxiety responses include exercises that promote embodiment such as grounding or mindfulness, which bring attention and regulation to physiological or

sensory processes. Trauma-induced disembodiment can also lead to *hypoarousal*, whereby the sympathetic nervous system becomes deactivated. The psychological consequences of hypoarousal include exhaustion, numbness, depression, flat affect, lethargy, and excessive sleeping (Ogden, 2009).

Disembodiment and the resulting disconnection between mind and body can also disrupt people's sensitivity and responsiveness to hunger and satiety, increasing the risk of eating disorders (e.g., La Mela et al., 2010) [5]. When this kind of traumatic dysregulation is combined with cultural messages praising restrictive eating and weight loss, as they are for fat people, then it creates a nearly perfect storm of risk factors for disordered eating and clinically significant eating disorders that may help to explain why fat people are so prone to these debilitating conditions (Lipson & Sonneville, 2017).

Thus, fat people who experience these and other symptoms of psychological distress, and the mental healthcare professionals who work with them, would do well to consider the trauma of weight stigma as an important causal factor in their distress. It is worth noting that this perspective stands in stark contrast to the usual treatment that distressed fat people receive in mental healthcare settings, where healthcare workers too-often blame fat people's bodies for their distress, make unfounded assumptions about their eating and exercise habits, use stereotypes rather than symptoms to determine diagnoses, exclude them from treatment programs, and generally compound the fat-phobic abuse that likely drove their fat clients to seek support in the first place (e.g., Akoury, Schafer, & Warren, 2019; Harrop, 2019; Davis-Coelho et al., 2000).

[5] Like "obesity" research, much of the research on eating disorders contains problematic discussions of what constitutes, for example, a disordered relationship with food. For the purposes of this paper, it is important to acknowledge this problem with the research without a full examination of it, while gleaning necessary information.

The present research will test the proposed theoretical model. The trauma of weight stigma and the reaction of disembodiment leads to negative outcomes for fat people, which likely comprise more than what I have included in the proposed model and should also be explored in future research. Those that are included are the most common and salient and should be researched more to be fully understood, but so should other potential negative outcomes. While not all fat people are anxious or depressed or have eating disorders, those that do experience negative outcomes likely also experience public weight stigma, internalized weight stigma, and disembodiment. I propose that internalized weight stigma is the crux of the traumatic process and should be conceptualized as the thing to recover from. I also propose that resistance and/or recovery will include embodiment.

Possible Paths to Resistance and Recovery

The research literature and the public scholarship of fat activists point to specific strategies that fat people might adopt to facilitate resistance to public weight stigma and recovery from internalized weight stigma, many of which involve reconnecting with and listening to one's body. To facilitate the discussion of these various strategies and to highlight the recurring themes that are evident across such a wide range of approaches, I have adapted Stinson and Swann's (2017) model of pathways to well-being. This model was intended to provide a conceptual framework to organize and analyze strategies for achieving well-being, and here I adapt and apply it to provide a conceptual framework for organizing and analyzing strategies for resisting and healing from weight stigma.

Recovery Strategies that Embrace the Self

Stinson and Swann (2017) originally conceptualized the *embrace self* path to well-being as comprising strategies to bring awareness to aspects of the self that may have been suppressed,

denigrated, or overlooked because of negative experiences or trauma, and in re-invigorating those aspects of self, improving well-being. This path also applies to recovery from weight stigma, which causes suppression, denigration or overlooking aspects of the self. In the *embrace self* path to recovery from weight stigma, healing is generated through embodiment processes involving the awareness or awakening of the self, which directly interrupts path d of the theoretical model, preventing psychological distress.

Returning to Virgie Tovar's (2014) quote from the beginning of this paper, Tovar's decision to reject self-hate and choose self-love exemplifies embracing the self. The approach rejects internalized stigma, or what Tovar calls self-hate, and encourages people to love themselves as a method of recovery. Other writers (e.g., Hagen, 2019) prefer to frame this as body neutrality rather than self-love – for some, learning to respect and respond to their body's needs in a neutral way is less fraught than loving their body. As Tovar defines it, self-love is a practice, a day-to-day method of living in a way that reclaims one's body for oneself and replaces internalized stigma with self-love. For fat people, there are myriad possible avenues away from internalized stigma and toward self-love or self-acceptance. Baker (2015) suggests that since internalized stigma is a learned process, then it can also be unlearned. This process of unlearning can be accomplished through different methods, such as therapy, social media curation, and reading about fat liberation or activism (e.g., Baker, 2015; Taylor, 2018; Tovar, 2018).

Psychotherapy. Therapies that are rooted in constructivism may be beneficial for fat people who seek to unlearn self-hate, because constructivist therapies allow for a social justice perspective on psychological distress (Mahoney & Granvold, 2005). In addition, constructivist therapies address each stage in Herman's (1992) model of trauma recovery by helping clients to

understand how they interact with the world around them to make meaning and by empowering clients to make new meanings within their own contexts. For example, in one form of constructivist therapy, *narrative therapy*, the therapist helps clients define their values and the strengths and skills they have, and then help them to apply their values in their lives (Brown & Augusta-Scott, 2007). A key technique of narrative therapy is re-authoring, in which the therapist and client work together to write or re-write the story of the client's identity. The process of rewriting one's story can be conceptualized as a process of fat embodiment, whereby the recovering fat person reconnects with their body while re-authoring and centralizes their fat body in the new narrative. Fat people who are interested in pursuing this option should seek fat-positive therapists, as it is essential that the therapist stands in "moral solidarity" (Herman, 1992, p. 178) with their client and does not reinforce weight stigma. The concept of identity is key in narrative therapy, as it is in the concept of the spoiled identity of stigma. In *the embrace self* path, one can reconstruct their identity so it is unspoiled.

Attending to Bodily Needs. Learning about the origins of fat phobia and becoming liberated from societal pressure to hate oneself may lead some fat people to begin to reconnect with their bodies' needs and desires. For others, beginning with practices that promote connecting with their bodies will lead them toward self-love or self-acceptance. Embracing and attending to basic bodily needs creates the safety and stability necessary for trauma recovery (Herman, 1992), and reconnects fat people to essential acts of self-care that disembodiment may have prevented. In contrast to restrictive dieting for weight loss, which teaches people to ignore their body's natural cues of hunger and satiety in favour of rigid external rules (Harrison, 2019), practices such as *Health at Every Size* (Bacon, 2010) and *Intuitive Eating* (Tribole & Resch, 2020) teach fat people to respect and respond to their body's cues. In turn, these practices can

improve physical and mental health (Bacon et al., 2005). Also, in contrast to weight-loss centered approaches to exercise, which cast exercise as a tool for weight loss or a way to earn or repent for forbidden foods, *joyful movement* emphasizes moving the body in pursuit of pleasure and embodiment (see Bacon, 2010). Amber Karnes, a fat yoga instructor and blogger, found self-love and safety in her body through yoga: "[m]y yoga practice made me sure—made me *know* in my bones—that my body was a powerful, good, and safe place to be" (Karnes, 2018, para. 20). This quote emphasizes the powerful unlearning/re-learning and *knowing* aspect of re-embodiment. Additional ways of embracing bodily needs include responding to the need for sleep, rest, and relief of suffering. Asking for accommodations appropriate for fat bodies and taking up space are also important components of this approach to fat embodiment.

Embracing the self through re-embodiment is essential to recovery from internalized stigma and must occur in a relational context, but recovery also comprises finding solidarity and support through understanding one's common experiences with others.

Recovery Strategies that Embrace Relationships and Community

Strategies that embrace relationships and community improve well-being through embodiment activities that strengthen connections with others (see also, Stinson & Swann, 2017). In this context, embodiment is undertaken in the context of physically intimate relationships and in fat community. In terms of Herman's (1992) stages of recovery, embracing community supports every stage: in stage one, one can establish safety by finding safe spaces to learn alternative fat discourses. In stage two, one can tell one's story within these safe spaces. In stage three, finding a new community and having relationships where one is "out" as a fat person who no longer participates in diet culture is part of rebuilding a life. Finally, an important component of embracing relationships is having healthy boundaries, both with loved ones and

with others who interact with one's body such as medical professionals. For example, this may include telling family members that it is not appropriate to comment on one's body or telling a doctor that discussions of weight loss are not acceptable.

Intimate Relationships. Physically intimate relationships include sexual relationships, friendships that involve hugging or cuddling, as well as relationships with fat positive physical therapists, massage therapists, or other service providers that interact with the physical body. There is a lack of research on fat sexuality from the perspective of fat people. One qualitative study on fat women's sexual experiences found that the majority of participants reported an improvement in their sexual relationships after they had become embodied through embracing radical body positivity or fat pride. Others reported that positive sexual relationships helped them to appreciate their bodies (Gailey, 2012). Fat liberation activist Virgie Tovar has explained that sex was her gateway to fat pride (Wodarcyk, 2018). Being sexually intimate with a partner who is attracted to and enamored with one's body is a process of embodiment and is path to healing weight stigma. Public scholarship provides more specific discussion on fat embodiment through sexual relationships (see Blank, 2011; Weinstein, 2012). In her examination of Big Beautiful Woman (BBW) social events – which represent one of the main sites of fat activism in the west (Cooper, 2016) – Kotow (2020) describes processes of fat embodiment through desire and sensual pleasure.

The Fatosphere. For unradicalized fat people, community and support was historically commonly found in weight loss groups, which are inherently stigmatizing and only allow for support within the dominant discourse. While weight loss groups perhaps provide places for fat people to tell their stories of public stigma and receive some emotional support and solidarity, they exist by defining weight loss as the only solution. Though the fat acceptance movement has

existed since the 1960s, it remained a fringe group due to lack of mainstream distribution. In addition to an increase in books about fat liberation and fat acceptance over the past two decades, the internet has provided the opportunity for the development of an online community of bloggers who critique the dominant discourse about fatness and provide support and solidarity for people seeking fat community called *the Fatosphere* (Harding & Kirby, 2009). In a qualitative study with Fatosphere bloggers, Dickins and colleagues (2011) asked participants about the role of the Fatosphere in the resistance of public stigma. They found that the participants identified the Fatosphere as a safe space, where they felt accepted, supported, and empowered to resist public stigma and in doing so, curated an online experience that exposed them to role models for positive fat embodiment. In addition to Fatosphere blogs, social media provides a source of fat community. People can curate social media so they are only exposed to positive and empowering images of fat people. While this does not allow for a complete inoculation against mainstream fat stigma, it does provide alternative sources of media as well as fat role models who those in recovery can look to for inspiration and concrete ideas about how to move forward. Lindy West (2016) describes how these kinds of images helped her to heal from internalized weight stigma: “There was really only one step to my body acceptance: Look at pictures of fat women on the Internet until they don't make you uncomfortable anymore. That was the entire process” (p.68). This represents a type of exposure self-therapy that West used to desensitize herself to the automatic negative thoughts that were triggered by viewing fat bodies. Over time, appreciating beautiful images of fat people and reading their life stories online can lead fat people to internalize a more positive image of fatness that facilitates self-change and healing.

Currently, fat community exists mainly online. However, online groups have led to physical meetups such as fat swims, fat pride groups, and activities such as fat dance and fat yoga. Within fat community, people are likely to learn more radical ways of existing and thinking through exposure to fat activism.

Recovery Strategies that Embrace Radical Ways of Being

> *Dismantling oppression and our role in it demands that we explore where we have been complicit in the system of body terrorism while employing the same compassion we needed to explore our complicity in our internalized body shame.*
>
> Sonya Renee Taylor, 2018, p.83

Embodiment is a foundational concept among radical fat activists and public scholars. Asserting that fat people have a right to exist in their fat bodies and demanding that society accommodate the needs of fat bodies, are fundamental tenets of body liberation activism. Thus, to embrace radical ways of being in fat bodies necessarily involves the radical practice of fat embodiment. Taking up space, rejecting shame, nourishing the body, demanding access to resources or accommodations: all have embodiment as either a pre-condition or a consequence.

Herman (1992) proposes that finding a survivor's mission is a part of stage three of trauma recovery, and that this can include social or political action, working with individuals who have experienced similar trauma, or pursuing justice. This mission can be empowering, but it can also be uncomfortable, as Sonya Renee Taylor describes in the quote above. Yet this discomfort can also bring necessary growth and healing.

Herman also discusses the importance of recognizing socialized assumptions and of identifying different sources of social pressure that contributed to one's vulnerability to trauma, both of which can be realized through embodied radicalization. Engaging with radical

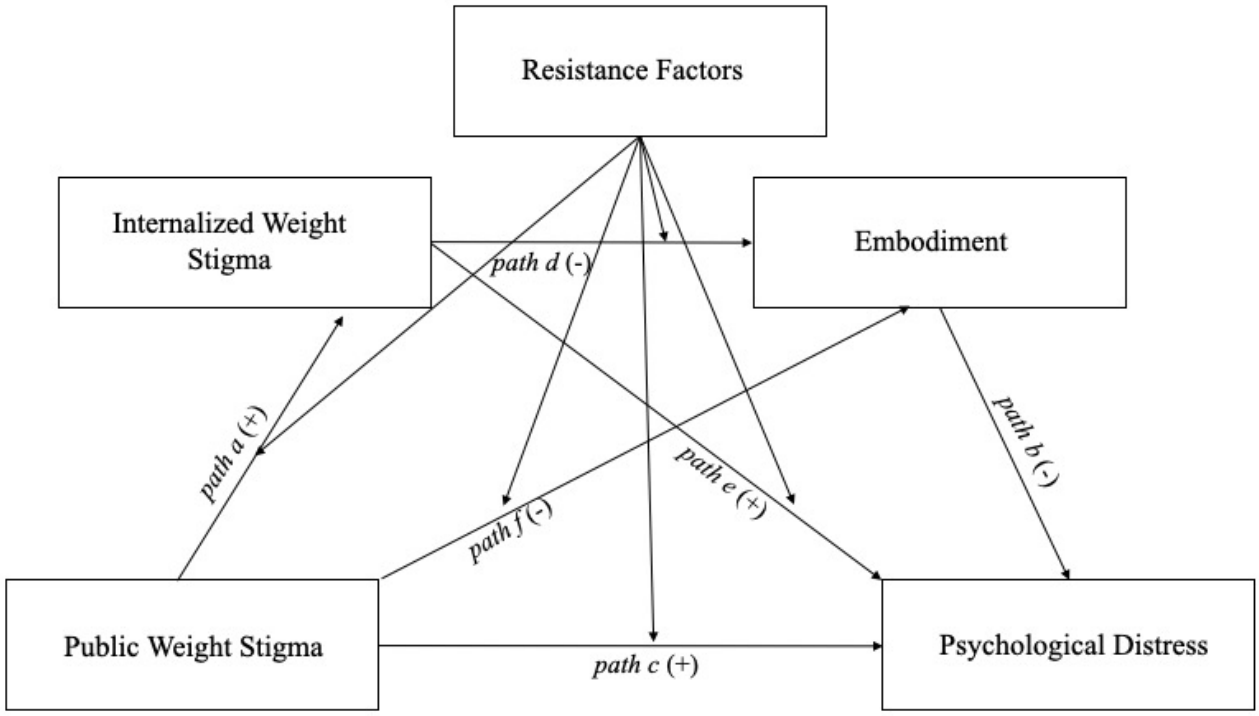
scholarship about fatness can also support resistance and healing. The emergence of fat scholarship from fat activism represented a radical shift away from a dominant academic tradition that problematizes fatness (e.g., Pausé et al., 2021), and towards a fat epistemology that centers fat people in research (see Manokaran et al., 2020).

The Present Research

The purpose of my dissertation research was to examine whether public weight stigma predicted psychological distress and whether it was further explained by internalized weight stigma and disembodiment. In addition, I sought to understand if or how fat liberation, which I have conceptualized as a *resistance factor*, helps fat people to recover from or resist the effects of internalized stigma. The review of the extant literature resulted in a conceptual model (see *Figure 1).* I further expanded that conceptual model into a testable model that aligns with my operational definitions of variables and with my proposed methods (see *Figure 2).* As noted earlier in this dissertation, some paths are likely recursive. For the purposes of the present research all paths have been hypothesized and drawn as unidirectional.

Figure 2

Testable Mediation Model with the Moderating Effect of Resistance Factors



Hypotheses

Overarching Hypotheses

My hypotheses were guided by my proposed model (*Figure 2*):

H1: Public Weight Stigma positively predicts higher levels of Psychological Distress (*path c* in Figure 2).

H2: Higher levels of Public Weight Stigma positively predicts higher levels of Internalized Weight Stigma (*path a* in Figure 2).

H3: Higher levels of Internalized Weight Stigma negatively predicts Embodiment, controlling for Public Weight Stigma (*path d* in Figure 2).

H4: Embodiment negatively predicts Psychological Distress, controlling for Internalized Weight Stigma and Public Weight Stigma (*path b* in Figure 2)

H5: Internalized Weight Stigma and Embodiment sequentially explain the association between Public Weight Stigma and Psychological Distress (i.e., Public Weight Stigma →Internalized Weight Stigma → Embodiment → Psychological Distress; *path a* X *path d* X *path b* in Figure 2).

I also examined other direct and indirect paths in my model (e.g., direct *path e*; indirect *path e X a;* direct *path f*; indirect *path b X f*). In addition, I explored Disordered Eating as an outcome variable using the same model and hypothesized that the same processes would be in effect.

Moderation Hypotheses

H6 – Resistance factors moderate *paths a, c, d, e, and f* in Figure 2. I did not predict that resistance factors would moderate the association between embodiment and psychological distress (*path b*), because resistance factors operate in a conscious, controlled way, and can therefore interrupt more conscious processes. The connection between embodiment and psychological distress is an automatic process (Van der Kolk, 2015), and so likely cannot be directly impacted by resistance factors.

Overview of Methods

The present research includes two primary studies, with data collected simultaneously. In the first study, I collected data from University of Victoria students. In the second study I recruited fat-identified participants through fat liberation platforms. Both studies included the same survey questions that measured demographics, public stigma, internalized stigma, embodiment, psychological distress, and resistance factors. In the second study, I included

further questions about potential resistance factors and did not ask participants to report their height and weight, as I was attempting to limit stigmatizing questions as much as possible. Since the participants in Study 2 were recruited from fat liberation platforms, I was considering that they might find reporting their weight to be stigmatizing, and attempted to find other more neutral, or at least fat liberation-informed ways that participants might report their body size.

A third study was conducted using data from the primary studies, wherein I examined the utility of the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) by comparing descriptive statistics among studies, conducting confirmatory factor analyses using data from the primary studies and comparting the results with the original FAAT study, and considering how variables in the primary studies associated with the variables from the FAAT.

Research Goals

The research goals of this dissertation included three primary empirical goals, one secondary, exploratory empirical goal, and one theoretical or ethical goal that was woven through all the research studies.

1) To test the primary mediation model in Figure 2 to understand the pathways that connect public weight stigma to psychological distress (Study 1 and Study 2).

2) To identify important resistance factors for fat people (Study 2).

3) To examine how resistance factors may help to mitigate psychological distress by testing the full moderated mediation model in Figure 2 (Study 2).

4) To explore disordered eating as an outcome variable in the mediation model (Study 1 and Study 2).

5) To critically examine the measurement of various constructs relating to weight and weight stigma, including fat identity, internalized weight stigma, body size, weight stigma, and attitudes about fatness (Study 1, Study 2, and Study 3).

Study 1

Study 1 was a preliminary study in which I tested the main mediation model in Figure 2 (not the moderated model), and which addressed research goals 1, 4, and 5. I recruited a student sample, which was ideal because it included participants across the weight spectrum and thus allowed me to test whether the model was accurate and to explore its accuracy among people of different body sizes.

To address research goal 1, I first tested the mediation model with the hypothesis that the pathways would be Public Weight Stigma -> Internalized Weight Stigma -> lower Embodiment -> Psychological Distress. I also examined whether the model was applicable to people of various weights. I then addressed research goal 4 by testing Disordered Eating as the outcome variable and hypothesized that the pathways would be the same as the first model. As I analyzed the data, questions about the validity of the measurement of certain constructs (e.g., Body Size, Public Weight Stigma, Internalized Weight Stigma) emerged, and I examined these further using exploratory methods, which addressed research goal 5.

Methods

Participants

I determined that a minimum of 400 participants would provide sufficient power to test the mediation model based on a-priori analysis in G power (Faul et al., 2009), but I continued data collection until the end of the academic semester to account for exclusions. I initially recruited 568 University of Victoria students to complete the online survey. Participants were recruited using the University of Victoria psychology undergraduate participant pool and received class bonus credit for participating. Inclusion criteria were: 1) currently enrolled at the University of Victoria, and 2) at least 19 years old. Participants were excluded if they failed to

correctly answer attention checks (n = 21) or if they completed the survey in less than 5 minutes (n = 8). I also deleted duplicate responses for participants who responded more than once, which was determined using IP addresses and Qualtrics generated ID codes (n = 20). After exclusions, my final sample included 519 participants (M_{age} = 21.20, SD_{age} = 3.65, Range = 19 to 53 years). See Table 4 for complete Demographic Information about the sample for Study 1.

Table 4

Demographic Characteristics of Participants Retained after Exclusions in Study 1

Characteristic	*n*	*%*
Gender		
Women	421	81.1
Men	83	16.0
Transgender, nonbinary, or questioning	14	2.7
No response	1	.2
Sexual Orientation		
Heterosexual/straight	383	73.8
Bisexual, demisexual, pansexual, and/or fluid	70	13.4
Gay or lesbian	16	3.1
Mostly Straight/Straight for Now/Bi-curious	10	1.9
Queer	10	1.9
No label	5	1
Asexual spectrum	2	.4
Questioning	2	.4
No Response/gender identity response	21	4
Ethnic Background		
White	363	70.0
East/Southeast Asian	47	9.1
South Asian	26	5.0
East/Southeast Asian and White	11	2.1
Indigenous and White	9	1.7
Middle Eastern	9	1.7
Latin, Central and South American origins	8	1.5
Middle Eastern and White	6	1.2
Indigenous	5	1
Black	4	.8
South Asian and White	4	.8
European	3	.6
Latin/Central/South American and White	3	.6
Afro Latina	1	.2
Black and White	1	.2
Central Asian	1	.2
Indigenous, Latin/Central/South American, and White	1	.2

Characteristic	*n*	%
Jewish	1	.2
No response	5	1
Country of Birth		
Canada	414	79.8
China	23	4.4
USA	20	3.9
United Kingdom	8	1.5
India	5	1
Philippines	5	1
Columbia	3	0.6
Germany	3	0.6
Iran	3	0.6
Iraq	2	0.4
Malaysia	2	0.4
Mexico	2	0.4
Saudi Arabia	2	0.4
South Africa	2	0.4
Taiwan	2	0.4
Argentina	1	0.2
Australia	1	0.2
Austria	1	0.2
Bulgaria	1	0.2
Burundi	1	0.2
Denmark	1	0.2
France	1	0.2
Ghana	1	0.2
Hong Kong	1	0.2
Indonesia	1	0.2
Israel	1	0.2
Japan	1	0.2
Jordan	1	0.2
Khazakstan	1	0.2
Nepal	1	0.2
New Zealand	1	0.2
Switzerland	1	0.2
The Netherlands	1	0.2
Trinidad	1	0.2
Turkey	1	0.2
United Arab Emirates	1	0.2
Vietnam	1	0.2
Missing	1	0.2

Procedure

Participants completed an online questionnaire created and administered using Qualtrics. They first completed a consent form that explained the nature of the survey, followed by a questionnaire that took about 30 minutes to complete, and finally an information letter. Participants were invited to contact researchers by email if they wanted information on the results of the study (see Appendix A for the complete survey).

Measures.

Demographics. Participants completed a demographic questionnaire where they provided open-text responses about country of birth, age, weight, and height. They responded to questions with a set number of options about gender, sexuality, and ethnicity, with the option to write in another term that best described them.

Body Size. Body size was assessed in three different ways: a medical index of body size, a subjective comparison measure of body size, and a subjective self-identification measure of body size.

1) Body Mass Index (BMI): calculated based on participant-reported height and weight. Participants also wrote in whether they were reporting their weight in kilograms or pounds. Note: 74 participants did not explain whether they reported in kilos or pounds. These participants were excluded from analyses using this variable.
2) Comparative Body Size: participants answered a subjective measure that I developed that asked them to use a 7-point Likert-type scale to compare their body size to their peers' body size (i.e., "Compared to my peers, the current size of my body is" *1* = smaller, *4* = about the same, *7* = larger).

3) Fat Identification: participants answered another subjective measure asking them if they identified with a variety of words that can be used to describe fat bodies (i.e., BBW, Chubby, Curvy, Fat, Fluffy, Full Figured, Hefty, Plus Size, Voluptuous). Participants could select as many labels as they wanted.

Public Weight Stigma. Participants answered the 9-item Everyday Discrimination Scale (EDS; Williams et al., 2008) which asks participants to rate the frequency with which they experienced various forms of discrimination using a 6-point Likert-type scale (*0* = never, *5* = almost every day). Sample items include: "People act as if they think you are not smart" and "You are called names or insulted." They also answered a follow-up question for each form of discrimination asking them to make an attribution for their experiences of discrimination. If they selected their weight as a reason for their experience of a particular discrimination experience, then their rating of the frequency of that experience was included in the calculation of their EDS score (which was the average of all discrimination scores that were attributed to weight). If a participant did not have any discrimination experiences that they attributed to weight, then they were given a score of 0.

Internalized Weight Stigma. Participants answered the 11-item Modified Weight Bias Internalization Scale (Pearl & Puhl, 2014), which rates agreement with items on a 7-point Likert-type scale (*1* - strongly disagree, *7* - strongly agree). Items include "I feel anxious about my weight because of what people might think of me" and "I wish I could drastically change my weight.". Two items ("Because of my weight, I feel that I am just as competent as anyone," and "I am OK being the weight that I am") were reverse coded. Scores were averaged for the final IWS score.

Embodiment. Participants answered the 7-item Positive Body Connection and Comfort Subscale of the Experience of Embodiment Scale (EES; Piran, Teall, & Counsell, 2020), rating items on a 5-point Likert-type scale (*1*- strongly disagree, *5* – strongly agree). Items include "I feel in tune with my body" and "Generally I feel good/comfortable in my body". One item, "I feel "detached" and separate from my body" was reverse scored. Scores were averaged for the final Embodiment score.

Psychological Distress. Participants answered 10 questions assessing symptoms of anxiety and depression based on DSM-5 criteria (American Psychiatric Association, 2013) on a 5-point Likert scale rating items on a 5-point Likert-type scale (*1*- strongly disagree, *5* – strongly agree). Items include "I frequently do not have the energy I need to complete everyday life tasks" and "I often feel tense or 'on edge'". Item scores were averaged for a total Psychological Distress score.

Disordered Eating. Participants answered six items (i.e., "I avoid eating when I am hungry", "I engage in dieting behaviour", "I find myself being preoccupied with food", "I feel guilty after eating", "I have gone on eating binges where I feel that I may not be able to stop", and "I think of burning up calories when I exercise") from the Eating Attitudes Test-26 (EAT-26; Garner et al., 1982) assessing symptoms of disordered eating on a 6-point Likert-type scale (1 – Never, 6 – Always). Z-scores were calculated for each item and summed to create a total score.

Body Acceptance. Participants answered the 4-item Body Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess their level of self-acceptance of their body. Items included "I feel good about my body", "I feel happy about my weight", "I do not feel defined by my body weight", and "My self-esteem is not impacted by my

body weight". Items were rated on a 7-point Likert-type scale (*1*- strongly disagree, *7* – strongly agree). A mean score was calculated for each participant.

Size Acceptance. Participants answered the Size Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness of and agreement with size acceptance, which includes items such as "rather than fat people changing their bodies; society needs to change the way it responds to fat bodies" and "size acceptance should be encouraged." Items were rated on a seven-point Likert-type scale (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Critical Health. Participants answered the Critical Health subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness that fatness is not associated with poor health. Items include, "body weight isn't a reliable indicator of health", and "fat people are not necessarily unhealthy". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Empathy. Participants answered the Empathy subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant empathy for the discrimination faced by fat people and its associated impact. Items include, "fat people face discrimination in many areas of life", and "fat people are treated badly because of the way society depicts fat bodies". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Activism Orientation. Participants answered the Activism Orientation subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant agreement with the idea that discrimination against fat people is unacceptable. Items include, "we need to take weight-based discrimination as seriously as other forms of discrimination", and "there is a need

for Fat Activism because fat shaming is widespread". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Attractiveness. Participants answered the Attractiveness subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant attraction to fat people. Items include, "fat people are sexy", and "if I were single, I would go out with a fat person". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Fat Acceptance Composite. The Fat Acceptance Composite is an overall score of the degree to which participants align with critical fat perspectives. It was derived by calculating the mean score of the Empathy, Activism Orientation, Attractiveness, Critical Health, and Size Acceptance scales of the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022).

Results & Discussion

Preliminary Analyses

Descriptive Statistics. Means, standard deviations, range, possible values, skewness, and kurtosis for all Study 1 variables are presented in Table 5.

Table 5

Descriptive Statistics for All Study 1 Variables

Variable	*N*	Mean	*SD*	Range	Skewness	Kurtosis	Chronbach's alpha
Body Mass Index	445	22.89	4.24	14.88 - 43.60	1.82	4.85	n/a
Comparative Body Size	519	4.00	1.16	1.00 - 7.00	-.18	.57	n/a
Public Weight Stigma	519	0.31	0.72	0.00 - 3.89	2.36	4.65	.80
Internalized Weight Stigma	519	2.76	1.19	1.00 - 5.91	.53	-.59	.94
Embodiment	519	3.46	0.89	1.00 - 5.00	-.45	-.50	.90
Psychological Distress	519	3.37	0.78	1.00 - 5.00	-.45	-.15	.87
Disordered Eating*	519	0.00	4.50	-8.03 - 14.06	.54	-.06	.85
Body Acceptance	519	4.21	1.56	1.00 - 7.00	-.28	-.87	.88
Size Acceptance	519	5.90	1.30	1.00 - 7.00	-1.16	2.46	.94
Critical Health	518	5.52	1.19	1.00 - 7.00	-.86	.37	.84
Attractiveness	517	4.42	1.40	1.00 – 7.00	-.70	-.05	.92
Empathy	519	6.01	0.96	1.00 – 7.00	-1.55	3.31	.89
Activism Orientation	519	5.36	1.37	1.00 - 7.00	-1.10	1.16	.95
Fat Acceptance Composite	517	5.44	1.07	1.00 - 7.00	-1.28	1.84	.91

Note. *Variable was created using a summed z-score

All variables were normally distributed, with four exceptions that had skewness or kurtosis values greater than |2| (George & Mallery, 2019): Body Mass Index, Public Weight Stigma, Size Acceptance, and Empathy. I examined these variables further with data visualization (see Figures 3 to 10).

Figure 3

Frequency of Body Mass Index in Study 1

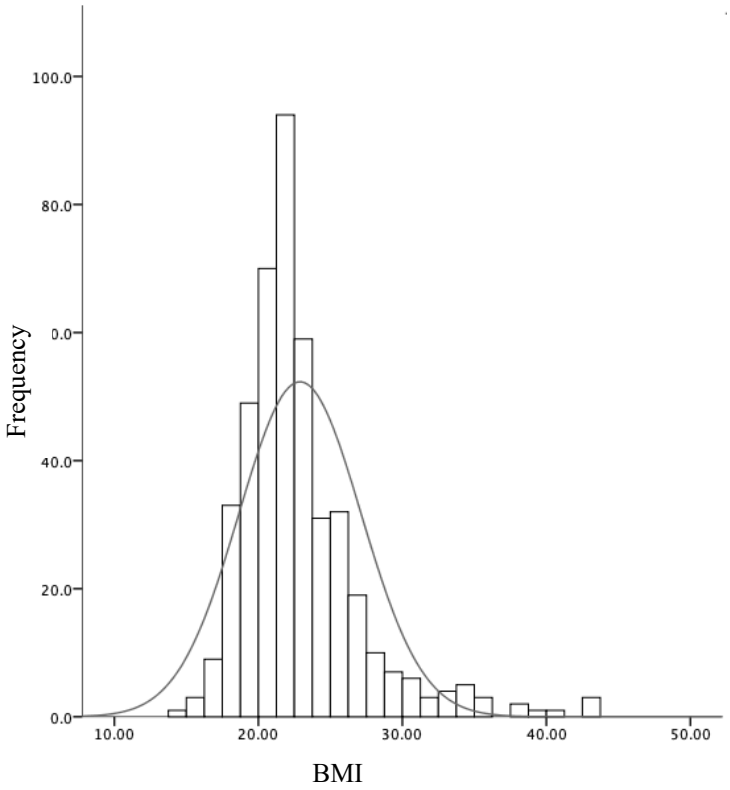
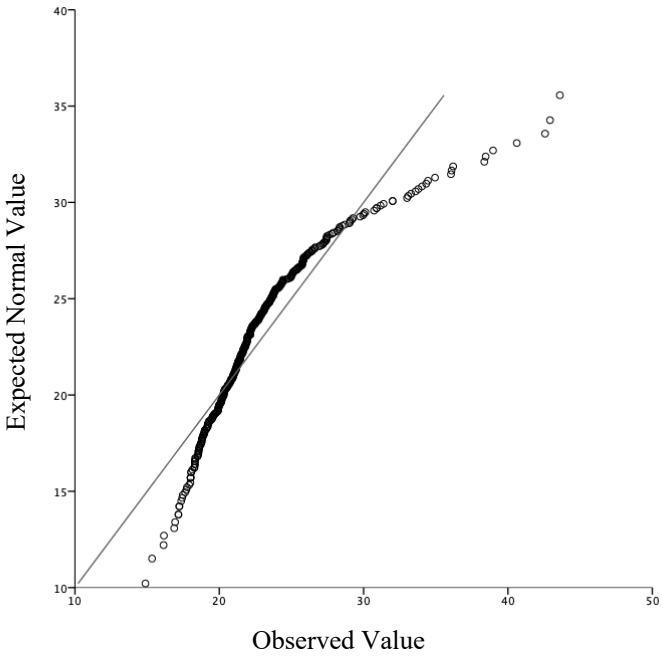


Figure 4

Normal Q-Q Plot of Body Mass Index Scores in Study 1



Body Mass Index scores were highly positively skewed and leptokurtic; most of the participants were in the lower range of BMI and a high number of scores were clustered around the mean (22.89). According to problematic Canadian weight guidelines, so-called "normal" weight is indicated by a BMI range of 18.5 to 24.9 (Douketis et al., 2005). This means that the majority of the participants were not fat, so for Study 1, it was difficult to answer my research questions, because I wanted to understand the serial process of weight stigma, embodiment, and psychological distress for fat people. (Study 2 addressed this limitation by sampling a fat group of participants.) Because the data were not normally distributed, I used Spearman's Rho to analyze correlations among BMI and other variables. It is also important to note the missing data in this variable. Participants were asked to write in their height and weight, and to indicate if they

were reporting kilograms or pounds. Many participants did not indicate the unit of measurement, which meant that I had to leave these data out of the BMI calculation, leaving 445 scores of BMI reported out of 519 participants. Analysis used pairwise deletion.

Figure 5

Frequency of Public Weight Stigma Scores in Study 1

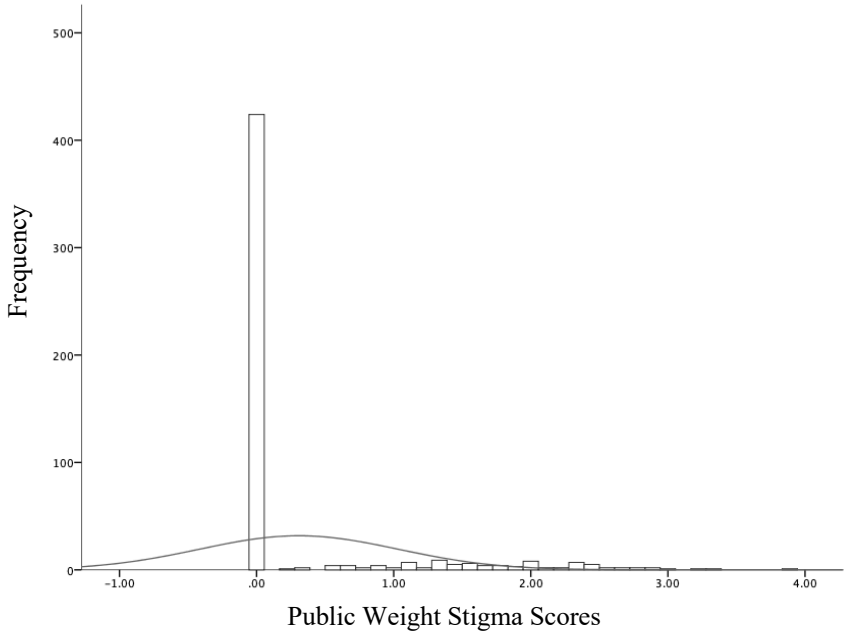
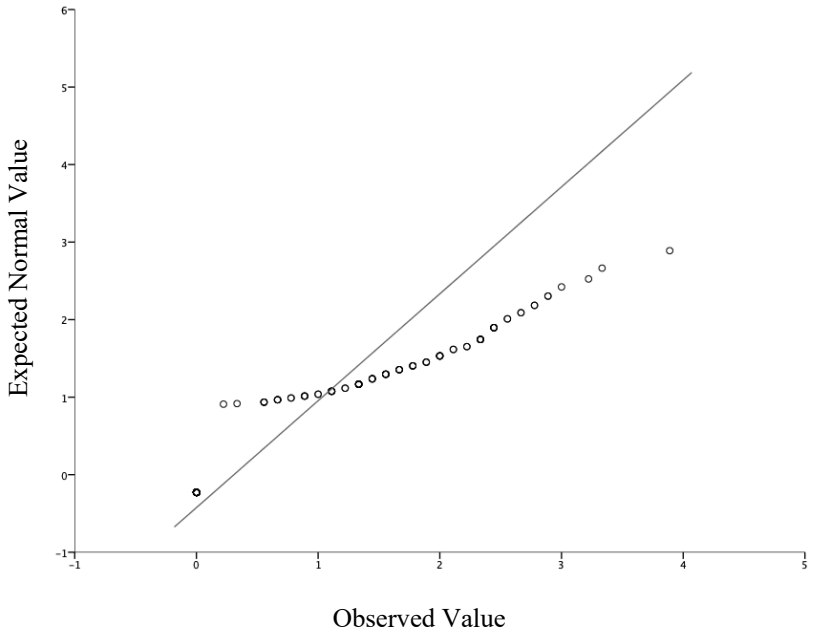


Figure 6

Normal Q-Q Plot of Public Weight Stigma Scores in Study 1



Public Weight Stigma scores were highly positively skewed and leptokurtic. Because most participants did not experience the overt public weight stigma that was measured by this survey, most participants had a score of 0. For this reason, and because of the very low mean and abnormal distribution of this variable, I decided not to use this variable in my analyses. The measure was either irrelevant to this population of relatively thin young people and/or it was not sensitive enough to detect meaningful variation in this population.

