Quantifying Elements of Contemporary Fat Discourse: The Development and Validation of The Fat Attitudes Assessment Toolkit

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A thesis submitted for the degree of Doctor of Philosophy of Murdoch University, Western Australia.

April 2019
DECLARATION

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution. All necessary ethics and have been obtained.

Patricia Tess Cain

Statement of Contributors

This thesis contains two peer review publications on which Chapter 3 and Chapter 5 are based. For both chapters I conducted the data collection and analysis, and wrote the draft manuscripts. My supervisors and co-authors contributed advice on analysis, detailed revisions of the manuscripts, and responses to peer review.

Dr Graeme Ditchburn  
Associate Professor Ngaire Donaghue
ACKNOWLEDGEMENTS

I would like to extend my gratitude to a number of people for their support and assistance during my PhD candidature. First and most importantly I would like to thank my supervisors Associate Professor Ngaire Donaghue and Dr Graeme Ditchburn for both their knowledge and advice, as well as their continued guidance and support throughout this project. I would also like to extend a special thank you to Olivia Monson for introducing me to this important area of research.

I am thankful to a number of experts and “non-experts” alike who offered important feedback at various stages of this project. In particular I wish to acknowledge the subject matter experts who provided feedback on my initial item pool. Thank you to, Dr Esther Rothblum, Dr Deb Burgard, Dr Linda Bacon, Dr Jason Whitesel, Dr Lucy Aphramor, Natalie Ingram, Dr Maureen McHugh, Darliene Howell, Peggy Howell, Kerry Beaks, Caitlin O’Reilly, Olivia Monson and Dr Rebecca Puhl. I also wish to acknowledge the “non-experts” who provided valuable feedback on my revised item pool. Thanks to, Joanne Stevens, Lainnie Akastrom, Tammy Thompson, Renee Seebohm, Lisa Seebohm, Sasha Botsis, Tara Reale, Brenda Searle, Sharon Clarke, Amanda Stevenson, Rebecca Buswell, David Campbell and Peta Green.

In 2017 I presented a workshop at the 5th Annual Weight Stigma Conference in Prague, titled Experiments, interventions and strategies: Generating new approaches to weight stigma research. During this workshop, attendees collaborated to generate ideas relating to research protocols and interventions, ideas which are presented in Chapter 4. I would like to acknowledge the contributions made by, Natashja Robstad, Natascha Weinberger, Dr Friedrich Schorb, Mane Bernard, Franziska Jung, Dr Sean Phelan, Emily Porth, Professor Iyiola Solanke, Laurel O’Gorman, Veronika Merklein,
Stephanie von Leibenstein, Dr Angela Meadows, Dr Jeff Hunger, Chris Borduas, Dr Sian McLean, Lindsey Mazur, Maks Robmether, Dr Andrea Bomback, Professor Chris Crandall, Martin Cadek, Sharon DeJoy, and Sharon Noonam-Gunning.

To the 1140 anonymous participants who took part in this research, thank you. Without people willing to participate in research, whether paid or voluntary, academic progress is not possible. To the “Weight Stigma” and “Fat Activism” communities more broadly, thank you for being so generous and inclusive. What an amazing and inspiring group of people, thank you for making me feel welcome wherever and whenever I have engaged with you. To my PhD office colleagues past and present, it has been so great to share this experience with you all, what an enormous support you have been. Lastly, I would like to thank my daughter Quinn Harland, you have shown support and encouragement way beyond your years.

This research has been supported by an Australian Government Research Training Program Scholarship.
ABSTRACT

The majority of instruments designed to measure attitudes toward fatness and “obesity” were developed in the 1990s, a time when the “obesity epidemic” was gaining attention. As a consequence, they focus on assessing negative appraisals of fat people. While there is no doubt that negative attitudes underlie stigma and discrimination, this approach assesses only part of fat discourse. Recent times have seen mainstream fat discourse expand beyond anti-fat rhetoric and incorporate perspectives of activism, acceptance, and critical responses to the anti-“obesity” agenda. To reflect this maturation and align with more critical research agendas, an expanded approach to quantification is now needed. This thesis documents the development and validation of the Fat Attitudes Assessment Toolkit (FAAT), a new approach to measurement that responds to and represents contemporary fat discourse.

In developing the FAAT it was first necessary to identify the nature of contemporary fat discourse and current methods of measurement. To do this, I review key perspectives on fatness in academic and popular literature, as well as in social media news commentary. I also review methods of weight stigma intervention research, in order to uncover opportunities for construct measurement. Following this, popular validated measures of fat attitudes are qualitatively and systematically reviewed, so that I may draw attention to problematic aspects of current instruments. The development and validation process of the FAAT are then detailed, including subject matter expert review, exploratory and confirmatory factor analysis, and establishing scale reliability and validity.

The FAAT quantifies endorsement of elements of current fat discourse including: empathy, attractiveness, injustice, health, size acceptance, complexity and responsibility. For stigma reduction research, this will enable more targeted questions to
be asked and more nuanced results analysed. These outcomes will advance stigma reduction research and in turn influence policies and programs designed to reduce stigma and oppression.
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CHAPTER 1.
INTRODUCTION

“Jokes about fat people are funny, fat people are unclean, most fat people are boring, being fat is sinful, fat people are disgusting. I’m wondering how you feel about these statements? Some of you may agree, some disagree, others may feel offended or shocked. When I tell you that these statements have been generated by academics in order to measure attitudes toward obesity and fatness, you may be surprised. I know I was when I first came across them.

Attitudes toward fat people unfortunately tend to be negative attitudes, and this results in stigma, bias, and discrimination that impacts on important areas of life: employment, housing, health care, relationships, and even education. Do you know the most common reason children are bullied? It’s because of their weight.

I believe it is vital to understand attitudes toward fat people, in order to reduce stigma and discrimination; however, I think this can be done in a more respectful and considered way—and this is where my thesis comes in.”

This was the opening of my Three Minute Thesis\(^1\) presentation in 2015 and, in a nutshell, is the argument for my thesis – when it comes to measuring attitudes toward

\(^1\) The Three Minute Thesis competition or 3MT is an annual worldwide completion where PhD students present their research in 3 minutes in a form that can be understood by a general audience
fat people, I think it is time for a new approach. The statements I opened my presentation with are items from the Antifat Attitudes Test, by Lewis, Cash, Jacoby, and Bubb-Lewis (1995). Although I focused on this particular instrument, the statements are indicative of the types of items found across popular measures of attitudes toward fat people (Allison, Bastile, & Yuker, 1991; Crandall, 1994; Latner, O’Brien, Durso, Brinkman, & MacDonald, 2008; Morrioson & O’Connor, 1999). Measures that have been employed for several decades across a range of research designed to both assess and reduce weight stigma (Alberga et al., 2016; Danielsdottir, O’Brien, & Ciao, 2010; Lee, Ata, & Brannick, 2014; Puhl & Heuer, 2009). Measures that have been paired with interventions designed to increase empathy toward fat people (Teachman, Gapinski, Brownell, Rawlins, & Jeyaram, 2003) or to assess the impact of Health At Every Size education (Humphrey, Clifford, & Morris, 2015). Measures that have been used following workshops and curriculum on the negative effects of weight bias, with health professionals (McVey et al., 2013) and health professional students (Poutschi, Saks, Piasecki, Hahn, & Ferrante, 2013). Measures that, despite endorsement (Morrison, Roddy, & Ryan, 2009; UConn Rudd Centre for Food Policy and Obesity, 2015) and their contributions to the field of weight stigma research, focus only on antifat attitudes and, given the maturation and complexity of current fat discourse, I suggest may no longer be fit for purpose.

In this thesis I argue that current measures for quantifying attitudes toward fat people are problematic for two important reasons. Firstly, they are failing to capture the breadth and diversity of contemporary fat discourse. While there is no doubt that negative attitudes toward fat people do underlie stigma (Crandall, 1994), and responses to negative statements do allow access to these evaluations, the current focus of quantification is only allowing researchers access to the antifat aspect of fat attitudes.
Restricting measurement to this one domain is limiting our understanding of social evaluations of fat people. When measures capture only negative attitudes, expressions of more positive responses to fat people are not captured, or may only be inferred as the absence of negativity. I argue that it is now time for measurement to expand focus and embrace the complex and colourful landscape that is contemporary fat discourse. While quantifying negativity gives researchers access to antifat attitudes, an expanded approach, one that captures the fullness and nuance of contemporary fat discourse, will enable access to endorsement of elements of critical fat perspectives as they work to reconstruct evaluations of fat people.

My second concern with the current focus on antifat attitude measurement is with the actual items included in measures, and the impact they may have on research participants. As I am yet to find any research on weight stigma that deliberately recruits “non-fat” participants, it is safe to assume that many if not most research participants responding to antifat attitude measures are themselves likely to identify as fat. While the nature of attitude measurement means that when members of the target group are participants, they are responding to statements about themselves, in the case of antifat attitude measurement, many items are derogatory and disparaging. How might responding to the following statements make the fat participant feel? “Obese people should not expect to live normal lives” (Allison, et al., 1991), “It is disgusting when a fat person wears a bathing suit at the beach” (Morrioson & O’Connor, 1999) or, “Although some fat people are surely smart, in general, I think they are not quite as bright as normal weight people” (Crandall, 1994). Given that antifat attitude measures are used in research where the goal is to reduce weight stigma, I argue that the use of measures that include pejorative statements about fat people is ethically problematic and
may be harmful to participants. This approach serves to propagate negativity toward fat people. It is important to consider who is feeling validated and who is feeling violated after completing one of these measures.

Mainstream views of fatness position fat people as responsible for their weight (Crandall, 1994). This perception positions fat people as having the ability (and obligation) to change, and has been found to both drive and legitimize stigmatizing practices (see Puhl & Brownell, 2006; Rogge, Greenwald, & Golden, 2004 for further discussion of this trend). Conventional viewpoints also establish fatness as evidence of poor health, as such, the fat body is now commonly recognised as a diseased body (Gard & Wright, 2005). With this, fat people are considered not only responsible for their weight, they are considered responsible and held accountable for their health—messages that have been further legitimized through public health campaigns (Lupton, 2014). Negative judgements are so pervasive that many fat people have come to internalize weight stigma, directing negativity toward themselves (Hilbert, Braehler, Haeuser, & Zenger, 2014). Now that the so-called “obesity crisis” is a focus for many western countries (Jutel, 2011), fat people are subjected to further scrutiny and stigma. Weight stigma, bias and discrimination powerfully affect the well-being and lived experience of fat people (Brewis, Hruschka, & Wutich, 2011; Major, Eliezer, & Rieck, 2012; Puhl & Brownell, 2001; Puhl & Heuer, 2009). The current climate of antipathy toward fat people has even been compared to the expression of racism in the 1940s; Crandall, (1994) asserts that antifat attitudes are “… overt, expressible and widely held.” (p. 891).

While there has been activism and challenge to the stigma and oppression of fat people since the 1960s, the past decade and a half have seen a growing body of work
from activist and critical perspectives, in both academic and popular literature (Lupton, 2013). Critical “obesity” research works to contest many of the claims upon which the “war on obesity” has been based (Campos, 2004; Campos, Saguy, Ernsberg, Oliver, & Gaesser, 2006). Movements such as Fat Acceptance and Fat Activism respond to the need for acceptance and activism on behalf of people facing oppression due social responses to their weight (Wann, 2009). These movements draw attention to the oppression directed toward fat people, and challenge conventional ideas of attractiveness, health, responsibility and fatness (Cooper, 1998, 2016). Health At Every Size poses a challenge to the assumption that to be healthy fat people need to lose weight and proposes a shift to a weight neutral approach to health, at an individual level as well as within the conventional health care paradigm (Aphramor, 2005; Bacon, 2010; Burgard, 2009, Bacon & Aphramor, 2011). Ideas from these academic, political, and social movements are making inroads into mainstream narratives (Cain, Donaghue, & Ditchburn, 2017). They are reaching broader audiences, thanks in part to the growth of digital and social media and the birth of the “fatosphere” (Harding & Kirby, 2009).

What is now required is an approach to measurement that reflects these shifts.

**Epistemology and Methodology**

In this thesis I argue that current measures of antifat attitudes are too one dimensional. I suggest that they are failing to capture the range of ways in which fat people are being evaluated and considered, in other words, they are failing to capture the different social constructions of fat people. In this thesis, I also argue that current measures include language and statements that are hurtful and disrespectful to research participants, particularly fat participants. The current approaches do not honour the reality of participant lived experience, nor recognize the material consequences of living
with imposed social identities. In developing a new measure, I aim to reflect on the
constructionist and the realist elements of fat embodiment, recognizing how these
inform the measurement of attitudes toward fat people. To do this I adopt a critical
realist epistemology. As a theory of knowledge, critical realism sits between the
somewhat oppositional positions of realism and social constructionism (Bhaskar, 1989)
acknowledging both as making important contributions to the knowledge made possible
from this research.