Figure 7

Frequency of Size Acceptance Scores in Study 1

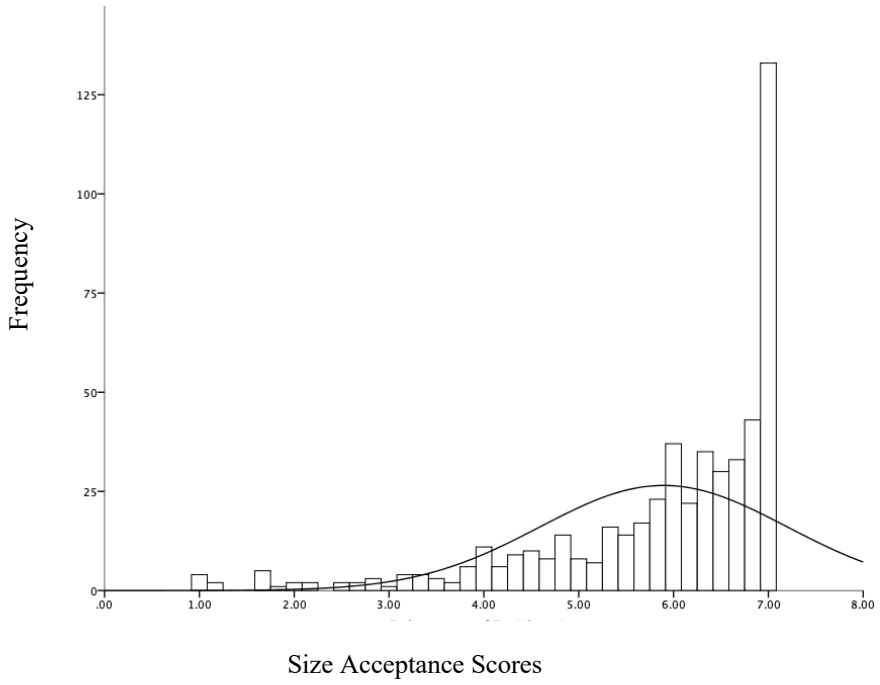


Figure 8

Normal Q-Q Plot of Size Acceptance Scores in Study 1

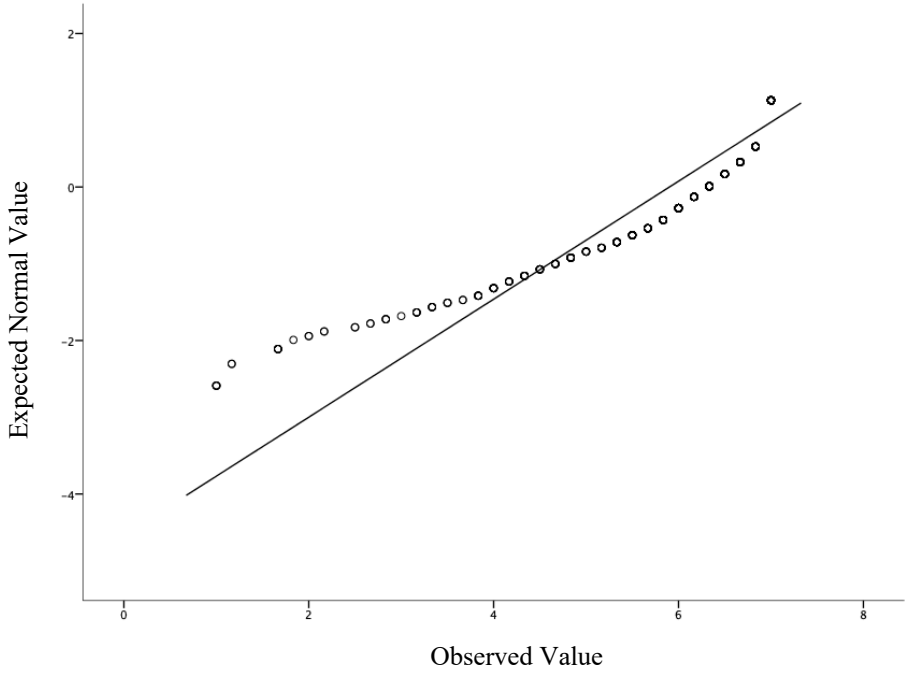


Figure 9

Frequency of Empathy Scores in Study 1

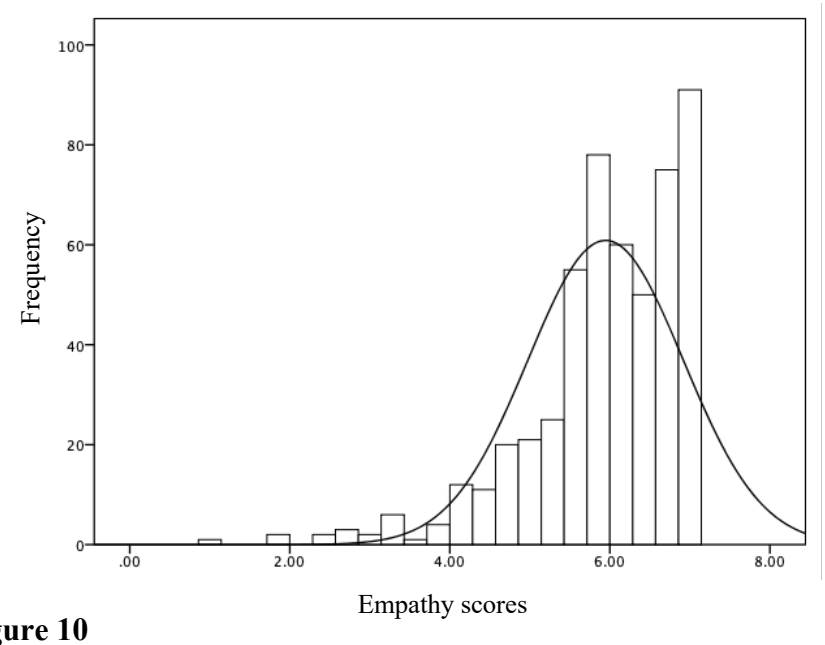
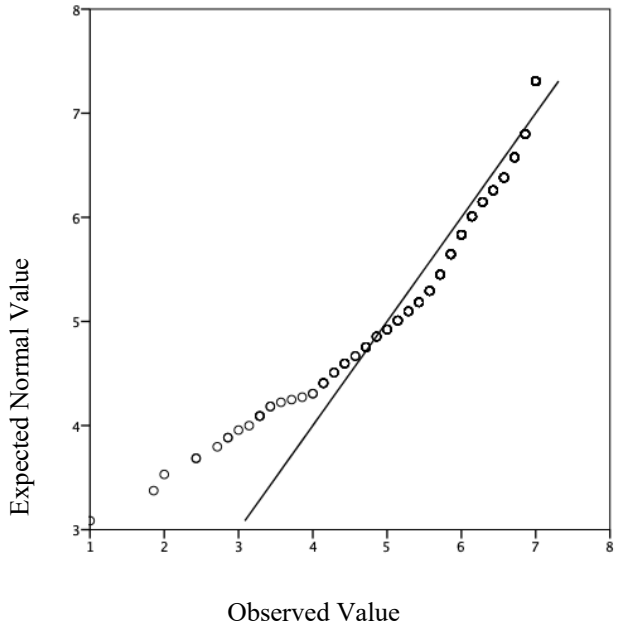


Figure 10

Normal Q-Q Plot of Empathy Scores in Study 1



Size Acceptance and Empathy scores had similar distributions. They were highly negatively skewed, meaning most participants had high scores on these measures, and leptokurtic, with scores that were clustered around the mean. This distribution suggests that most participants agreed emphatically with the scale items.

While it is possible that participants were in absolute agreement with these statements, it is also possible that the face validity of these items encouraged a social desirability bias. Items on the Size Acceptance scale included "rather than fat people changing their bodies; society needs to change the way it responds to fat bodies" and "we need more positive images of fat people in the media.". Items on the Empathy scale included **"**fat people face discrimination in many areas of life", and "fat people are treated badly because of the way society depicts fat bodies". These items are clearly promoting positive views of fatness and are therefore difficult to disagree with. This may be especially true in a sample of young people attending university, all of whom are likely exposed to social justice movements, and so even if they might privately disagree with the items, it is more difficult to do so in the context of this survey.

It is noteworthy that the Critical Health scale, which measures participants' agreement with statements indicating that fatness is not an indicator of health (e.g., "body weight isn't a reliable indicator of health", and "fat people are not necessarily unhealthy") was normally distributed. Given that *concern trolling* (i.e., shaming or moralizing under the guise of concern over others' health) is a socially acceptable form of fat phobia (Womack and Mathiesen, 2019), it makes sense that participants felt more comfortable disagreeing with statements concerning Critical Health than more obvious statements about fat people's worth, because the items are worded more neutrally. Therefore, the Critical Health measure could be a better measure of anti-fat bias.

On the other hand, it may also be true that one could believe that fat people should have equal rights while still believing that being fat is an indicator of poor health, without it being an indication of social desirability bias. While size acceptance has been popularized, access to education about the difference between fatness and health status is more limited, and beliefs about fatness equating with poor health are ubiquitous (e.g., Frederick et al., 2020; Saguy, 2013). Perhaps *high* Critical Health scores are a good indicator of fat liberation, but *low* scores are not necessarily an indicator of anti-fat bias, but of a lack of education and understanding of this issue. This issue should be addressed in future research.

Because the data were not normally distributed, I used Spearman's Rho to analyze correlations among these skewed variables and other Study 1 variables.

Variable Exploration. Correlations among variables are presented in Table 6. Examining correlations in Study 1 raised questions about measurement of some constructs, including Internalized Weight Stigma and Fatness, which are relevant to my research goal 5.

Table 6

Correlations Among Study 1 Variables

Variable	2	3	4	5	6	7†	8	9	10†	11	12	13
1. Body Mass Index†	.64***	.26***	-.12*	-.02	.20***	-.05	.06	.02	.05	-.27***	-.08	.01
2. Comparative Body Size	-	.41***	-.25***	.07	.30***	.06	.11*	.10*	.11*	-.32***	.03	.13**
3. Internalized Weight Stigma		-	-.74***	.43***	.68***	.09*	.08	.08	.19***	-.84***	.08	.13**
4. Embodiment			-	-55***	-.51***	-.12**	-.14**	-.11*	-.23***	.78***	-.13**	-.18***
5. Psychological Distress				-	.43***	-.16***	.17***	.20***	.23***	-.43***	.16***	.23***
6. Disordered Eating					-	.08	.05	.08	.21***	-.61***	.09*	.11**
7. Size Acceptance†						-	.62***	.57***	.66***	-.07	.71***	.84***
8. Critical Health							-	.62***	.61***	-.08	.59***	.83***
9. Attractiveness								-	.47***	-.04	.54***	.79***
10. Empathy†									-	-.21***	.74***	.80***
11. Body Acceptance										-	-.06	-.10*
12. Activism Orientation											-	.86***
13. Fat Acceptance Composite												

Note. *$p < .05$; **$p < .01$; ***$p < .001$. †Spearman's Rho correlations

Measurement of Internalized Weight Stigma. Internalized Weight Stigma was strongly correlated with almost all the other variables, showing strong positive associations with variables like psychological distress and disordered eating, and strong negative associations with variables like health, self-esteem, physical freedom, body acceptance, self-compassion, belongingness, and self-care. Though it is logical that internalized weight stigma is a negative experience, and therefore with higher levels of internalized weight stigma there are lower levels of these other constructs, it is interesting to see these associations in a sample that is comprised of mostly thin participants. To examine this further, I tested partial correlations between Internalized Weight Stigma and other Study 1 variables (see Table 7). In one analysis, I controlled for BMI. In a second analysis I controlled for Comparative Body Size. I included the original correlations in the table to aid in comparison. For all variables, correlations remained consistent whether controlling for either BMI or CBS. This means that the associations between Internalized Weight Stigma and the other variables were consistent across the spectrum of (not fat) weights represented in my sample.

These results indicate a couple of things. First, weight stigma as a societal force likely affects most people, independent of body size. While not all thin people have high levels of Internalized Weight Stigma, for those that do, it is a negative experience. Second, it is possible that the construct of internalized weight stigma is not well measured or understood in current research. For example, a recent meta-analysis proposed that there is a large degree of overlap between measures of body dissatisfaction and internalized weight stigma (Saunders et al, 2022). While my study did not measure body dissatisfaction, I did measure body acceptance, which is the inverse of body dissatisfaction. Internalized Weight Stigma was strongly negatively correlated with Body Acceptance (r = -.84, p < .001). Embodiment was also strongly correlated

with Body Acceptance (r = .78, p < .001) and Internalized Weight Stigma (r = -.74, p < .001), and so it is possible that these three variables were measuring a similar construct. For the purposes of this research, I used these measures independently as planned but interpreted the results with this discriminant validity problem in mind.

Table 7

Partial Correlations Among Internalized Weight Stigma and other Study 1 Variables Controlling for Measures of Body Size

	No control	Controlling for BMI	Controlling for CBS
Variable	Internalized Weight Stigma	Internalized Weight Stigma	Internalized Weight Stigma
Embodiment	-.74***	-.74***	-.72***
Psychological Distress	.43***	.45***	.44***
Disordered Eating	.68***	.68***	.64***
Body Acceptance	-.84***	-.83***	-.82***
Size Acceptance	.09*	.14**	.09*
Critical Health	.08	.08	.05
Empathy	.19***	.21***	.17***
Activism Orientation	.08	.14*	.10
Attractiveness	.08	.09	.04
Fat Acceptance Composite	.13**	.15**	.10*

Note. *p < .05; **p < .01; ***p < .001. BMI = Body Mass Index. CBS = Comparative Body Size

How should we measure degree of "fatness?" BMI and Comparative Body Size (CBS) were strongly correlated (r = .64, p < .001). This indicates that the *objective* and *subjective* measures of fatness are strongly connected. In other words, people with higher BMIs tend to report that their bodies are larger compared to their peers. In addition, the strong correlation validates that they are both measures of fatness. However, both have limitations. As a measure of fatness, BMI has myriad problems which I discussed in the first chapter of my dissertation, including its origins in white supremacy and homogeny; its use, despite multiple inaccuracies

and evidence to the contrary, as a proxy measure for health; and, because of these and other problems, it is a perpetuator of weight stigma. For these reasons, people have questioned whether we should even be using BMI as a measure of body size or fatness in research. Currently, there are no other good measures of body size or fatness in the literature, and this is why I created a measure of Comparative Body Size (CBS). CBS is a subjective measure that I devised for my thesis, so it hasn't been validated before. I will discuss its correlations with other variables later in this section.

CBS is an interesting measure because it required participants to compare their bodies to their peers, meaning that a person could be self-identifying as fat on this measure because they were comparing themselves to very thin peers, but they might not be considered "fat" in relation to the general population or on the BMI scale. Another person could self-identify as "about the same" as their peers on the CBS measure because they are comparing themselves to relatively fat peers, though they may be considered fat in relation to the general population and have a high BMI. It is plausible that those who are subjectively fatter than their peers, regardless of actual fat status, are likely to experience psychological distress because they may experience weight stigma within their peer context. This topic has not yet been explored in science, but is garnering discussion in the media, where *mid-size* has become a term among social media influencers. Mid-size is a term that indicates larger thin people, and some argue it is an important part of the size acceptance discourse, while others argue that those who identify as mid-size are claiming victimhood without acknowledging thin privilege (see Dall'Asen, 2023).

By contrast, someone may have mostly fat peers and therefore may be somewhat insulated from weight stigma in their peer group because they choose to surround themselves with other fat people who do not perpetuate stigmatizing beliefs. Fat people with fat peers may

also experience the protective effect of fat community, which could potentially mitigate the psychological distress caused by societal weight stigma. The psychological importance of CBS is reflected in the following correlations: Internalized Weight Stigma was more strongly correlated with CBS than with BMI, *r*s = .41 and .26 respectively ($z = 2.723$, $p = .003$), meaning that one's comparison group may play an outside role in experiences of internalized stigma. Similarly, Embodiment was strongly negatively correlated with CBS, but only weakly correlated with BMI, *r*s = -.25 and -.12, respectively ($z = -2.166$, $p = .015$), meaning that perceiving oneself to be larger than one's peers was once again more closely aligned with disembodiment than was one's actual body size. There were comparable patterns for Body Acceptance (*r*s = -.32 and -.22, respectively; $z = -1.735$, $p = .04$). I examined these patterns further using hierarchical linear regression (see Table 8). I regressed each of Internalized Weight Stigma, Embodiment, and Body Acceptance onto: Step 1) BMI; and Step 2) CBS. This allowed me to test whether CBS predicted the outcome variables over-and-above BMI and allowed me to determine which measure might be the better measure of fatness. For all analyses, CBS was a better predictor of the outcome variable than was BMI. Therefore, Comparative Body Size is likely a better measure of fat experience than BMI. Identifying as fatter than one's peers is a stronger predictor of negative outcomes (i.e., higher Internalized Weight Stigma, lower Embodiment, and lower Body Acceptance) than BMI.

Table 8

Hierarchical Regressions Examining the Associations Between Medical vs. Subjective Definitions of Fatness and Indicators of Psychological Well-Being/Distress

	Internalized Weight Stigma						
Predictor	*β*	*b*	95% CI	*t*	*p*	ΔR^2	f^2
Step 1 (*df* = 443)						.11	.12
BMI	0.33	0.10	[0.07, 0.12]	7.40	<.001		
Step 2 (*df* = 442)						.08	.23
BMI	0.09	0.03	[-0.01, 0.06]	1.52	.128		
CBS	0.37	0.38	[0.08, 0.49]	6.49	<.001		

	Embodiment						
Predictor	*β*	*b*	95% CI	*t*	*p*	ΔR^2	f^2
Step 1 (*df* = 443)						.04	.04
Self-Esteem	-0.20	-0.04	[-0.06, -0.02]	-4.24	<.001		
Step 2 (*df* = 442)						.03	.08
BMI	-0.04	-0.01	[-0.03, 0.02]	-0.65	.519		
CBS	-0.24	-0.18	[-0.28, -0.09]	-3.92	<.001		

	Disordered Eating						
Predictor	*β*	*b*	95% CI	*t*	*p*	ΔR^2	f^2
Step 1 (*df* = 443)						.03	.03
BMI	0.17	0.18	[0.08, 0.28]	3.64	<.001		
Step 2 (*df* = 442)						.06	.10
BMI	-0.04	-0.04	[-0.17, 0.08]	-0.69	.488		
CBS	0.32	1.23	[0.77, 1.68]	5.32	<.001		

	Body Acceptance						
Predictor	*β*	*b*	95% CI	*t*	*p*	ΔR^2	f^2
Step 1 (*df* = 443)						.07	.08
BMI	-0.27	-0.10	[-0.14, -0.07]	-5.95	<.001		
Step 2 (*df* = 442)						.04	.13
BMI	-0.09	-0.03	[-0.08, 0.10]	-1.53	.126		
CBS	-0.27	-0.37	[-0.53, -0.21]	-4.59	<.001		

Note. BMI = Body Mass Index, CBS = Comparative Body Size

Fat Identity and Measurement. Considering the two indexes of body size raises questions of both identity and of measurement. What is a fat person? How can we define and measure fatness in ways that do not perpetuate stigma? What does it mean to define oneself as

fat, and how does group membership influence that definition? These are all important questions that the literature is just beginning to grapple with, and which speak to my research goal 5. In this first study, it was impossible to make conclusions about how these variables interacted for people who experienced public weight stigma, because my sample did not include many objectively fat people. However, this study allowed me to examine these variables among people on the small end of the fat spectrum, as well as in thin people. The question of who identifies as fat and how group membership influences that definition was of particular interest to me. For the Study 1 participants, fat was likely a negative word that someone might use for themselves that could indicate higher levels of internalized weight stigma, whereas for fat people who have been exposed to the fat liberation discourse, fat is more likely a positive term and represents chosen group membership with fat community.

Another way to answer the question of how people of different body sizes identify with different body size terms is by comparing terminology choices among subjective body sizes. To do this, I separated the Body Size Comparison variable into three groups. A *small* group, based on those who indicated their body is smaller than their peers (i.e., 1 to 3 on the Likert-type scale), an *about the same as their peers* group (i.e., 4 on the Likert-type scale), and a *larger than their peers* group (i.e., 5 to 7 on the Likert-type scale). Table 9 shows the group frequencies in my sample.

Table 9

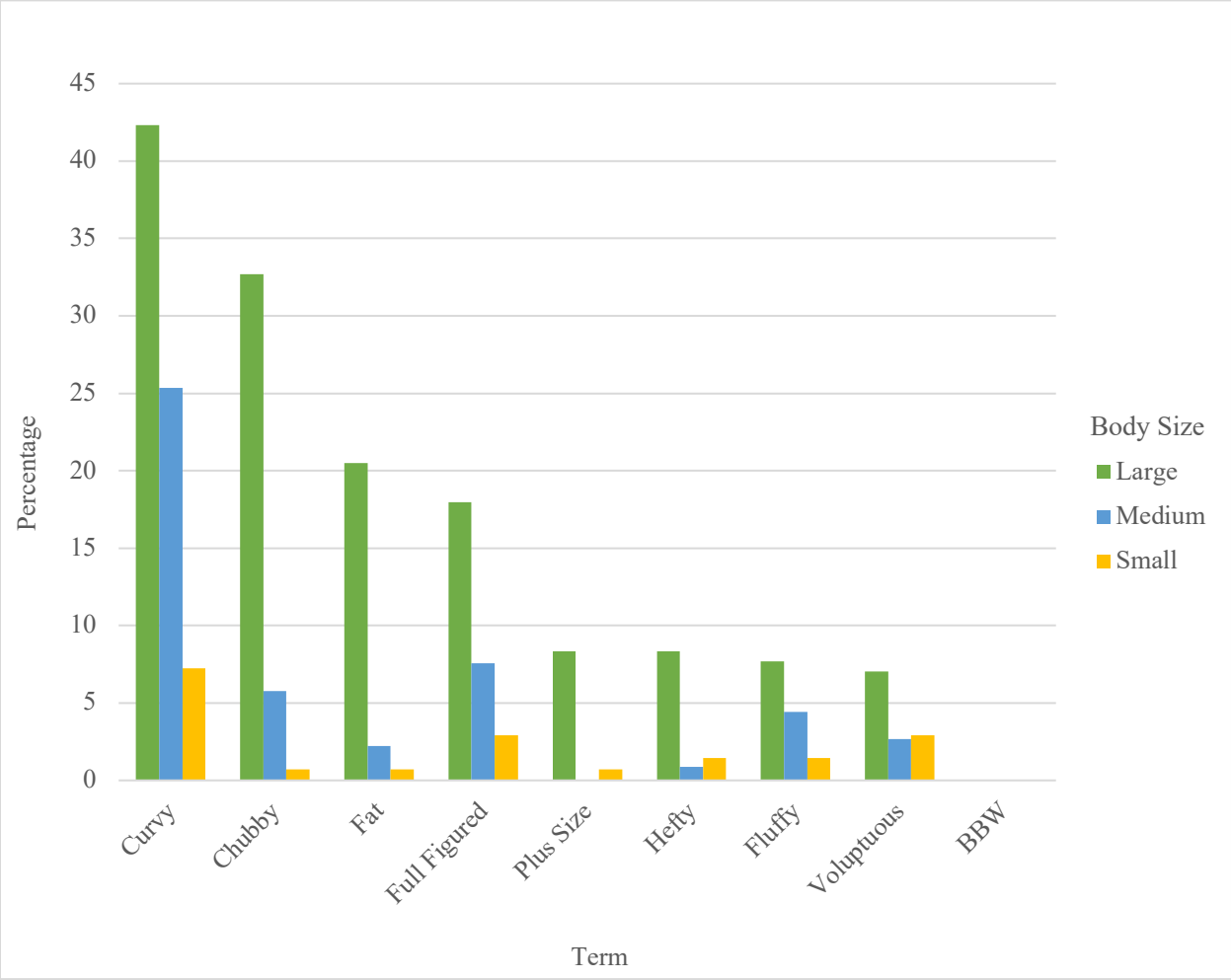
Frequencies of Comparative Body Size Groups

Body Size	Frequency	Percent
Large	156	30.10
Medium	225	43.40
Small	138	26.60
Total	519	100.00

I then compared the frequencies of terminologies selected among these groups. Figure 11 shows the percentages of each term selected by each group.

Figure 11

Bar Graph Showing Percentages of Body Terminologies Among Comparative Body Size Groups



In all groups, Curvy was the most popular term (Large: 42%; Medium 25%; Small 10%). In the Large group, Chubby (51%), Fat (32%), and Full Figured (28%) were the next three most popular terms. In the Medium group, Full Figured (17%), Chubby (13%) and Fluffy (10%) followed Curvy but were at much lower percentages than the Large group, which makes sense

because they were selected by people who indicated that their bodies are of average size relative to their peers. Finally, a very small percentage of the Small group identified with the terms Full Figured (4%), Voluptuous (4%), Hefty (2%) and Fluffy (2%).

In addition to examining these terminologies among different body sizes, I was also interested in how they compared among different levels of Internalized Weight Stigma. I therefore split the Internalized Weight Stigma variable into tertiles, with cut points at Internalized Weight Stigma levels of 2.00 and 3.27 (the Likert scale for the IWS items was 1 – Strongly Disagree, 2 – Disagree, 3 – Slightly Disagree, 4 – Slightly Agree, 5 – Agree and 6 – Strongly Agree; higher scores correspond to higher levels of Internalized Weight Stigma). Table 10 shows group frequencies.

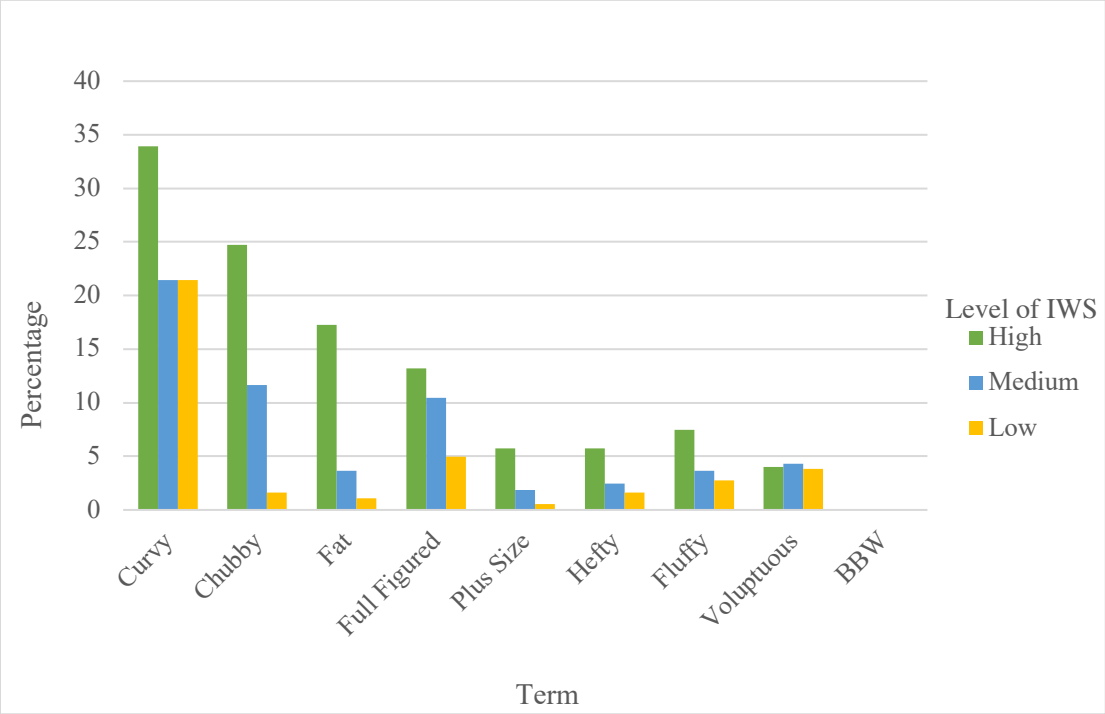
Table 10

Frequencies of Internalized Weight Stigma Groups

Internalized Weight Stigma	Frequency	Percent
Low	182	35.10
Medium	163	31.40
High	174	33.50
Total	519	100.00

Figure 12

Percentages of Body Terminologies Among Internalized Weight Stigma Groups



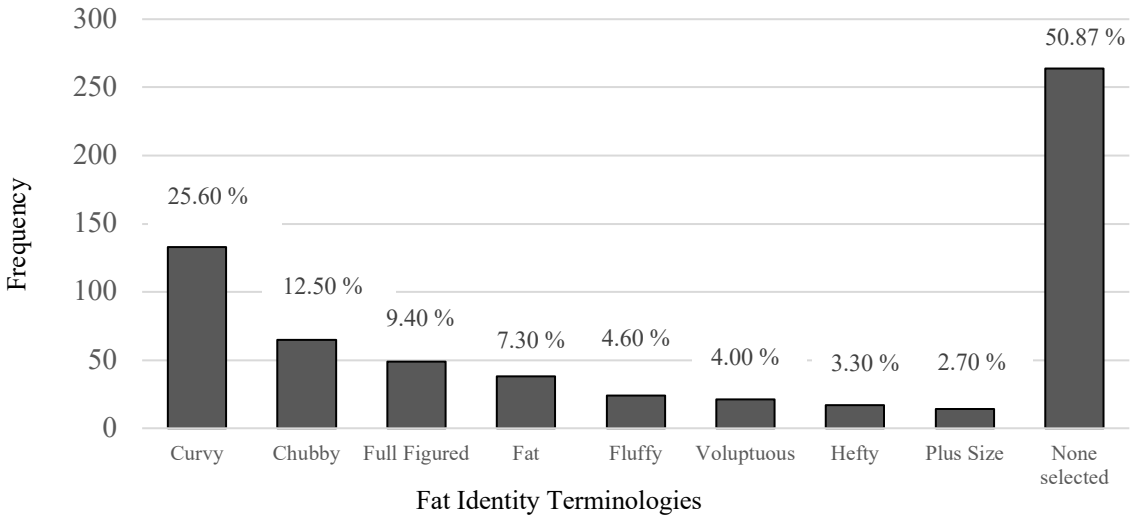
As with the Body Size Groups, Curvy was the most selected term among each group (High: 59%; Medium: 35%; Low: 39%). As with the Large body size group, the most selected terminologies for those high in Internalized Weight Stigma were Chubby (43%), Fat (30%), and Full Figured (23%). This makes sense because Comparative Body Size and Internalized Weight Stigma were strongly correlated ($r = .41$, $p < .001$), and so those on the higher end of both measures were the same or similar. There were slight differences for the Medium IWS group compared with the Medium CBS group, where the next most chosen terminologies were Chubby (19%), Full Figured (17%), and Voluptuous (7%). As with the Small CBS group, those with low levels of IWS chose Full Figured (9%), Voluptuous (7%), and Fluffy (5%) to describe their bodies, indicating both that smaller than average people did not tend to select any terms, and that

the terms they chose are those that either do not indicate fatness on their own (i.e., Voluptuous and Fluffy) or those that tend to be chosen in addition to other, better descriptors of fatness (i.e., Full Figured). It is worth noting that Curvy was the most acceptable self-describing term among this population and it will be interesting to compare term preferences with the sample in Study 2. It is also interesting that BBW (Big Beautiful Woman) was not chosen by anyone in Study 1. BBW is a sexualized term to describe fat women in possibly celebratory or fetishistic ways, (Kotow, 2020) so it is understandable that it was not chosen by anyone in the non-liberated sample. The issue of fat identification and body self-descriptors will be further discussed in the General Discussion section, after exploring similar analyses in Study 2.

Fat Identification as a Proxy for Public Weight Stigma. Because my intended measure of Public Weight Stigma (the Everyday Discrimination Scale; Williams et al., 2008) was not sound, I decided to use a proxy for public weight stigma in my analyses. We can assume that being visibly fat means that someone is likely subjected to public weight stigma (Stevens, 2018), so a measure of fatness can be used as a proxy for public weight stigma. As previously discussed, BMI is a flawed measure of fatness. I found that my measure of Comparative Body Size (CBS) was a better measure of self-perceived fatness, but this again does not necessarily equal publicly perceived fatness and therefore should not be used as a proxy of public weight stigma. Another, potentially better way to consider fatness is fat identity. Identifying as fat means that someone considers themselves to be a member of the fat group. Because fatness is a stigmatized identity, we might reasonably conclude that those who identify as fat have experienced public weight stigma. Claiming social labels for fatness likely indicates group membership. Study 1 participants were asked to select any and all social labels for fatness that they identified with. Figure 13 shows frequencies of fat identity terminology.

Figure 13

Frequency of Participant Selected Terminologies for Fat Identity in Study 1



Note. Participants were able to select multiple responses.

More than half of participants did not select any fat identity terminologies, suggesting that those participants were either thin, or did not identify with any of the terminologies that were available. Additionally, while identifying with fat labels likely indicated fatness, simply selecting a single term did not necessarily mean that a participant was fat. For example, a thin person could consider themselves "curvy" because they are not extremely thin. I therefore compared, in separate analyses, the mean BMI and the mean CBS for those who selected each term with those who did not. Tables 11 and 12 show means, standard deviations, mean comparisons, and effect sizes between selected and not selected fat identity terminologies for BMI. I used Hedge's *g* statistic as a measure of effect size, because of the large difference in group sizes.

Table 11

Mean Difference Tests of BMI as a Function of Fat Self-Identity in Study 1

	N	Mean BMI (SD)	*Diff [CI]*	*t (df)*	*p*	*g*
Chubby						
Y	58	25.57 (4.48)				
N	387	22.49 (4.06)	3.08 [1.94, 4.22]	5.31 (443)	<.001	0.75
Curvy						
Y	105	25.00 (4.27)				
N	340	22.24 (4.02)	2.76 [1.87, 3.66]	6.06 (443)	<.001	0.68
Fat*						
Y	34	29.64 (6.93)				
N	411	22.33 (3.40)	7.31 [4.87, 9.75]	6.09 (34.32)	<.001	1.93
Fluffy						
Y	19	23.55 (3.82)				
N	426	22.86 (4.26)	0.69 [-1.27, 2.65]	0.69 (443)	.488	0.16
Full Figured*						
Y	41	25.58 (5.27)				
N	404	22.62 (4.03)	2.97 [1.26, 4.67]	3.51 (44.88)	.001	0.71
Hefty*						
Y	15	30.27 (6.75)				
N	430	22.63 (3.89)	7.64 [3.89, 11.39]	4.36 (14.33)	.001	1.90
Plus Size*						
Y	14	34.24 (6.36)				
N	431	22.52 (3.61)	11.72 [8.04, 15.40]	6.86 (13.27)	<.001	3.15
Voluptuous*						
Y	15	25.17 (6.45)				
N	430	22.81 (4.13)	2.36 [-1.23, 5.95]	1.40 (14.40)	.182	0.56

Note. * Welch's test was used as Levene's test showed unequal variances.

Table 12

Mean Difference Tests of Comparative Body Size as a Function of Fat Self-Identity in Study 1

	N	Mean CBS (SD)	*Diff [CI]*	*t (df)*	*p*	*g*
Chubby*						
Y	65	5.05 (0.80)				
N	454	3.85 (1.12)	1.20 [0.98, 1.42]	10.70 (103.98)	<.001	1.11
Curvy						
Y	133	4.52 (0.88)				
N	386	3.82 (1.19)	0.70 [0.48, 0.92]	6.26 (517)	<.001	0.63
Fat						
Y	38	5.55 (1.11)				
N	481	3.87 (1.07)	1.68 [1.33, 2.03]	9.31 (517)	<.001	1.57
Fluffy						
Y	24	4.50 (0.93)				
N	495	3.97 (1.16)	0.53 [0.06, 1.00]	2.20 (517)	.029	0.46
Full Figured						
Y	49	4.69 (1.03)				
N	470	3.92 (1.15)	0.77 [0.44, 1.11]	4.52 (517)	<.001	0.68
Hefty						
Y	17	5.41 (1.37)				
N	502	3.95 (1.12)	1.46 [0.92, 2.01]	5.27 (517)	<.001	1.29
Plus Size						
Y	14	5.86 (1.23)				
N	505	3.94 (1.11)	1.91 [1.32, 2.51]	6.33 (517)	<.001	1.72
Voluptuous						
Y	21	4.43 (1.12)				
N	498	3.98 (1.16)	0.45 [-0.05, 0.96]	1.75 (517)	.080	0.39

Note. * Welch's test was used as Levene's test showed unequal variances.

The independent samples t-tests indicated significant differences between group means of BMI and CBS for participants who selected Chubby, Curvy, Fat, Full Figured, Hefty, or Plus Size compared with those who did not select those terms. For those who selected Fluffy and Voluptuous, differences were either not significant or marginally significant. This likely indicates that Fluffy and Voluptuous were labels that people who were on the upper end of what society may consider acceptable in terms of body size selected, whereas the other labels were more likely to be selected by people who were visibly larger than average. Fluffy and Voluptuous may also indicate other ways people self-identify in terms of their bodies – for

example, people with larger breasts may choose Voluptuous. The term Fat has been reclaimed as a part of positive fat identity among those who participate in the fat liberation movement (Plyley & Burfoot, 2021). Study 1 participants were not necessarily engaged with the fat liberation movement, so they were probably less likely to select "Fat" as a term, as it is still considered pejorative in mainstream society.