A critical realist approach has been suggested as a fitting epistemology for
approaching the topic of fatness. Warin (2015) recommends the need for greater
connection between the materiality of fat bodies and the discursive construction of fat
bodies, suggesting that recognition of the material social injustices that are inflicted on
fat bodies, opens up ways of thinking from which ethical practices may emerge. In
addition, Patterson and Johnson (2012) have suggested that “obesity” is indeed a hybrid
construct encompassing both social and biomedical influences, and as such, is best
understood from the theoretical perspective of critical realism. Given my intention is to
draw upon socially constructed understandings of fatness to create a measure for
evaluating elements of fat discourse, critical realism aligns with these objectives.

Throughout this thesis I frequently refer to “fat discourse”. In using this term, I
adopt a meaning of discourse that focuses on ways of representing knowledge about
fatness and fat people. I employ a Foucauldian approach to discourse where discourse is
conceptualised as “a system of representation” (Hall, 2001, p.72) rather than an analysis
of language or conversation. Discourse in this sense encompasses the notion of social
power (Weedon, 1987) and recognises the ways in which certain representations shape
the way the self and the other are perceived and acted upon, an important feature given
my critical realist approach. My goal is to identify the mainstream ways in which fat bodies and fatness are discussed, so that these constructions may be reflected in measurement. To bring these constructions into a measurement context in a manageable way, I use thematic analysis (Braun & Clarke, 2006; Parker, 2013) to collect and group together meanings and understandings of fatness that are currently deployed to fat bodies.

Crotty (1998) suggests that when doing social research, decisions relating to choice of methodologies and method, and the decisions that justify choices, need to inform one another. One’s epistemology informs theoretical perspective, which in turn informs methodology, or strategy, which lastly informs specific techniques or methods (Crotty, 1998). As I approach this project from the epistemology of critical realism, I adopt the theoretical perspective of critical enquiry. This methodology informs the qualitative work I do in making a case for a new approach to measurement, and also the work done in formulating constructs and items for the measure. However, as a methodology, critical enquiry and qualitative methods are not typically aligned with psychometric measurement.

The outcome of this thesis is a psychometric scale, a product built on the fundamental idea that, we can know something about a person’s evaluation of a target subject or object, from their responses to a select number of items. This approach speaks to a realist theory of knowledge. I recognize that developing a mainstream quantitative instrument underpinned by a critical enquiry creates a tension within this thesis. The critical and qualitative work in this thesis recognizes the social nature of attitudes and how such evaluations may be complex and multidimensional (Molina & Tafani, 1997). This work similarly seeks to tap into the broader discourse around fatness.
and fat people, acknowledging the power of discourse, in shaping understanding, rather than simply reflecting perceptions.

The quantitative work that informs this thesis aligns with the scientific research method of that psychology has come to favour (Wertz, 2014) and reflects more of a positivist approach. Quantitatively measuring how people position themselves in relation to social attitudes towards fatness and fat people, enables a scale and a type of research that is not available through qualitative approaches. It remains the case that in many social and policy forums “numbers” carry a greater persuasive weight than other forms of data. For critical fat researchers who want to show that interventions have “worked”, empirical measures are an important tool. Providing forms of “quantification rhetoric” (Potter, Wetherell, & Chitty, 1991) for critical perspectives in the evaluations to be quantified means that these topics are now able to penetrate a domain previously dominated by an antifat focus.

**Situating the Research**

Situating this research in the domain of psychology also creates a degree of tension in this thesis. As a discipline, mainstream psychology tends to adhere very much to a weight centric model of health, a position that is argued to have impeded meaningful gains in the domain of weight stigma research (McHugh & Kasardo, 2012; Rothblum, 1999; Watkins & Gerber, 2016). Indeed, some stigma reduction research with roots in psychology is interested in weight stigma because of links with diminished dietary intentions (for example, Seacat & Mickelson, 2009). Throughout the theses, I will challenge beliefs central to mainstream psychology, and I do this through a critical psychology and critical fat studies approach.
In a research context, critical enquiry characterises research that seeks to challenge, recognize oppression, and bring about change (Crotty, 1998)—all tenets central to critical psychology (Prilleltensky & Nelson, 2002) and critical fat studies. Critical psychology challenges mainstream psychology in fundamental ways, suggesting that psychology as an institution has propagated a constricted view of human welfare that may actually foster inequality and oppression (Fox, Prilleltensky, & Austin, 2009). Through a critical approach, I support a desire to explore alternatives and “do better” (Prilleltensky & Nelson, 2002), in terms of both reflecting contemporary fat discourse through measurement, and the recognition of fat people as research subjects and participants. In developing items for the Fat Attitudes Assessment Toolkit (FAAT), I have sought to extend beyond the traditional model of measurement, and the notion that antifat attitudes are the most important evaluations that need to be quantified.

Fat studies adopts a critical position to scrutinize popular social attitudes around body weight, health, and appearance (Rothblum, 2012). Fat studies is interdisciplinary and, in many ways, similar to critical scholarship that focus on ethnicity or gender (Rothblum, 2012). Fat studies considers body weight a natural form of human diversity and works to examine and challenge social constructions and responses to fat people (Wann, 2009). Active in calling attention to discrimination and oppression of fat people (Rogge et al., 2004) Fat Studies critiques the current weight centred health policy, viewing this approach as inconsistent with human rights obligations (O’Hara & Gregg, 2012). While as a researcher I identify with a critical fat framework, in order to develop a comprehensive quantitative assessment tool, there are times that I extend my reach to include messages that represent a more normative approach.
My goal in creating a new way of measuring fat attitudes is twofold: to reflect popular discourse around fat people, and to feature language that does not perpetuate negative stereotypes or denigrate fat people. Built into these goals is a natural tension, as popular fat discourse retains notions of individual control and responsibility, in which fat people are “blamed” (or “excused”) for their (assumed to be undesirable) fatness. If I were to develop a dedicated measure of fat acceptance only, then I would not include items designed to capture this belief (or its rejection). However, these contests over attributions for fatness remain a key element of contemporary social discourse around fatness, and their exclusion would make for an incomplete assessment of fat attitudes. This illustrates some of the tension that occurred when deciding on item content, and concern over whether the inclusion of particular items would render this offering unappealing to a critical audience. I explore these tensions and my decision-making process in relation to these issues throughout the thesis.

The pervasiveness of antifat rhetoric and the dominance of weigh centric stereotypes may pose additional concern for researchers participating in this space. Wann (2009) suggests researchers engaged in this field of study need to begin by examining their own relationships with these forces, and to consider their own position on weight-based privilege. For the most part, during my research, I have attempted to distance myself from the “target” of my interest, and focus on what it is important to know with respect to how fat people are evaluated. This strategy does not require me to reflect on, explain, or defend my own embodiment, and is the default position for most academic pursuits. However, this does not reflect the intention that brought me to this research. As a white Australian mature cis gendered woman, whose weight has fluctuated significantly throughout adult life (from what would be considered traditionally slim to traditionally fat), I was very much aware of how differently I felt
about myself at different weights. I was, however, less consciously aware of how differently society responded to me at different weights. When introduced to the topic of “weight stigma” much that I had experienced and thought was “about me” fell into place. When working on a fourth year Psychology undergraduate assignment I discovered Crandall’s (1994) *Antifat Attitudes Questionnaire* and was taken back by this approach to measurement, and a desire to produce something different was fostered.

In a similar vein to Wann’s call to acknowledge one’s relationship with weight based privilege, Cooper also speaks to the importance of a researcher’s relationship to their subject, asserting that, “Who researches fat people, and who creates knowledge about fatness is important” (p.32, 2016). Here Cooper is talking about “standpoint” and the inclusion of fat voices in knowledge production. In response to Cooper, at various stages of this project I have attempted to include the voices of fat people, both from academia and activism (Marilyn Wann and Charlotte Cooper included). I have consulted both academic fat studies literature and activist popular literature in developing the initial item pool for the FAAT. I have reached out to fat activists, bloggers, and members of the fat studies and weight stigma conference community, to perform the role of subject matter experts and review these items. I have remained mindful of the need to include the perspectives of fat people in a measure that, unfortunately by nature of design, “others” fat people in order to quantify evaluations of them.

**A Note on Terminology**

I am mindful that the act of labelling is in itself an act of “othering” (Meadows & Danielsdottir, 2106), an act that is by default built into measurement of attitudes toward groups of people. In my work to measure attitudes toward fat people, I have
been guided by the convention of Fat Studies scholarship, and I adopt the term “fat” in preference to the term “obese” and “overweight” (Fikkan & Rothblum, 2012). In doing this I acknowledge the work of Fat Activists and Fat Acceptance in reclaiming the word fat as a descriptive term, in preference to “obesity”, a medical term, and “overweight”, which implies comparison to a preferred standard (Saguy & Riley, 2005). In doing this I also acknowledge the work that has shown the term fat to be a preferred descriptive term for many people (Thomas, Hyde, Karunaratne, Herbert, & Komesaroff, 2008). Where I use the terms “obese” and “overweight” I follow the Fat Studies convention of using scare quotes around these words in order to demonstrate their problematic and contested nature. I also use scare quotes for other terms that pathologize fatness, such as “problem” and “blame”. Where I use the terms “obese” and “overweight” in reference to other people’s work, I reflect the authors’ custom and use scare quotes only if the original work has done so.

While Fat Studies scholarship has established preferred use of the term fat, public discourse still routinely uses the terms “obese” and “overweight”. This creates a tension when it comes to developing items for a scale which will ultimately be used with participants from the general public. For this reason, I will be using different terminology in my discussion of fatness throughout the thesis than I have used in item development. During the initial phase of item development, I elected to use terms that are common in the broader public discourse. I use the terms “fat”, “obese”, and “overweight” as well as the terms recommended by Meadows and Danielsdottir (2016), “higher weight” and “higher body weight”.

Overview of the Thesis

This thesis maps the development and the validation of the Fat Attitudes Assessment Toolkit. In order to develop the toolkit, it was first necessary to establish the need for a new approach to measurement. In chapters 2 and 3, I review the landscape of contemporary fat discourse to demonstrate how fat discourse extends well beyond the simple expression of negativity towards fat people that constitute antifat rhetoric. In particular I draw attention to the ways in which critical responses to the antifat agenda are now becoming part of mainstream conversations on fatness. In Chapter 2, I review academic literature that seeks to position or reposition fatness and the fat person. As fat discourse has matured, a division along the lines of antifat and critical fat scholarship has developed. In this review, I tease out elements of this somewhat simplistic dichotomy to reflect on the increasingly complex and contested social understandings of fatness. I identify four key perspectives on fatness—health, attribution, stigma, and resistance—and reflect upon how these ways of framing fatness work to construct different perceptions of fat people. In Chapter 3, I move beyond the academic literature to document how conversations about fatness and fat people are being played out in the public domain. I review fat and “obesity” discourse in digital new media from popular news aggregators. Material analysed here includes traditional news reports, together with opinion pieces and accompanying reader commentary. Three themes featured—concern, culprits, and counsel—and across these themes there was much conflict, as critical points of view engaged with traditional antifat views. While there were concerns expressed over the harmful effects of weight stigma and fat shaming, there were also concerns that fat acceptance messages are inadvertently or deliberately promoting “obesity”. Similarly, there were conflicting points of view over
who or what people consider responsible for creating and “correcting” fat people. Chapters 2 and 3 demonstrate the breadth and complexity of current fat discourse and are key sources of material for the development of items for the FAAT.

To understand the research space that the new measure will be introduced to, in Chapter 4 I review weight stigma intervention research. A new approach to measurement not only needs to capture current perspectives, it should also reflect the ways in which attitudes toward fatness are being investigated. If researchers are attempting to shift attitudes toward fatness through attempting to evoke empathy toward fat people (for example, Burmeister, et al., 2017) then having a means of assessing empathy is important. In reviewing stigma reduction research, I also draw attention to stimulus materials employed to bring about attitude change. Just as I am concerned about quantitative measures perpetuating negativity, I am similarly concerned about materials presented in intervention research contributing to negative representations of fat people. The benefits of having a new approach to measurement may be undermined if used in protocols that depict fat people in negative ways. To address this concern, I developed a workshop titled Experiments, Intervention, and Strategies: Generating New approaches to Weight Stigma Research. The workshop was presented at the 5th annual Weight Stigma Conference, held in Prague, Czech Republic, on June 6th-7th 2017. The objective was to engage with the weight stigma community and to have an interdisciplinary conversation on issues central to research focused on weight stigma reduction. The workshop also allowed for important collaboration on ideas for future research, including stimulus materials and potential audiences. Chapter 4 documents both the workshop process and outcomes.
In Chapters 5 and 6, I introduce seven popular instruments of fat attitude measurement. I then provide qualitative and systematic reviews of these measures in order to highlight the limitations of current methods, and further establish the need for a new direction in measurement. In Chapter 5, I treat the items included across the seven measures as a data corpus and, through content and thematic analysis, examine explicit content and latent meaning, drawing attention to the ways in which these measures rely on problematic and limited representations of fat people. While it is reasonable to expect negative content from antifat measures, the heavy focus on disparaging personal attributes leads me to question the acceptability and ethical practice of these tools. In Chapter 6 I evaluate these measures from a systematic perspective, reviewing their development processes and psychometric properties. Guided by the rational-empirical approach to test construction, I compare the development process of each measure with best practice in scale design, looking at item generation and characteristics, sample properties, factor structure, reliability statistics, and scale validation. Through this, I bring attention to the limitations of current instruments, limitations that I work to address in developing and validating the FAAT.