It is also noteworthy that the group BMI means that correspond to (clearly problematic) BMI interpretation standards (Douketis et al., 2005) indicate that those who chose Chubby, Fat, or Full Figured were in the "overweight" range (BMI 25.0 – 29.9) , whereas those who chose Hefty or Plus Size were the in the "obese" range (BMI above 30.0), demonstrating again that those participants who self-identified as fat were mostly if not all on the smaller end of the range of fatness, meaning their exposure to public weight stigma was likely of a lesser magnitude than fatter people, though they may have experienced some stigmatizing situations related to having larger bodies amongst their peers or families.

Based on these analyses, and with the aim of creating a proxy for Public Weight Stigma, I created a *Fat Self-Identification* variable that differentiated between participants who selected Chubby, Curvy, Fat, Full Figured, Hefty, or Plus Size (1 – fat identification; Fat ID) and participants who selected no identities, or only selected voluptuous or full-figured (0 – non-fat identification; non-Fat ID). To confirm differences in body size between the Fat ID group and the non-Fat ID group, I compared means of BMI and Comparative Body Size between groups. Table 13 shows independent samples t-test results for mean differences in BMI and Comparative Body Size among fat self-identification groups.

Table 13

Mean Differences of BMI and Comparative Body Size as a Function of Fat Identity in Study 1

			N	Mean (SD)	*Diff [CI]*	*t (df)*	*p*	*g*
BMI*	Fat ID							
		Y	168	25.30 (5.04)				
		N	277	21.43 (2.82)	3.88 [3.04, 4.71]	9.15 (231.12)	<.001	0.95
CBS	Fat ID							
		Y	204	4.70 (0.99)				
		N	315	3.54 (1.03)	1.15 [0.98, 1.33]	12.71 (517)	<.001	1.14

Note. *Welch's test was used as Levene's test showed unequal variances.

I used the Fat ID variable in place of the Public Weight Stigma variable in my mediation model, but it is very important to note that for Study 1, "Fat" means "slightly overweight" per medical standards, or slightly bigger than one's peers. This was important to keep in mind when interpreting the results.

The Fat ID Variable. Since I decided to use the Fat Identification (i.e., Fat ID) variable as a proxy for public weight stigma, and to explore differences between those who identified as fat and those who did not, descriptive statistics for each group are reported, as well as independent samples t-tests of mean differences, in Table 14.

Table 14

Tests of the Mean Differences in Study 1 Variables Between Fat Identity Groups

	Fat ID					
	Y (*N = 204)*	N (*N = 315)*				
	Mean (SD)	*Mean (SD)*	*Diff [CI]*	*t (df)*	*p*	*g*
Internalized Weight Stigma*	3.27 (1.26)	2.46 (1.03)	0.81 [0.60, 1.02]	7.70 (372.08)	<.001	0.72
Embodiment	3.30 (0.90)	3.56 (0.87)	-0.26 [-0.41, -0.10]	-3.22 (517)	.001	0.29
Psychological Distress	3.49 (0.73)	3.29 (0.79	0.20 [0.06, 0.34]	2.90 (517)	.004	0.26
Disordered Eating*	1.59 (4.77)	-1.03 (4.01)	2.62 [1.83, 3.41]	6.49 (380.05)	<.001	0.61
Body Acceptance	3.69 (1.54)	4.56 (1.48)	-0.86 [-1.13, -0.59]	-6.38 (517)	<.001	0.58
Size Acceptance*	6.15 (1.10)	5.73 (1.40)	0.43 [0.21, 0.64]	3.88 (497.60)	<.001	0.33
Critical Health	5.69 (1.09)	5.41 (1.23)	0.28 [0.08, 0.48]	2.63 (516)	.009	0.24
Empathy*	6.18 (0.80)	5.90 (1.04)	0.28 [0.12, 0.44]	3.45 (503.09)	.001	0.29
Activism Orientation	5.52 (1.27)	5.25 (1.42)	0.27 [0.03, 0.51]	2.18 (517)	.030	0.20
Attractiveness	4.72 (1.35)	4.22 (1.40)	0.50 [0.25, 0.74]	3.99 (515)	<.001	0.36
Fat Acceptance Comp.*	5.66 (0.92)	5.30 (1.13)	0.36 [0.18, 0.54]	3.91 (486.42)	<.001	0.34

Note. *Levene's test showed unequal variances among groups, so Welch's test was used.

Mean difference tests showed significant differences between groups for most variables, with small to medium effect sizes. The variables with the largest mean differences were Internalized Weight Stigma, Disordered Eating, and Body Acceptance, which are easily understood. Those who identified as fat all had significantly higher means in all the FAAT scales except Body Acceptance, which indicates that self-identifying as fat lends itself to higher levels of fat acceptance in terms of agreeing with fat liberation, but not in terms of self-acceptance of one's body. Interestingly, BMI was not correlated with most of these variables in either the full sample or when separated by group (see Tables 6 and 15), suggesting that self-identification is a separate construct from actual body size. There were no significant differences between means for Health, Physical Freedom, Belongingness, or Self-Care.

Table 15 displays the correlations among all variables, separated into two groups: those who identified as fat and those who did not.

Table 15

Correlations among Study 1 Variables by Fat Identification group

	1†	2	3	4	5	6	7	8	9	10†	11†	12	13
1. Body Mass Index†	-	.52***	.25**	-.26**	.04	.04	-.30***	.24**	.09	.13	-.03	-.09	.08
2. Comparative Body Size	.57***	-	.47***	-.43***	.10	.19**	-.43***	.11	.07	.09	-.02	-.07	.06
3. Internalized Weight Stigma	.05	.17**	-	-.78***	.43***	.67***	-.86***	.03	-.08	.13	.00	.02	.04
4. Embodiment	.09	-.06	-.71***	-	-.52***	-.51***	.81***	-.07	.03	-.14	-.01	-.08	-.09
5. Psychological Distress	-.15*	-.04	.40***	-.56***	-	.42***	-.43***	.14	.05	.24**	.06	.14*	.17*
6. Disordered Eating	.11	.20***	.63***	-.50***	.41***	-	-.60***	-.07	-.11	.15*	-.03	.06	-.01
7. Body Acceptance	.03	-.09	-.80***	.76***	-.41***	-.56***	-	.01	.13*	-.14*	.00	-.02	-.01
8. Critical Health	-.07	.04	.06	-.15**	.17**	.09	-.09	-	.59***	.52***	.54***	.49***	.79***
9. Attractiveness	-.19**	-.01	.10	-.16**	.26***	.14*	-.08	.63***	-	.43***	.51***	.49***	.78***
10. Empathy†	-.07	.03	.18**	-.25***	.21***	.20***	-.21***	.65***	.48***	-	.63***	.73***	.78***
11. Size Acceptance†	-.19**	-.03	.07	-.15**	.20***	.09	-.05	.66***	.60***	.67***	-	.63***	.77***
12. Activism Orientation	-.13*	.00	.08	-.13*	.15**	.08	-.05	.66***	.58***	.74***	.76***	-	.83***
13. Fat Acceptance Composite	-.15*	.04	.11	-.19**	.25***	.13*	-.08	.85***	.79***	.80***	.86***	.88***	-

Note. Those who identified as fat are above the diagonal. *$p < .05$; **$p < .01$; ***$p < .001$.

There were some notable differences in correlations between those who identified as fat and those who did not. First, for the Fat ID group, both BMI and CBS were negatively correlated with Embodiment (rs = -.26, $p < .01$ and -.43, $p < .001$ respectively). However, in the non-Fat ID group, neither were correlated (rs = .09, $p > .05$ and -.06, $p > .05$ respectively). The differences between groups for these correlations were significant (BMI and Embodiment: z = -3.94, $p <$ .001; CBS and Embodiment: z = -4.42, $p < .001$). This indicated a linear association between body size and Embodiment, but only in the Fat ID group. Simple linear regression analysis was conducted to evaluate the extent to which BMI could predict Embodiment. A significant regression was found ($F(1, 166) = 13.674$, $p < .001$, $R^2 = .076$). Therefore, body size matters in terms of how it associates with embodiment in larger people. In other words, for people who self-identify as fat (but not for those who do not), the larger their body, the lower their embodiment. So, fat people are not only less embodied than thin people, but the fattest people are the least embodied.

Simply having a larger body is not the *reason* someone is less embodied. It is socially observable that the larger someone's body is, the more likely they are to experience public weight stigma. This has not been specifically examined in the literature as a linear association, however, there is evidence that among people with high BMIs, perceived weight-based discrimination is the most prevalent for those with the highest BMIs (Spahlholz et al., 2016). Unfortunately, I could not test a linear association with the data I collected, because I did not have a viable measure of exposure to public stigma in Study 1, and I did not collect weight data in Study 2. So, as is proposed and examined throughout this dissertation, the largest people will be exposed to the most public weight stigma, which means they will have the highest levels of internalized weight stigma (Hypothesis 2), resulting in the lowest levels of embodiment

(Hypothesis 3). This is important because it shows that there are differences in vulnerabilities for different bodies (i.e., those with the largest bodies are the most vulnerable) and this should inform both social and individual interventions, which will be discussed further in the general discussion. For both the Fat ID and non-Fat ID groups, Internalized Weight Stigma was strongly correlated with most variables, in the same patterns as the full sample. As discussed earlier, this suggests that Internalized Weight Stigma is a negative experience regardless of body size, which may indicate problems with measurement and/or the widespread problem of weight stigma in society. This distinction will be discussed further in the general discussion section.

Group differences in correlations among the FAAT (Cain et al., 2022) variables (Body Acceptance, Critical Health, Attractiveness, Empathy, Size Acceptance, Activism Orientation, Fat Acceptance Composite) are explored in Study 3.

Focal Analyses: Testing Pathways from Public Weight Stigma to Psychological Distress (Research Goal 1)

The first research goal was to test the mediation model to understand the pathways that may lead from public weight stigma to psychological distress (see Figure 2). As discussed, the limitations of the sample and measurement in Study 1 only allow for cautionary interpretation of how the model explained the experience of fat people. This was because the fat participants in Study 1 were not so fat that they experienced high levels of public weight stigma and so the measure of public weight stigma that I used in Study 1 was not sensitive enough to capture the relatively lower levels of public weight stigma that smaller fat people may face. Therefore, I used a measure of fat self-identification (Fat ID) as a proxy for public weight stigma in the mediation analyses in this section. This presented further limitations, as my hypotheses did not incorporate this conceptualization of public weight stigma, so the results of the mediation

analyses were interpreted with caution. In Study 1, I was not able to truly determine whether public weight stigma predicted higher levels of psychological distress (H1) or internalized weight stigma (H2) or whether internalized weight stigma and embodiment sequentially explained the association between public weight stigma and psychological distress (H5). However, in considering Fat Identity to be a proxy for Public Weight Stigma, I could interpret the results of the mediation analysis with caution. In sum, the first research goal was only partially addressed in Study 1 because I could only truly test the pathways between fat identification and psychological distress. This limitation was addressed in Study 2.

Mediation Analyses. I used Hayes' (2022) PROCESS macro v4.0 for SPSS with 10000 bootstrap samples to test the primary mediation model, in which X = Fat Identity (i.e., Exposure to Public Weight Stigma; 0 = Not Fat, 1 = Fat), M_1 = Internalized Weight Stigma, M_2 = Embodiment, and Y = Psychological Distress. The purpose of sequential mediation analysis is to determine the strength and sequential path of predictors (i.e., Exposure to Public Weight Stigma, Internalized Weight Stigma, and Embodiment) on an outcome variable (i.e., Psychological Distress). In this type of analysis, indirect paths show iterations of the model excluding certain variables, for example: Fat Identity (Exposure to Public Weight Stigma) -> Embodiment -> Psychological Distress.

The results for the mediation analysis are reported in Table 16 and depicted in Figure 14.

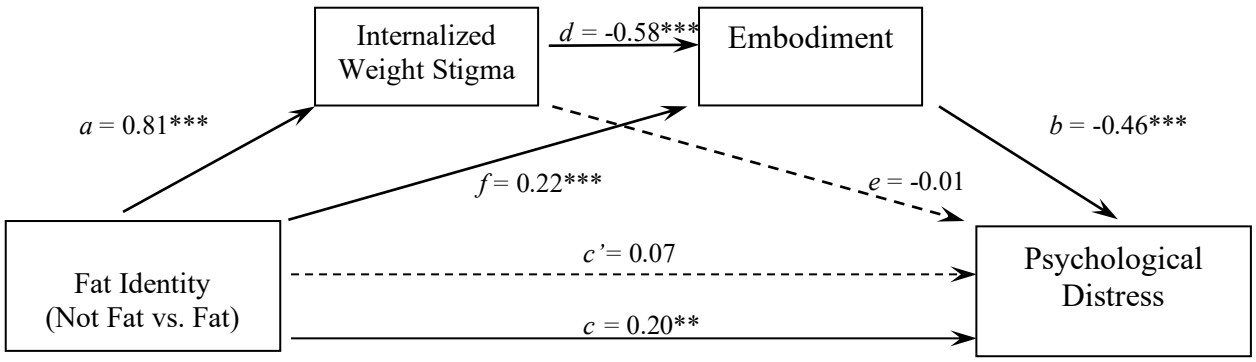
Table 16

PROCESS Results Testing Mediation Model in Study 1

	β	*b*[CI]	SE	*t*	*p*	R^2
Outcome:						
Internalized Weight Stigma						0.12
Constant		2.46 [2.33, 2.58]	0.06	38.73	<.001	
Fat Identity	.68	0.81 [0.61, 1.01]	0.10	8.03	<.001	
Outcome:						0.56
Embodiment						
Constant		4.98 [4.85, 5.11]	0.07	75.29	<.001	
Fat Identity	.24	0.22 [0.10, 0.33]	0.06	3.80	<.001	
Internalized Weight Stigma	-.78	-0.58 [-0.63, -0.54]	0.02	-24.95	<.001	
Outcome:						0.31
Psychological distress						
Constant		4.90 [4.41, 5.39]	0.25	19.65	<.001	
Fat Identity	.09	0.07 [-0.05, 0.19]	0.06	1.15	.252	
Internalized Weight Stigma	.02	-0.01 [-0.06, 0.09]	0.04	0.36	.719	
Embodiment	-.53	-0.46 [-0.56, -0.37]	0.05	-9.63	<.001	
Total Effect						
Psychological distress						0.02
Constant		3.29 [3.20, 3.37]	0.04	75.89	<.001	
Fat Identity	.25	0.20 [0.07, 0.34]	0.07	2.90	.004	

Figure 14

Primary Serial Mediation Model for Study 1



Indirect Effects of X on Y

a x e:	0.01 [-0.04, 0.07], SE = 0.03
f x b:	-0.10 [-0.16, -0.05], SE = 0.03
a x d x b:	0.22 [0.20, 0.37], SE = 0.44
Total:	0.13 [0.04, 0.22], SE = 0.05

Note. ***$p < .001$, **$p < .01$. Dotted lines represent non-significant paths.

The results indicated that Fat Identity predicted higher levels of Psychological Distress (i.e., the total effect of X on Y; path *c*), meaning that those who identified as fat and thus were presumed to be subjected to more public weight stigma had higher levels of depression and anxiety symptoms than their thin counterparts. If it is true that Fat Identity (or exposure to Public Weight Stigma) is a proxy for public weight stigma, this result is consistent with H1, though this should be interpreted with caution. When accounting for the mediating variables in the model, Fat Identity did not directly predict higher levels of Psychological Distress (i.e., the direct effect of X on Y, path *c').* Fat Identity predicted heightened Internalized Weight Stigma (path *a)*, such

that people who identified as fat (and thus were presumably subjected to more public weight stigma than their thin counterparts) also reported greater Internalized Weight Stigma than their thin counterparts. Again, interpreting with caution, this is consistent with H2 if Fat Identity indicates exposure to public weight stigma. In turn, and consistent with H3, higher levels of Internalized Weight Stigma predicted lower feelings of Embodiment (path *d)*, which in turn, and consistent with H4, predicted higher levels Psychological Distress (path *b)*. Internalized Weight Stigma and Embodiment sequentially explained the association between Fat Identity and Psychological Distress *(*path *a* x path *d* x path *d*). With caution, this result is consistent with H5, if Fat Identity is indeed a proxy for Public Weight Stigma.

There was no direct association between Internalized Weight Stigma and Psychological Distress when Fat Identity was controlled (path *e*). There was, however, a positive direct association between Fat Identity and Embodiment when internalized weight stigma was controlled (path *f*). The indirect path linking Fat Identity to Embodiment and in turn to Psychological Distress was also statistically significant (i.e., path *f* x path *b* in Figure 14). This is an interesting result, suggesting that there are at least two distinct components of the association between Fat Identity and Embodiment at play. Being fat is a risk factor for traumatic disembodiment via exposure to public weight stigma and the internalization of that stigma (path *a* x *d*). However, identifying as fat, or using positive fat terminology for oneself, may be a protective factor for some people, predicting heightened Embodiment and decreased Psychological Distress (i.e., paths *f* x *b*). These two paths linking Fat Identity to Embodiment were opposite in valence, so when put together they suppressed the magnitude of the direct association between Fat Identity and Embodiment, and by extension, between Fat Identity and Psychological Distress. This result may help to tease apart the negative aspects of being fat (i.e.,

exposure to public weight stigma and subsequent internalized stigma) from the positive aspects of adopting a radical fat identity (heightened Embodiment and less Psychological Distress).

Testing an Alternative Mediation Analyses. I next tested a mediation model in which I reversed the order of Internalized Weight Stigma and Embodiment, to test whether this alternative model was a better explanation of the sequence of mediators than my proposed model (see Table 17 and Figure 15). The first model showed that Internalized Weight Stigma did not predict Psychological Distress when Embodiment was controlled (i.e., path e), suggesting that an alternative model that reversed the order of mediators might not sequentially predict psychological distress as in the first model. The results showed that the alternative model did not offer a good explanation of the data when the order of mediators was reversed, given that the indirect path from Fat Identity to Psychological Distress was not significant (i.e., paths a x d x b in Figure 19). This showed that the association between Fat Identity and Internalized Weight Stigma comes first, followed by lowered Embodiment, which reflects the traumatic sequence that was explained in the introduction.

Table 17

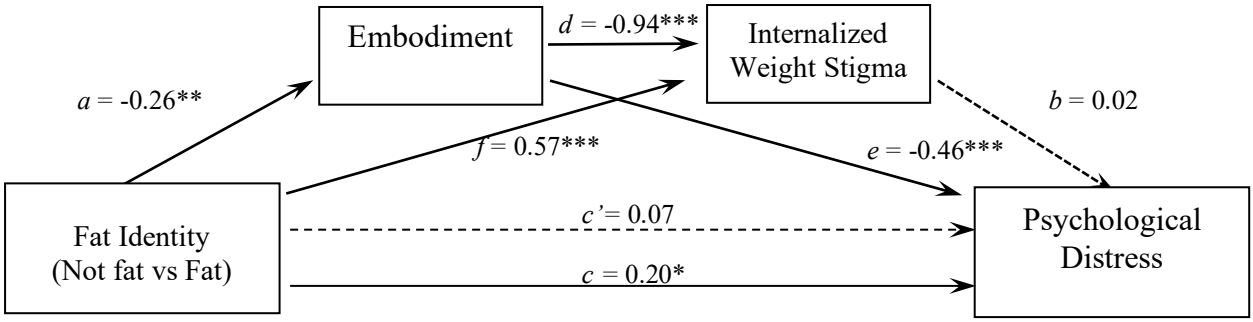
PROCESS Results Testing Reverse Order Mediation Model in Study 1

	β	*b*[CI]	SE	*t*	*p*	R^2
Outcome: Embodiment						0.02
Constant		3.56 [3.46, 3.66]	0.05	71.58	<.001	
Fat Identity	-.29	-0.26 [-0.41, -0.10]	0.08	-3.22	.001	
Outcome: Internalized Weight Stigma						0.60
Constant		5.81 [5.54, 6.09]	0.14	41.18	<.001	
Fat Identity	.48	0.57 [0.44, 0.71]	0.07	8.30	<.001	
Embodiment	-.70	-0.94 [-1.02, -0.87]	0.04	-24.95	<.001	
Outcome: Psychological distress						0.31

Constant		4.90 [4.41, 5.39]	0.25	19.65	<.001	
Fat Identity	.09	0.07 [-0.05, 0.19]	0.06	1.15	.252	
Embodiment	-.53	-0.46 [-0.56, -0.37]	0.05	-9.63	<.001	
Internalized Weight Stigma	.02	0.02 [-0.06, 0.09]	0.04	0.36	.719	
Total Effect						
Psychological Distress						0.02
Constant		3.29 [3.20, 3.37]	0.04	75.89	<.001	
Fat Identity	.25	0.20 [0.07, 0.34]	0.07	2.90	.004	

Figure 15

Study 1 Serial Mediation Model with Mediators Reversed



Indirect Effects of X on Y

a x e:	0.12 [0.05, 0.20], SE = 0.04
f x b:	0.01 [-0.03, 0.05], SE = 0.02
a x d x b:	0.00 [-0.01, 0.02], SE = 0.01
Total:	0.13 [0.04, 0.22], SE = 0.05

Can Body Acceptance Take the Place of Internalized Weight Stigma (Research Goal 5)? One measurement question that was raised by the very high correlation between body dissatisfaction and internalized weight stigma in this study is whether those are actually distinct measures. This critique has been levelled at this measure of internalized weight stigma before (see Saunders et al., 2022) so it is worth addressing here. To address the question of whether this measure of Internalized Weight Stigma is distinct from body dissatisfaction, I tested the original

model using Body Acceptance in place of Internalized Weight Stigma (see Table 18 and Figure 16). The results were almost identical to the model using Internalized Weight Stigma shown in Table 16 and Figure 14 (with opposite valences, as low levels of Body Acceptance equal high levels of Internalized Weight Stigma), lending more evidence to the possibility that Internalized Weight Stigma was not properly measured and is rather a measure of body dissatisfaction. I will return to this issue in Study 2 and the General Discussion.

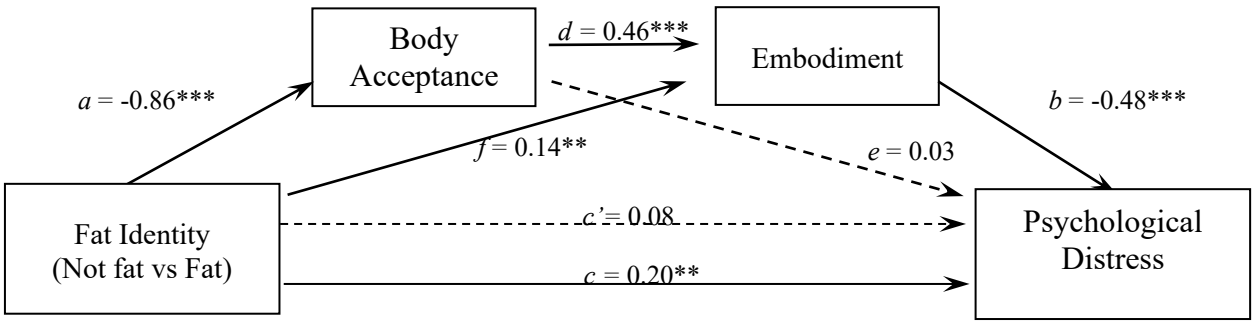
Table 18

PROCESS Results Testing Serial Mediation Model with Body Acceptance

	β	*b* [CI]	SE	*t*	*p*	R^2
Outcome:						
Body Acceptance						0.07
Constant		4.55 [4.39, 4.72]	0.09	53.64	<.001	
Fat Identity	-.55	-0.86 [-1.13, -0.60]	0.14	-6.38	<.001	
Outcome:						0.61
Embodiment						
Constant		1.49 [1.33, 1.64]	0.08	18.52	<.001	
Fat Identity	.15	0.14 [0.04, 0.24]	0.05	2.65	.008	
Body Acceptance	.80	0.46 [0.42, 0.49]	0.02	28.01	<.001	
Outcome:						0.31
Psychological Distress						
Constant		4.98 [4.74, 5.21]	0.12	41.31	<.001	
Fat Identity	.11	0.08 [-0.04, 0.20]	0.06	1.35	.177	
Body Acceptance	.01	0.03 [-0.05, 0.06]	0.03	0.18	.855	
Embodiment	-.55	-0.48 [-0.58, -0.38]	0.05	-9.40	<.001	
Total Effect						
Psychological Distress						0.02
Constant		3.29 [3.20, 3.37]	0.04	75.89	<.001	
Fat Identity	.26	0.20 [0.07, 0.34]	0.07	2.90	.004	

Figure 16

Study 1 Mediation Model using Body Acceptance in Place of Internalized Weight Stigma



Indirect Effects of X on Y

a x e:	-0.01 [-0.05, 0.05], SE = 0.03
f x b:	-0.07 [-0.12, -0.02], SE = 0.03
a x d x b:	0.19 [0.12, 0.26], SE = 0.04
Total:	0.12 [0.04, 0.21], SE = 0.05

Exploring Another Outcome Variable: Disordered Eating (Research Goal 4). Finally, I tested a model using Disordered Eating as the outcome variable (*Y*; see Table 19 and Figure 17). I had hypothesized that as an outcome variable, Disordered Eating would show similar results as Psychological Distress. However, while Fat Identity predicted Internalized Weight Stigma (path *a*) and Internalized Weight Stigma predicted Embodiment (path *d*), Embodiment did not predict Disordered Eating (path *b*). The path from Fat Identity to Internalized Weight Stigma, (a *x* e path) was strong, and showed that Embodiment did not help to explain how Fat Identity resulted in Disordered Eating. Perhaps this is because disordered eating is a behaviour with an intended result(i.e., weight loss). In contrast, psychological distress is experiential phenomenon that is not a behaviour, per se.

In the model that tested the pathways from Fat Identity to Psychological Distress, lower Embodiment followed from Internalized Weight Stigma, and this was conceptualized as a

traumatic process that resulted in anxiety and depression symptoms. Perhaps in the case of conceptualizing disordered eating as an outcome, the process is more direct and conscious: one experiences stigma, the stigma becomes internalized, and one restricts, binges, and/or purges in an attempt to change their stigmatized body.

This does not mean that embodiment is not implicated in the etiology of disordered eating. Eating disorders research has incorporated embodiment in research on both causes and recovery (see Castellini et al., 2019). However, there is a dearth of research on disordered eating in fat people, and most of the extant research is intertwined with stigma. For example, the dominant discourse regards dieting to be a so-called "healthy", or at the very least, acceptable, solution to being in a fat body (and thereby experiencing weight stigma). Erin Harrop is one researcher who is an exception to the dominant discourse on eating disorders. Their research (see Harrop & Erdman, 2023) explores the tensions between fat acceptance and feminist approaches to eating disorders. They explain how anti-fat bias is both intertwined with causing eating disorders and is continually perpetuated in approaches to recovery, and that most research on eating disorders excludes fat people despite the likelihood that they are the most at risk.

In terms of this model, the question for future research is where does Embodiment come in? Perhaps it comes after Disordered Eating, as could follow that engaging in harmful ways of eating that decrease attention to hunger cues or could diminish bodily awareness. I am not aware of any research that has examined disordered eating in a model such as the one in this thesis, and it has certainly not been explored in fat populations, so future research should expand the current research to better understand the etiology of disordered eating for fat people, considering internalized weight stigma and embodiment.

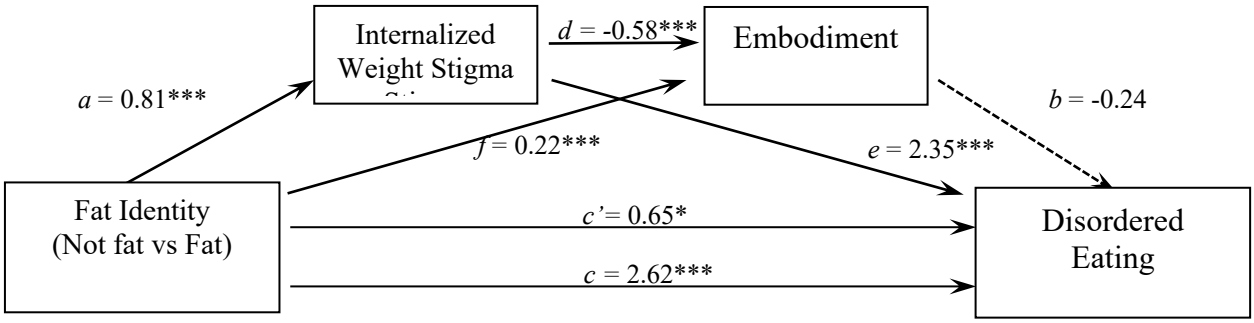
Table 19

PROCESS Results Testing Serial Mediation Model with Disordered Eating as the Outcome Variable

	β	*b* [CI]	SE	*t*	*p*	R^2
Outcome:						
Internalized Weight Stigma						0.11
Constant		2.46 [2.33, 2.58]	0.06	38.73	<.001	
Fat Identity	.68	0.81 [0.61, 1.01]	0.10	8.03	<.001	
Outcome:						0.56
Embodiment						
Constant		4.98 [4.85, 5.11]	0.07	75.29	<.001	
Fat Identity	.24	0.22 [0.10, 0.33]	0.06	3.80	<.001	
Internalized Weight Stigma	-.78	-0.58 [-0.63, -0.54]	0.02	-24.95	<.001	
Outcome:						0.47
Disordered Eating						
Constant		-5.93 [-8.41, -3.43]	1.27	-4.67	<.001	
Fat Identity	.15	0.65 [0.03, 1.28]	0.32	2.06	.040	
Internalized weight stigma	.62	2.35 [1.97, 2.72]	0.19	12.28	<.001	
Embodiment	-.05	-0.24 [-0.72, 0.23]	0.24	-1.00	.317	
Total Effect						
Disordered Eating						0.08
Constant		-1.03 [-1.51, -0.55]	0.24	-4.23	<.001	
Fat Identity	.58	2.62 [1.86, 3.38]	0.39	6.75	<.001	

Figure 17

Study 1 Serial Mediation Model with Disordered Eating as the Outcome Variable



Indirect Effects of X on Y

a x e:	1.91 [1.33, 2.55], SE = 0.31
f x b:	-0.05 [-0.18, 0.07], SE = 0.06
a x d x b:	0.12 [-0.14, 0.37], SE = 0.13
Total:	1.97 [1.40, 2.57], SE = 0.30

Conclusions

In summary, Study 1 analyses demonstrated that Fat Identity predicted Psychological Distress, and this was sequentially mediated by Internalized Weight Stigma and low Embodiment. I was not able to wholly test my hypotheses, due to the error in measurement of Public Weight Stigma. Additionally, the analyses demonstrated that the same sequence did not explain Disordered Eating, which was better explained as (Fat Identity -> Internalized Weight Stigma -> Disordered Eating).

Other findings from Study 1 pertained to measurement. First, I found that a measure I created of Comparative Body Size may be a better measure of fat experience than BMI. In

addition, identifying as fatter than one's peers was a stronger predictor of negative outcomes (i.e., higher Internalized Weight Stigma, lower Embodiment, and lower Body Acceptance) than BMI. Second, I found that the most popular terms that large-bodied people within a University population used were chubby, fat, and full figured, and that BBW was not a term used in this population. Fluffy and Voluptuous were terms that people of many different body sizes used to describe themselves. Finally, I found that Body Acceptance and Internalized Weight Stigma may be measuring the same underlying construct.

Since all these findings were from preliminary research, I used them to inform my approach to analysis in Study 2, which was the key study in this dissertation.

Study 2

The overarching objective of this dissertation was to centre fat bodies in a sociocultural context to shed light on the lived experience of fat people, the mental health risks of enduring weight stigma, and to examine the potential avenues for resistance to and recovery from weight stigma. To this end, in Study 2 I recruited fat-identified people via social media platforms that were associated with the fat liberation movement.

Study 2 addressed all five of my research goals. First, I tested the same mediation model that I tested in Study 1, but because participants in Study 2 were all fat-identified, I was able to infer more from the results about the lived experience of fat people than I was in Study 1 (research goal 1). As in Study 1, I also tested the mediation model using Disordered Eating as an outcome variable in place of Psychological Distress (research goal 4). I originally hypothesized the model would demonstrate the same pathways as the Public Weight Stigma -> Psychological Distress model, however this was not the case in Study 1, which showed a strong pathway from Fat Identity (a proxy for Public Weight Stigma) to Internalized Weight Stigma to Disordered Eating.

In Study 2 I was also able to accomplish research goals 2 and 3, which were to identify *resistance factors*. These were conceptualized as methods that fat people employed to resist and/or recover from weight stigma. In the introduction to this dissertation, I considered strategies that fat people might adopt, using an adapted framework of the model of pathways to well-being (Stinson & Swann, 2017). Based on extant scientific literature and public scholarship, I determined three categories of recovery strategies: 1) recovery strategies that embrace the self; 2) recovery strategies that embrace relationship and community; and 3) recovery strategies that embrace radical ways of being. I found measures that pertained to each category (detailed in the

methods section). These measures were then tested as moderators in the serial mediation model. While I was able to find some measures that pertained to the recovery strategies categories, I did not find any measures that examined how participation in the fat liberation movement might help people resist or recover from weight stigma. To that end, I created a 13-item questionnaire that addressed this problem. I then conducted an exploratory factor analysis on these items and created variables using the resulting factors. I also tested these variables as moderators. This addresses research goal 5, which was to examine the measurement of various constructs related to fat lived experiences. Fat identity is a key construct explored in Study 2, which I examined through terminologies that people used to describe themselves. I also examined other constructs in Study 2 in similar ways as Study 1 (e.g., the potential conflation of internalized weight stigma and body dissatisfaction).

Study 2 addressed major gaps in the literature, first by centering fat people in research about fatness. Second, it created a new measure of fat liberation activities that have never been explored before. Third, it determined the sequential pathway from public weight stigma to psychological distress to better understand the facilitating mechanisms that impact mental health. Finally, it examined whether and how resistance or recovery factors might impact these processes to inform future research and intervention.

Methods

Participants

As with Study 1, I determined that a minimum of 400 participants would provide sufficient power to test the moderated mediation model based on a-priori analysis in G power (Faul et al., 2009), but I decided to collect data for two months to account for possible exclusions. I initially recruited 813 participants to complete the online survey using an invitation

(see Appendix B) posted on various forms of social media. Fat influencers were contacted to post the invitation with the aim of recruiting a sample of fat people who access fat liberation via social media. In the advertisement, we also included language aligned with fat liberation (e.g., "fat researchers invite fat adults"; explicit naming of weight stigma). While these efforts were made to recruit individuals who were exposed to or who were participating in the fat liberation community, as this was an anonymous online survey precise details about participant involvement in this movement are not known. Inclusion criteria were: 1) identify as fat and 2) at least 19 years old. Participants were excluded if they failed to correctly answer attention checks (n = 25), if they completed the survey in less than 5 minutes (n = 182), or if they responded to half or fewer of the survey questions (n = 40). It is unknown what led these participants to complete the survey so quickly. I also deleted duplicate responses for participants who responded more than once, which was determined using IP addresses and Qualtrics generated ID codes (n = 22). After exclusions, my final sample included 544 participants (M_{age} = 33.08, SD_{age} = 10.47, Range = 19 to 80 years). See Table 20 for complete Demographic Information about the Study 2 sample.

Table 20

Demographic Characteristics of Participants Retained after Exclusions in Study 2

Characteristic	*n*	*%*
Gender		
Women	353	64.9
Transgender, nonbinary, or questioning	150	27.6
Men	13	2.4
No response	28	5.1
Sexual Orientation		
Bisexual, demisexual, pansexual, and/or fluid	182	33.5

Heterosexual/straight	137	25.2
Queer	62	11.4
Gay or lesbian	45	8.3
Asexual spectrum	41	7.6
Questioning	6	1.1
Mostly Straight/Straight for Now/Bi-curious	5	0.9
No label	4	0.7
No Response/gender identity response	62	11.4
Ethnic Background		
Ashkenazi Jewish	2	0.4
Australian Aboriginal	1	0.2
Biracial	1	0.2
Black	9	1.7
Black and White	6	1.1
Black, East/Southeast Asian, and White	1	0.2
East/Southeast Asian	7	1.3
East/Southeast Asian and White	8	1.5
European	1	0.2
Indigenous	4	0.7
Indigenous and White	7	1.3
Irish and Serbian	1	0.2
Latin, Central and South American origins	11	2.0
Latin/Central/South American and White	9	1.7
Middle Eastern	3	0.6
Middle Eastern and White	5	0.9
Mixed Race	4	0.7
Slavic	3	0.6
South Asian	4	0.7
South Asian and White	1	0.2
White	455	83.6
Unknown	1	0.2
Country of Birth		
USA	284	52.2
Canada	135	24.8
Australia	28	5.1
Germany	24	4.4
UK	16	2.9
Sweden	9	1.7
New Zealand	5	0.9
Romania	4	0.7

Austria	3	0.6
Italy	3	0.6
Mexico	3	0.6
Azerbaijan	2	0.4
Bahrain	2	0.4
France	2	0.4
Poland	2	0.4
Sri Lanka	2	0.4
The Netherlands	2	0.4
Ukraine	2	0.4
Belgium	1	0.2
Brazil	1	0.2
Bulgaria	1	0.2
Chile	1	0.2
Cuba	1	0.2
Czech Republic	1	0.2
Israel	1	0.2
Malawi	1	0.2
Malaysia	1	0.2
Norway	1	0.2
Philippines	1	0.2
Russia	1	0.2
Serbia	1	0.2
Singapore	1	0.2
South Africa	1	0.2
Switzerland	1	0.2

Country of Participation		
USA	289	53.1
Canada	144	26.5
Australia	30	5.5
Germany	23	4.2
United Kingdom	11	2
Sweden	9	1.7
New Zealand	4	0.7
Austria	3	0.6
Netherlands	3	0.6
Romania	3	0.6
Czech Republic	2	0.4
Italy	2	0.4

Poland	2	0.4
South Korea	2	0.4
Belgium	1	0.2
Brazil	1	0.2
Bulgaria	1	0.2
Chile	1	0.2
Finland	1	0.2
France	1	0.2
Greece	1	0.2
Ireland	1	0.2
Malaysia	1	0.2
Mexico	1	0.2
Norway	1	0.2
Russia	1	0.2
Serbia	1	0.2
Singapore	1	0.2
South Africa	1	0.2
Sri Lanka	1	0.2
Switzerland	1	0.2

The Study 2 participants were majority white, female-identifying, and participated from the United States and Canada. More than a quarter (27.6%) of participants reported their gender as transgender, nonbinary, or questioning, and a minority of participants were heterosexual (25.2%). Gender and sexuality demographics of this sample are markedly different than other research on fatness. This is possibly because the fat liberation movement has roots in the queer liberation movement (e.g., Simon, 2019; Wykes et al., 2014), and there is likely a great deal of fat queer intersectionality in those who participate in fat liberation.