In Chapters 7 and 8, I document the extensive process of developing and validating the FAAT. With regard to developing a pool of items, I detail the process of item generation, and item review. This includes an interdisciplinary subject matter expert review and a general population review. Next, I describe my decisions surrounding participant recruitment and sample size, and present the findings of the exploratory factor analysis. To address the limitations of current measures, I extend my development process to include confirmatory factor analysis, in order to assess factor structure as compared to literature and theory. I also investigate test-retest reliability, to
assess consistency of scores over time. Chapter 7 concludes with the final structure of the FAAT, incorporating nine individual scales: Attractiveness, Injustice, Size acceptance, Health, Empathy, General Attribution, Socioeconomic Attribution, Responsibility, and Self-reflection. The Five scales, Attractiveness, Injustice, Size acceptance, Health, and Empathy combine to create the composite scale Fat Acceptance. The scales General Attribution and Socioeconomic Attribution also combine to create the Attribution Complexity composite scale. All subscales of the composite scales are robust enough to work as stand-alone scales, thus making this collection of scales into a “Toolkit”. From the toolkit, researchers may select the most appropriate instrument according to their research objective and research questions. As mentioned, in developing this scale I experienced some tension with including of particular constructs, namely those relating to “explaining” fatness. I fully appreciate that many fat scholars do not support quantifying constructs like causation and explanation, a sentiment that some subject matter experts clearly expressed. Given that each scale in the FAAT is psychometrically robust enough to work independently, scale constructs that do not fit with research agendas need not be included. Nevertheless, I appreciate that contentious scales will be difficult for some to overlook and will possibly estrange those who consider this work not “critical” enough. To this, I respond to this potential critique at several points throughout the thesis.

Chapter 8 documents the validation process of the FAAT. Here I cover the ways in which the scales are compared with other established psychometric measures. Specifically, I look at convergent and discriminant validity, as well as, predictive validity. At this point, I also detail investigations relating to social desirability bias in responses. To date, expression of antifat attitudes have not been shown to be influenced by a desire to respond in socially desirable ways (Latner, et al., 2008; Lewis et al., 1995;
Morrison & O'Connor, 1999). Given that some of these investigations are now decades old, I address social desirability not only as an assessment of validity, but also to assess whether there has actually been any shift in response bias over recent times.

Lastly, in Chapter 9 I discuss the strengths and limitations of the FAAT, and make recommendations for future applications of the toolkit. As much weight stigma research occurs within the domain of mainstream psychology, in my conclusions, I also acknowledge the limitations that this may bring. Moving forward, this alliance will be important to address if new approaches to measurement and research are to be embraced. This thesis also includes an extensive list of appendices covering additional details of qualitative and quantitative analysis and information provided to research participants.
CHAPTER 2.
FRAMING FAT PEOPLE THROUGH FAT SCHOLARSHIP

Introduction

Fatness has been portrayed and investigated through academic and popular literature in a myriad of ways (Lupton, 2013), resulting in a complex and multifaceted body of scholarship. As discourse on “obesity” and fatness has matured, a division within fat and “obesity” scholarship has developed. The anti-“obesity” and the critical fat or fat studies branches of scholarship have emerged, signifying two broad and competing ways for fatness and fat people to be constructed (Gard, 2011; Kwan, 2009; Kwan & Graves, 2013; Lupton, 2013; Saguy & Riley, 2005). These broad camps of scholarship have been reproduced (to a greater and lesser extent) throughout popular media (Monaghan, Bombak, & Rich, 2018) and have themselves become topics of scholarly investigation, as academics consider the nature of this taxonomy.

In this review I reflect on how various forms of scholarship serve to construct different representations of fat people. Frame analysis suggests that people’s perceptions are influenced by the way “things” are framed (Goffman, 1974). As different approaches to fat scholarship and research frame fatness in particular ways, so too are fat people framed, evaluated, and consequently acted upon. In line with my critical realist approach, I am conscious that the ways in which academic literature frames fatness, ultimately dictates public understandings of fatness and the lived experience of fat people. Anti-“obesity” literature typically frames fat people as problematic, and seeks to identify what fat people should do so as not to be fat. Critical fat literature on the other hand represents fat people as a part of normal human diversity, and instead positions anti-“obesity” rhetoric that results in discrimination against fat
people as the problem. It is worth noting here that weight stigma research may be
supported by either a critical or and antifat approach to scholarship. While often aligned
with a critical fat approach, at times weight stigma research is seen to embrace weight
centric goals (see for example, Schvey, Puhl, & Brownell, 2011). This overlay
illustrates a limitation of the anti/critical dichotomy in characterising “obesity”
scholarship, and is one I draw attention to throughout this chapter. Teasing apart fat and
“obesity” scholarship allows more nuanced commentary on the ways in which academic
discourse and research influence public understanding and response to fatness, and fat
embodiment.

When considering fat scholarship, Saguy and Riley (2005) distinguished the
division based on nature of understanding; suggesting fat studies appreciates fatness
through a social lens, while “obesity” studies understands fatness through a scientific or
health focused one. Lupton (2013) also categorises varieties of fat scholarship,
recognising the significance of: critical biomedical perspectives, libertarian sceptics,
ethical challenges, as well as Fat studies and Fat Activism. Gard (2011), too, reflects on
the increasingly complex nature of “obesity” and fat scholarship. At first
acknowledging the distinct “anti” and “critical” divisions, labelled by Gard as
“alarmists” and “sceptics”, Gard then further distinguishes “empirical sceptics” who
challenge “obesity” science through data, and “ideological sceptics” who challenge anti-
“obesity” rhetoric through feminist and neo-liberal critique. In mapping the landscape of
fat and “obesity” scholarship, the work of Lupton (2013) and Gard (2011) are important
as they draw attention to the increasingly complex and contested ways in which fatness
may be framed, and in turn, how fat people may be perceived.
Kwan (2009) and Kwan and Graves (2013) have similarly been influential in drawing attention to competing and contested ways of framing fatness. Through frame analysis of organizational materials from the Centers for Disease Control and Prevention (CDC), the National Association to Advance Fat Acceptance (NAAFA), and the Centre for Consumer Freedom (CCF), Kwan (2009) identified three cultural frames, medical, social justice, and market choice. Following this, Kwan and Graves (2013) added a fourth frame, the aesthetic frame, to represent the cultural conventions about the appeal of the fat body. While less focused on categorizing the spectrum of fat frames, Monaghan, Hollands and Pritchard, (2010) draw attention instead to the varied practices and interests that actively construct obesity as problematic. Referring to these as “Obesity epidemic entrepreneurs” Monaghan et al (2010, p. 37) identify six types of entrepreneurs: creators, amplifiers/moralizers, legitimates, supporters, enforcers/administrators and the entrepreneurial self.

In this review, my intention is similarly to distinguish different ways of conceptualizing fatness. In shaping this review, I am guided by frame analysis (Goffman, 1974), although in doing this, I am mindful of Goffman’s caution that classification often “…biases matters in the direction of unitary exposition and simplicity” (Goffman, 1974 p.9), for my goal here is not to simplify, rather I seek to expose nuance and complexities within this field. I am concerned that the distinction between what has come to be known as “anti” or “critical” in relation to fat scholarship and representations of fat people may be less straightforward than it appears.

Through a broad review of the fat and “obesity” literature, I identify four overarching categories of scholarship. Firstly, health is a topic that dominates. Within this category, fatness in relation to health, or health in relation to fatness, is framed in a
variety of ways. Some perspectives position the fat person as unhealthy or diseased, while others contest the nature of fatness as an indicator of health. Next I consider scholarship that sits within a problem framework, in that the focus is on identifying causes for fatness, and this I label attribution. Following this I move to explore the body of work focused on weight bias, that is, stigma and discrimination directed toward fat people. This scholarship problematizes negative social responses to fat people, although as I will discuss, elements of this approach are not always by default “critical”, as some proponents of this scholarship uphold a weight centric model of health. Lastly, I look at what I have termed “resistance” scholarship, a branch of scholarship that aligns with a critical standpoint and is political in nature.

Health

The topics of health and weight are hard to extricate from one another. Health discourse tends to be antifat discourse, however this is not always the case. Despite the power and pervasiveness of health discourse, particularly medicalized and government supported discourse (Cain & Donaghue, 2018) health discourse can also be used to push back against claims that being fat is being unhealthy. As such I do not position health as a unified discourse, rather I draw attention to the ways in which health can be used as a foundation to underpin different ways of framing fat people. In the following section I discuss five health related frames: health crisis, healthism, public health, critical biomedical, and Health At Every Size. While some of these frames sit comfortably within an antifat critical fat division, others, as I will elaborate on, do not.

Health Crisis

The “obesity epidemic” began to emerge in public discourses in the late 1990s. It was during this time that obesity became labelled an epidemic and considered the
underlying factor in many diseases (Wilding, 1997). In 1997 the World Health Organization held a summit titled *Obesity: Preventing and Managing the Global Epidemic*, where obesity was considered as a noncommunicable disease, for which public health solutions were needed. This was also the time when body mass index (BMI) became a widely adopted diagnostic tool wielding much statistical authority (Gard, 2017), and the western world initiated the “war on obesity” (Lupton, 2013). Over subsequent decades little has changed, with continued reports of increasing obesity rates (WHO, 2014) and risks associated with weight gain and obesity continuing to be widely publicized. Framing fatness as a health crisis medicalizes the fat person, depicting individuals as unhealthy and “diseased”, and because “obesity” is depicted as a modifiable factor, this discourse simultaneously (im)moralizes the fat person for continuing to act in ways that maintain their “condition” (Saguy & Riley, 2005). The public presentation of the link between fatness and health gives authority to this discourse (Rich & Evans, 2005) so much so that it is considered to enjoy “immunity from scrutiny” (Tischner, 2013; Aphramor, 2005; Bacon & Aphramor 2011). This provides a legitimized foundation for negative judgements against fat people (Gard & Wright, 2005). Indeed, judgments and discriminatory practices against fat people are often depicted as attempts to motivate others to lose weight (Puhl & Brownell, 2006).

**Healthism**

“…in a health valuing culture, people come to define themselves in part by how well they succeed or fail in adopting healthy practices” (Crawford, 2006, p.402). Over recent years, the importance placed on health and the pursuit of health as a goal has grown, and while this may seem a wholesome development, health can be framed as an obligatory pursuit, resulting in the moralization of health, referred to by Crawford (2006) as “healthism”. Western societies over recent decades have come to value health,
not simply as a goal in itself, but because the pursuit and attainment of health provides the opportunity to express the highly valued qualities of willpower, self-control, and self-discipline (Crawford, 2006). These individualized values also reflect the values of neoliberal citizenship, together they bring individual responsibility to the forefront of fat discourse (Monaghan, et al., 2018).

Healthism positions individuals as accountable for their health status; within this paradigm, health becomes a duty rather than a choice (Cheek, 2008). People viewed as adopting an “irresponsible” approach to their health and wellbeing, through occupying a fat body, may be assumed to lack the ability to self-regulate, and hence, lack moral fortitude (LeBesco, 2011). In addition, the assumption that high body weight leads to poor health, suggests that a fat person will draw heavily on the public health system, a notion that positions the fat person as a burden on society (Chrisler & Barney, 2017; Pausé, 2017) and may support increasingly punitive responses against fat people (Saguy & Gruys, 2010). The logic of healthism positions fat people as not just immoral and diseased, but as immoral because they are diseased (Crawford, 2006) and again, legitimizes negative evaluations and discriminatory actions.

Public Health

Controlling or reducing “obesity” has become a priority of many developed countries, with public health campaigns targeting “obesity” now common place (Walls, Peters, Proietto, & McNeil, 2011). Directed at changing the behaviours of fat people, weight centric campaigns are often perceived as stigmatizing, with fat people considering messages to be simplistic and fostering an atmosphere of blame (Lewis, Thomas, Hyde, Castle, Blood, & Komesaroff, 2010). Public health campaigns have also been critiqued for serving as vehicles for governments to demonstrate their actions
toward addressing the “problem” of “obesity”, while at the same time positioning the fat person as culpable and locating responsibility for solutions with the individual (Lupton, 2014). Unsurprisingly, audiences have been found to resist health messages that problematize fat people (Thompson & Kumar, 2011) with fat people reporting stigmatizing messages as less motivating when it came to making lifestyle changes (Puhl, Peterson, & Luedicke, 2013). These outcomes, contribute to the plethora of social factors work to undermine the health and wellbeing of fat people (Pausé, 2017). Aside from their stigmatizing and negative impact, the effect of public health campaigns on behaviour change is poorly supported by evidence (Walls, et al., 2011; Young, Subramanian, & Hinnant, 2016).