All the participants, by virtue of their agreement to participate in the study, identified as fat. The Study 2 participants were demographically quite different from the Study 1 participants, who were majority thin, white, female, heterosexual, and young, meaning the results from Study 2 allowed me to draw conclusions about the experiences of some fat people. On one hand, this

work adds to the literature because it is more intersectional and possibly provides more nuance about the fat experience than extant literature. On the other hand, the sample was still majority white and from North America, so it was still homogenous, and therefore important to consider that the lack of ethnic diversity in the participants limited generalizability.

Additionally, as the Study 2 participants were recruited using Fat Liberation networks, they were all at least exposed to Fat Liberation discourse, so I was able to test moderators which were created considering different aspects of Fat Liberation.

I was also interested in how widespread the participation locations were, so I created a heatmap (Figure 18, below) to visualize the locations of the participants. More colour indicates more participants from that location. As can be seen, participation was international, though participants were predominantly from Canada and the United States.

Figure 18

Heat Map Depicting Geographic Locations of Study 2 Participants

Procedure

As with Study 1, participants completed an online questionnaire created and administered using Qualtrics. They first completed a consent form that explained the nature of the survey, followed by a questionnaire that took about 30 minutes to complete, and finally an information letter. At the end of the survey, participants were given the choice to enter a draw for a gift card. If they selected yes, they entered their email address in a separate survey so that their email address would not be connected to their responses. Participants were invited to contact researchers by email if they wanted information on the results of the study.

Measures: General.

Demographics. Participants completed a demographic questionnaire where they provided open-text responses about country of location, country of origin, and age. They responded to questions with a set number of options about gender, sexuality, and ethnicity, with the option to write in another term that best described them.

Body Size. In contrast to Study 1, body size was only assessed in two ways. I chose not to ask participants to report their height and weight, because I was trying to limit the number of stigmatizing questions I asked. First, participants answered the same subjective measure that I developed for Study 1, that asked participants to use a 7-point Likert-type scale to compare their body size to their peers' body size (i.e., "Compared to my peers, the current size of my body is;" *1* = smaller, *4* = about the same, *7* = larger). Second, participants answered another subjective measure asking them if they identified with a variety of words that can be used to describe fat bodies (i.e., BBW, Chubby, Curvy, Fat, Fluffy, Full Figured, Hefty, Plus Size, Voluptuous). These were the same choices as in Study 1, but in Study 2, I also gave participants the option to write in names they used for themselves. Participants could select as many labels as they wanted.

Public Weight Stigma. As in Study 1, participants answered the 9-item Everyday Discrimination Scale (EDS; Williams et al., 2008) which asks participants to rate the frequency with which they experienced various forms of discrimination using a 6-point Likert-type scale (*0* = never, *5* = almost every day). Sample items include: "People act as if they think you are not smart" and "You are called names or insulted." They also answered a follow-up question for each form of discrimination asking them to make an attribution for their experiences of discrimination. If they selected their weight as a reason for their experience of a particular discrimination experience, then their rating of the frequency of that experience was included in the calculation of their EDS score (which was the average of all discrimination scores that were attributed to weight). If a participant did not have any discrimination experiences that they attributed to weight, then they were given a score of 0.

Internalized Weight Stigma. As in Study 1, participants answered the 11-item Modified Weight Bias Internalization Scale (Pearl & Puhl, 2014), which rates agreement with items on a 7-point Likert-type scale (*1* - strongly disagree, *7* - strongly agree). Items include "I feel anxious about my weight because of what people might think of me" and "I wish I could drastically change my weight.". Two items ("Because of my weight, I feel that I am just as competent as anyone," and "I am OK being the weight that I am") were reverse coded. Scores were averaged for the final IWS score.

Embodiment. As in Study 1, participants answered the 7-item Positive Body Connection and Comfort Subscale of the Experience of Embodiment Scale (EES; Piran, Teall, & Counsell, 2020), rating items on a 5-point Likert-type scale (*1*- strongly disagree, *5* – strongly agree). Items include "I feel in tune with my body" and "Generally I feel good/comfortable in my body". One

item, “I feel “detached” and separate from my body” was reverse scored. Scores were averaged for the final Embodiment score.

Measures: Health and Wellness (Outcome Variables).

Psychological Distress. As in Study 1, participants answered 10 questions assessing symptoms of anxiety and depression based on DSM-5 criteria (American Psychiatric Association, 2013) on a 5-point Likert scale rating items on a 5-point Likert-type scale (*1*- strongly disagree, *5* – strongly agree). Items include “I frequently do not have the energy I need to complete everyday life tasks” and “I often feel tense or ‘on edge’”. Item scores were averaged for a total Psychological Distress score.

Disordered Eating. As in Study 1, participants answered six items (i.e., “I avoid eating when I am hungry”, “I engage in dieting behaviour”, “I find myself being preoccupied with food”, “I feel guilty after eating”, “I have gone on eating binges where I feel that I may not be able to stop”, and “I think of burning up calories when I exercise”) from the Eating Attitudes Test-26 (EAT-26; Garner et al., 1982) assessing symptoms of disordered eating on a 6-point Likert-type scale (*1* – Never, *6* – Always). Z-scores were calculated for each item and summed to create a total score.

Measures: Resistance Factors - Embrace the Self (Moderators).

Self-Esteem. Participants answered the Single-Item Self-Esteem Scale (SISE; Robins et al., 2001) “I have high self-esteem”, on a seven-point Likert-type scale (*1*- not very true of me, *7* – very true of me). Item scores were used as the Self-Esteem variable.

Self-Compassion. Participants answered the six-item Self-Compassion Scale (Toth-Kiraly et al., 2021) to examine participants’ ability to feel compassion towards themselves and to care for themselves on a five-point Likert-type scale (*1*-Not at all true for me, *5*-Very true for

me). Items include “I’m giving myself the caring and tenderness I need” and “I’m obsessing and fixating on everything that’s wrong”. Three items were reverse scored. Mean scores were calculated for each participant.

Physical Freedom. Participants answered the 13-item Physical Engagement, Encouragement of Self-Care by Others, Sexuality Physical Freedom (PEESCS) Subscale of the Physical Freedom Scale (Piran, Teall, & Counsell, 2020), rating items on a 5-point Likert-type scale (*1*- strongly disagree, *5* – strongly agree). One item (“I have not been as physically active as I have wanted to be (due to, for example, no female sport teams; lack of access to facilities; physical health; safety in public places; care of others; lack of money; school/work)”) was reverse scored. Other items include “I have engaged in enjoyable leisure activities” and “I have been encouraged and supported in expressing and responding to my needs”. A mean score was calculated for each participant.

Self-Care. Participants answered seven items from the Attuned Self-Care subscale from the Experience of Embodiment Scale (EES; Piran, Teall, & Counsell, 2020), rating items on a 5-point Likert-type scale (1 - strongly disagree, 5 – strongly agree). Items include “I take good care, and am respectful, of my body”, and “I am aware of my needs”. Two items, “I engage in potentially harmful or painful behaviours (e.g., disordered eating, bingeing, purging, denying physical needs, skin cutting, burning, drug use, excessive alcohol consumption)” and “I have an eating disorder” were excluded from the score calculation because they assessed eating disorder symptoms and were therefore likely confounding with the dependent disordered eating variable. Two other items were reverse scored. A mean score was calculated for each participant.

Body Acceptance. As in Study 1, participants answered the 4-item Body Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess their

level of self-acceptance of their body. Items included “I feel good about my body”, “I feel happy about my weight”, “I do not feel defined by my body weight”, and “My self-esteem is not impacted by my body weight”. Items were rated on a 7-point Likert-type scale (*1*- strongly disagree, *7* – strongly agree). A mean score was calculated for each participant.

Measures: Resistance Factors - Embrace Community (Moderators).

Belongingness. Participants answered the twelve-item General Belongingness Scale (Malone, Pillow, & Osman, 2012) to assess general feelings of social belongingness. Items were rated on a 7-point Likert-type scale (*1*- strongly disagree, *7* – strongly agree). Items include “When I am with other people, I feel included, and “I have close bonds with family and friends.” Six items were reverse scored, and a mean score was calculated for each participant.

Measures: Resistance Factors - Embrace Radical Thinking (Moderators).

Size Acceptance. As in Study 1, participants answered the Size Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness of and agreement with size acceptance, which includes items such as “rather than fat people changing their bodies; society needs to change the way it responds to fat bodies” and “size acceptance should be encouraged.” Items were rated on a seven-point Likert-type scale (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Critical Health. As in Study 1, participants answered the Critical Health subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness that fatness is not associated with poor health. Items include, “body weight isn’t a reliable indicator of health”, and “fat people are not necessarily unhealthy”. Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Empathy. As in Study 1, participants answered the Empathy subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant empathy for the discrimination faced by fat people and its associated impact. Items include, "fat people face discrimination in many areas of life", and "fat people are treated badly because of the way society depicts fat bodies". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Activism Orientation. As in Study 1, participants answered the Activism Orientation subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant agreement with the idea that discrimination against fat people is unacceptable. Items include, "we need to take weight-based discrimination as seriously as other forms of discrimination", and "there is a need for Fat Activism because fat shaming is widespread". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Attractiveness. As in Study 1, participants answered the Attractiveness subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant attraction to fat people. Items include, "fat people are sexy", and "if I were single, I would go out with a fat person". Items were rated on a seven-point Likert-type scale, (*1*-Strongly Disagree, *7*-Strongly Agree. A mean score was calculated for each participant.

Fat Acceptance Composite. As in Study 1, the Fat Acceptance Composite is an overall score of the degree to which participants align with critical fat perspectives. It was derived by calculating the mean score of the Empathy, Activism Orientation, Attractiveness, Critical Health, and Size Acceptance scales of the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022).

Feedback. Participants were asked, "It is our intention to improve fat people's lives with this research. If anything was harmful or poorly worded, please let us know." Participants filled in responses in their own words.

Results & Discussion

Preliminary Analyses

Descriptive Statistics. Means, standard deviations, range, possible values, skewness, and kurtosis for all Study 2 variables are presented in Table 21.

Table 21

Descriptive Statistics for All Study 2 Variables

Variable	*N*	Mean	*SD*	Range	Skewness	Kurtosis	Chronbach's alpha
Comparative Body Size	543	6.09	0.80	3.00 - 7.00	-.67	.43	n/a
Public Weight Stigma	540	1.82	1.26	0.00 - 5.00	.19	-.68	.90
Internalized WS	440	3.78	1.26	1.00 - 6.00	-.21	-.90	.93
Embodiment	542	2.93	0.97	1.00 - 5.00	.07	-.83	.89
Psychological Distress	530	3.73	0.71	1.10 - 5.00	-.62	.43	.84
Disordered Eating*	533	0.00	4.27	-8.57 - 12.38	.39	-.18	.81
Self-Esteem	544	3.38	1.71	1.00 - 7.00	.29	-.75	n/a
Physical Freedom	535	3.05	0.72	1.08 - 4.85	-.03	-.35	.83
Self-Compassion	531	2.70	0.77	1.00 - 5.00	.27	-.20	.75
Belongingness	527	4.16	1.38	1.00 - 7.00	-.08	-.68	.96
Self-Care	539	2.98	0.87	1.00 - 5.00	.05	-.64	.76
Body Acceptance	541	3.18	1.57	1.00 - 7.00	.48	-.64	.85
Size Acceptance	543	6.56	0.72	1.00 - 7.00	-2.98	13.04	.85
Critical Health	524	6.54	0.78	1.00 - 7.00	-3.18	14.24	.90
Attractiveness	522	5.39	1.10	1.00 - 7.00	-.90	.93	.87
Empathy	525	6.74	0.53	1.00 - 7.00	-5.21	41.44	.87
Activism Orientation	523	6.50	0.84	1.00 - 7.00	-3.13	13.25	.95
Fat Acceptance Composite	518	6.35	0.63	1.68 - 7.00	-2.83	13.40	.82

Note. *Variable was created using a summed z-score

All variables were normally distributed, with five exceptions that had skewness or kurtosis values greater than |2| (George & Mallery, 2019): Size Acceptance, Critical Health,

Empathy, Activism Orientation, and the Fat Acceptance Composite. I examined these variables further with data visualization (see Figures 19 to 28 below).

Figure 19

Frequency of Size Acceptance Scores in Study 2

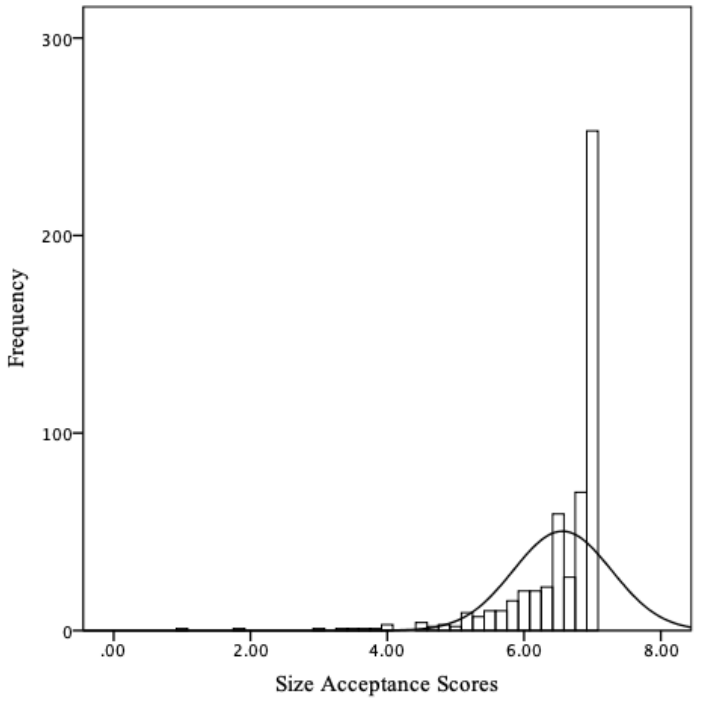


Figure 20

Normal Q-Q Plot of Size Acceptance Scores in Study 2

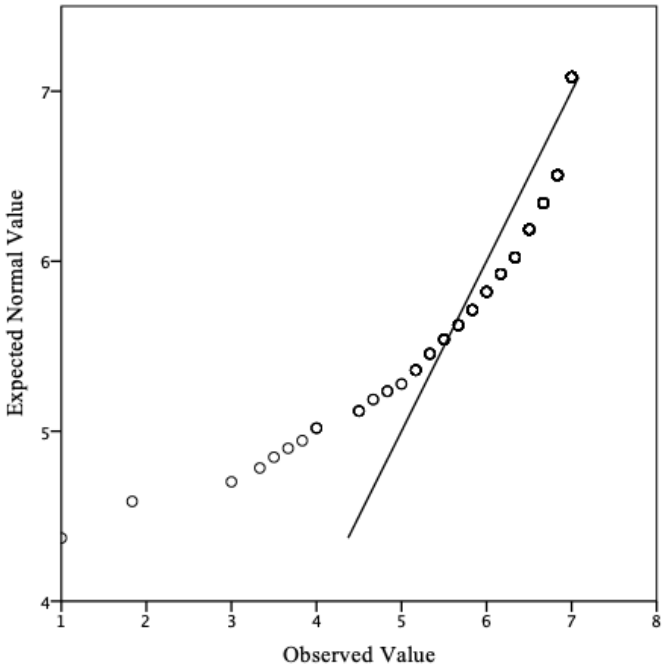


Figure 21

Frequency of Critical Health Scores in Study 2

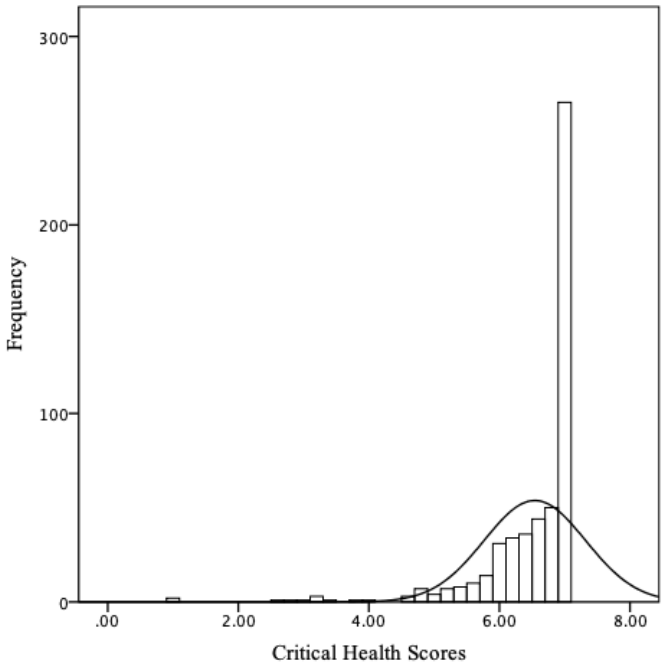


Figure 22

Normal Q-Q Plot of Critical Health Scores in Study 2

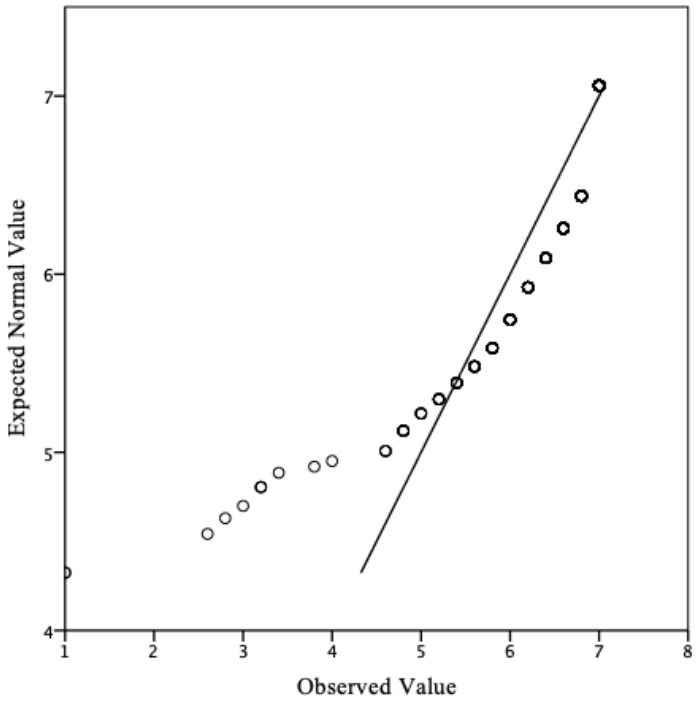


Figure 23

Frequency of Empathy Scores in Study 2

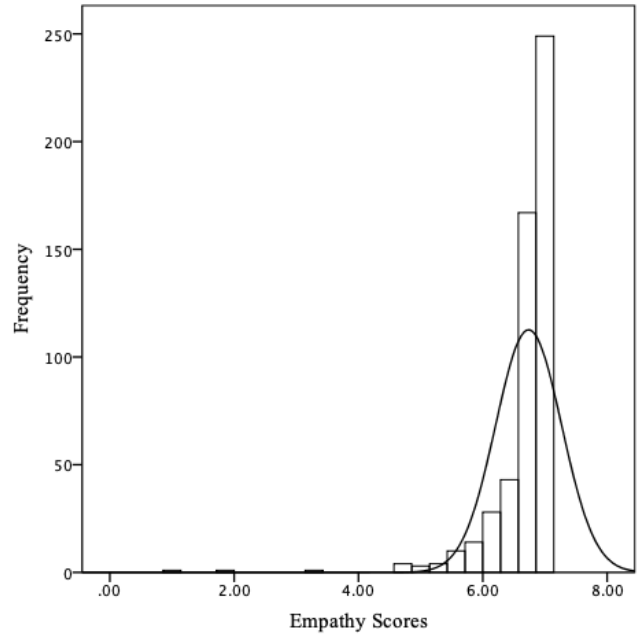


Figure 24

Normal Q-Q Plot of Empathy Scores in Study 2

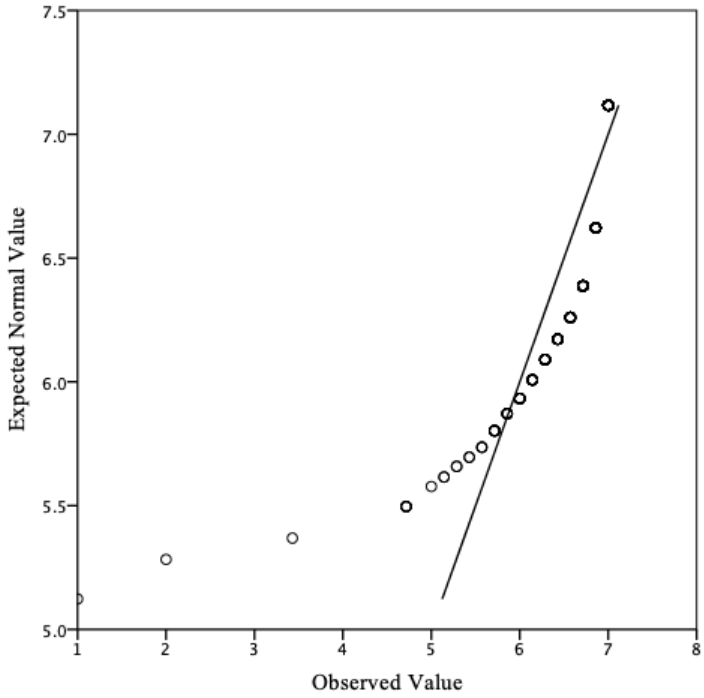


Figure 25

Frequency of Activism Orientation Scores in Study 2

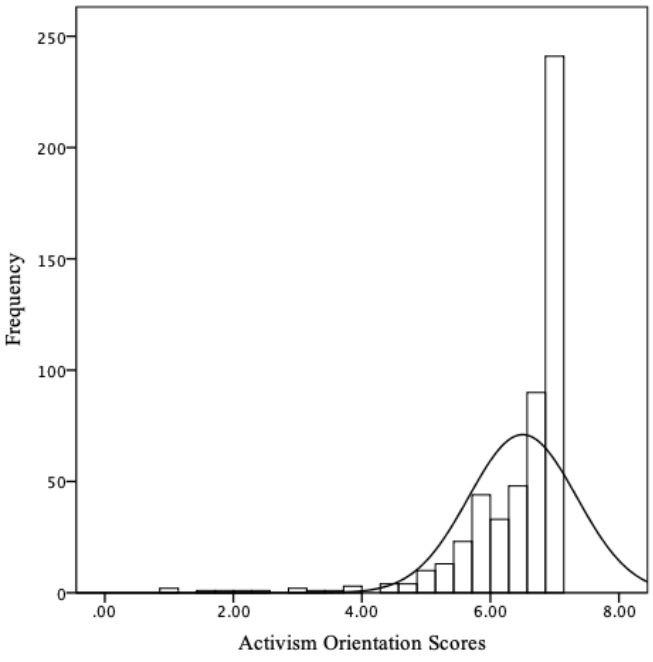


Figure 26

Normal Q-Q Plot of Activism Orientation Scores in Study 2

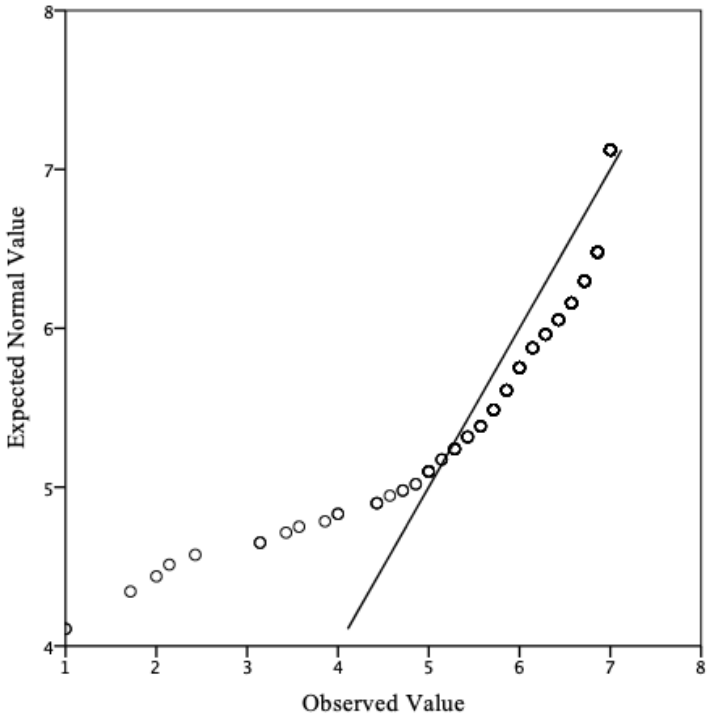


Figure 27

Frequency of Fat Acceptance Composite Scores in Study 2

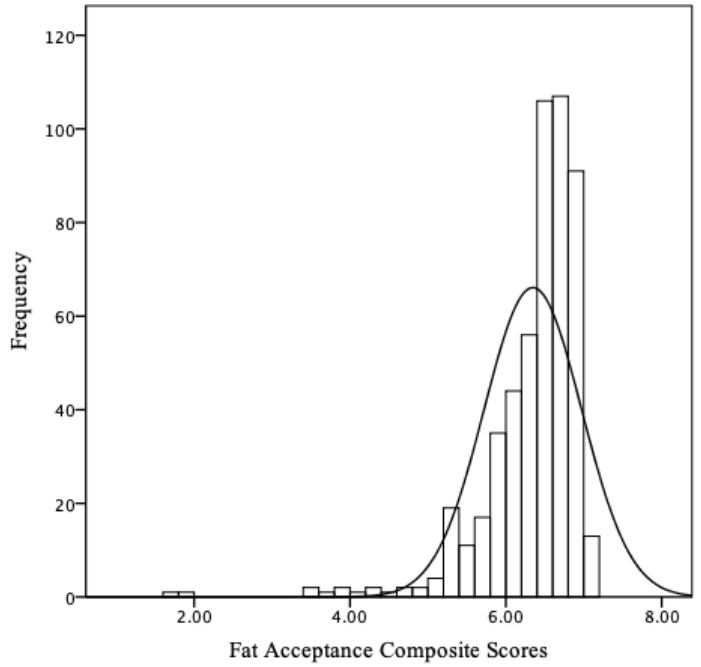
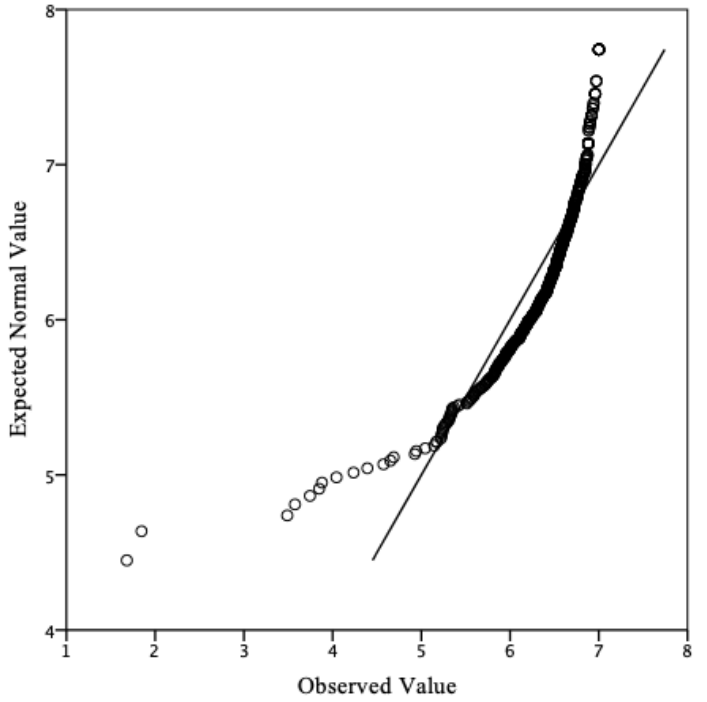


Figure 28

Normal Q-Q Plot of Fat Acceptance Composite Scores in Study 2



As in Study 1, many of the FAAT subscale scores were highly negatively skewed, meaning most participants had very high levels of Size Acceptance, Critical Health, Empathy, Activism Orientation, and the Fat Acceptance Composite. These were leptokurtic, with scores clustered around the mean. Because I targeted a sample that was exposed to the fat liberation movement, it is probable that participants wholly agreed with the FAAT items, and that social desirability was less of a factor compared to Study 1. The best evidence for this difference is that while in Study 1, participants had skewed Size Acceptance and Empathy scores, they did not have skewed Critical Health scores (Critical Health measured the degree to which participants agreed with items that reflected that fatness does not equate to poor health). In contrast, participants in Study 2 did have skewed Critical Health scores, so most participants wholly agreed with items on that scale. Additionally, Activism Orientation scores were skewed in Study

2, which further indicates that many if not most of Study 2 participants were at least exposed to the fat liberation movement, as Activism Orientation items reflect the need for fat activism.

Interestingly, not all the FAAT subscales were skewed – Attractiveness, which measured the degree to which participants agree that they are attracted to fat people, and Body Acceptance, which measured participants' own acceptance of their bodies, were normally distributed, showing that even among fat people who were exposed to fat liberation, there is variation among these constructs. There are likely many nuances to fully understanding these constructs, but I think these results may reflect a potential last bastion of fat acceptance: loving and being attracted to one's own fat body, and the fat bodies of sexual partners. This is likely because mainstream society projects disgust about the positive sexualization of fat bodies, especially female fat bodies (Gailey, 2012). People who are exposed to the fat liberation movement can learn about stigma and discrimination and injustice, and accommodate these into more liberated viewpoints, but changing the way one feels about one's own body, the attractiveness of fat bodies in general, is likely more difficult. Perhaps high scores on these items, in this sample, are the best indicators of true fat liberation. This should be examined in future research.

Importantly, Public Weight Stigma scores were normally distributed in this study. First, this means that many people in this sample experienced Public Weight Stigma, so it is important to acknowledge the sadness of that reality. Second, it means that I used this variable in my analyses for Study 2, whereas I had to create a proxy variable for Public Weight Stigma in Study 1. Given that all my participants in Study 2 identified as Fat, my analyses in Study 2 can be considered as delving deeper into the psychological experiences of Fat people, which was not fully captured in Study 1 as the sample had a smaller number of fat-identified participants.

Correlations among Study 2 variables are presented in Table 22. These correlations are generally similar (in terms of what correlations are significant, and valences) to correlations discussed in Study 1. For example, Internalized Weight Stigma was strongly negatively correlated with Body Acceptance, lending more evidence to the possibility that these are measuring the same underlying construct. There are some variables included in Study 2 that were not included in Study 1, so these will be discussed here. First, Public Weight Stigma was positively correlated with Internalized Weight Stigma, Psychological Distress, Disordered Eating, and the Attractiveness, Empathy, Activism Orientation, and Fat Acceptance Composite scales of the Fat Acceptance Attitudes Toolkit (FAAT, Cain et al., 2022). While all of these are logical associations, it is particularly interesting that Public Weight Stigma is associated with Attractiveness. This means that for the group exposed to the fat liberation movement, the more one was exposed to public weight stigma, the more likely they were to report attraction to other fat people. I suppose that this is not a direct association, and I wonder if fat people who are exposed to more public weight stigma AND are involved in the fat liberation movement, are more likely to dive more deeply into fat activism, which results in a general embracing of fat bodies and of attraction to other fat people. This argument is somewhat contrasted by the negative correlation between Public Weight Stigma and Body Acceptance, but it may be that love of self is more difficult to accomplish than love of others.

Table 22

Correlations Among Study 2 Variables

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12. †	13. †	14
1. Comparative Body Size	-													
2. Public Weight Stigma	.25***	-												
3. Internalized Weight Stigma	.12*	.15**	-											
4. Embodiment	-.06	-.14**	-.72***	-										
5. Psychological Distress	.00	.26***	.32***	-.45***	-									
6. Disordered Eating	.04	.21***	.66***	-.51***	.32***	-								
7. Self-Esteem	-.06	-.12**	-.61***	.66***	-.40***	-.39***	-							
8. Physical Freedom	-.10*	-.24***	-.33***	.49***	-.43***	-.23***	.38***	-						
9. Self-Compassion	-.03	-.20***	-.52***	.52***	-.53***	-.42***	.52***	.43***	-					
10. Belongingness	-.03	-.40***	-.34***	.44***	-.49***	-.29***	.42***	.59***	.49***	-				
11. Self-Care	-.02	-.17***	-.46***	.59***	-.49***	-.49***	.47***	.46***	.49***	.39***	-			
12. Size Acceptance†	-.05	.04	-.18***	.17***	.02	-.12***	.11*	.06	.07	.05	.08	-		
13. Critical Health†	.02	.08	-.29***	.19***	.03	-.26***	.11*	.01	.04	-.01	.10*	.52***	-	
14. Attractiveness	-.03	.10*	-.45***	.35***	-.02	-.20***	.21***	.18***	.19***	.06	.14**	.14**	.40***	-
15. Empathy†	.09*	.20***	.06	-.06	.16***	.04	-.08	-.11*	-.14**	-.12**	-.05	.50***	.46***	.20***
16. Body Acceptance	-.13**	-.13**	-.86***	.78***	-.31***	-.58***	.61***	.35***	.49***	.30***	.45***	.45***	.27***	.42***
17. Activism Orientation†	.11*	.22***	-.15**	.07	.07	-.16***	.09*	-.05	-.01	-.07	.06	.51***	.55***	.33***
18. Fat Acceptance Composite†	.00	.17***	-.37***	.26***	.07	.07	.15***	.06	.09	-.04	.10*	.68***	.72***	.80***

	15. †	16.	17. †
16. Body Acceptance	-.10*	-	
17. Activism Orientation†	.60***	.10*	-
18. Fat Acceptance Composite†	.55***	.33***	.68***

Note. *p < .05; **p < .01; ***p < .001. †Spearman's Rho correlations

Fat Identity and Measurement (Research Goal 5)

Recall the questions posed in Study 1. What is a fat person? How can we define and measure fatness in ways that do not perpetuate stigma? What does it mean to define oneself as fat, and how does group membership influence that definition? In Study 1, I proposed that the term Fat would be perceived as negative and therefore not frequently used, due to the stigma associated with being fat. Participants in Study 2 have been at least exposed to fat liberation, including discourse such as *Just Say Fat*, an essay by Aubrey Gordon (2020b), which explains (to people who are not fat) why using the term Fat is an essential component of fat liberation.

> Do not rush to correct fat friends who name their own bodies for themselves, using the words that fit their experience. Recognize that a fat person daring to name their own body is an act of growth and that when you correct us, you stunt it. It is also an act of rebellion, and when you silence it, you silence us. Remember that your comfort does not take precedence over our autonomy. Do not rush to soothe and center your own discomfort by insisting "sweetie, no! You're not fat!" Let us say our own names for ourselves.

The term fat is an act of growth, rebellion, and represents chosen group membership with fat community. While Gordon's position in her essay is not to use other words to signify fatness, I propose that within fat community, using other terms for oneself may also be acts of growth and rebellion. I invited Study 2 participants to (as in the paraphrased words of Gordon (2020b)) 'say their own names for themselves', by asking them to write in terms they used for their own bodies, in addition to the nine terms I offered as identity terms. Table 23 shows frequencies of fat identity terminology. I also created a word cloud using these terms (Figure 29).

Table 23

Body Size Terminologies Chosen by Participants in Study 1

Body Size Identity Term*	*n*	*%*
Fat	478	87.9
Plus Size	330	60.7
Curvy	127	23.3
Chubby	124	22.8
Full Figured	68	12.5
BBW	43	7.9
Voluptuous	38	7.0
Fluffy	29	5.3
Hefty	25	4.6
Overweight	8	1.5
Big	5	0.9
Chunky	4	0.7
Small Fat	4	0.7
Thicc/Thick	4	0.7
In a larger body	3	0.6
Large	3	0.6
Stout	3	0.6
Big Girl	2	0.4
Heavyset	2	0.4
Round	2	0.4
Abundant	1	0.2
Bear	1	0.2
BHM	1	0.2
Big Boned	1	0.2
Bigger	1	0.2
Bigger Bodied	1	0.2
Fat-bodied	1	0.2
Fierce	1	0.2
Fit Fat	1	0.2
Heavy	1	0.2
Heavy Weight Class	1	0.2
Large-bodied	1	0.2
Large Lad	1	0.2
Larger-bodied	1	0.2
Mid-size	1	0.2

Obese	1	0.2
Person of Size	1	0.2
Pudgetastic	1	0.2
Rubenesque	1	0.2
Short	1	0.2
Stocky	1	0.2
Substantial	1	0.2
Supersized	1	0.2
SSBBW	1	0.2
Traditionally Built	1	0.2
Unhealthy	1	0.2
None selected	1	0.2

Note. *Participants were able to choose as many body size identities as were applicable to them, thus the totals sum to greater than the total number of participants, and the percentages do not add up to 100%.

Figure 29

Word Cloud Depicting Fat Identity Terminologies in Study 2

Overall, the word cloud is a powerful visual and lexical representation of the terms that fat people use to describe themselves. It shows that fat is the most selected term, which indicates that the participants generally embrace the word ‘fat’ as an identity term. Fat is a term that has different meanings in different groups. In the mainstream, fat is still pejorative, while in fat liberation circles, it has been reclaimed as a descriptor, as was eloquently stated by Gordon (2020b). It co-existed with many other self-descriptive terms in this sample, some of which were other descriptors (e.g., small fat, big), some of which were celebratory (e.g., fierce, pudgetastic), and very few of which are pejorative (e.g., obese, overweight, unhealthy). That pejorative terms

were claimed by participants likely indicates not all the participants were engaged in fat liberation. It also indicates that there may be some ambivalence about terminology even among those who have been exposed to the fat liberation movement. Or it might represent a reclaiming of slurs, which is common practice among liberation communities.

As in Study 1, I also compared terminology choices among subjective body sizes and levels of internalized weight stigma to examine whether terminologies differed. To do this, I separated the Body Size Comparison variable into three groups. A small group, based on those who indicated their body is smaller than their peers (i.e., 1 to 3 on the Likert-type scale), about the same as their peers (i.e., 4 on the Likert-type scale), and larger than their peers (i.e., 5 to 7 on the Likert-type scale). Table 26 shows the group frequencies.

Table 24

Frequencies of Comparative Body Size Groups in Study 2

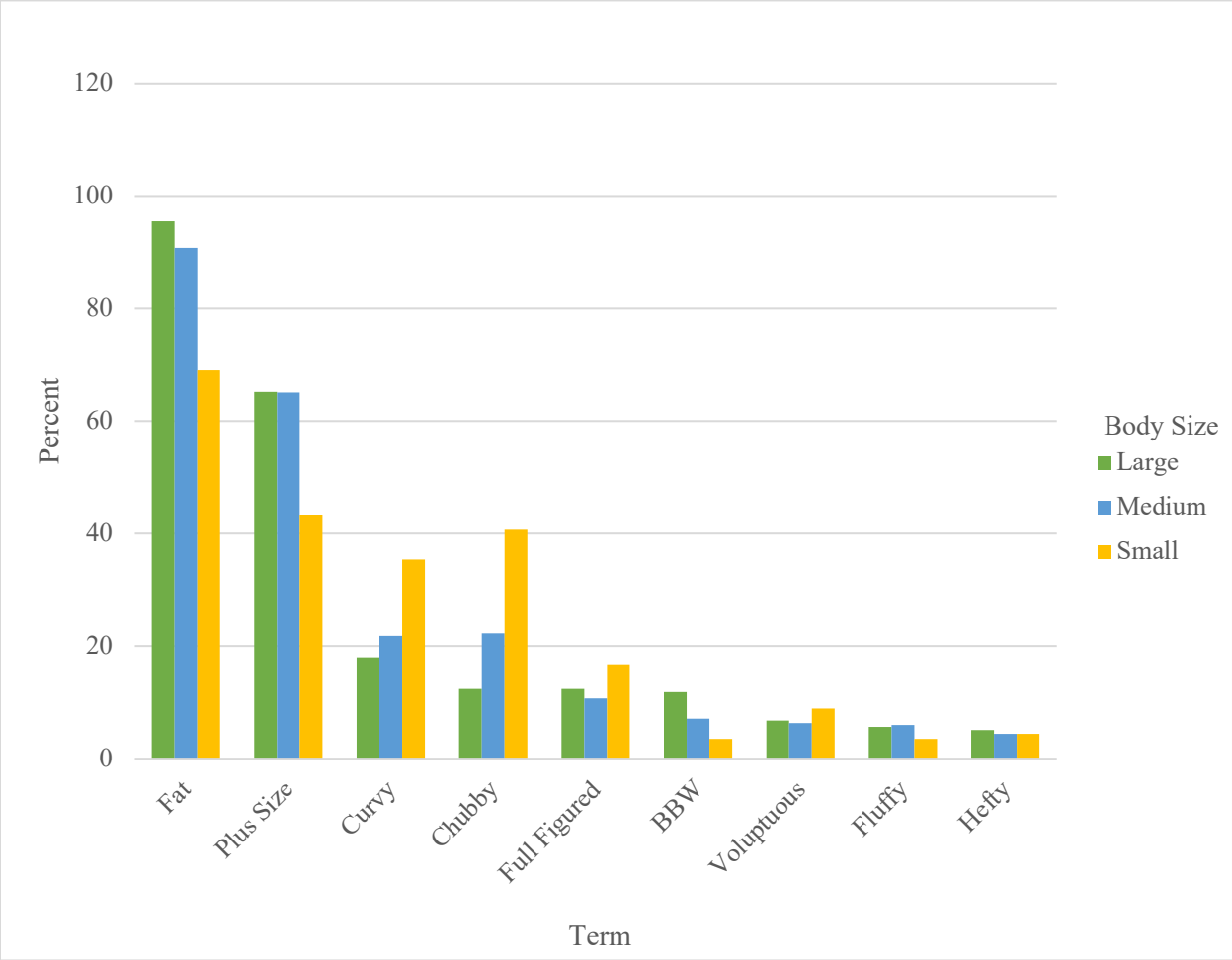
Category	Frequency	Percent
Small	113	20.8
Medium	252	46.4
Large	178	32.8
Total	543	100.0

Note. One participant did not use any terminologies to self-identify.

I then compared the frequencies of terminologies selected among these groups. Figure 16 shows the percentages of each term selected by each group.

Figure 30

Bar Graph Showing Percentages of Body Terminologies Among Comparative Body Size Groups



In contrast to Study 1, Fat was the most frequently selected term in all body size groups (Large: 95%; Medium 91%; Small 69%). Plus Size was the second most frequently selected for all groups (Large: 65%; Medium 61%; Small 43%). In the Large group, Curvy was the third most frequently selected (18%) while Chubby was the third most frequently selected in the Medium (22%) and Small (41%) groups. There are some interesting nuances with these terms among the Study 2 participants: among the small fat group, the distribution of Plus Size, Curvy

and Chubby is similar (all are between 35% to 45%), whereas among the large fat group, the selections are distributed much less evenly. This indicates that these terms may have different meanings depending on body size, and that perhaps for larger fat people, so-called "cute" terms like curvy and chubby may be less meaningful. There were also some interesting contrasts with Study 1 that further illustrate this point: Fat was far less selected by Study 1 participants and tended to be chosen by those with the largest bodies. This difference, whereby nearly all participants in Study 2 identified as fat whereas a minority of participants in Study 1 did so, is likely explained by the reclaiming of the word *fat* as descriptive and not pejorative among liberated groups. Participants in Study 1, who were less liberated, were likely seeing the word fat as having negative connotations. Also, some Study 2 participants chose the term BBW, whereas nobody in Study 1 chose that term, indicating the possibility that BBW is a term used in the fat liberation community, specficially.

As in Study 1, in addition to examining these terminologies among different body sizes, I was also interested in how they compared among different levels of Internalized Weight Stigma. In this sample, the 'small' group had scores of 5 or lower, the 'medium' group, 6, and the 'large' group, 7. Table 25 shows frequencies of the created groups.

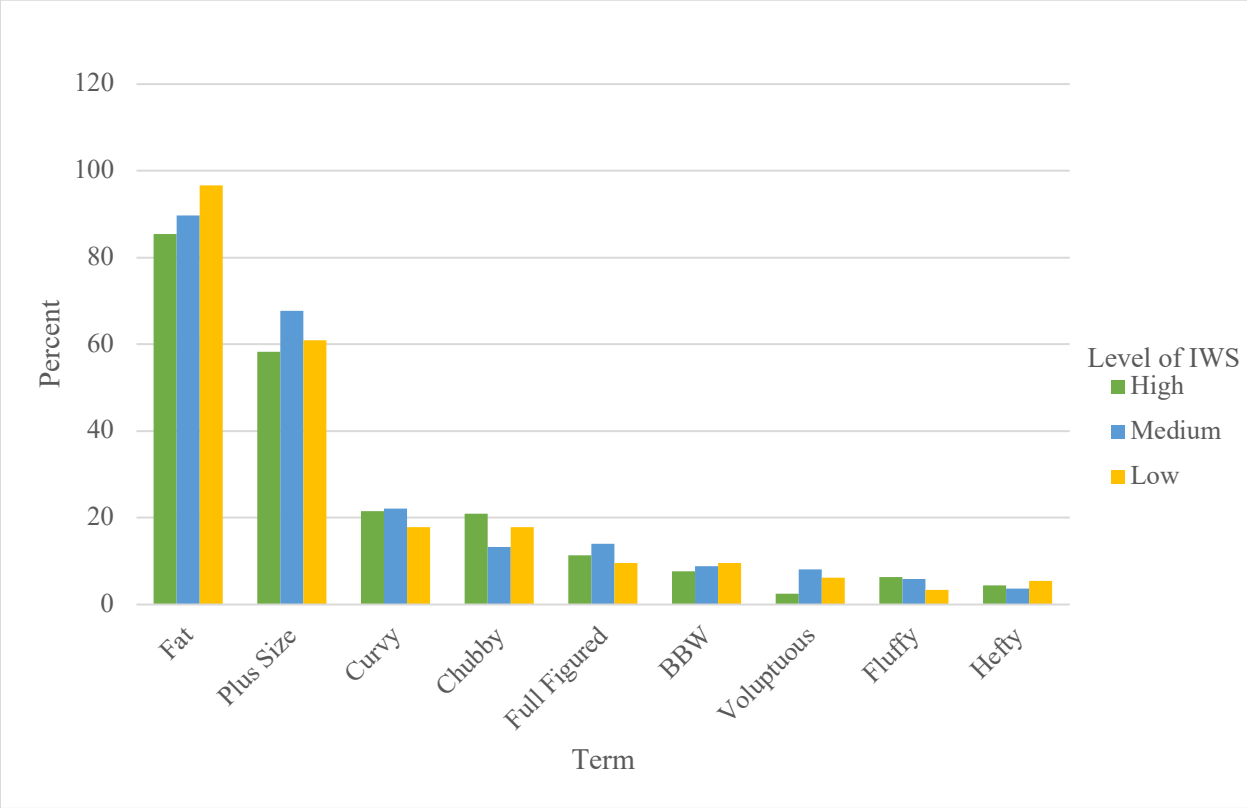
Table 25

Frequencies of Internalized Weight Stigma Groups in Study 2

Category	Frequency	Percent
Low	146	33.2
Medium	136	30.9
High	158	35.9
Total	544	100.0

Figure 31

Bar Graph Showing Percentages of Body Terminologies Among Internalized Weight Stigma Groups



As with the Body Size Groups, Fat was the most selected term among each group (High: 85%; Medium: 90%; Low: 97%). Interestingly, Fat was chosen by a higher percentage of the Low Internalized Weight Stigma group than in any other group, indicating that calling oneself "Fat" by people who have been exposed to fat liberation may be associated with lower levels of internalized weight stigma. Distribution of the remainder of terms is similar to those in the body size groups.

Testing the Pathways from Public Weight Stigma to Psychological Distress (Research Goal 1)

Mediation Analyses. I used Hayes' (2022) PROCESS macro v4.0 for SPSS with 10000 bootstrap samples to test the mediation model, in which X = Public Weight Stigma, M_1 =

Internalized Weight Stigma, M_2 = Embodiment, and Y = Psychological Distress. The results for the mediation analysis are reported in Table 26 and depicted in Figure 32.

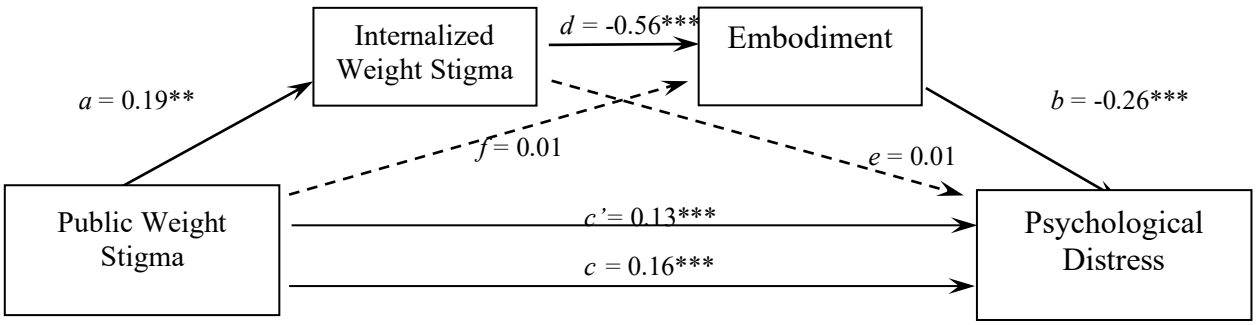
Table 26

PROCESS Results Testing Mediation Model in Study 2

	β	*b*[CI]	SE	*t*	*p*	R^2
Outcome: Internalized Weight Stigma						0.03
Constant		3.36 [3.08, 3.64]	0.14	23.58	<.001	
Public Weight Stigma	.16	0.19 [0.08, 0.31]	0.06	3.30	.001	
Outcome: Embodiment						0.52
Constant		4.99 [4.76, 5.22]	0.12	42.75	<.001	
Public Weight Stigma	.01	0.01 [-0.05, 0.07]	0.03	0.31	.759	
Internalized Weight Stigma	-.73	-0.56 [-0.61, -0.51]	0.03	-21.53	<.001	
Outcome: Psychological Distress						0.21
Constant		4.22 [3.75, 4.68]	0.24	17.77	<.001	
Public Weight Stigma	.20	0.13 [0.07, 0.19]	0.03	4.57	<.001	
Internalized Weight Stigma	.01	0.01 [-0.06, 0.07]	0.03	0.16	.872	
Embodiment	-.38	-0.26 [-0.34, -0.17]	0.04	-6.03	<.001	
Total Effect						
Outcome: Psychological Distress						0.06
Constant		3.43 [3.29, 3.58]	0.07	46.37	<.001	
Public Weight Stigma	.24	0.16 [0.10, 0.22]	0.03	5.15	<.001	

Figure 32

Serial Mediation Model for Study 2



Indirect Effects of X on Y

a x e:	0.01 [-0.01, 0.02], SE = 0.01
f x b:	-0.01 [-0.2, 0.02], SE = 0.01
a x d x b:	0.03 [0.01, 0.05], SE = 0.01
Total:	0.03 [0.002, 0.05], SE = 0.01

Consistent with H1, and with Study 1, the results confirmed that public weight stigma predicted higher levels of psychological distress (i.e., the total effect of X on Y; path *c*), meaning that those with higher levels of public weight stigma had higher levels of depression and anxiety than those with lower levels of public weight stigma. In contrast to Study 1, when accounting for the mediating variables in the model, exposure to public weight stigma was still associated with higher levels of psychological distress (i.e., the direct effect of X on Y, path *c').* As with Study 1, *consistent* with H2, public weight stigma predicted heightened internalized weight stigma (path *a)*, in that those who reported higher levels of public weight stigma also reported higher levels of internalized weight stigma. In turn, and consistent with H3, greater feelings of internalized weight stigma predicted lower feelings of embodiment (path *d)*, which in turn, and consistent with H4, predicted higher levels of psychological distress (path *b)*. Consistent with H5,

internalized weight stigma and embodiment sequentially explained the association between public weight stigma and psychological distress *(*path *a* x path *d* x path *d*).

As in Study 1, there was no association between internalized weight stigma and psychological distress (path *e*). There was no direct association between public weight stigma and embodiment, which was not consistent with the Study 1 results where body size was used as a proxy for exposure to weight stigma. Neither the indirect path from public weight stigma to internalized weight stigma to psychological distress (*a* x *e* path in Figure Y) nor the indirect path from public weight stigma to embodiment to psychological distress (*f* x *b* path in Figure Y) were significant.

Exploring Alternative Models. As in Study 1, I next tested a mediation model in which I reversed the order of Internalized Weight Stigma and Embodiment, to test whether this alternative model was a better explanation of the sequence of mediators than my proposed model (see table 27 and Figure 33). The first model showed that Internalized Weight Stigma did not predict Psychological Distress when Embodiment was controlled (i.e., path e), suggesting that an alternative model that reversed the order of mediators might not sequentially predict psychological distress as in the first model. The results showed that the alternative model did not offer a good explanation of the data when the order of mediators was reversed, given that the indirect path from Fat Identity to Psychological Distress was not significant (i.e., paths a x d x b in Figure 19). As in Study 1, this showed that the association between Fat Identity and Internalized Weight Stigma comes first, followed by lowered Embodiment, which reflects the traumatic sequence that was explained in the introduction.

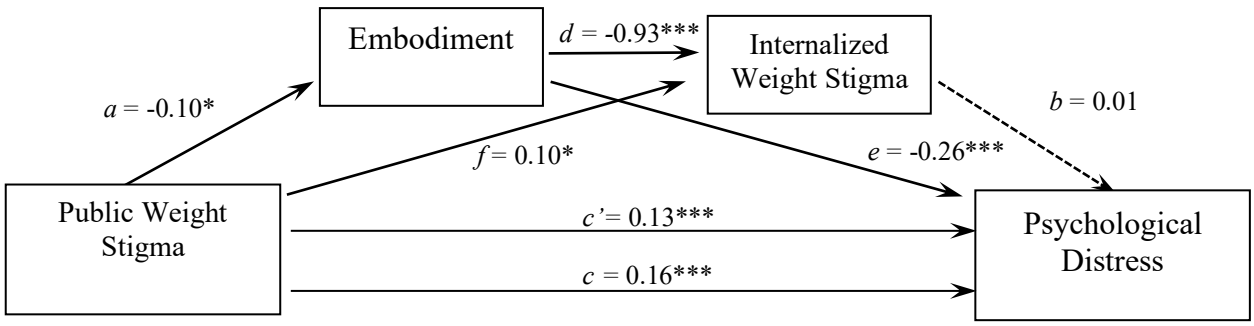
Table 27

PROCESS Results Testing Reverse Order Mediation Model in Study 2

	β	*b*[CI]	SE	*t*	*p*	R^2
Outcome:						
Embodiment						0.01
Constant		3.10 [2.88, 3.32]	0.11	27.93	<.001	
Public Weight Stigma	-.10	-0.10 [-0.19, -0.01]	0.05	-2.16	.031	
Outcome:						0.53
Internalized Weight Stigma						
Constant		6.23 [5.91, 6.56]	0.17	37.55	<.001	
Public Weight Stigma	.08	0.10 [0.02, 0.18]	0.04	2.49	.013	
Embodiment	-.72	-0.93 [-1.01, -0.84]	0.04	-21.53	<.001	
Outcome:						0.21
Psychological distress						
Constant		4.22 [3.75, 4.68]	0.24	17.77	<.001	
Public Weight Stigma	.20	0.13 [0.07, 0.19]	0.04	4.59	<.001<.	
Embodiment	-.38	-0.26 [-0.34, -0.17]	0.04	-6.03	001	
Internalized Weight Stigma	.01	0.01 [-0.06, 0.07]	0.03	0.16	.872	
Total Effect						
Psychological Distress						0.06
Constant		3.43 [3.29, 3.58]	0.07	46.37	<.001	
Public Weight Stigma	.24	0.16 [0.10, 0.22]	0.03	5.15	<.001	

Figure 33

Serial Mediation Model with Mediators Reversed for Study 2



Indirect Effects of X on Y

a x e:	0.03 [0.002, 0.05], SE = 0.01
f x b:	0.001 [-0.001, 0.01], SE = 0.004
a x d x b:	0.001 [-0.001, 0.01], SE = 0.003
Total:	0.03 [0.002, 0.05], SE = 0.01

Can Body Acceptance Take the Place of Internalized Weight Stigma (Research Goal 5)? As in Study 1, to address the question of whether Internalized Weight Stigma is measuring the same construct as body dissatisfaction, I tested the original model using Body Acceptance in place of Internalized Weight Stigma (see Table 28 and Figure 34). As in Study 1, the results were almost identical to the model using Internalized Weight Stigma (with opposite valences, as low levels of Body Acceptance equal high levels of Internalized Weight Stigma), lending further evidence to the possibility that Internalized Weight Stigma was not properly measured and is rather a measure of body dissatisfaction, or that they are both measuring the same thing. This issue will be further explored in the General Discussion.

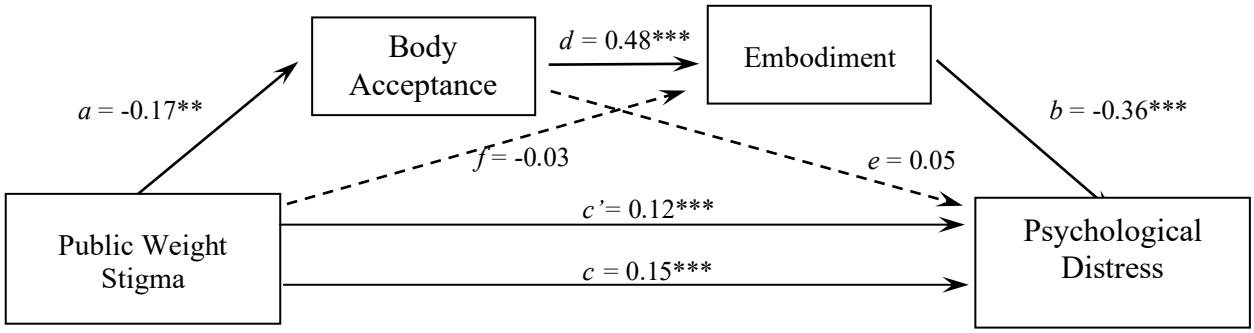
Table 28

PROCESS Results Testing Serial Mediation Model with Body Acceptance

	β	*b* [CI]	SE	*t*	*p*	R^2
Outcome:						
Body Acceptance						0.02
Constant		3.49 [3.26, 3.73]	0.12	28.81	<.001	
Public Weight Stigma	-.14	-0.17 [-0.28, -0.06]	0.06	-3.13	.002	
Outcome:						0.61
Embodiment						
Constant		1.47 [1.32, 1.62]	0.08	19.28	<.001	
Public Weight Stigma	-.04	0.03 [-0.08, 0.01]	0.02	-1.59	.112	
Body Acceptance	.78	0.48 [0.45, 0.51]	0.02	28.17	<.001	
Outcome:						0.24
Psychological Distress						
Constant		4.42 [4.22, 4.62]	0.10	43.75	<.001	
Public Weight Stigma	.21	0.12 [0.08, 0.16]	0.02	5.37	<.001	
Body Acceptance	.11	0.05 [-0.01, 0.10]	0.03	1.80	.073	
Embodiment	-.50	-0.36 [-0.45, -0.28]	0.04	-8.15	<.001	
Total Effect						
Psychological Distress						0.07
Constant		3.45 [3.35, 3.56]	0.05	65.13	<.001	
Public Weight Stigma	.27	0.15 [0.10, 0.20]	0.02	6.33	<.001	

Figure 34

Study 2 Mediation Model using Body Acceptance in Place of Internalized Weight Stigma



Indirect Effects of X on Y

a x e:	-0.01 [-0.02, 0.001], SE = 0.01
f x b:	0.01 [-0.003, 0.03], SE = 0.01
a x d x b:	0.03 [-0.01, 0.05], SE = 0.01
Total:	0.04 [0.01, 0.06], SE = 0.01

Exploring Another Outcome Variable: Disordered Eating (Research Goal 4). As in Study 1, I tested a model using Disordered Eating as the outcome variable (*Y*, see Table 29 and Figure 35). While in Study 1 I had hypothesized that, as an outcome variable, Disordered Eating would show similar results as Psychological Distress, in Study 2, I presumed that the results would be similar to Study 1, which was what I found. Fat Identity predicted Internalized Weight Stigma (path *a*) and Internalized Weight Stigma predicted Embodiment (path *d*), but Embodiment did not predict Disordered Eating (path *b*). As in Study 1, the path from Fat Identity to Internalized Weight Stigma, (a *x* e path) was strong, and showed that Embodiment did not help to explain how Fat Identity resulted in Disordered Eating.

This result was explored in Study 1, to which I will add that the same results in Study 2 simply lend more evidence to that argument.

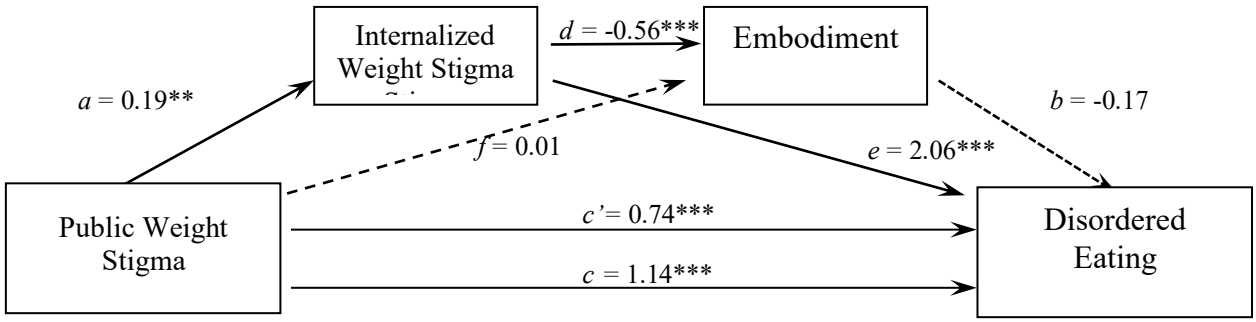
Table 29

PROCESS Results Testing Serial Mediation Model with Disordered Eating as the Outcome Variable in Study 2

	β	*b* [CI]	SE	*t*	*p*	R^2
Outcome:						
Internalized Weight Stigma						0.02
Constant		3.37 [3.09, 3.65]	0.14	23.60	<.001	
Public Weight Stigma	.15	0.19 [0.07, 0.30]	0.06	3.19	.002	
Outcome:						0.53
Embodiment						
Constant		5.00 [4.77, 5.22]	0.12	42.90	<.001	
Public Weight Stigma	.01	0.01 [-0.05, 0.07]	0.03	0.31	.760	
Internalized Weight Stigma	-.73	-0.56 [-0.61, -0.51]	0.03	-21.69	<.001	
Outcome:						0.47
Disordered Eating						
Constant		-8.87 [-11.32, -6.41]	1.25	-7.12	<.001	
Public Weight Stigma	.18	0.74 [0.45, 1.03]	0.15	4.96	<.001<.	
Internalized Weight Stigma	.61	2.06 [1.72, 2.41]	0.18	11.77	001	
Embodiment	-.04	-0.17 [-0.61, 0.28]	0.23	-0.74	.463	
Total Effect						
Disordered Eating						0.07
Constant		-2.43 [-3.36, -1.50]	0.47	-5.15	<.001	
Public Weight Stigma	.58	1.14 [0.76, 1.52]	0.19	5.89	<.001	

Figure 35

Study 2 Serial Mediation Model with Disordered Eating as the Outcome Variable



Indirect Effects of X on Y

a x e:	0.40 [0.14, 0.67], SE = 0.13
f x b:	-0.002 [-0.02, 0.02], SE = 0.01
a x d x b:	0.02 [-0.03, 0.08], SE = 0.03
Total:	0.40 [0.14, 0.67], SE = 0.14

Development of a New Measure of Resistance and Recovery Activities (Research Goal 5)

As explained in the introduction to Study 2, there were no existing measures that examined how participation in the fat liberation movement might help people resist or recover from weight stigma. I therefore created a 13-item questionnaire, which was based on the three categories of recovery strategies that I described in the introduction to this dissertation: 1) recovery strategies that embrace the self; 2) recovery strategies that embrace relationship and community; and 3) recovery strategies that embrace radical ways of being (see Table 30 for all items). I asked participants in Study 2 about activities related to the fat liberation movement that were important for healing from harms caused by weight stigma. First, I conducted an exploratory factor analysis to examine how the items hung together. Second, I created variables

using these factors. Third, I explored these variables by examining correlations with other Study 2 variables and then as moderators in the serial mediation model.

The questionnaire read as follows: “Fat people healing their relationships with their bodies often engage in activities that help with the healing process. To what extent have these activities been important for your healing?” Participants answered the extent to which each activity (listed in Table 30) was important for healing using a 5-point Likert scale, from not at all important to extremely important.

I conducted an exploratory factor analysis using principal axis factoring with Promax rotation, which is a common method used to extract correlated factors. Three factors with eigenvalues greater than one were extracted that accounted for 52% of the variance. Table 30 lists the activities and loadings.

Table 30

Exploratory Factor Analysis for Healing Activities in Study 2

Item	Factor		
	1	2	3
1. Following fat social media influencers	**.82**	-.20	.15
2. Participating in fat community online (e.g. the Fatosphere)	**.77**	.15	-.07
3. Finding/interacting with fat role models	**.69**	.11	.04
4. Forming a fat-positive identity	**.48**	.15	.21
5. Participating in fat activism	**.44**	**.45**	-.04
6. Asking for or demanding accommodations for your body in spaces that are not designed to accommodate fat bodies	-.10	**.81**	.02
7. Participating in fat community in person	.23	**.77**	-.24
8. Participating in fat-positive body movement activities (e.g., fat positive yoga, fat swims)	.13	**.61**	-.05
9. Taking up space	.07	**.56**	.18
10. Attending and responding to hunger and fullness cues (e.g., intuitive eating)	.05	.05	**.65**
11. Attending and responding to bodily needs for rest and sleep	-.21	.36	**.49**
12. Body Neutrality	.23	-.26	**.46**
13. Attending and responding to bodily needs for sensuality and sexuality	.02	.29	**.37**

Factor 1: Fat Belonging. There were some surprises in the way the variables hung together. First, I had presumed that participating online and in person fat community items would hang together, so it was interesting to see that these were different elements of resistance and

recovery experiences. When we see how the other items fit together, Factor One included activities that pertain to the intersection of the Fatosphere (Dickins et al., 2011) and to forming or re-forming one's identity to incorporate fat positivity, which I named Fat Belonging. It makes sense that fat people access fat liberation primarily online, which is how they are creating a fat-positive identity. One could consider that online fat positive spaces are safer than being fat in public, in that these spaces are moderated and if someone accessed these spaces with mal intent, they will likely be quickly banned. In addition, online spaces can contain large numbers of people who hold the same ideals, so even if they are infiltrated by someone who is not fat positive, the entire online community can provide support for one another. The online space creates the most widespread opportunity for fat belonging – it provides access to many fat role models and gives people language and opportunity to reconsider the social context that originally created their spoiled identity. It also gives people access to resources to unlearn myths about, for example, fatness and health and is a place for people to vent when they experience discrimination.

Factor 2: Fat Ownership. Factor Two items incorporated engagement in public activities in ways that claim fatness, and I named this factor Fat Ownership. Being fat in public is a far more daunting experience than being fat online. The items that loaded onto this factor require extreme courage, because they leave people open to overt maltreatment and discrimination. For example, one must be vulnerable to ask for accommodations, because they can be denied. One also must be confident that the lack of accommodations is the fault of the person who would be responsible to provide them, and the spoiled fat identity and internalized weight stigma may leave people to believe that they are at fault for having too large of a body. Fat ownership may follow from fat belonging, because it is through the process of fat belonging

that one learns that they deserve to take up space and to have accommodations for their bodies. Fat people may also learn about how to connect with their fellow fat people in public by accessing information online, which happens in fat belonging. Participating in fat activism loaded equally onto factors one and two, which made sense. Factors one and two could also be seen as kinds of fat activism, with the first factor incorporating online activism activities and the second one incorporating more public forms of activism.

Factor 3: Fat Self-Care. Activities that loaded onto the third factor were all related to self-care, and so I named this factor Fat Self-Care. Three of the items are about responding to body cues, so it makes sense that they hang together. Body neutrality is an interesting item and deserves further exploration. Within the fat liberation movement, body neutrality is a response to body positivity, which was itself a response to weight stigma and body shaming. Body neutrality is about accepting one's body as it is, without either celebrating or hating it, and many people find it easier than body positivity, which, if it means always feeling positive about one's body, can be a daunting task (see Gordon, 2020a). In terms of self-care, it makes sense that thinking about one's body in a specific way hangs with items about body attunement. In fact, it could be argued that without body neutrality, one could not be attuned at all. For fat people with spoiled identities, body neutrality is a response to body hatred, which is likely an aspect of disembodiment that results from internalized weight stigma. When one is disembodied, it is difficult to be attuned to bodily cues for self-care. So, when one uses body neutrality, which allows one to objectively consider what one's body needs without attaching specific emotions of love or hate to it, one becomes more attuned to cues.

Creating Variables from Factors. Since I created the questionnaire with the goal of finding solutions to the psychological problems caused by weight stigma, I created variables using these

factors to later test them as moderators in the serial mediation model. The variables were created using each factor and did not include the single item that cross-loaded onto two factors (participating in fat activism). This resulted in three healing activities variables: *Fat Belonging, Fat Ownership*, and *Fat Self-Care*. I considered dropping item 13 entirely because of its lower loading (.37) but decided not to as Chronbach's alpha for the scale was smaller (.45 compared to .56) when I dropped the item, and due to the exploratory nature of the scale development (Field, 2013).

I then assessed the properties of the variables, first with descriptive statistics (Table 31) and then by examining correlations with other Study 2 variables (Table 32).

Table 31

Descriptive Statistics for Healing Activities Variables

Variable	*N*	Mean	*SD*	Range	Skewness	Kurtosis	Chronbach's alpha
Fat Belonging	513	3.33	1.14	1.00 - 5.00	-.24	-.96	.83
Fat Ownership	511	2.94	1.15	1.00 - 5.00	.03	-1.02	.81
Fat Self-Care	516	3.68	0.86	1.00 - 5.00	-.62	.19	.56

All variables were normally distributed. Chronbach's alpha for the Fat Self-Care variable was lower than .70, which is generally not acceptable and indicates low reliability for the measure. For the purposes of this research, I used the variable but considered the results with extreme caution. In fact, all the results from this scale were considered with caution as the scale was not developed and should go through more rigorous processes in future research in order to be used effectively.

Table 32

Correlations Among Healing Activities Variables and Study 2 Variables

	Fat Belonging	Fat Ownership	Fat Self-Care
Comparative Body Size	.09*	.20***	-.02
Public Weight Stigma	.24***	.28***	.05
Internalized Weight Stigma	-.19***	-.10*	-.13**
Embodiment	.21***	.13**	.21***
Psychological Distress	-.03	-.03	-.01
Disordered Eating	-.05	.01	.02
Self-Esteem	.08	.08	.11*
Physical Freedom	.11*	.10*	.26***
Self-Compassion	.00	.07	.13**
Belongingness	.02	-.02	.12**
Self-Care	.14**	.05	.17***
Size Acceptance†	.14**	.05	.20***
Critical Health†	.36***	.18***	.13**
Attractiveness	.37***	.29***	.29***
Empathy†	.30***	.11*	.17***
Body Acceptance	.14**	.08	.12**
Activism Orientation†	.36***	.26***	.19***
Fat Acceptance Composite†	.48***	.30***	.26***
Fat Belonging	-	.62***	.39***
Fat Ownership		-	.46***

Note. *p < .05; **p < .01; ***p < .001. †Spearman's Rho correlations

Comparative Body Size was positively correlated (r = .20, p < .001) with Fat Ownership, which indicates that for Study 2 participants, as body size increases, so does one's claiming of one's fatness in a public way. As the Study 2 participants were not all necessarily part of the fat liberation movement, it is difficult to draw firm conclusions about this, but it does present the possibility that association with the fat liberation movement may play a role in this correlation.

The healing variables were also all positively correlated with Embodiment, indicating that resistance and recovery increase as embodiment increases. While these are only correlations,

this aligns with the theory I presented in the introduction to this paper, that resistance and recovery are connected to embodiment in some way.

Fat Belonging and Fat Ownership were both positively correlated with Public Weight Stigma, indicating that the more people were oppressed, the more they engaged in deliberate resistance and recovery activities, which also might help to explain the correlation between CBS and Fat Ownership. Because this is not a one-way causal relationship, it is also possible that engaging in more activism, either in public (Fat Ownership) or online (Fat Belonging) could have resulted in higher awareness of discrimination. Therefore, I think the associations between Public Weight Stigma and Fat Ownership and Fat Belonging are recursive: being stigmatized begets (through many potential pathways) seeking fat community online and in person, and both of those are types of fat activism AND being a member of these communities exposes people to more instances of public weight stigma (e.g., hearing the experiences of others; learning that being mistreated by doctors is a form of public stigma) and therefore increases the awareness of stigma.

Another interesting pattern is that the Healing variables were *negatively* correlated with Internalized Weight Stigma, indicating either that these activities help to reduce internalizing stigmatizing beliefs about the self, or that having fewer self-stigmatizing beliefs allow for the pursuit of healing activities, which is another example of a recursive association.

Understandably, most of these variables were strongly correlated with most of the FAAT variables; it stands to reason that both the healing activities scale and the FAAT are indicators of participation in fat liberation.

While this scale is in a nascent phase, I think it has potential utility in research in the future. I propose that a qualitative study should be conducted to generate more potential items

first, and then a thorough scale development study should be conducted. For the purposes of this dissertation, the scale offered a glimpse into areas of focus for healing activities, specifically body attunement and care, connecting online with fat liberation participants, and finding opportunities to claim one's identity in public without shame.

Do Resistance Factors Moderate the Pathways from Public Weight Stigma to Psychological Distress (Research Goal 3)?

I used Hayes' (2022) PROCESS Macro in SPSS to test moderated serial mediation models, using 10000 bootstrap samples, whereby X = Public Weight Stigma, Y = Psychological Distress, M1 = Internalized Weight Stigma, and M2 = Embodiment. First, I tested potential moderators (Health, Self-Esteem, Physical Freedom, Self-Compassion, Belongingness, Self-Care, Size Acceptance, Critical Health, Attractiveness, Empathy, Activism Orientation, Fat Acceptance Composite, Healing: Fat Community, Healing: Fat Ownership, and Healing: Self-Care) in a series of exploratory tests, testing each moderator one by one and using Model 92 whereby W moderated all paths in the model.

As hypothesized (H6), path b (the association between Embodiment and Psychological Distress) was not moderated by any of the resistance factors that I explored. While I predicted that the other paths (*paths a, c, d, e, and f*) would be moderated, only paths *a* and *d* were moderated, by Physical Freedom and Empathy, respectively. I then pared the models including Physical Freedom and Empathy by eliminating non-significant moderated paths, following Hayes' (2022) recommendations, and conducted two separate tests of moderated serial mediation models, first whereby W = Physical Freedom and using Model 83, and second whereby W = Empathy and using Model 91.