**Critical Biomedical**

Researchers skeptical of the weight centric approach to health challenge the fundamental assumption of anti-“obesity” discourse: that fatness, and body mass index in particular, are strong indicators of health. Through re-examining scientific and statistical data, counter-claims to the dominant medical discourse have been made (Bacon, 2010; Campos, 2004; Gaesser, 2002; Macmillan, Oakes, & Liao, 2011; Monaghan, 2005; Tylka et al., 2014). This body of research contests many of the assertions on which the “war on obesity” is based: that overweight and obesity are major contributors to increased mortality, that excess body fat is a primary and direct cause of disease, and that significant long-term weight loss is a practical goal that will improve health (Campos, 2004; Campos, et al., 2006). Literature from this perspective has made the transition from scientific publications to a popular audience, with publications such as, Gaesser, *Big fat lies: the truth about your weight and your health* (2002) and Campos, *The obesity myth: why America’s obsession with health is hazardous to your health* (2004).
Through providing evidence that counters weight centric health claims, the critical biomedical perspective attempts to undermine the strength of the powerful, pervasive, and legitimized discourse that connects weight with poor health (Rich & Evans, 2005). Critical biomedical reframing aims to dispel the notion that body size is a marker for health, and instead serves to situate fat bodies as targets of an antifat research policies and agendas. Critical biomedical arguments that point out previously established “facts” as “myths” may be challenging for the public to accept (Salas, Forhan, & Sharma, 2014), as messages connecting weight and health benefit from the perception of a strong and credible scientific/medical foundation (Cain & Donaghue, 2018). Critical biomedical arguments may also be misconstrued as a lack of faith in established medical science, or as a deliberate strategy to direct attention away from individualized accounts of fatness (Monaghan, 2013). While labelled a critical perspective, framing a fat person through a critical biomedical lens, maintain a focus on the ubiquitous value of health. While, this framing may succeed in circumventing negativity attributed to fat people because of their perceived poor health status, this discourse is one that I consider to sit uncomfortably along the critical/antifat binary, a factor underpinning this reconceptualization of fat frames.

**Health At Every Size**

Health At Every Size or HAES is a trans-disciplinary movement arguing for a shift in focus from a weight centric model of health toward a weight neutral approach (Bacon & Aphramor, 2011; Bacon, 2010). Drawing evidence from a variety of fields including: psychotherapy, exercise science, and nutrition (Bacon, 2010), dietetics and social justice (Aphramor, 2005), law (Campos, 2004), and sociology (Saguy & Riley, 2005; Saguy & Ward, 2011). HAES challenges assumptions surrounding weight and health, (Burgard, 2009) suggesting a shift at both an individual level, and in the
conventional health care paradigm (Aphramor, 2005; Bacon, 2010). Health At Every Size® and HAES® have been trademarked by the Association for Size Diversity and Health, an organization celebrating body diversity and committed to HEAS practices, to ensure that products and services using these labels adhere to the core principals of: weight inclusivity, health enhancement, respectful care, eating for well-being, and life enhancing movement (ASDAH, 2018). HAES advocates that the weight centric approach to health has resulted in pervasive bias, stigma, and discrimination against fat people (Burgard, 2009). It works to reduce weight bias by disrupting the conception that “normal” weight equates with “good” health, suggesting health is not weight dependent and that people can indeed be fat and fit (Bacon, 2010).

From a HAES perspective, fat people are framed as having the capability and responsibility to pursue their own health related goals. Similar to the critical biomedical discourse, HAES has also reached a popular audience with publications such as Health At Every Size: The Surprising Truth About Your Weight (Bacon, 2010). This work encourages readers to “accept your size, trust yourself, adopt healthy lifestyle habits, and embrace size diversity” (Bacon, 2010, p.278). This approach positions the body as a natural phenomenon, and the individual as having instinctive knowledge and the ability to nurture their body (Lupton, 2013).

The HAES approach has indeed been co-opted by some health professionals. In health care (weight loss focused) settings, HAES has been found to be more successful than weight centric programs in terms of improving physiological measures, health behaviors, and psychosocial outcomes (Bacon et al., 2002; Bacon, Stern, Van Loan, & Keim, 2005; Rapoport, Clarke, & Wardle, 2000; Tylka et al., 2014). HAES has also received support on ethical grounds, with recommendations that a HAES approach be
adopted by health professionals (Tylka et al., 2014). There are also suggestions that
HAES is able to sit within a Public Health approach to “obesity” (Penny & Kirk, 2015)
as an alternative to the weight centric health paradigm (O’Hara & Taylor, 2014). With
public health campaigns featuring HAES considered positive and motivating (Puhl, et
al., 2013), and the personal message of HAES seen as “empowering people to do what
they can to improve their health” (O’Hara & Taylor, 2014, p. 272) the fit between
HAES and public health appears strong.

Despite the critical message of HAES, within this framework health remains at
the forefront of this discourse. Welsh (2011) suggests that while a particular body size is
not a goal, the pursuit of health as a duty suggests that HAES is not a “real” alternative
to weight centric ideals. Tischner (2013) also suggests that HAES is “very much located
within the current discourses of individual responsibility and the biomedical model of
health” p.129. The alignment of HAES with the broader ideology of healthism is
considered problematic by some (e.g. Welsh, 2011), rather than being blamed for being
unhealthy for being fat—within a HAES framework— a fat person could potentially be
blamed for being unhealthy even while “excused” for being fat. However, others see
this alignment as a feature that allows the HAES message to resonate with a wider
audience (see Cain & Donaghue, 2018, for an extended discussion of this point).
Similar to the critical biomedical frame, when probes further HAES discourse also
appears to straddle the antifat critical fat divide.

Attribution

Certain events, in particular negative events, lead people to appraise a situation
and to seek out an explanation (Weiner, 1986; Weiner, Perry, & Magnusson, 1988). In
the case of fatness, the “event” is the fat body. People tend to seek explanations for why
people (other and self) are fat, with several common explanations dominating contemporary fat discourse. Different attributions frame fat people in different ways, namely in relation to whether or not they are considered responsible for their fatness. Different attributions, also give rise to different instructions around how people can avoid becoming, or stop being, fat. In this section I focus on two dominant attribution frames, individual responsibility and the “obesogenic” environment. In addition to this I will briefly mention genetic and medical attributions and the ways in which they frame fat people, the detailed aspects of these arguments are beyond the scope of this review.