The final models are depicted in Figures 36 and 37 and the full output from the analyses are in Tables 33 and 34.

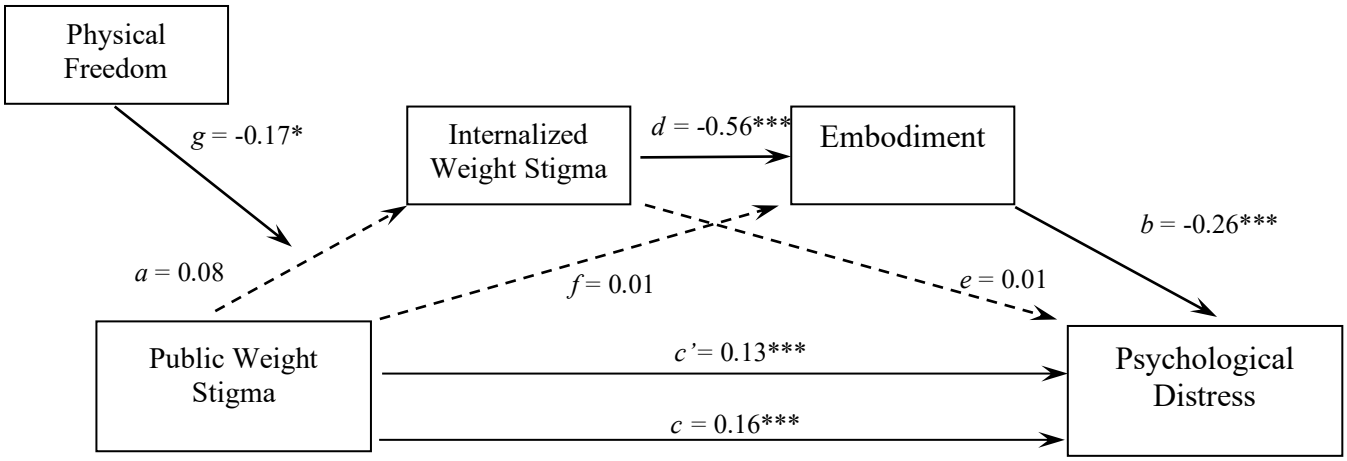
Table 33

PROCESS Results Testing Moderated Mediation Model in Study 2 (Physical Freedom)

	b[CI]	SE	*t*	*p*	R^2
					0.13
Outcome: Internalized Weight Stigma					
Constant	3.76 [3.65, 3.88]	0.06	64.02	<.001	
Public Weight Stigma	0.08 [-0.03, 0.20]	0.06	1.41	.159	
Physical Freedom	-0.57 [-0.74, -0.41]	0.08	-6.88	<.001	
Interaction: Physical Freedom X Public Weight Stigma	-0.17 [-0.32, -0.02]	0.08	-2.25	.025	
					0.53
Outcome: Embodiment					
Constant	5.02 [4.82, 5.23]	0.11	47.89	<.001	
Public Weight Stigma	0.01 [-0.06, 0.07]	0.03	0.22	.825	
Internalized Weight Stigma	-0.56 [-0.62, -0.51]	0.03	-21.50	<.001	
Outcome: Psychological Distress					0.21
Constant	4.51 [4.05, 4.97]	0.24	19.19	<.001	
Public Weight Stigma	0.13 [0.07, 0.19]	0.03	4.56	<.001	
Internalized Weight Stigma	0.01 [-0.06, 0.07]	0.03	0.13	.898	
Embodiment	-0.26 [-0.34, -0.18]	0.04	-6.04	<.001	

Figure 36

Serial Moderated Mediation Model for Study 2 (Physical Freedom)



Conditional Indirect Effects
Low Physical Freedom = .03 [.01, .05], SE = .01
Moderate Physical Freedom = .01 [-.01, .03], SE = .01
High Physical Freedom = -.01 [-.03, .02], SE = .01

Index of Moderated Mediation = -0.30 [-.05, -.01], SE = .01

Physical Freedom moderated path *a*, the association between Public Weight Stigma and Internalized Weight Stigma. Physical Freedom is a variable that encompasses physical engagement and encouragement and role modeling of physical engagement as self-care by others. The association between Public Weight Stigma and Internalized Weight Stigma was significant at low levels of Physical Freedom, but not at moderate or high levels (see Figure 36). So, for those participants in Study 2 who had moderate to high levels of Physical Freedom, the association between Public Weight Stigma and Internalized Weight Stigma was eliminated. This means that moderate to high positive engagement in physical activities as a self-care may buffer the process of internalizing weight stigma. So even if someone experiences discrimination, they

may be less likely to internalize that discrimination if they are able and encouraged to engage physically with their body and if they have role models who use physical engagement as a form of self-care.

This result points back to my original theory: that activities that promote engagement with the body could potentially help with resistance or recovery from Internalized Weight Stigma. In this case, it seems that physical engagement might be preventative, because it interrupts the association between Public and Internalized Weight Stigma. This will be discussed in more detail in the General Discussion section.

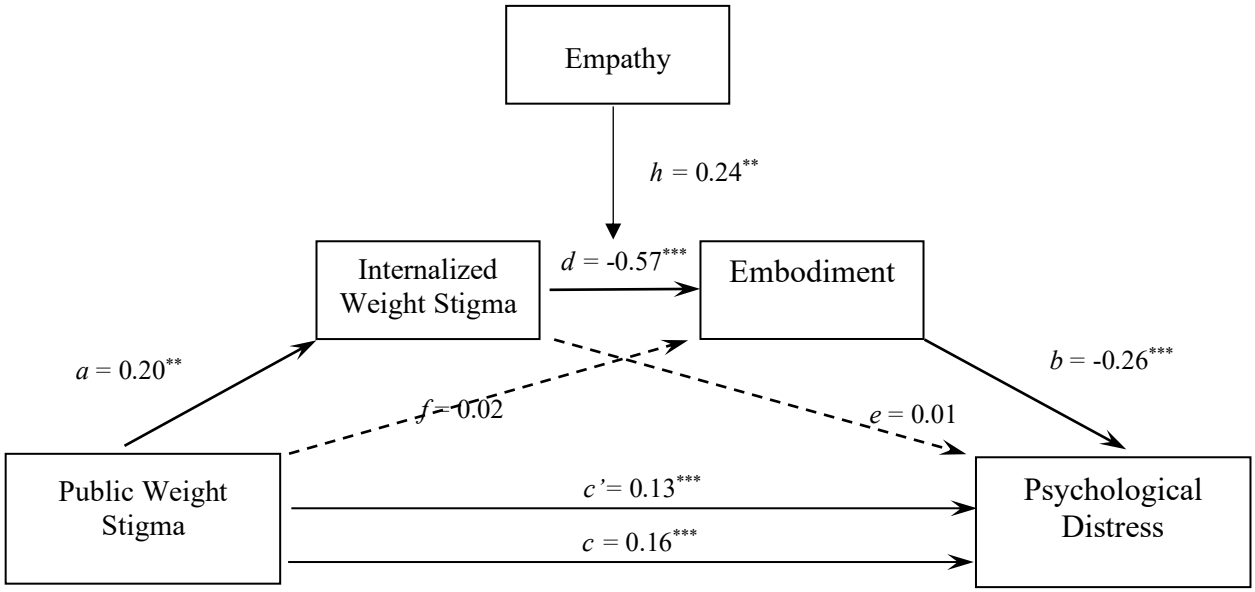
Table 34

PROCESS Results Testing Moderated Mediation Model (Empathy)

	b[CI]	SE	*t*	*p*	R^2
					0.03
Outcome: Internalized Weight Stigma					
Constant	-0.43 [-0.71, -0.15]	0.14	-3.00	.003	
Public Weight Stigma	0.20 [0.08, 0.31]	0.06	3.31	.001	
					0.53
Outcome: Embodiment					
Constant	2.84 [2.68, 2.99]	0.08	36.17	<.001	
Public Weight Stigma	0.02 [-0.04, 0.08]	0.03	0.63	.529	
Internalized Weight Stigma	-0.57 [-0.62, -0.52]	0.03	-21.69	<.001	
Empathy	-0.06 [-0.25, 0,13]	0.10	-0.61	.542	
Interaction: Empathy X Internalized Weight Stigma	0.24 [0.08, 0.41]	0.08	2.91	.004	
Outcome: Psychological Distress					0.21
Constant	4.26 [3.98, 4.53]	0.14	30.39	<.001	
Public Weight Stigma	0.13 [0.07, 0.18]	0.03	4.51	<.001	
Internalized Weight Stigma	0.01 [-0.06, 0.07]	0.03	0.01	.939	
Embodiment	-0.26 [-0.35, -0.18]	0.04	-6.11	<.001	

Figure 37

Serial Moderated Mediation Model for Study 2 (Empathy)



Conditional Indirect Effects
Low Empathy = .03 [.01, .06], SE = .01
Moderate Empathy = .03 [.01, .05], SE = .01
High Empathy = .03 [.01, .05], SE = .01

Index of Moderated Mediation = -0.01 [-.03, -.01], SE = .01

Empathy is a subscale of the Fat Attitudes Assessment Toolkit and is essentially the awareness that fat discrimination exists and that it is a problem. The scale measures views that are less radical than are measured by other FAAT scales, as it is more about awareness than engaging in activism. The path between Internalized Weight Stigma and Embodiment varies by level of empathy, such that higher levels of empathy predicted a weaker negative association between internalized stigma and embodiment. Therefore, I conclude with caution that having awareness of fat discrimination somewhat buffers the traumatic process of bodily disconnection.

This is interesting especially in the context of the other FAAT subscales that indicate more radical views, and which did not emerge as significant moderators.

Why would having more radical views on fat liberation not help to mitigate the effects of public weight stigma on psychological distress? I think that it is possible that having more radical views and more involvement in activism could be a different kind of traumatic experience and could still result in negative psychological impacts. When one first encounters ideas about fat liberation, one realizes that being fat and all the negative things associated with it are not one's fault. This is a liberating viewpoint and may result in some relief (i.e., "I'm not the problem). Within this study, these views could be considered within the FAAT Empathy scale. If one moves beyond this realization to the realization that fat oppression is constructed and perpetuated by society at large and likely many people one is close to, new emotions such as grief and anger may arise. Further research into fat liberation and learning about the suffering of other fat people, the overt and covert ways weight stigma is perpetuated, and the choice one is faced with to step outside of the stigma paradigm and possibly lose relationships or life opportunities as a result, likely increases psychological distress. So, having radical views does not necessarily help anyone to feel better and possibly could make people feel worse. In addition, changing one's viewpoint does not change the fact that oppression and marginalization are ongoing, and so for people who are involved in fat liberation, they are likely even more aware of micro and macro aggressions than a person who is not aware of it. This likely also increases distress. Similarly, healing activities are perhaps somewhat helpful but do not make a significant impact on a spoiled identity, because how could they? An individual cannot solve a societal problem by themselves.

In summary, both Empathy and Physical Freedom have implications for intervention, future research and for understanding more about the way these processes work. I will explore these issues in detail in the General Discussion.

User Feedback

Study 2 participants were asked, “It is our intention to improve fat people's lives with this research. If anything was harmful or poorly worded, please let us know.” 122 participants responded to this item. Of these responses, 62 were either positive (e.g., “all good!”) or neutral (e.g., “n/a”). Four responses were negative about the general tone of the survey (e.g., “I can already tell you're trying to justify fat activism. Stop being woke.”). Forty-one responses were critical of the options available based on context, for example, asking questions about sexual attractiveness without n/a options available for asexual people. Or, because the survey was conducted during the COVID-19 pandemic, some users were concerned that their responses about activity were different than they would have been before the pandemic. Fourteen responses were critical about the assumptions projected by the survey. One criticism was that the survey perpetrated healthism. Another was that terms like “fat shaming” perpetrated weight stigma. Another was that the survey assumed that people were “healing” and that this was not helpful. Finally, one user said “I don't use "fat acceptance" language. I think about fat liberation. Or fatness. I want freedom not acceptance.”

Lessons Learned. The user feedback section of this survey was very valuable, and I think the comments about healthism, healing, and fat acceptance language should inform future research. In addition, the variety in comments showed that not all participants were engaged in fat liberation, and future research that targets this population should have more questions about involvement to draw specific conclusions about the impact of engagement in fat liberation.

Conclusions

In summary, with Study 2 I was able to answer many questions and to achieve all five of my research goals. Of most importance, and as part of Research Goal 3, I found that only Physical Freedom and Empathy moderated the pathways from Public Weight Stigma to Psychological Distress. These results have implications for intervention and future research, but of more importance is that I tested many other moderators that did not impact the model. This shows that, as discussed above and as will be discussed in more detail in the next section, expecting stigmatized individuals to heal from a spoiled identity without changing the society that perpetuates the stigma is unrealistic and unfair. The remainder of Study 2 results are summarized below, and are organized by the remainder of my research goals.

Research Goal 1 was achieved by testing the mediation model, wherein I found similar results as in Study 1, which demonstrated that Public Weight Stigma leads to Internalized Weight Stigma, which leads to lowered Embodiment, and which results in Psychological Distress. In Study 1, I used a proxy for Public Weight Stigma (Fat Identity), and these results demonstrate the likelihood that Fat Identity is a useful proxy for Public Weight Stigma because the pathways were similar.

Research Goal 2 was to identify important resistance factors for fat people. I accomplished this by creating a new measure that I used to determine certain healing activities, but as these did not emerge as moderators there is a lack of evidence for their importance for the processes I am studying.

Research Goal 4 was to explore Disordered Eating as an outcome variable. This analysis showed that, as in Study 1, the path from Public Weight Stigma to Disordered Eating is only

mediated by Internalized Weight Stigma, though questions remain about the role Embodiment might play in this.

Research Goal 5 was to examine the measurement of various constructs, with some key results. First, I found that fat people use a variety of terms to describe their bodies, and these are implicated in identity and group membership, which deserves more attention in research. One example is the word ‘fat’, which may indicate fat liberation for some and the opposite for others, because some use the word as a neutral descriptor, and some use it pejoratively. Second, I found further evidence that Body Acceptance and Internalized Weight Stigma may be measuring the same underlying construct, which means there are likely problems with the way Internalized Weight Stigma is measured and understood. Finally, there are problems with the way body size is measured in fat research which should be addressed to improve both the scientific literature and to prevent further stigmatization of fat people who participate in fat research.

Further to Research Goal 5, I wanted to explore the utility of a relatively new measure of Fat Acceptance. This was accomplished in Study 3, below.

Study 3: Exploring the Measure of Fat Acceptance with the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022)

The Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) was created to measure attitudes about fatness in a more contemporary, nuanced way than previous scales (e.g., Crandall, 1994; Morrison & O'Connor, 1999). These older measures assessed negative attitudes towards fat people and perpetuated weight stigma by using derogatory language and dehumanizing statements (Cain et al., 2022). In contrast, the FAAT does not promote stigmatizing views about fatness, and includes measurement of awareness of discrimination and fat activism (Cain et al., 2022).

The development of the FAAT (Cain et al., 2022) consisted of three studies. In Study 1, the author developed a large item pool for the scale, followed by an exploratory factor analysis (EFA) to identify latent constructs, and finally the use of psychometric tests to reduce the total number of items and to measure internal consistency among subscales. In Study 2, the author conducted a second EFA with another participant pool, followed by a confirmatory factor analysis (CFA) with different participants to both measure the fit of the structure and to identify redundant items. The third study assessed test-retest reliability of the final scale.

The full FAAT measure is comprised of nine subscales and two composite scales. These are outlined in Table 35 (Table 40 contains all items from each scale). Broadly, the FAAT measures three areas: first, an array of types of fat acceptance, which range from empathy for fat oppression, to what some may consider more advanced fat liberation attitudes that differ from current societal norms, namely that fatness is not an indicator of poor health. Second, the FAAT measures understanding of social determinants of body size. Third, the FAAT measures the degree to which one is accepting of one's own body.

Table 35

FAAT Subscales and Descriptors

Scale Name	Construct Measured
Empathy	Empathic attitudes about fat people
Activism Orientation	Recognition that weight-based discrimination is serious and unjust
Size Acceptance	Acceptance of diverse body sizes
Attractiveness	Agreement that fat people are attractive
Critical Health	Understanding that high body weight is not an indicator of poor health
Body Acceptance	Acceptance and satisfaction with one's own body
General Complexity	Recognition that fatness is caused by many external factors and not within personal control
Socioeconomic Complexity	Recognition that fatness can be caused by socioeconomic factors
Attribution Complexity	Composite of General and Socioeconomic Complexity
Fat Acceptance Composite	Composite of Empathy, Activism Orientation, Size Acceptance, Attractiveness, and Critical Health

I first chose to use the FAAT to explore whether fat acceptance moderated the association between public weight stigma and psychological distress. After I found the scale, I developed a secondary research goal, which was to explore the utility of the FAAT among fat-identified people. This is important because the FAAT is the result of research that exists outside

the outdated paradigm that marginalizes and oppresses fat people. Since the present research aims to contribute to anti-oppressive fat research, it was essential to incorporate as much of the existing similar research as possible. In addition, it was one of the only scales measuring anything to do with fatness that did not use stigmatizing language, which was also very important.

As it is a relatively new scale, it has not yet been validated among fat-identified people. While a full-fledged validation study was outside of the scope of the present research, Study 3 answered the following exploratory questions:

1) How does fat acceptance differ among participants of different body sizes?
2) How do FAAT variables associate with other variables in the present studies and what meaning can be gleaned from that?
3) How do the FAAT items in the present studies load in a confirmatory factor analysis, and how do these compare to the original FAAT study?

To answer these questions, I used six of the eight FAAT subscales in my studies (i.e., all subscales except Socioeconomic Complexity and General Complexity). In all comparisons, I used the published data from the FAAT Study 2 (Cain et al., 2022) as it was the study that conducted the confirmatory factor analysis. Going forward, the FAAT Study 2 will be discussed as "the FAAT Study."

Methods

Participants and Procedure

In Study 3, I analyzed data from Studies 1 and 2, so participants included all participants from both studies (combined $N = 1063$). Please see the *Participants* sections in both studies for

information about recruitment and exclusions. See Tables 5 and 21 for complete demographic information about all participants.

In Study 3, I analyzed the following measures, which were included in both studies. Note that I did not include Public Weight Stigma, as it was not valid in Study 1. The measures were described in full in Studies 1 and 2, so I simply offer brief definitions here as a reminder.

Body Acceptance. Participants answered the 4-item Body Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess their level of self-acceptance of their body.

Size Acceptance. Participants answered the Size Acceptance subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness of and agreement with size acceptance.

Critical Health. Participants answered the Critical Health subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant awareness that fatness is not associated with poor health.

Empathy. Participants answered the Empathy subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant empathy for the discrimination faced by fat people and its associated impact.

Activism Orientation. Participants answered the Activism Orientation subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant agreement with the idea that discrimination against fat people is unacceptable.

Attractiveness. Participants answered the Attractiveness subscale from the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022) to assess participant attraction to fat people.

Fat Acceptance Composite. The Fat Acceptance Composite is an overall score of the degree to which participants' views align with critical fat perspectives. It was derived by calculating the mean score of the Empathy, Activism Orientation, Attractiveness, Critical Health, and Size Acceptance scales of the Fat Attitudes Assessment Toolkit (FAAT; Cain et al., 2022).

Body Size. Body size was assessed in two different ways: a medical index of body size (BMI; Study 1 only), and a subjective comparison measure of body size (CBS; Studies 1 and 2).

Internalized Weight Stigma. Participants answered the 11-item Modified Weight Bias Internalization Scale (Pearl & Puhl, 2014).

Embodiment. Participants answered the 7-item Positive Body Connection and Comfort Subscale of the Experience of Embodiment Scale (EES; Piran, Teall, & Counsell, 2020).

Psychological Distress. Participants answered 10 questions assessing symptoms of anxiety and depression based on DSM-5 criteria (American Psychiatric Association, 2013).

Disordered Eating. Participants answered six items from the Eating Attitudes Test-26 (EAT-26; Garner et al., 1982) assessing symptoms of disordered eating.

Results & Discussion

Comparing the FAAT Study to the Present Studies

First, I compared the demographic information from the FAAT Study to Studies 1 and 2, to establish demographic differences between participants in all studies to aid in interpretation.

Demographics. Table 36 compares the demographic information from the present research to the FAAT participant demographic information.

Table 36

Comparison of Participant Demographics in the FAAT Study 2 and the Present Studies

	FAAT Study 2	Present Study 1	Present Study 2
N	390	519	544
Age			
Range	18-71	19-53	19-80
Mean *(SD)*	31.68 *(10.2)*	21.2 *(3.65)*	33.08 *(10.47)*
Gender			
Women (%)	49	81.1	64.9
Men (%)	50.2	16	2.4
Non-conforming (%)	0.8	2.7	27.6
% Fat Identified	22.3 %	39.3 %	100%
Recruitment Pool	Prolific (crowdsourcing platform), USA	University of Victoria	Targeted Fat Liberation social media

There were some key demographic differences between all studies. The participants in the present Study 1 were considerably younger than the other studies, while the FAAT Study 2 and the present Study 2 had similar age means and ranges. One third of the present Study 2 participants were gender non-conforming, while the other studies had far lower proportions of gender non-conforming participants. In addition, the FAAT Study 2 had a far higher (50%) proportion of men than both Study 1 and Study 2 (16% and 2% respectively). In terms of diversity of viewpoints, the Study 1 participants were all students at the same university, so may have had more homogenous views than a random sample from across the United States. Study 2 participants were all (at least) aware of the Fat Liberation movement. In addition, the present studies both had higher percentages of fat-identified people (39% and 100%, respectively) than the FAAT Study 2 (22%). With all these differences in mind, participants from the present studies were probably more inclined to agree with the kinds of attitudes the FAAT was measuring compared with the random sample in the FAAT study. Therefore, it stands to reason

that scale means for the present studies would be higher than the FAAT Study 2. Table 37 shows scale means for each study.

Descriptive Statistics.

Table 37

Means and Standard Deviations of FAAT Scale Means for the FAAT Study 2 and the present studies

	FAAT Study		Study 1		Study 2	
	N	*Mean (SD)*	*N*	*Mean (SD)*	*N*	*Mean (SD)*
Body Acceptance	390	4.46 (1.46)	519	4.21 (1.56)	541	3.18 (1.57)
Size Acceptance	390	4.70 (1.13)	519	5.90 (1.30)	543	6.56 (0.72)
Critical Health	390	4.93 (1.31)	518	5.52 (1.19)	524	6.54 (0.78)
Empathy	390	5.24 (1.10)	517	6.01 (0.96)	525	6.74 (0.53)
Activism Orientation	390	4.61 (1.46)	519	5.36 (1.37)	523	6.50 (0.84)
Attractiveness	390	3.79 (1.36)	519	4.42 (1.40)	522	5.39 (1.10)
Fat Acceptance Composite	390	4.70 (1.13)	517	5.44 (1.07)	518	6.35 0.63)

I conducted one-way ANOVAs to test whether there were significant differences between the subscale means for the three studies. Because I used reported data from the FAAT paper, not all information (i.e. individual data points) was available. I used an online calculator (Interactive Statistics, n.d.) to calculate the one-way ANOVAs and post-hoc tests. Analyses in Studies 1 and 2 showed that the data for both studies were skewed, so these data violated the assumption of normality required for ANOVA. However, because I did not have individual data points for the FAAT Study, I could not run a Kruskal-Wallis ANOVA (the recommended test for skewed data). I therefore interpreted these results with extreme caution. Table 38 shows the results of the ANOVAs.

Table 38

One-Way ANOVA Tests of Mean Differences of FAAT Subscales Between Studies

One Way ANOVA						Post-Hoc Tests (Tukey's HSD)			
Variable	Sums of Squares	df	Mean Square	F	*p*	Group Comparison	Diff	95% CI	*p*
Body Acceptance									
Between Groups	452.56	2	226.28	95.72	<.001	FAAT Study vs. Study 1	0.25	-.05, -.001	.041
Within Groups	3420.84	1447	2.36			FAAT Study vs. Study 2	-1.28	-1.52, -1.04	<.001
Total	3873.41	1449				Study 1 vs. Study 2	-1.03	-1.25, -0.81	<.001
Size Acceptance									
Between Groups	789.86	2	394.93	346.17	<.001	FAAT Study vs. Study 1	1.20	1.03, 1.37	<.001
Within Groups	1653.11	1449	1.14			FAAT Study vs. Study 2	1.86	1.69, 2.03	<.001
Total	2442.96	1451				Study 1 vs. Study 2	0.66	0.51, 0.81	<.001
Critical Health									
Between Groups	616.23	2	308.12	256.31	<.001	FAAT Study vs. Study 1	0.59	0.42, 0.76	<.001
Within Groups	1717.88	1429	1.20			FAAT Study vs. Study 2	1.61	1.44, 1.78	<.001
Total	2334.11	1431				Study 1 vs. Study 2	1.02	0.86, 1.18	<.001
Empathy									
Between Groups	506.20	2	253.10	330.78	<.001	FAAT Study vs. Study 1	0.77	0.63, 0.91	<.001
Within Groups	1093.43	1429	0.77			FAAT Study vs. Study 2	1.50	1.36, 1.64	<.001
Total	1599.63	1431				Study 1 vs. Study 2	0.73	0.60, 0.86	<.001
Activism Orientation									
Between Groups	834.65	2	417.32	274.85	<.001	FAAT Study vs. Study 1	0.75	0.56, 0.94	<.001
Within Groups	2169.75	1429	1.52			FAAT Study vs. Study 2	1.89	1.70, 2.08	<.001
Total	3004.40	1431				Study 1 vs. Study 2	1.14	0.96, 1.32	<.001
Attractiveness									
Between Groups	598.47	2	299.23	180.67	<.001	FAAT Study vs. Study 1	0.63	0.43, 0.83	<.001
Within Groups	2365.18	1428	1.66			FAAT Study vs. Study 2	1.60	1.40, 1.80	<.001
Total	2963.65	1430				Study 1 vs. Study 2	0.97	0.78, 1.16	<.001
Fat Acceptance Comp									
Between Groups	619.08	2	309.54	340.51	<.001	FAAT Study vs. Study 1	0.74	0.59, 0.89	<.001
Within Groups	1292.68	1422	0.91			FAAT Study vs. Study 2	1.65	1.50, 1.80	<.001
Total	1911.76	1424				Study 1 vs. Study 2	0.91	0.77, 1.05	<.001

The one-way ANOVAs showed that for all scales, group means were significantly different among studies. Post-hoc Tukey's tests showed that for all scales except the Body Acceptance scale, the present Study 2 had significantly higher means than the present Study 1, and the present Study 1 had significantly higher means than the FAAT Study. This is logical, as we would expect participants who have been exposed to fat liberation to have the highest levels of fat acceptance, and for a university sample to have higher levels of fat acceptance than the general public.

The only scale that did not show this pattern was Body Acceptance. Rather than measuring fat acceptance of others, Body Acceptance measures acceptance of one's own body. Post-hoc tests showed no difference in means between Study 1 and the FAAT Study. However, participants in the present Study 2 had significantly lower levels of Body Acceptance than participants in the other studies. As has been discussed in Studies 1 and 2, this indicates (with caution) that that having a larger body impacts body acceptance, and that body acceptance is difficult to achieve even when exposed to fat liberation.

Confirmatory Factor Analysis

The FAAT Study did not report a full model CFA on their data. Rather, they ran individual CFAs for each factor and reported fit indices for each factor. I conducted the CFA using the same method as the FAAT Study, using SPSS Amos Version 29.0. The original FAAT study used the following indices to establish the consistency of the model fit: the Root Mean Square Error of Estimation (RMSEA; values < .08 indicate reasonable fit and values < .05 indicate good fit); the Comparative Fit Index (CFI; values > .90 indicate good fit); the Tucker–Lewis Fit Index (TLI; values > .90 indicate good fit); and χ^2 [a nonsignificant χ^2, ($p > .05$) indicates good model fit]). Table 39 reports model fit indicators for all factors and studies.

Table 39

Summary of CFA Model Fit Indicators for all Studies

FAAT Subscale	χ^2	*p*	*df*	χ^2/df	TLI	CFI	RMSEA
Empathy							
FAAT Study	26.60	.014	13	2.046	.984	.990	.052
Study 1	75.093	<.001	14	5.364	.955	.970	.092
Study 2	91.366	<.001	14	6.526	.941	.961	.101
Activism Orientation							
FAAT Study	33.74	.001	12	2.811	.984	.991	.068
Study 1	116.232	<.001	14	8.302	.957	.971	.119
Study 2	95.621	<.001	14	6.830	.965	.977	.104
Size Acceptance							
FAAT Study	17.40	.026	8	2.175	.991	.995	.055
Study 1	143.781	<.001	9	15.976	.921	.952	.170
Study 2	37.836	<.001	9	4.204	.974	.984	.077
Attractiveness							
FAAT Study	1.48	.224	1	1.477	.996	1.00	.035
Study 1	25.122	<.001	5	5.020	.980	.990	.088
Study 2	32.911	<.001	5	6.582	.964	.982	.101
Critical Health							
FAAT Study	11.83	.037	5	2.367	.979	.990	.059
Study 1	72.037	<.001	5	14.407	.884	.942	.161
Study 2	45.639	<.001	5	9.128	.954	.977	.122
Body Acceptance							
FAAT Study	1.52	.218	1	1.52	.996	.952	.055
Study 1	75.100	<.001	2	37.55	.804	.935	.266
Study 2	36.025	<.001	2	18.012	.902	.967	.177

Note: Abbreviations: CFA, confirmatory factor analysis; CFI, comparative fit index; FAAT, Fat Attitudes Assessment Toolkit; RMSEA, Root Mean Square Error of Estimation; TLI, Tucker–Lewis Fit Index.

For the present studies, all indicators except for the TLI and CFI generally showed poor model fit. This is likely due to the differences in sample demographics among studies. It is likely that for people who agree with most items, fewer latent factors would emerge, as there is less nuance among the different aspects of Fat Liberation. For example, if one is aware of the problems with conflating fatness and health, and agrees that this way of thinking is wrong, one is also equally aware of and in agreement with size acceptance, and activism orientation, and so on. Since the models did not show good fit statistics, factor loadings are not worth discussing. For interest's sake, factor loadings for all studies are reported in Table 40.

Table 40

CFA Item Factor Loadings for all Studies

FAAT Subscale		1	2	3	4	5	6
Empathy (7 items)							
Fat people face discrimination in many areas of life	FAAT Study	0.676					
	Study 1	0.746					
	Study 2	0.726					
It is hard to accept your body if it differs from what the media represents as normal	FAAT Study	0.633					
	Study 1	0.711					
	Study 2	0.530					
Negative beliefs about body weight lead to negative assumptions about fat people	FAAT Study	0.743					
	Study 1	0.758					
	Study 2	0.710					
Health professionals should be aware of the negative impact of weight stigma	FAAT Study	0.494					
	Study 1	0.812					
	Study 2	0.737					
Fat people are treated badly because of the way society depicts fat bodies	FAAT Study	0.611					
	Study 1	0.845					
	Study 2	0.815					
Weight-based discrimination negatively impacts on well-being	FAAT Study	0.620					
	Study 1	0.826					
	Study 2	0.907					
Concern for health is used as an excuse to judge fat people	FAAT Study	0.601					
	Study 1	0.645					
	Study 2	0.666					
Activism Orientation (7 items)							
Discrimination due to fatness leads to a denial of human rights	FAAT Study		0.697				
	Study 1		0.791				
	Study 2		0.784				
We need to take weight-based discrimination as	FAAT Study		0.843				
	Study 1		0.835				
	Study 2		0.789				

seriously as other forms of discrimination		
Activism is necessary because of the discrimination fat people experience	FAAT Study Study 1 Study 2	0.705 0.915 0.928
The existence of organizations to lobby for the rights of fat people is a good thing	FAAT Study Study 1 Study 2	0.567 0.844 0.917
Discussions and programs recognizing diversity need to include body weight	FAAT Study Study 1 Study 2	0.576 0.859 0.838
We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming	FAAT Study Study 1 Study 2	0.416 0.873 0.819
There is a need for Fat Activism because fat shaming is widespread	FAAT Study Study 1 Study 2	0.538 0.909 0.880
Size Acceptance (6 items)		
We should celebrate all bodies	FAAT Study Study 1 Study 2	0.532 0.811 0.742
Size acceptance is an important social movement	FAAT Study Study 1 Study 2	0.529 0.896 0.874
Size acceptance is a foundation for making healthy lifestyle choices	FAAT Study Study 1 Study 2	0.560 0.826 0.462
We need more positive images of fat people in the media	FAAT Study Study 1 Study 2	0.447 0.873 0.739
Rather than fat people changing their bodies; society needs to change the	FAAT Study Study 1 Study 2	0.512 0.848 0.781

way it responds to fat bodies				
Size acceptance should be encouraged	FAAT Study	0.580		
	Study 1	0.893		
	Study 2	0.904		
Attractiveness (5 items)				
Fat people are sexy	FAAT Study		0.833	
	Study 1		0.914	
	Study 2		0.893	
If I were single, I would go out with a fat person	FAAT Study		0.655	
	Study 1		0.846	
	Study 2		0.719	
Fat people are attractive	FAAT Study		0.801	
	Study 1		0.904	
	Study 2		0.931	
Confident fat people are appealing	FAAT Study		0.599	
	Study 1		0.821	
	Study 2		0.684	
Fat people are sexier than thin people	FAAT Study		0.692	
	Study 1		0.717	
	Study 2		0.598	
Critical Health (5 items)				
Body weight isn't a reliable indicator of health	FAAT Study			0.632
	Study 1			0.740
	Study 2			0.817
Health is not predicted solely by body weight	FAAT Study			0.610
	Study 1			0.592
	Study 2			0.756
Body Mass Index (BMI) is a poor indicator of health	FAAT Study			0.508
	Study 1			0.544
	Study 2			0.731
Fat people are not necessarily unhealthy	FAAT Study			0.597
	Study 1			0.893
	Study 2			0.872
Healthy bodies come in all shapes and sizes	FAAT Study			0.478
	Study 1			0.833

	Study 2	0.888	
Body Acceptance (4 items)			
I feel good about my body	FAAT Study		0.850
	Study 1		0.855
	Study 2		0.841
I feel happy about my weight	FAAT Study		0.836
	Study 1		0.864
	Study 2		0.881
I do not feel defined by my body weight	FAAT Study		0.641
	Study 1		0.725
	Study 2		0.579
My self-esteem is not impacted by my body weight	FAAT Study		0.719
	Study 1		0.740
	Study 2		0.777

Note: FAAT, Fat Attitudes Assessment Toolkit

Table 41

Factor Correlations from EFA in FAAT Study 2 (Cain et al., 2022)

	1	2	3	4	5
1. Body Acceptance					
2. Size Acceptance	.03				
3. Critical Health	.09	.65**			
4. Attractiveness	.04	.66**	.57**		
5. Empathy	-.09	.73**	.58**	.48**	
6. Activism Orientation	.01	.73**	.61**	.62**	.75**

Table 42

Factor Correlations from the Present Studies

	1	2	3	4	5	6
1. Body Acceptance	-	-.07	-.08	-.04	-.21**	-.06
2. Size Acceptance	.45***	-	.62**	.57**	.66**	.71**
3. Critical Health	.27***	.52***	-	.62**	.61**	.59**
4. Attractiveness	.42***	.14**	.40***	-	.47**	.54**
5. Empathy	-.10*	.50***	.46***	.20***	-	.74**
6. Activism Orientation	.10*	.51***	.55***	.33***	.60***	-

Note: Study 1 is above the diagonal

In terms of factor correlations, most of the correlations in the present study were similar to the FAAT Study with a few key differences. Body Acceptance was not correlated with any of the other scales in FAAT. It was only correlated with Empathy in Study 1, but in Study 2 it was correlated strongly with everything except Empathy, (which it was weakly negatively correlated with) and Activism Orientation. This means that among fat people who were exposed to fat liberation, Body Acceptance is linked to other forms of fat acceptance, while it is an independent construct for the general population. Importantly, this indicates that fat acceptance may be a critical factor in body acceptance for fat people. More specifically, knowing that being fat does not mean you are unhealthy, being attracted to fat people, and knowing that fat bodies have a right to exist are all associated with higher body acceptance scores.

FAAT Subscale Correlations with Variables in My Dissertation Research

To understand the differences in fat attitudes in both studies included in my dissertation, I explored correlations among each FAAT subscale and other variables in the present studies to examine how they differed in terms of body size and between the thin participants in Study 1, the relatively smaller-bodied fat participants in Study 1, and the larger-bodied fat participants in

Study 2. Table 42 reports correlations among the FAAT Subscales and the other variables. I have only included variables that show differences between groups.

Table 43

Correlations Among FAAT Subscales and Other Study Variables by Study Group

	Study 1 Full Sample	Study 1 No Fat ID	Study 1 Fat ID	Study 2
Body Acceptance				
Body Mass Index	-.27***	.03	-.30***	n/a
Comparative Body Size	-.32***	-.09	-.43***	-.13**
Size Acceptance				
Body Mass Index	.05	.19**	-.03	n/a
Comparative Body Size	.06	-.03	-.02	-.05
Internalized Weight Stigma	.09*	.07	.00	-.18***
Embodiment	.12**	-.15**	-.01	.17***
Psychological Distress	.16***	.20***	.06	.02
Disordered Eating	.08	.09	-.03	-.12***
Self-Esteem	.20***	-.21***	-.13	.11*
Critical Health				
Body Mass Index	.06	-.07	.24**	n/a
Comparative Body Size	.11*	.04	.11	.02
Internalized Weight Stigma	.08	.06	.03	-.29***
Embodiment	-.14**	-.15**	-.07	.19***
Psychological Distress	.17***	.17**	.14	.03
Disordered Eating	.05	.09	-.07	-.26***
Health	-.05	-.04	-.04	.14**
Self-Esteem	-.21***	-.22***	-.17*	.11*
Self-Care	-.14**	-.14*	-.10	.10*
Attractiveness				
Body Mass Index	.02	.19**	.09	n/a
Comparative Body Size	.10*	-.01	.07	-.03
Internalized Weight Stigma	.08	.10	-.08	-.45***
Embodiment	-.11*	-.16**	.03	.35***
Psychological Distress	.20***	.26***	.05	-.02
Disordered Eating	.08	.14*	-.11	-.20***
Health	-.15**	-.18**	-.06	.14**
Self-Esteem	-.18***	-.24**	-.05	.21***
Physical Freedom	-.12**	-.14**	-.07	.18***
Self-Compassion	-.08	-.12*	.05	.19***
Self-Care	-.10*	-.17**	.04	.14**
Empathy				
Internalized Weight Stigma	.19***	.18**	.13	.06
Embodiment	-.23***	-.25***	-.14	-.06

Disordered Eating	.21***	.20***	.15*	.04
Self-Esteem	-.22***	-.23***	-.18*	-.08
Belongingness	-.02	-.03	.03	-.12**
Self-Care	-.19***	-.21***	-.13	-.05
Activism Orientation				
Comparative Body Size	.03	.00	-.07	.11*
Internalized Weight Stigma	.08	.08	.02	-.15**
Embodiment	-.13**	-.13*	-.08	.07
Psychological Distress	.16***	.15**	.14*	.07
Disordered Eating	.09*	.08	.06	-.16***
Self-Esteem	-.16***	-.15**	-.14*	.09*
Physical Freedom	-.07	.01	-.15*	-.05

Note. *$p < .05$; **$p < .01$; ***$p < .001$

Overall Correlation Patterns. All FAAT Subscales except Empathy were negatively correlated with Internalized Weight Stigma in Study 2, but not in Study 1. To explore these differences, I compared correlations between the full sample in Study 1 and Study 2, explained below in Table 44.

Table 44

Comparing Correlations Between FAAT Subscales and Internalized Weight Stigma for Studies 1 and 2 in this Dissertation

	Study 1	Study 2	*z*
Size Acceptance	.09*	-.18***	4.42***
Critical Health	.08	-.29***	6.15***
Attractiveness	.08	-.45***	9.18***
Activism Orientation	.08	-.15**	3.76***

Note. *$p < .05$; **$p < .01$; ***$p < .001$

The results in Table 44 demonstrate that as fat acceptance of all kinds increases, Internalized Weight Stigma decreases among fat people who were exposed to fat liberation in Study 2; this association was not present for the University sample in Study 1. This association

between FAAT scales and internalized weight stigma among the fat liberation sample stands to reason because for fat people, fat acceptance may be a form of self-acceptance, and Internalized Weight Stigma is the opposite of self-acceptance for fat people. It is interesting that Empathy was the only subscale that did not negatively correlate with Internalized Weight Stigma, also because it was the only subscale that emerged as a moderator in Study 2. As discussed in Study 2, Empathy could be conceptualized as stage one of fat acceptance. It is an awareness that weight bias exists but is not as radical as the other subscales, so perhaps that is why the same pattern was not seen with this variable.

Conclusions

In summary, the FAAT (Cain et al., 2022) is best used to understand nuanced differences in types of fat acceptance and should be further validated using random samples and in other countries. The FAAT is an ideal scale to use, for example, in a longitudinal study of medical professionals to measure things like changing attitudes about fatness. In terms of using the FAAT in research with fat people, it might be interesting to look at differences in fat attitudes among a random sample of fat people that were not all exposed to the fat liberation movement to see how it is associated with other constructs such as internalized weight stigma. It could be useful to consider creating a short form of the scale to use among fat-liberated populations.

Future research should use the FAAT (Cain et al., 2022) to better understand the nuances between body size, Body Acceptance, and Fat Acceptance, and should investigate the effect of fat liberation on self-acceptance among fat people.

General Discussion

Implications for Theory and Research

The primary purpose of this research was to understand the experiences of fat people and how they, specifically are affected by public weight stigma. I found evidence for the theoretical model, wherein public weight stigma is associated with internalized weight stigma, which is in turn associated with lowered embodiment, which in turn is associated with psychological distress. To my knowledge, this model has not been previously examined in the literature. These results are noteworthy because they provide a lens through which we can better understand both the harmful impacts of public weight stigma on fat people and the mechanisms that propagate these outcomes.

A key theoretical implication of this work is a deepened understanding of fat embodiment and disembodiment. It lends evidence to the theory that disembodiment is a product of complex trauma (Burstow, 2016) and adds to the literature because fat embodiment has rarely been studied. As I proposed in the introduction to this dissertation, internalized weight stigma is the crux of the traumatic process and should be conceptualized as the thing to recover from. I also proposed that resistance and/or recovery will include embodiment.

I hypothesized that individual coping strategies are likely not enough to mitigate the effects of societal bias. My findings affirm this and further suggest that even participation in the radical fat community fails to buffer against the effect of weight stigma. Since I found that greater positive physical experiences buffered individuals experiencing weight stigma from developing internalized weight stigma, my hypothesis that embodiment practices could help to buffer some of the resulting process was supported.

However, embodiment is not easy to achieve. Fat people may have daily experiences that lead them to believe that they have a spoiled identity. So, asking people who have such experiences to engage their body physically is a tall order, especially when physical movement may have been experienced as a form of punishment or only as a means to change their problematic body (see Ashdown-Franks et al., 2022). This presents a paradox: fat people's bodies are externally identified as problematic, which results in trauma that disconnects fat people from their bodies, but to resist or recover they must reconnect with their bodies in a positive way.

I also found that fat empathy, or knowing that fat people are marginalized, buffers the pathway from internalized weight stigma to disembodiment. However, no other measures of fat acceptance were found to moderate the model. This has theoretical implications in that it presents the possibility that engagement in the fat liberation movement may not have positive effects on fat peoples' mental health. If this is true, it deserves more attention in research. Another possibility is that the present research did not find or measure resistance or recovery processes that are helping people, and research should continue to examine possibilities to see if these exist. Most importantly, the lack of findings in terms of resistance and recovery implies that societal change, over and above individual change, is necessary.

Measurement of Internalized Weight Stigma

The present research identified a potential problem with the measurement of internalized weight stigma, which has been recently discussed in the scientific literature. In their systematic review and meta-analysis, Saunders et al. (2022) found that internalized weight stigma and body dissatisfaction were highly correlated, to the point of verging on multicollinearity. These findings were consistent across different measures of both constructs. I did not measure body

dissatisfaction in my research, but I did measure body acceptance, which may be conceptualized as the inverse of body dissatisfaction. Like Saunders et al., my results showed a very strong association between body acceptance and internalized weight stigma (i.e., between -.80 and -.90 across studies and samples). However, Saunders et al. also found that BMI moderated the association, such that as BMI increased, the strength of the association between the internalized weight stigma and body dissatisfaction decreased. I did not observe a similar effect in my research.

Romano et al. (2022) identified one possible reason for this conflation of body satisfaction/dissatisfaction and internalized weight stigma specifically in the Modified Weight Bias Internalization Scale (WBIS-M; Pearl & Puhl, 2014), which I used in both of my studies. They propose that the weight-neutral language of the scale (e.g., using the item stem "Because of my weight…" instead of "overweight" (p.92)) may inadvertently elicit participant body dissatisfaction. Saunders et al. (2022) explain that, to date, internalized weight stigma has been defined in the literature as "holding negative attitudes about oneself because of self-perceived excess body weight and devaluation of the self, based on societal pressures" (p. 7). While I think that definition is adequate, I'm not sure that the stigmatized beliefs one holds about oneself are totally conscious and able to be measured by asking direct questions. For example, I have only begun to understand and notice my own stigmatizing beliefs about myself after prolonged exposure to radical fat liberation discourse and working on this research project. A further example of this can be found using item one of the WBIS-M (2014): "Because of my weight, I feel that I am just as competent as anyone". I would have answered this "strongly agree" at any point in my life, including now. I never consciously believed I was incompetent, nor would I have associated any feelings of incompetence with my weight. However, when I think back on

the times that I demonstrated that I feared I was incompetent or incapable due to my weight because I did not try something or I let someone take credit that I deserved or I held myself back in some way, I realize that I did hold that belief about myself. When discussing this issue, a friend told me a story about how she did not attend a seminar she was interested in because there were no chairs that fit her, and she realized later that her thought was that she did not deserve to have a chair that fit, nor did she deserve to attend the seminar. Those automatic or uncontrolled behaviors resulting from non-conscious internalized stigma are unlikely to be captured in the items in the WBIS-M (2014). Currently, there are are no measures that capture this automatic thought process.

On the other hand, body dissatisfaction is conscious – people can identify what they do not like about their bodies in large part because it is a common topic of conversation. Therefore, I propose that the questions that the field have used so far to assess internalized weight stigma tend to draw on conscious beliefs about the self and the body, and therefore measuring internalized weight stigma is conflated with measuring body dissatisfaction.

The items in the WBIS-M (2014) follow. If the word "weight" is replaced with the word "body", the scale becomes a measure of body dissatisfaction. I suggest that in this case, they are interchangeable, and I'm not sure this is only due to weight-neutral language. In the earlier version of this scale, the term "overweight" was used. I do not think that simply using words that imply fatness means the scale truly measures internalized weight stigma. Rather, we might assume that for people of any size, weight and body mean similar things. However, being dissatisfied with one's weight is not the same as self-stigmatizing due to one's weight.

1. Because of my weight, I feel that I am just as competent as anyone.
2. I am less attractive than most other people because of my weight.

3. I feel anxious about my weight because of what people might think of me.

4. I wish I could drastically change my weight.

5. Whenever I think a lot about my weight, I feel depressed.

6. I hate myself for my weight.

7. My weight is a major way that I judge my value as a person.

8. I don't feel that I deserve to have a really fulfilling social life, because of my weight.

9. I am OK being the weight that I am.

10. Because of my weight, I don't feel like my true self.

11. Because of my weight, I don't understand how anyone attractive would want to date me.

So, how do we change the way we measure internalized weight stigma? I think we need a multi-faceted approach. First, we need to interview fat experts, both inside and outside of academia, to create a definition of internalized weight stigma that encompasses both the unconscious and conscious processes that are involved, and to elucidate ideas for how we might measure the unconscious aspects of it. Second, we need to conduct qualitative research among fat people across developmental stages to understand how internalized weight stigma develops and how to measure it accurately. Third, we need to understand whether internalized weight stigma is a construct that can be applied to all bodies, or only to those who also face public stigma for being fat.

I think that it is possible that there are two similar yet separate constructs at play in the measurement of internalized stigma. Because weight stigma is so pervasive, it tends to affect everyone. However, there is a difference for those of us who literally do not have a seat at the seminar. A spoiled identity is not the same as being a slightly larger size than your thin friends.

Aubrey Gordon's essay *To body positive friends who don't wear plus sizes* (2020c) explains this beautifully:

> As a person who wears straight sizes, you know the obsessive focus on specific parts of your body, the way your friends' eyes may linger on your hips after you've put on five pounds, the uninvited comments from your mother or aunt. You know what it's like to be perched so precariously near a more ideal body, always just out of reach. Always afraid of toppling down further.
>
> **But when you and I talk about our bodies, there will be a point where you no longer see yourself reflected in my experiences**. Maybe it is the point at which fat stops being a weaponized insult, an omen of a sad and frightening future—the point at which plus size people use it as a liberating statement of fact…
>
> I know that it is hard to live in your body. It is also hard to live in mine. Our bodies exist in the same system, but they are received differently. Where you are sold gym memberships to get a "beach body," I am rejected from the gym and beach alike—too fat to exercise, too fat to be seen. Where your self-confidence is undercut by snide remarks and airbrushed beauty standards, my daily experiences are shaped by overt comments on my body, health, attractiveness, character, and mortality. Those comments may come from nearly anyone I meet.

In summary, consensus on the conceptual definition of internalized weight stigma is required. In their scoping review and synthesis of the literature, Nutter et al. (2024) call for moving beyond using internalization of stereotypes to define internalized weight stigma, and

considering how a conceptual definition and tools used to measure this construct would include an internalization of a world-view that results in self-devaluation. I agree and add that because this may not be a conscious process, research must work on how to measure this without only asking direct questions about beliefs.

Implications for Clinical Practice

"The oppression of anti-fat hatred is sited on the body, and it is in the body that those wounds can be healed."

– Heather McAllister (2009, p. 311)

In her essay about fat liberation, quoted above, activist and artist Heather McAllister asserts that fat embodiment is the surest path to recovery from the oppression of anti-fat hatred, or stigma. Embodiment may be a key component of resistance or recovery, but being embodied all the time is not possible nor advised, especially for fat people living in oppression, or for people with bodily pain or discomfort or disability. To be embodied means that the mind and body are connected and attuned to one another. If one is embodied all the time and also has chronic pain, this may mean a kind of hyper-attunement to bodily pain and could contribute to overwhelm or exhaustion, and make life more difficult to live. Or, being always attuned to one's fat body may mean that one is more aware of the ways in which their body is reviled or ignored or not accommodated. Perhaps there is an ideal balance, a place where one is attuned but not hyper-attuned, after much work on resistance and recovery.

Findings from the present research suggest that, as the process by which public weight stigma becomes psychological distress is traumatic, recovery should be approached as trauma recovery. Herman (1992) describes the process of recovery as entailing three stages. The first

stage is *establishing safety*, which involves creating a safe environment for processing and understanding the traumatic experience and accepting that recovery is possible. The second stage is *remembrance and mourning*, in which the recovering person develops a new narrative for their life that allows them to come to terms with their experiences, mourn the losses they have experienced because of the trauma, and creates a new vision of their future. The final stage is *reconnection with ordinary life*, which involves developing an understanding of the social contexts and cultures that allowed the trauma to occur, and then redefining a safer and more authentic place in the world that reflects one's autonomy and ideal self. During recovery, people might move backwards and forwards through these stages as they process different aspects of their past experiences and as they expand their lives and encounter new situations and contexts that must be integrated into their new understandings of the world. Importantly, Herman advises that recovery cannot occur alone and so it must occur within relationships, including therapeutic relationships or personal relationships. Additionally, it is essential that the person recovering is empowered as the author of their recovery process. Table 46 summarizes the central tasks and outcomes of Herman's three stages of recovery.

Table 45

Summary of Herman's (1992) Three Stages of Recovery from Trauma

Stage of Trauma Recovery	Stage 1: Establishing Safety	Stage 2: Remembrance and Mourning	Stage 3: Reconnection with Ordinary Life
Important Components	• Name the problem • Understand how symptoms result from trauma • Restore control • Attend to basic needs • Create a safe environment	• Tell the story of the trauma • Reconstruct the story • Review the meaning • Reformulate beliefs and values • Take action • Testimony	• Build a new life in a new culture • Become powerful • Challenge fear • Recognize socialized assumptions that create vulnerability • Identify social pressures that trap us in certain roles • Identify triggers

		• Mourn losses (e.g., of self, of an imagined future)	
Outcomes	• Mastery • Discovery that one is not alone • Learn that others with similar experiences share outcomes • Learn that recovery is possible	• Come to terms with the past • Create a new future • Reclaim one's world	• Reconciliation with the self • Self-possession • Re-creation of an ideal self • Reconnecting with others • Find a survivor mission • Manage triggers

The research literature and the public scholarship of fat activists also points to specific strategies that fat people might adopt to facilitate resistance to public weight stigma and recovery from internalized weight stigma, many of which involve reconnecting with and listening to one's body (i.e., embodiment), and the findings from the present research lend more evidence to this theory. While embodiment is not the entire solution, it is likely part of the recovery process.

Returning to Virgie Tovar's (2014) quote from the beginning of this paper, Tovar's decision to reject self-hate and choose self-love exemplifies a process of recovery. The approach rejects internalized stigma, or what Tovar calls self-hate, and encourages people to love themselves as a method of recovery. As Tovar defines it, self-love is a practice, a day-to-day method of living in a way that reclaims one's body for oneself and replaces internalized stigma with self-love. For fat people, there are myriad possible avenues away from internalized stigma and toward self-love or self-acceptance. Baker (2015) suggests that since internalized stigma is a learned process, then it can also be unlearned. I propose that therapies that will reduce internalized stigma, disembodiment, and the resulting psychological distress, should incorporate both elements of unlearning internalized stigma and embodied activities and do so using Herman's (1992) approach to healing from trauma.

Existing Therapies for Reducing Internalized Stigma

While the results from the present research point to ideas for therapeutic interventions that involve embodiment, unlearning stigma, and are trauma informed, there are a small but growing number of existing therapies that I review here in order to consider whether some of these may be helpful in informing future clinical intervention.

Current interventions typically have weight loss as the goal for participants, and so aim at reducing internalized stigma because it has been found to impede weight loss (Puhl & Suh, 2018). Puhl and Suh (2018) recommend that strategies to prevent and treat "obesity" should incorporate treatments that reduce weight stigma; weight-loss as a treatment goal is itself stigmatizing, so any attempt to reduce weight stigma as part of weight-loss is paradoxical and likely unhelpful long-term, even if studies find reductions of weight and/or internalized weight stigma in the short-term.

To the best of my knowledge, there are currently seven published studies that have tested various treatments for weight stigma (there are some additional follow-up studies that use the same protocols listed). These studies use primarily group-based interventions and various approaches, summarized in Appendix D.

While all the treatments summarized incorporate potentially helpful strategies, only two did not have weight loss as a treatment goal. One of these was a short intervention (Dunaev et al., 2018), and one was very long (two years; Ramos Salas et al., 2019).

The Ramos Salas intervention is as follows. The researchers lived alongside the ten participants and used a narrative inquiry and narrative repair model, meaning that the participants could first tell their stories, and then create counterstories to actively change their stigmatized narratives. A counterstory is " a story that resists an oppressive identity and attempts to replace it with one that commands respect" (Lindemann-Nelson, 2001, p.6). The purpose of the

intervention was both to help the individuals and to disseminate the stories to effect social change. The counterstories were created by developing overarching narratives from the narrative inquiry process, such as "Obesity is bad and by default people who have obesity are bad persons and a burden to society (p. 13)." Then, the researchers alongside the participants, developed a list of unjust assumptions based on these narratives, such as, "people with obesity cannot be healthy unless they achieve a "normal weight (p. 13).'". Next, the group developed consequences, for example, "external stigmatization via institutional and social practices can reduce individuals' participation in education, employment, and in health promotion settings such as fitness and recreational centers (p. 13)." Finally, they developed resistance strategies, for example, "Confronting their own internalized weight bias to find self-acceptance and self-respect. This gives individuals a sense of self-empowerment where they can redefine health in their own terms (p. 14)." This narrative process could be adapted for individuals or could continue to be used in groups.

Palmeira et al. (2019) and Brownstone et al. (2021) incorporate embodiment activities. Of these, only Brownstone et al. (2021) incorporates embodiment activities that specifically address enjoyment of the body (i.e., joyful movement), which is an important element of fat embodiment. In this study, 36 participants in an outpatient eating disorders program took part in seven to 10 group therapy sessions that included the following modules: Introduction to Weight Stigma, Movement, My Weight Stigma Story, Weight Stigma Food Rules, Media, Challenge Days, and Intersectionality. In Introduction to Weight Stigma, participants were taught about language norms and how using terms like 'fat' in lieu of "obese" can be empowering. The Movement module incorporated *joyful movement*, and taught participants to "de-shame" their experience of moving their bodies, without a goal of weight-loss (even though the purpose of the

treatment was weight loss. Oh the irony). The My Weight Stigma Story module helped participants to explore the various ways in which weight stigma affected different domains of their lives (e.g., family, school, work). The Weight Stigma Food Rules module helped participants identify how weight stigma affected rules they had made about their own food choices. The Media module encouraged participants to curate their social media so that they would only experience body positivity- or body justice-oriented content. The Challenge Days module gave participants opportunities to publicly challenge stigma-related activities, such as eating junk food in public or shopping for clothes. The intersectionality module included participants identifying their intersectional identities and discussing how weight stigma relates to these identities. Importantly, this treatment incorporates at least two of the aspects of Herman's trauma recovery framework, in that it provides and establishes safety at the outset of the group treatment, it provides opportunities to understand the way weight stigma has affected participants and provides participants opportunities to apply what they have learned to reconnect to normal life.

I propose that the treatment developed by Brownstone et al. (2021) could be adapted, first to eliminate weight loss as a goal, and second to incorporate both the findings from the present research and more of Herman's trauma recovery framework. For example, there could be a radicalization process at the beginning, which would inform participants about weight stigma and fat oppression (akin to teaching the information from the Empathy scale from the FAAT (Cain et al., 2022). This also incorporates Herman's stage one of recovery by naming the problem and establishing safety. This could be followed by education on how weight stigma is traumatic and provide trauma-informed discussion and additional modules of trauma-informed treatments. It would be very important to consider that people may not necessarily feel better if

they become more deeply involved in fat oppression communities, and so consideration and research should be conducted about this to understand how to best approach it.

Future research could test this protocol against a CBT control group because the theorized mechanism for reducing anxiety and depression, internalized weight stigma, is not treated in typical group CBT for anxiety and depression. Therefore, it should be possible to detect whether treating internalized weight stigma is more effective for reducing depression and anxiety in fat people than standard anxiety and depression treatment.

Implications for Policy

The ideal solution to weight stigma is widespread social and political change. Unfortunately, these changes are often slow and incremental when it comes to policy. Currently, weight status is not protected against discrimination in Canada (see Levy et al., 2023 for a review of current lack of policy and support for policy). This fact alone may indicate society's overarching view: fat people do not matter. However, public support for policy change is growing (see Puhl, 2022 for a review of current policy initiatives both within and outside of the United States).

In the scientific literature, there are two concurrent streams. One stream is radical, centres fat people, and pushes for a paradigm shift, with the overarching message that fat people deserve to be treated with dignity and respect, should not be discriminated against, that fatness does not mean unhealthy, and that health is not necessarily the ideal (e.g., Manokaran, 2020; Pausé 2021). The other stream of research uses an outdated framework, which to sum up, problematizes fatness, and discusses "obese" people as though they are anthropological subjects who should be protected because they need to be thinner, and discrimination keeps them fat (see Pausé, 2021 for a detailed summary and call to action). Most of the current research on policy occurs in the

second stream. Some may argue that this is necessary in order to convince biased politicians to make incremental shifts in policy. That may be true. But as a fat person, researcher, and clinician, it feels close to unbearable to read, let alone participate in, work that promotes weight bias while discussing making things better for fat people. So, I will not conduct a deep review of the current literature on policy. Instead, I will ask the reader to recall that I cited Watkins and Gerber's 2016 proposal of three new directions for psychology researchers to address the problems they outline.

The present research indicates that fat people are suffering, and was not able to find much about what might mitigate that suffering. It may also indicate that participating in fat activism, which is necessary to move things forward, makes them suffer in new and different ways. Things definitely need to change, and we need allies who truly understand the impact of weight stigma to bring about that change. Research on all aspects of fatness should incorporate Watkins and Gerber's (2016) directions.

Limitations and Future Directions

There are several limitations to the current studies. First, in the first study, participants were current students from the University of Victoria, and a majority of participants were white, female, straight, and under age 25. This significantly limits generalizability of findings. In the second study, participants were more diverse in terms of age and sexuality, but not ethnicity. In terms of gender, the majority of participants in Study 2 identified as straight, but a large proportion (27%) of participants did not identify as straight. Despite more diversity in Study 2, generalizability of findings is limited for both studies. Future research should test these models with more diverse populations and consider using other models that allow for more complex and

nuanced examination of intersectionality, especially as intersecting identities will certainly impact people's experiences with stigma.

Second, some things emerged from the research that I had not considered thoroughly when I planned the surveys. One of these was asking people terms that they use to describe their own bodies. The list I created for them to choose from was done somewhat arbitrarily and terms such as "small fat," "medium fat," "large fat," and "infinifat" were just beginning to emerge at the time the research was conducted. While I am glad that I asked participants in Study 2 to write in terms that they used, future research should study the phenomenon of fat body terminology and how it reflects social identities.

Another issue that emerged was measurement. During analysis it became apparent that there are significant problems with the way internalized weight stigma is currently measured, and so in retrospect it would have been nice to have other ways to examine this more deeply. As internalized weight stigma was a key variable in my research, it has implications on my findings that were difficult to unpack. As described in the section on internalized weight stigma, future research should work to create a measure of this phenomena that distinguishes it from body dissatisfaction and should consider that internalized weight stigma is most likely a different experience for fat people than it is for thin people.

Study 3 was limited by a lack of measures to test the validity of the FAAT scales. This research began the important work of examining the FAAT using a fat-identified sample, but future work should include all FAAT scales and continue to examine the scale in different populations and using validity measures.

There were some hints of evidence in Studies 2 and 3 that involvement in fat liberation affects fat people, or that those who are suffering the most are more attracted to the fat liberation

movement. The present research was limited in its ability to draw conclusions about how involvement and depth of involvement in the fat liberation movement affects mental health, either positively or negatively. Future research should specifically target individuals who engage in fat liberation, and should explore how it influences mental health in both qualitative and quantitative (using longitudinal and experimental) methods.

Due to the myriad problems with BMI, I created my own measure of body size where I asked participants to compare their body size to their peers. This measure was useful, but also had problems, namely that it is subjective based on comparing oneself to one's peers, and so could vary depending on peer group. I am curious whether subjective body size has a stronger association with perceived weight stigma than objective measures, and I posit that this may vary based on involvement in fat liberation (i.e., perhaps those heavily involved in fat liberation perceive more weight stigma or conversely, perhaps those same people feel ownership in representing their bodies as larger than others and this has a positive effect). These are complex questions that should be addressed in future research. In addition, research has yet to find a measure that is not stigmatizing in some way but that accurately captures body size so that something like a linear association between body size and stigmatizing experiences could be tested. Future research should address this.

Future research should also continue to examine the processes examined in this research and could build on the model used in the present studies. For example, more complex models could test recursive relationships or could better examine the effect of daily stigmatizing experiences, while the current model can only examine these phenomena in a linear fashion. It could also test these processes longitudinally in order to better understand the direction of effects.

The Paradox of Fat Embodiment: Conclusions and Personal Reflections on the Process of this Research

When I began this research, I conceptualized a path to recovery from the psychological effects of internalized weight stigma. I naively thought that if the traumatic process of disembodiment was the problem, then perhaps a recovery process of embodiment would be the solution. Sadly, the linear statistical models we use to make sense of complex psychological phenomena do not necessarily provide simple linear solutions. I found that physical freedom is a moderator of the association between public weight stigma and internalized weight stigma, which means that embodiment is an important component of resistance. I also found that an awareness of weight stigma and the need to change it moderated the path between internalized weight stigma and disembodiment, so that gives another clue to possible clinical implications. However, nothing else I examined, including deeper involvement in fat activism, belongingness, self-compassion, or self-esteem moderated any of the pathways. This is disheartening because when I began conducting this research, I thought that fat activism might be a pathway to recovery from the effects of internalized weight stigma.

I recently watched a documentary about Aubrey Gordon (Finlay, 2023), a writer and podcaster whose work I have included in this dissertation, and someone I consider to be a fat activist. I was struck when I saw the documentary that she experiences what appear to be significant anxiety symptoms, and I realized that doing the public work of dismantling public oppression does not necessarily resolve the effects of personal oppression. In fact, it may make it worse, because one is constantly faced with how bad things are, and when one is publicly known, one is exposed to public, directed hatred. At one point in the film, Gordon's personal information is released on the internet and she fears for her life. This is part of why fat

embodiment is a paradox. To become liberated, one must embody their fatness and bring it forward, but by doing so it may invite overt discrimination.

My own experience of becoming what I think of as a liberated fat person has come with significant distress, and I have come to realize it as a process of partial resistance, but not recovery. I think it is very important to recognize my own privilege in my recovery process. I have many privileged identities that mean my own experiences of oppression are not comparable to those who also face other forms of oppression on top of weight stigma, and those experiences were not addressed in this research.

My process of recovery follows Herman's trauma recovery process. First, I underwent a process of radicalization, whereby my research advisor gave me many books about fat liberation. This process was a part of Herman's Stage 1, which allowed me to name the problem and understand how my own symptoms resulted from trauma and oppression. I realized that I was not alone because my experience was shared by so many others, and it helped me to create a safe environment for myself and situate my problems in my experiences and not within myself. Herman writes that within Stage 1, the person who is recovering must learn that recovery is possible, and I certainly believed that to be true when I was in Stage 1, though now I'm not sure that we should conceptualize this process as recovery per se. Perhaps we need to define recovery in a different way. I initially believed recovery to mean that one would no longer feel anxious or depressed. But perhaps it means that one no longer blames oneself for these feelings.

The second stage of my process also followed Herman's recovery process. Through this research, I have told the story of the trauma, reconstructed the story, reviewed the meaning, reformulated my beliefs and values, taken action, testified, and mourned the loss of an imagined future where I might be fully recovered. This process was significantly more painful than I

expected. At the beginning of my research, I joined fat groups on social media, which I had thought would inspire solidarity and revolution. However, I found that participating in these groups would inspire profound feelings of grief. Many people posted with stories of discrimination by family members, co-workers, and strangers, or asked for advice on finding help with medical issues or other barriers they faced. I then realized the magnitude of the problem, and it filled me with despair. I then understood that individuals cannot be expected to recover in an individual way.

As I write this, I have only just begun Stage 3. While I can recognize socialized assumptions, identify triggers, and identify social pressures, I still have not truly built a new life in a new culture. I got a small taste of this at the Weight Stigma Conference in 2023, where I remember noticing that I was feeling completely relaxed. When I reflected on this feeling, I realized it was because I was amongst a large group of people who all understood the same basic concepts. I did not have to explain anything to anybody. I felt that I was accepted for myself, and that I did not have to apologize for my work. I was amongst a majority of those who had had similar experiences and realizations, with a minority who had not, but were allies. We were all existing outside of an old paradigm, and inside a new one.

I was recently out for dinner and sat next to a group of six women who all spent a long time discussing the need for one of their party to celebrate their birthday by eating a cronut for dessert. The rest decided to share a single cronut, and all expressed various diet culture tropes throughout the discussion. Many did not eat their small share. I felt like an anthropologist observing the strange behaviour of a previously unencountered species. “Everybody eat a cronut!” I wanted to shout. I do not think I live entirely outside of diet culture now, but I certainly see it completely differently than I once did. Before my radicalization process, I would

have felt ashamed that I was having a dessert all to myself, even though it wasn't my birthday. I would have felt that their discussion was directed towards me specifically, because they were trying to avoid looking like me. Now, I can see these discussions for what they are. Ridiculous, sad, and a waste of everybody's time.

I now exist outside of an outdated paradigm, but I don't necessarily feel better. I have a better and deeper understanding of the work that needs to be done, and I do not wish to do that work. When I encounter weight stigma, I feel tired and dismayed. In many ways, I have become an embodied fat person, and that process has been both empowering and exhausting.

This is the paradox of fat embodiment. Fat stigma divorces fat people from their bodies, and one solution to this it to become embodied. But this is very difficult to do when one lives in a society where one is constantly told their body is wrong. People can't get themselves out of the paradox by themselves and so society needs to change. While it is both possible and remarkable for individuals to work within themselves to be embodied and free from spoiled identities, it is a sad and arduous task in a society that challenges that freedom.

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Appendices

Appendix A: Study 1 Survey

Understanding Embodiment

Start of Block: Informed Consent

Letter of Information for Implied Consent
Understanding Embodiment

Faculty Investigator: Dr. Danu Anthony Stinson, Associate Professor, Department of Psychology, University of Victoria
Researcher: Clea Sturgess, Doctoral Candidate, Department of Psychology, University of Victoria
Contact Information: Clea Sturgess: cleastur@uvic.ca
Dr. Danu Anthony Stinson: dstinson@uvic.ca

If Dr. Stinson is your course instructor, you are advised to contact Clea Sturgess, not Dr. Stinson, so that Dr. Stinson is not aware of your participation in this study.

If you are age 19 or above and are a University of Victoria student, then you are invited to participate in a study entitled **Understanding Embodiment**. This study is being conducted by Clea Sturgess for her graduate degree in the Department of Psychology at the University of Victoria, under the supervision of ツュDr. Danu Anthony Stinson. You may contact Clea if you have further questions by using the contact information above. Dr. Stinson is an Associate Professor in the department of psychology at the University of Victoria. This research is being funded by the University of Victoria.

Purpose, Importance, and Involvement
We are conducting a study about embodiment, which is someone's thoughts and feelings about their body. We want to understand how people's identities and lived experiences relate to their thoughts and feelings about their body, including experiences of weight-based prejudice and discrimination. If you agree to voluntary participate in this research, **your participation in this study will involve 1) answering a brief demographic survey about yourself and; 2) answering questions about your thoughts and feelings regarding your body and different aspects of your identity, lived experiences, and group interactions**. Research of this type is important because it allows us to better understand individual differences in how people think and perceive aspects of their own and other people's identities.You are being asked to participate in this study because of your expertise and lived experiences, and your availability and interest as a University of Victoria student. All participation will take place online as a survey on Qualtrics and will require 30 minutes or less of your time.

Risks

There are some potential risks to you by participating in this research and they include potentially feeling embarrassed answering some of the demographic questions and/or feeling emotional or psychological distress answering some of the survey questions relating to your body size, and your lived experiences (including stigmatizing experiences you may have endured). To prevent potential risks, **you may skip any questions you do not want to answer or exit the survey at any time**. You may experience some fatigue or boredom or emotional or psychological distress while completing the survey.

If you experience emotional or psychological distress during the survey, please call 911 or go to the nearest emergency room. If you need support or would like to learn about other resources in your community, please contact:

Canada Suicide Prevention Service: (toll-free) 1-833-456-4566 for 24-hour crisis support OR text 45645 for text support (see https://www.crisisservicescanada.ca/en/for more information) University of Victoria Counselling Services & Student Wellness Centre: 250-721-8563 (see https://www.uvic.ca/services/counselling/for more information)

Benefits and Compensation.

The potential benefits of your participation in this research include learning about the process of research first-hand and helping to advance the state of knowledge regarding the perceived identities and lived experiences of people.

As a way to compensate you for any inconvenience related to your participation, you will receive 0.5 of a SONA credit.

If you decide to withdraw from the study during or after the data collection process you will still be awarded full compensation.

Voluntary Participation

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data can be deleted if you contact Clea Sturgess (cleastur@uvic.ca) with your confirmation code that is presented at the end of the study. **If you do not retain this code, we will be unable to identify and delete your responses.**

This code is **not** required to receive compensation. It is only required to identify and delete your anonymous responses if you choose to withdraw from the study at any point.

Researcher's Relationship with Participants

Dr. Stinson may have a dual role as a course-instructor and researcher, and it is important that you feel no undue pressure to participate in this research. Therefore, we have put the following safeguard in place to help prevent this relationship from influencing your decision to participate: if Dr. Stinson is your course instructor, you are advised to contact Clea Sturgess, not Dr. Stinson, so that Dr. Stinson is not aware of your participation in this study**.** At no time (during or after project) will Dr. Stinson know if you are a participant. Dr. Stinson will only have access to the

anonymized data and will not know who participated in the research project.

Anonymity and Confidentiality

Your responses will be anonymous, as no one will be able to associate your individual answers with your identity. Your confidentiality and the confidentiality of the data will be via the security protocols in place for data collected through Qualtrics. **All data collected through Qualtrics for this study will be stored on Qualtrics' protected Canadian servers which are located in Canada.**

Dissemination of Results and Disposal of Data

If you decide to participate in our study your de-identified data may be used in the future by the same Principal Investigator, Dr. Danu Anthony Stinson, for other scholarly purposes. The future use of your data may involve other undergraduate or graduate students that join the research team. It is anticipated that the results of this study and future studies using this data will be shared with others in the following ways: 1) conference oral and poster presentations; 2) university classroom presentations; 3) press-releases and social media; and 4) peer-reviewed journal articles. In the course of dissemination, it may be necessary to share anonymized aggregated data in order for external reviewers and readers to verify the accuracy of our analyses and research reports. This will be facilitated via Dr. Stinson's Open Science Framework page—a service for sharing research materials. Data from this study will be stored indefinitely, in order to maintain the verifiability of the findings to interested researchers and readers.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Please check one of the following options to confirm your consent:

- ○ I verify that I am age 19 or older and I agree to participate in this survey (3)
- ○ I do not agree to participate (4)

Skip To: End of Survey If Letter of Information for Implied ConsentUnderstanding EmbodimentFaculty Investigator: Dr. Danu A... = I do not agree to participate

End of Block: Informed Consent

Start of Block: Demographics

Background Information
This information will only be presented as group data when sharing the results of the study.

I identify my gender as

_____

My current age is

We know that people of different races do not have significantly different genetics. But our race still has important consequences, including how we are treated by different individuals and institutions. Which race category best describes you? Check all that apply

☐ Black (African, Afro-Caribbean, African Canadian descent) (1)

☐ East/Southeast Asian (Chinese, Korean, Japanese, Taiwanese descent or Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent) (2)

☐ Indigenous (First Nations, Metis, Inuk/Inuit) (3)

☐ Latino (Latin American, Hispanic descent) (4)

☐ Middle Eastern (Arab, Persian, West Asian descent) (5)

☐ South Asian (East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo-Caribbean) (6)

☐ White (8)

☐ Another term best describes me (10)

_____

Page Break

I identify my sexual orientation as

_____

The country I was born in is

_____

Page Break

People's experiences in the world are different depending on their weight and body size and shape and we would like to understand those different experiences. We will not be using this information to draw any conclusions about your health.

Page Break

My current weight is (note pounds or kilos)

_____

My height is (note cm or inches)

_____

Page Break

I identify as (click all that apply). Please skip this question if you do not identify with any of these.

- [ ] Fat (1)
- [ ] Plus Size (2)
- [ ] Chubby (3)
- [ ] Fluffy (4)
- [ ] BBW (5)
- [ ] Curvy (6)
- [ ] Full-figured (7)
- [ ] Hefty (8)
- [ ] Voluptuous (9)

Page Break

Compared to other people my age, the current size of my body is	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter
As a child, compared to my peers, the size of my body was:	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter
As a teenager, compared to my peers, the size of my body was:	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter

End of Block: Demographics

Start of Block: Survey 1

We are interested in understanding your attitudes and perceptions. There are no right or wrong answers to any of the items. Please provide the response that best fits your experiences and beliefs.

Please choose the response from the following that best describes how you feel about each of the statements listed below.
Please provide responses for how you currently feel (past four weeks).

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
I feel in tune with my body	○	○	○	○	○
I feel at one with my body	○	○	○	○	○
I feel “detached” and separate from my body	○	○	○	○	○
I feel depressed/anxious/scared in/about my body	○	○	○	○	○
My eating habits are a way for me to manage my emotions or how I have felt about myself	○	○	○	○	○
Generally I feel good/comfortable in my body	○	○	○	○	○
I am proud of what my body can do	○	○	○	○	○
I feel dissatisfied, envious, and frustrated when I compare my body to others	○	○	○	○	○
I feel joy in my body	○	○	○	○	○
My body reduces my sense of self worth in the world	○	○	○	○	○
I sometimes tend to blame my body for difficulties I am having	○	○	○	○	○

I engage in potentially harmful or painful behaviours (e.g., disordered eating, bingeing, purging, denying physical needs, skin cutting, burning, drug use, excessive alcohol consumption)	○	○	○	○	○
I have an eating disorder	○	○	○	○	○
I take good care, and am respectful, of my body	○	○	○	○	○
I ignore the signs by body sends me (e.g., of hunger, stress, fatigue, illness/injury)	○	○	○	○	○
I am aware of my needs	○	○	○	○	○
It is hard for me to read/identify my feelings	○	○	○	○	○
I am comfortable with, and proud of, who I am	○	○	○	○	○
My dissatisfaction with my body/appearance has a negative effect on my social life	○	○	○	○	○
I put a priority on listening to my body and its needs (e.g., stress, fatigue, hunger)	○	○	○	○	○

Page Break

	Poor	Fair	Good	Very Good	Excellent
In general, would you say your health is:	○	○	○	○	○
In general, how would you rate your physical health?	○	○	○	○	○
In general, how would you rate your satisfaction with your social activities and relationships?	○	○	○	○	○

	Poorly (1)	OK (2)	Average (3)	Quite Well (4)	Extremely Well (5)
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work, and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)	○	○	○	○	○

	Not at all (1)	A little (2)	Moderately (3)	Mostly (4)	Completely (5)
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	○	○	○	○	○

	None (1)	Mild (2)	Moderate (3)	Severe (4)	Very Severe (5)
How would you rate your fatigue on average?	○	○	○	○	○

	No pain 0	1	2	3	4	5	6	7	8	9	Worst Imagineable Pain 10
How would you rate your pain on average?	○	○	○	○	○	○	○	○	○	○	○

	Not very true of me 1	2	3	4	5	6	Very true of me 7
I have high self-esteem	○	○	○	○	○	○	○

	Strongly Disagree (1)	Disagree (2)	Mildly Disagree (3)	Neither Agree nor Disagree (4)	Mildly Agree (5)	Agree (6)	Strongly Agree (7)
We should celebrate all bodies	○	○	○	○	○	○	○
Size acceptance is an important social movement	○	○	○	○	○	○	○
Size acceptance is a foundation for making healthy lifestyle choices	○	○	○	○	○	○	○
We need more positive images of fat people in the media	○	○	○	○	○	○	○
Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies	○	○	○	○	○	○	○
Size acceptance should be encouraged	○	○	○	○	○	○	○

For verification purposes, please answer the following question. What is 12-2?

Please choose the response from the following that best describes how you feel about each of the statements listed below.

Please provide responses for how you currently feel (past four weeks).

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
I have not been as physically active as I have wanted to be (due to, for example, lack of access to facilities; physical health; safety in public places; care of others; lack of money; school/work)	○	○	○	○	○
Others (e.g., parents, teachers, partners) have supported me in being as active as I wanted to be	○	○	○	○	○
I have had the opportunity to engage in physical activities that have helped me feel confident in my physical abilities	○	○	○	○	○
I have engaged in enjoyable leisure activities	○	○	○	○	○
I have been encouraged and supported in expressing and responding to my needs	○	○	○	○	○
I have had opportunities to spend time in nature, which have helped me to feel more connected to myself and my body	○	○	○	○	○
My family/social circles have engaged in activities that made me feel joy in my body (e.g., dance, music, hiking, outdoor picnics)	○	○	○	○	○

Significant people in my life have modeled and/or have encouraged me to engage in self-care	○	○	○	○	○
I have had the opportunity to engage in activities (e.g., sports, play, yoga, meditation, massage) that have helped me feel immersed/connected in my body	○	○	○	○	○
I have received useful information from a trusted person that has helped guide me with respect to living in my body	○	○	○	○	○
I have received information (e.g., from parents, teachers, doctors, friends) that helped me make wise and informed decisions involving my health	○	○	○	○	○
In my sexual experiences I have felt that my wishes have been considered and respected	○	○	○	○	○
Positive intimate/sensual/sexual experiences have helped me to be more in tune with and aware of my body	○	○	○	○	○

Page Break

	Strongly Disagree (1)	Disagree (2)	Mildly Disagree (3)	Neither Agree nor Disagree (4)	Mildly Agree (5)	Agree (6)	Strongly Agree (7)
I feel good about my body	○	○	○	○	○	○	○
I feel happy about my weight	○	○	○	○	○	○	○
I do not feel defined by my body weight	○	○	○	○	○	○	○
My self-esteem is not impacted by my body weight	○	○	○	○	○	○	○

In your day-to-day life, how often do any of the following things happen to you?

	Almost every day (1)	At least once a week (2)	A few times a month (3)	A few times a year (4)	Less than once a year (5)	Never (6)
You are treated with less courtesy than other people are.	○	○	○	○	○	○
You are treated with less respect than other people are.	○	○	○	○	○	○
You receive poorer service than other people at restaurants or stores.	○	○	○	○	○	○
People act as if they think you are not smart.	○	○	○	○	○	○
People act as if they are afraid of you.	○	○	○	○	○	○
People act as if they think you are dishonest.	○	○	○	○	○	○
People act as if they're better than you are.	○	○	○	○	○	○

You are called names or insulted.	○	○	○	○	○	○
You are threatened or harassed.	○	○	○	○	○	○

Page Break

If you answered “A few times a year” or more frequently to at least one question, what do you think is/are the main reason(s) for these experiences (check all that apply)?

- ☐ Your Ancestry or National Origins (1)
- ☐ Your Gender (2)
- ☐ Your Race (3)
- ☐ Your Age (4)
- ☐ Your Religion (5)
- ☐ Your Height (6)
- ☐ Your Weight (7)
- ☐ Some other Aspect of Your Physical Appearance (8)
- ☐ Your Sexual Orientation (9)
- ☐ Your Education or Income Level (10)
- ☐ A physical disability (11)

Content warning: The wording of the following questions may cause emotional or psychological distress. Our intention in asking these questions is to understand experiences of weight stigma. You may skip any questions you do not want to answer or exit the survey at any time.

Please answer the items below, using the scale provided.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
Because of my weight, I feel that I am just as competent as anyone	○	○	○	○	○	○
I am less attractive than most other people because of my weight	○	○	○	○	○	○
I feel anxious about my weight because of what people might think of me	○	○	○	○	○	○
I wish I could drastically change my weight	○	○	○	○	○	○
Whenever I think a lot about my weight, I feel depressed	○	○	○	○	○	○
I hate myself for my weight	○	○	○	○	○	○
My weight is a major way that I judge my value as a person	○	○	○	○	○	○

I don't feel that I deserve to have a really fulfilling social life, because of my weight	○	○	○	○	○	○
I am OK having the weight that I have	○	○	○	○	○	○
Because of my weight, I don't feel like my true self	○	○	○	○	○	○
Because of my weight, I don't understand how anyone attractive would want to date me	○	○	○	○	○	○

	N/A 0	Low 1	2	Moderate 3	4	Severe 5
How would you rate your feelings of anxiety?	○	○	○	○	○	○
How would you rate your feelings of depression?	○	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I frequently do not have the energy I need to complete everyday life tasks.	○	○	○	○	○
I often unnecessarily worry about day-to-day tasks in my life	○	○	○	○	○
I have lost interest in many activities I used to enjoy	○	○	○	○	○
I often feel like I can't "turn off" my brain	○	○	○	○	○
I either sleep too much or not enough	○	○	○	○	○
I would rather stay at home then hang out with family or friends	○	○	○	○	○
I often feel sad or down	○	○	○	○	○
I often feel tense or "on edge"	○	○	○	○	○
I find it hard to concentrate	○	○	○	○	○
I have difficulty falling or staying asleep	○	○	○	○	○

Page Break

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I find myself being preoccupied with food (1)	○	○	○	○	○

	Never	Rarely	Sometimes	Often	Usually	Always
I feel guilty after eating	○	○	○	○	○	○
I avoid eating when I am hungry	○	○	○	○	○	○
I have gone on eating binges where I feel that I may not be able to stop	○	○	○	○	○	○
I think of burning up calories when I exercise	○	○	○	○	○	○
I engage in dieting behaviour	○	○	○	○	○	○

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Think about a situation you are experiencing right now that is painful or difficult. It could be some challenge in your life, or perhaps you are feeling inadequate in some way. Please indicate

how well each statement applies to how you are feeling toward yourself right now as you think about this situation, using the following scale:

	Not at all true for me 1	2	3	4	Very true for me 5
I'm giving myself the caring and tenderness I need.	○	○	○	○	○
I'm obsessing and fixating on everything that's wrong.	○	○	○	○	○
I'm remembering that there are lots of others in the world feeling like I am.	○	○	○	○	○
I feel intolerant and impatient toward myself.	○	○	○	○	○
I'm keeping things in perspective.	○	○	○	○	○
I feel like I'm struggling more than others right now.	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When I am with other people, I feel included.	○	○	○	○	○	○	○
I have close bonds with family and friends.	○	○	○	○	○	○	○
I feel like an outsider.	○	○	○	○	○	○	○
I feel as if people do not care about me.	○	○	○	○	○	○	○
I feel accepted by others.	○	○	○	○	○	○	○
Because I do not belong, I feel distant during the holiday season.	○	○	○	○	○	○	○
I feel isolated from the rest of the world.	○	○	○	○	○	○	○
I have a sense of belonging.	○	○	○	○	○	○	○
When I am with other people, I feel like a stranger.	○	○	○	○	○	○	○

I have a place at the table with others.	○	○	○	○	○	○	○
I feel connected with others.	○	○	○	○	○	○	○
Friends and family do not involve me in their plans.	○	○	○	○	○	○	○
For verification purposes, please select "Somewhat Agree"	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Fat people face discrimination in many areas of life	○	○	○	○	○	○	○
It is hard to accept your body if it differs from what the media represents as normal	○	○	○	○	○	○	○
Negative beliefs about body weight lead to negative assumptions about fat people	○	○	○	○	○	○	○
Health professionals should be aware of the negative impact of weight stigma	○	○	○	○	○	○	○
Fat people are treated badly because of the way society depicts fat bodies	○	○	○	○	○	○	○
Weight-based discrimination negatively impacts on well-being	○	○	○	○	○	○	○

Concern for health is used as an excuse to judge fat people	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Discrimination due to fatness leads to a denial of human rights	○	○	○	○	○	○	○
We need to take weight-based discrimination as seriously as other forms of discrimination	○	○	○	○	○	○	○
Activism is necessary because of the discrimination fat people experience	○	○	○	○	○	○	○
The existence of organizations to lobby for the rights of fat people is a good thing	○	○	○	○	○	○	○
Discussions and programs recognizing diversity need to include body weight	○	○	○	○	○	○	○

We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming	○	○	○	○	○	○	○
There is a need for Fat Activism because fat shaming is widespread	○	○	○	○	○	○	○

Page Break

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Body weight isn't a reliable indicator of health	○	○	○	○	○	○	○
Health is not predicted solely by body weight	○	○	○	○	○	○	○
Body Mass Index (BMI) is a poor indicator of health	○	○	○	○	○	○	○
Fat people are not necessarily unhealthy	○	○	○	○	○	○	○
Healthy bodies come in all shapes and sizes	○	○	○	○	○	○	○

Page Break

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Fat people are sexy	○	○	○	○	○	○	○
If I were single, I would go out with a fat person	○	○	○	○	○	○	○
Fat people are attractive	○	○	○	○	○	○	○
Confident fat people are appealing	○	○	○	○	○	○	○
Fat people are sexier than thin people	○	○	○	○	○	○	○

Understanding Embodiment Feedback Letter

Faculty Investigator: Dr. Danu Anthony Stinson, Associate Professor, Psychology Department
Researcher: Clea Sturgess
Contact Information: Clea Sturgess: cleastur@uvic.ca
Dr. Danu Anthony Stinson: dstinson@uvic.ca

If Dr. Stinson is your course instructor, you are advised to contact Clea Sturgess, not Dr. Stinson, so that Dr. Stinson is not aware of your participation in this study

Thank you for participating in this study!

In this study, we were interested in understanding your experiences of embodiment, which is your relationship with your body. **In particular, we wanted to better understand how different dimensions of identity (such as self-processes, belongingness, group-identification, and embodiment) help or hinder individuals who have experienced weight stigma in their efforts to recover from internalized weight stigma.** Previous research has looked at how individuals with higher-than-average weights are heavily stigmatized, but very little research has been done on internalized weight stigma. Virtually no research exists on the process of recovery from internalized weight stigma. We wanted to get an idea of what different identity aspects are needed, or acquired, to begin the healing process from internalized weight stigma.

If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact us at the email address listed at the top of the page.

As with all University of Victoria projects involving human participants, this project was reviewed by, and received ethics clearance through, the Human Research Ethics Office. Should you have any comments or concerns resulting from your participation in this study, please contact the Human Research Ethics Office at 250-472-4545 or ethics@uvic.ca.

End of Block: Feedback Letter

Start of Block: Block 4

Here is your confirmation code:

Please retain this code for your records as your proof of participation. This code will also be required should you wish to withdraw. We will be unable to identify and delete your responses if you do not retain this code. When you have copied this code, please click the next button to submit your survey.

End of Block: Block 4

Appendix B: Study 2 Recruitment Poster

fat researchers invite fat adults (19+) to share their experiences of weight stigma and healing

study link: tiny.cc/stigmastudy

The survey takes about 30 minutes and you can win 1 of 5 50$ (CAD) gift cards for participating

Researchers: Clea Sturgess, MSc and Danu Anthony Stinson, PhD

University of Victoria

*to maintain confidentiality, please contact cleasturgess@uvic.ca with questions rather than liking or following this post

Appendix C: Study 2 Survey

Understanding Embodiment 2

Start of Block: Informed Consent

Welcome to Understanding Embodiment. Please click the button below to start the survey

Page Break

Consent Letter of Information for Implied Consent
Understanding Embodiment

Faculty Investigator: Dr. Danu Anthony Stinson, Associate Professor, Department of Psychology, University of Victoria
Researcher: Clea Sturgess, Doctoral Candidate, Department of Psychology, University of Victoria
Contact Information: Clea Sturgess: cleasturgess@uvic.ca
Dr. Danu Anthony Stinson: dstinson@uvic.ca

If you are age 19 or above and self-identify as fat, then you are invited to participate in a study entitled **Understanding Embodiment**. This study is being conducted by Clea Sturgess for her graduate degree in the Department of Psychology at the University of Victoria, under the supervision of Dr. Danu Anthony Stinson. You may contact Clea if you have further questions by using the contact information above. Dr. Stinson is an Associate Professor in the department of psychology at the University of Victoria. This research is being funded by the University of Victoria.

Purpose, Importance, and Involvement
We are conducting a study about embodiment, which is someone's thoughts and feelings about their body. We want to understand how people's identities and lived experiences relate to their thoughts and feelings about their body, including experiences of weight-based prejudice and discrimination. If you agree to voluntary participate in this research, **your participation in this study will involve: 1) answering a brief demographic survey about yourself and; 2) answering questions about your thoughts and feelings regarding your body and different aspects of your identity, lived experiences, and group interactions**. Research of this type is important because it allows us to better understand individual differences in how people think and perceive aspects of their own and other people's identities. You are being asked to participate in this study because of your expertise and lived experiences. All participation will

take place online as a survey on Qualtrics and will require 30 minutes or less of your time.

Risks
There are some potential risks to you by participating in this research and they include potentially feeling embarrassed answering some of the demographic questions and/or feeling emotional or psychological distress answering some of the survey questions relating to your body size, and your lived experiences (including stigmatizing experiences you may have endured). To prevent potential risks, **you may skip any questions you do not want to answer or exit the survey at any time**. You may experience some fatigue or boredom or emotional or psychological distress while completing the survey.

If you experience emotional or psychological distress during the survey, please call emergency services or go to the nearest emergency room. If you need support or would like to learn about other resources in your community, please contact:

Within Canada: https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html Canada Suicide Prevention Service: (toll-free) 1-833-456-4566 for 24-hour crisis support OR text 45645 for text support (see https://www.crisisservicescanada.ca/en/ for more information)
Within the United States of America https://www.usa.gov/features/usa-govs-guide-to-mental-health-resources-from-the-government United States Suicide Prevention service: (toll-free_ 1-800-273-8255(see https://suicidepreventionlifeline.org/ for more information)
Outside of Canada/United States of America https://www.who.int/news-room/feature-stories/mental-well-being-resources-for-the-public The following has a list of crisis and suicide lines in different countries: https://suicidehotlines.com/international.html
Benefits and Compensation.
The potential benefits of your participation in this research include learning about the process of research first-hand and helping to advance the state of knowledge regarding the perceived identities and lived experiences of people.

As a way to compensate you for any inconvenience related to your participation, you will have the chance to win 1 of 5 gift cards worth $50 CAD.

If you decide to withdraw from the study during or after the data collection process you will still be eligible to win.

Voluntary Participation
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data can be deleted if you contact Clea Sturgess (cleastur@uvic.ca) with your confirmation code that is presented at the end of the study. **If you do not retain this code, we will be unable to identify and delete your responses.**

This code is **not** required to receive compensation. It is only required to identify and delete your anonymous responses if you choose to withdraw from the study at any point.

Anonymity and Confidentiality
Your responses will be anonymous, as no one will be able to associate your individual answers with your identity. Your confidentiality and the confidentiality of the data will be via the security protocols in place for data collected through Qualtrics. **All data collected through Qualtrics for this study will be stored on Qualtrics' protected Canadian servers which are located in Canada.**

Dissemination of Results and Disposal of Data
If you decide to participate in our study your de-identified data may be used in the future by the same Principal Investigator, Dr. Danu Anthony Stinson, for other scholarly purposes. The future use of your data may involve other undergraduate or graduate students that join the research team. It is anticipated that the results of this study and future studies using this data will be shared with others in the following ways: 1) conference oral and poster presentations; 2) university classroom presentations; 3) press-releases and social media; and 4) peer-reviewed journal articles. In the course of dissemination, it may be necessary to share anonymized aggregated data in order for external reviewers and readers to verify the accuracy of our analyses and research reports. This will be facilitated via Dr. Stinson's Open Science Framework page—a service for sharing research materials. Data from this study will be stored indefinitely, in order to maintain the verifiability of the findings to interested researchers and readers.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (1-250-472-4545 or ethics@uvic.ca).

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Please check one of the following options to confirm your consent:

- ○ I verify that I am age 19 or older and I agree to participate in this survey
- ○ I do not agree to participate

Skip To: End of Survey If Consent = 4

End of Block: Informed Consent

Start of Block: Captcha

Before you proceed to the survey, please complete the captcha below.

End of Block: Captcha

Start of Block: Demographics

Background Information
This information will only be presented as group data when sharing the results of the study.

I identify my gender as

_____

My current age is

_____

We know that people of different races do not have significantly different genetics. But our race still has important consequences, including how we are treated by different individuals and institutions. Which race category best describes you? Check all that apply

Black (African, Afro-Caribbean, African Canadian descent)

East/Southeast Asian (Chinese, Korean, Japanese, Taiwanese descent or

Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent)

Indigenous (First Nations, Metis, Inuk/Inuit)

Latino (Latin American, Hispanic descent)

Middle Eastern (Arab, Persian, West Asian descent)

South Asian (East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo-Caribbean)

White

Another term best describes me _____

Page Break

I identify my sexual orientation as

_____

The country I was born in is

_____

People's experiences in the world are different depending on their weight and body size and shape and we would like to understand those different experiences. We will not be using this information to draw any conclusions about your health.

I identify as (click all that apply)

- ☐ Fat
- ☐ Plus Size
- ☐ Chubby
- ☐ Fluffy
- ☐ BBW
- ☐ Curvy
- ☐ Full-figured
- ☐ Hefty
- ☐ Voluptuous
- ☐ Other _____

Compared to other people my age, the current size of my body is	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter
As a child, compared to my peers, the size of my body was:	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter
As a teenager, compared to my peers, the size of my body was:	○ 1 Much thinner	○ 2	○ 3	○ 4 About the same	○ 5	○ 6	○ 7 Much fatter

End of Block: Demographics

Start of Block: Survey 1

We are interested in understanding your attitudes and perceptions. There are no right or wrong answers to any of the items. Please provide the response that best fits your experiences and beliefs.

Please choose the response from the following that best describes how you feel about each of the statements listed below.
Please provide responses for how you currently feel (past four weeks).

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
I feel in tune with my body	○	○	○	○	○
I feel at one with my body	○	○	○	○	○
I feel “detached” and separate from my body	○	○	○	○	○
I feel depressed/anxious/scared in/about my body	○	○	○	○	○
My eating habits are a way for me to manage my emotions or how I have felt about myself	○	○	○	○	○
Generally I feel good/comfortable in my body	○	○	○	○	○
I am proud of what my body can do	○	○	○	○	○
I feel dissatisfied, envious, and frustrated when I compare my body to others	○	○	○	○	○
I feel joy in my body	○	○	○	○	○
My body reduces my sense of self worth in the world	○	○	○	○	○
I sometimes tend to blame my body for difficulties I am having	○	○	○	○	○

I engage in potentially harmful or painful behaviours (e.g., disordered eating, bingeing, purging, denying physical needs, skin cutting, burning, drug use, excessive alcohol consumption)	○	○	○	○	○
I have an eating disorder	○	○	○	○	○
I take good care, and am respectful, of my body	○	○	○	○	○
I ignore the signs by body sends me (e.g., of hunger, stress, fatigue, illness/injury)	○	○	○	○	○
I am aware of my needs	○	○	○	○	○
It is hard for me to read/identify my feelings	○	○	○	○	○
I am comfortable with, and proud of, who I am	○	○	○	○	○
My dissatisfaction with my body/appearance has a negative effect on my social life	○	○	○	○	○
I put a priority on listening to my body and its needs (e.g., stress, fatigue, hunger)	○	○	○	○	○

Page Break

	Poor	Fair	Good	Very Good	Excellent
In general, would you say your health is:	○	○	○	○	○
In general, how would you rate your physical health?	○	○	○	○	○
In general, how would you rate your satisfaction with your social activities and relationships?	○	○	○	○	○

	Poorly (1)	OK (2)	Average (3)	Quite Well (4)	Extremely Well (5)
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work, and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)	○	○	○	○	○

	Not at all (1)	A little (2)	Moderately (3)	Mostly (4)	Completely (5)
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?	○	○	○	○	○

	None (1)	Mild (2)	Moderate (3)	Severe (4)	Very Severe (5)
How would you rate your fatigue on average?	○	○	○	○	○

	No pain 0	1	2	3	4	5	6	7	8	9	Worst Imaginable Pain 10
How would you rate your pain on average?	○	○	○	○	○	○	○	○	○	○	○

	Not very true of me 1	2	3	4	5	6	Very true of me 7
I have high self-esteem	○	○	○	○	○	○	○

	Strongly Disagree (1)	Disagree (2)	Mildly Disagree (3)	Neither Agree nor Disagree (4)	Mildly Agree (5)	Agree (6)	Strongly Agree (7)
We should celebrate all bodies	○	○	○	○	○	○	○
Size acceptance is an important social movement	○	○	○	○	○	○	○
Size acceptance is a foundation for making healthy lifestyle choices	○	○	○	○	○	○	○
We need more positive images of fat people in the media	○	○	○	○	○	○	○
Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies	○	○	○	○	○	○	○
Size acceptance should be encouraged	○	○	○	○	○	○	○

For verification purposes, please answer the following question. What is 12-2?

Please choose the response from the following that best describes how you feel about each of the statements listed below.

Please provide responses for how you currently feel (past four weeks).

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
I have not been as physically active as I have wanted to be (due to, for example, lack of access to facilities; physical health; safety in public places; care of others; lack of money; school/work)	○	○	○	○	○
Others (e.g., parents, teachers, partners) have supported me in being as active as I wanted to be	○	○	○	○	○
I have had the opportunity to engage in physical activities that have helped me feel confident in my physical abilities	○	○	○	○	○
I have engaged in enjoyable leisure activities	○	○	○	○	○
I have been encouraged and supported in expressing and responding to my needs	○	○	○	○	○
I have had opportunities to spend time in nature, which have helped me to feel more connected to myself and my body	○	○	○	○	○
My family/social circles have engaged in activities that made me feel joy in my body (e.g., dance, music, hiking, outdoor picnics)	○	○	○	○	○

Significant people in my life have modeled and/or have encouraged me to engage in self-care	○	○	○	○	○
I have had the opportunity to engage in activities (e.g., sports, play, yoga, meditation, massage) that have helped me feel immersed/connected in my body	○	○	○	○	○
I have received useful information from a trusted person that has helped guide me with respect to living in my body	○	○	○	○	○
I have received information (e.g., from parents, teachers, doctors, friends) that helped me make wise and informed decisions involving my health	○	○	○	○	○
In my sexual experiences I have felt that my wishes have been considered and respected	○	○	○	○	○
Positive intimate/sensual/sexual experiences have helped me to be more in tune with and aware of my body	○	○	○	○	○

Page Break

	Strongly Disagree (1)	Disagree (2)	Mildly Disagree (3)	Neither Agree nor Disagree (4)	Mildly Agree (5)	Agree (6)	Strongly Agree (7)
I feel good about my body	○	○	○	○	○	○	○
I feel happy about my weight	○	○	○	○	○	○	○
I do not feel defined by my body weight	○	○	○	○	○	○	○
My self-esteem is not impacted by my body weight	○	○	○	○	○	○	○

In your day-to-day life, how often do any of the following things happen to you?

	Almost every day (1)	At least once a week (2)	A few times a month (3)	A few times a year (4)	Less than once a year (5)	Never (6)
You are treated with less courtesy than other people are.	○	○	○	○	○	○
You are treated with less respect than other people are.	○	○	○	○	○	○
You receive poorer service than other people at restaurants or stores.	○	○	○	○	○	○
People act as if they think you are not smart.	○	○	○	○	○	○
People act as if they are afraid of you.	○	○	○	○	○	○
People act as if they think you are dishonest.	○	○	○	○	○	○
People act as if they're better than you are.	○	○	○	○	○	○

You are called names or insulted.	○	○	○	○	○	○
You are threatened or harassed.	○	○	○	○	○	○

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If you answered “A few times a year” or more frequently to at least one question, what do you think is/are the main reason(s) for these experiences (check all that apply)?

- ☐ Your Ancestry or National Origins (1)
- ☐ Your Gender (2)
- ☐ Your Race (3)
- ☐ Your Age (4)
- ☐ Your Religion (5)
- ☐ Your Height (6)
- ☐ Your Weight (7)
- ☐ Some other Aspect of Your Physical Appearance (8)
- ☐ Your Sexual Orientation (9)
- ☐ Your Education or Income Level (10)
- ☐ A physical disability (11)

Content warning: The wording of the following questions may cause emotional or psychological distress. Our intention in asking these questions is to understand experiences of weight stigma. You may skip any questions you do not want to answer or exit the survey at any time.

Please answer the items below, using the scale provided.

	Strongly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Slightly Agree (4)	Agree (5)	Strongly Agree (6)
Because of my weight, I feel that I am just as competent as anyone	○	○	○	○	○	○
I am less attractive than most other people because of my weight	○	○	○	○	○	○
I feel anxious about my weight because of what people might think of me	○	○	○	○	○	○
I wish I could drastically change my weight	○	○	○	○	○	○
Whenever I think a lot about my weight, I feel depressed	○	○	○	○	○	○
I hate myself for my weight	○	○	○	○	○	○
My weight is a major way that I judge my value as a person	○	○	○	○	○	○

I don't feel that I deserve to have a really fulfilling social life, because of my weight	○	○	○	○	○	○
I am OK having the weight that I have	○	○	○	○	○	○
Because of my weight, I don't feel like my true self	○	○	○	○	○	○
Because of my weight, I don't understand how anyone attractive would want to date me	○	○	○	○	○	○

	N/A 0	Low 1	2	Moderate 3	4	Severe 5
How would you rate your feelings of anxiety?	○	○	○	○	○	○
How would you rate your feelings of depression?	○	○	○	○	○	○

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I frequently do not have the energy I need to complete everyday life tasks.	○	○	○	○	○
I often unnecessarily worry about day-to-day tasks in my life	○	○	○	○	○
I have lost interest in many activities I used to enjoy	○	○	○	○	○
I often feel like I can't "turn off" my brain	○	○	○	○	○
I either sleep too much or not enough	○	○	○	○	○
I would rather stay at home then hang out with family or friends	○	○	○	○	○
I often feel sad or down	○	○	○	○	○
I often feel tense or "on edge"	○	○	○	○	○
I find it hard to concentrate	○	○	○	○	○
I have difficulty falling or staying asleep	○	○	○	○	○

Page Break

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I find myself being preoccupied with food (1)	○	○	○	○	○

	Never	Rarely	Sometimes	Often	Usually	Always
I feel guilty after eating	○	○	○	○	○	○
I avoid eating when I am hungry	○	○	○	○	○	○
I have gone on eating binges where I feel that I may not be able to stop	○	○	○	○	○	○
I think of burning up calories when I exercise	○	○	○	○	○	○
I engage in dieting behaviour	○	○	○	○	○	○

Page Break

Think about a situation you are experiencing right now that is painful or difficult. It could be some challenge in your life, or perhaps you are feeling inadequate in some way. Please indicate

how well each statement applies to how you are feeling toward yourself right now as you think about this situation, using the following scale:

	Not at all true for me 1	2	3	4	Very true for me 5
I'm giving myself the caring and tenderness I need.	○	○	○	○	○
I'm obsessing and fixating on everything that's wrong.	○	○	○	○	○
I'm remembering that there are lots of others in the world feeling like I am.	○	○	○	○	○
I feel intolerant and impatient toward myself.	○	○	○	○	○
I'm keeping things in perspective.	○	○	○	○	○
I feel like I'm struggling more than others right now.	○	○	○	○	○

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When I am with other people, I feel included.	○	○	○	○	○	○	○
I have close bonds with family and friends.	○	○	○	○	○	○	○
I feel like an outsider.	○	○	○	○	○	○	○
I feel as if people do not care about me.	○	○	○	○	○	○	○
I feel accepted by others.	○	○	○	○	○	○	○
Because I do not belong, I feel distant during the holiday season.	○	○	○	○	○	○	○
I feel isolated from the rest of the world.	○	○	○	○	○	○	○
I have a sense of belonging.	○	○	○	○	○	○	○
When I am with other people, I feel like a stranger.	○	○	○	○	○	○	○

I have a place at the table with others.	○	○	○	○	○	○	○
I feel connected with others.	○	○	○	○	○	○	○
Friends and family do not involve me in their plans.	○	○	○	○	○	○	○
For verification purposes, please select "Somewhat Agree"	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Fat people face discrimination in many areas of life	○	○	○	○	○	○	○
It is hard to accept your body if it differs from what the media represents as normal	○	○	○	○	○	○	○
Negative beliefs about body weight lead to negative assumptions about fat people	○	○	○	○	○	○	○
Health professionals should be aware of the negative impact of weight stigma	○	○	○	○	○	○	○
Fat people are treated badly because of the way society depicts fat bodies	○	○	○	○	○	○	○
Weight-based discrimination negatively impacts on well-being	○	○	○	○	○	○	○

Concern for health is used as an excuse to judge fat people	○	○	○	○	○	○	○

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Discrimination due to fatness leads to a denial of human rights	○	○	○	○	○	○	○
We need to take weight-based discrimination as seriously as other forms of discrimination	○	○	○	○	○	○	○
Activism is necessary because of the discrimination fat people experience	○	○	○	○	○	○	○
The existence of organizations to lobby for the rights of fat people is a good thing	○	○	○	○	○	○	○
Discussions and programs recognizing diversity need to include body weight	○	○	○	○	○	○	○

We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming	○	○	○	○	○	○	○
There is a need for Fat Activism because fat shaming is widespread	○	○	○	○	○	○	○

Page Break

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Body weight isn't a reliable indicator of health	○	○	○	○	○	○	○
Health is not predicted solely by body weight	○	○	○	○	○	○	○
Body Mass Index (BMI) is a poor indicator of health	○	○	○	○	○	○	○
Fat people are not necessarily unhealthy	○	○	○	○	○	○	○
Healthy bodies come in all shapes and sizes	○	○	○	○	○	○	○

Page Break

	Strongly Disagree	Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Agree	Strongly Agree
Fat people are sexy	○	○	○	○	○	○	○
If I were single, I would go out with a fat person	○	○	○	○	○	○	○
Fat people are attractive	○	○	○	○	○	○	○
Confident fat people are appealing	○	○	○	○	○	○	○
Fat people are sexier than thin people	○	○	○	○	○	○	○

Fat people healing their relationships with their bodies often engage in activities that help with the healing process. To what extent have these activities been important for your healing? Please fill in the text boxes under "other" if there are activities that have helped you with the healing process that are not listed.

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Forming a fat-positive identity	○	○	○	○	○
Body neutrality	○	○	○	○	○
Attending and responding to hunger and fullness cues (e.g., intuitive eating)	○	○	○	○	○
Participating in fat-positive body movement activities (e.g., fat positive yoga, fat swims)	○	○	○	○	○
Attending and responding to bodily needs for rest and sleep	○	○	○	○	○
Asking for or demanding accommodations for your body in spaces that are not designed to accommodate fat bodies	○	○	○	○	○
Taking up space	○	○	○	○	○
Participating in Fat Activism	○	○	○	○	○
Participating in Fat Community in person	○	○	○	○	○
Finding/interacting with Fat role models	○	○	○	○	○

Participating in Fat Community online (e.g. the Fatosphere)	○	○	○	○	○
Following fat social influencers	○	○	○	○	○
Attending and responding to bodily needs for sensuality and sexuality	○	○	○	○	○
Other	○	○	○	○	○
Other	○	○	○	○	○
Other	○	○	○	○	○

Page Break

It is our intention to improve fat people's lives with this research. If anything was harmful or poorly worded, please let us know.

_____

End of Block: Survey 1

Start of Block: Feedback Letter

Understanding Embodiment Feedback Letter

Faculty Investigator: Dr. Danu Anthony Stinson, Associate Professor, Psychology Department
Researcher: Clea Sturgess
Contact Information: Clea Sturgess: cleasturgess@uvic.ca
Dr. Danu Anthony Stinson: dstinson@uvic.ca

Thank you for participating in this study!

In this study, we were interested in understanding your experiences of embodiment, which is your relationship with your body. **In particular, we wanted to better understand how different dimensions of identity (such as self-processes, belongingness, group-identification, and embodiment) help or hinder individuals who have experienced weight stigma in their efforts to recover from internalized weight stigma.** Previous research has looked at how individuals with higher-than-average weights are heavily stigmatized, but very little research has been done on internalized weight stigma. Virtually no research exists on the process of recovery from internalized weight stigma. We wanted to get an idea of what different identity aspects are needed, or acquired, to begin the healing process from internalized weight stigma.

If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact us at the email address listed at the top of the page.

As with all University of Victoria projects involving human participants, this project was reviewed by, and received ethics clearance through, the Human Research Ethics Office. Should you have any comments or concerns resulting from your participation in this study, please contact the Human Research Ethics Office at 250-472-4545 or ethics@uvic.ca.

End of Block: Feedback Letter

Start of Block: Block 4

Here is your confirmation code:

Please retain this code for your records as your proof of participation. This code will also be required should you wish to withdraw. We will be unable to identify and delete your responses if you do not retain this code. When you have copied this code, please click the next button to submit your survey.

End of Block: Block 4

Start of Block: Block 5

Would you like to enter the draw to win a prize? Your survey responses will remain anonymous.

- ○ Yes
- ○ No

End of Block: Block 5

Appendix D: Summary of Weight Stigma Treatment Studies

Table 47

Summary of Extant Weight Stigma Treatment Studies

Author (Year)	Modality	Design	Participants	Number of Sessions/ Frequency	Delivery	Focus	Key Results (Related to IWS and psychological distress)
Dunaev et al. (2018)	Body-focused Gratitude	RCT	369 young adults	1-time, online writing exercise	Online, self-directed	Lowering IWS and increasing body image	Writing group had lower IWS and higher body image scores than control group
Levin et al. (2018)	ACT	Pilot (no control group)	13 adults	7 weeks/ weekly sessions	Self-directed + weekly coaching calls	Weight loss & lowering IWS	Lower IWS and depression scores comparing baseline to end of treatment
Palmeira et al. (2019)	ACT & Mindfulness	No control group	53 women	10 weeks/ weekly sessions + 2 bi-weekly	Group, unclear if led by a psychologist or other professional	Weight loss & lowering IWS	Lower IWS scores comparing baseline to end of treatment; no measures of psychological distress
Ramos Salas et al. (2019)	Narrative Therapy	Qualitative study	10 adults	2-year narrative inquiry process	Individual	Understanding the process of IWS and recovery	No quantitative measures; qualitative showed narrative inquiry helps recovery from IWS
Pearl et al. (2020)	CBT	RCT	72 adults	Twelve/ Once a week followed by biweekly + monthly to week 26	Group, led by psychologist or registered dietician	Weight loss & lowering IWS	Lower IWS in treatment group at week 12, no difference between groups at week 26
Brownstone et al. (2021)	Psychotherapy/ Eclectic	Pilot (no control group)	36 adults (eating disorder patients)	Seven to 10 sessions, weekly	Group, led by therapist	Weight loss & lowering IWS	No quantitative measures

Note: CBT = Cognitive Behavioural Therapy; ACT = Acceptance and Commitment Therapy; IWS = Internalized Weight Stigma; RCT = Randomized Control Trial