**Individual Responsibility**

Body size is widely understood as the straightforward result of a person’s eating and exercise behaviour; a fat body is seen as “evidence” that a person consumes more energy than they expend (Brownell et al., 2010). This assessment suggests that a fat body is an indication of an individual’s irresponsible self-management, and consequently says something about that person’s character and morality (Jutel, 2005). In a similar vein to healthism discourse, a slim or “healthy” weight body is an opportunity to demonstrate discipline and hard work, (Crawford, 2006) as well as self-governance and responsible neoliberal citizenship (Guthman & DuPuis, 2006; Monaghan et al., 2018). Western ideologies reflecting a neoliberal approach to citizenship posit that in terms of health and welfare, while individuals have the opportunity to make choices, they also bear the responsibility of their consequences (LeBesco, 2011). Connection between choice and responsibility suggests that through making “good” choices individuals can enjoy positive consequences and through making “bad” choices individuals endure penalties. Given the common understanding of fatness as an energy
imbalance, the fat person is commonly constructed as making irresponsible and blameworthy choices (Brownell et al., 2010).

As individual constructions of weight and health have become the conventional point of view, lay judgments against fat people have become legitimized (Gard & Wright, 2005). Antifat bias has indeed been identified as more pronounced in individualistic western cultures than collectivist cultures, indicating that neoliberal ideologies support western antifat attitudes (Crandall & Martinez, 1996; Crandall et al., 2001; Monaghan et al., 2018). Value systems that support a belief in a just world, protestant work ethic, political conservatism, gender role segregation, racism, and homophobia uphold the notion of individual responsibility and are associated with more negative attitudes toward fat people (Crandall, 1994; Crandall & Biernat, 1990; Crandall & Schiffhauer, 1998; Perez-Lopez, Lewis, & Cash, 2001; Quinn & Crocker, 1999). Individual attribution discourse has created an environment that allows for “practices that marginalize a large group of people and set up situations where they can be pathologised, discriminated against, mistreated and abused.” (Gard & Wright, 2005, p.163).

“Obesogenic” Environment

Rather than a personal “failing”, fatness may be considered the result of western environments (Booth, Pinkston, Walker, & Poston, 2005; Cummins & Macintyre, 2006; Townsend & Lake, 2009). The combination of disadvantage, poor food availability, and urban conditions that do not support physical activity, has come to be known as an “obesogenic environment” (James, 2007). Increased access to highly palatable, high sugar, high fat food, large portion sizes, low prices, and aggressive marketing campaigns, have also been identified as contributing to increasing body weight
(Brownell et al., 2010). Living within such environments is essentially considered to lead to increased energy intake and lower energy output (Smith & Cummins, 2009). It is important to acknowledge that environment is not restricted to the built or the food environment, and can be extended to socio-economic disadvantage (Drewnowski, 2009; Giskes, van Lenthe, Avendano-Pabon, & Brug, 2011) the political environment, or the rules and regulations related to food, as well as socio-cultural environment, or attitudes toward food and physical activity (Swinburn, Egger, & Raza, 1999). At times however, what is meant by environmental causes of fatness, are not well articulated (Colls & Evans, 2014).

Environment discourse attempts to shift responsibility for fatness away from the individual and onto governments and industries that support particular environmental conditions (Brownell et al., 2010). This discourse however retains the focus on energy imbalance as an explanation for fatness and in doing so maintains a focus on individual behavior; the environment may set varying “degrees of difficulty” yet it is ultimately individuals who succeed or fail in their execution of “responsible self-management”. This discourse frames the fat person as a failed conqueror of their hostile environment, arguably a more “honourable” position than that provided by individualistic attribution, but a “failure” nonetheless. Interestingly, research investigating environmental influences is varied. In a review of 37 studies, Black and Macinko (2008) report inconsistent findings in relation to income inequality, racial composition and the availability of “healthy” versus “unhealthy” food. “Obesogenic” environment discourse has also been critiqued; rather than focusing on how environments create fat people, Colls and Evans (2014) call for a refocus on the ways in which environments moralize fat people and make fat bodies problematic.
Medical Reasons

Being fat can be attributed to a number of medical or biological conditions. Genes have been found to influence metabolism, as well as appetite and tolerance to exercise, suggesting that higher weight can be attributed to genetics (Frayling, 2012). Medical conditions, such as hypothyroidism (Sanyal & Raychaudhuri, 2016) and endocrine and metabolic disorders (Petrakis et al., 2017) have also been linked to higher body weights. Taking particular medications, such as antihypertensive and psychotropic medication, and contraceptives and steroid hormones (Wright & Aronne, 2012) have similarly been connected with increase in body weight. Some of these attributions, particularly medical conditions, may be considered a natural occurrence, or the result of individual differences. Such attributions can position fatness as a consequence of something that is beyond individual control, framing the fat person as less culpable for their (still “undesirable”) weight status.

Stigma

“Society establishes the means of categorizing persons and the complement of attributes felt to be ordinary and natural for members of each of these categories” (Goffman, 1963, p.11). Individuals and groups expressing attributes identified as deviant bear a mark of social disgrace or stigma (Link & Phelan, 2014). Stigmatizing attributes are discrediting, and the resulting stigmatizing practices serve to keep stigmatized people “down” and “away” from the “normal” population (Phelan, Link, & Dovidio, 2008). “Keeping people away” has been linked with disease avoidance (Phelan et al., 2008) and consequently much stigma research has been done in relation to a range of health conditions (Parker & Aggleton, 2003). Since “obesity” has been constructed as an illness, the stigma of “obesity”, both in terms of process and
consequences, has similarly received attention (Cahnman, 1968; Sechrist & Stangor, 2005). In this section I provide an overview of weight stigma research that investigates the prevalence and consequences of weight based stigma, as well as exploring the ways in which aspects of this research frame fatness and fat people in particular ways.

**Weight Stigma Prevalence**

Crandall (1994) has compared the expression of racism in the 1940s to the expression of negativity toward fat people, claiming such expression is “… overt, expressible and widely held.” (p. 891). Weight stigma is indeed currently considered a socially acceptable form of stigma and discrimination (DeBrun, McCarthy, McKenzie, & McGloin, 2014; Perez-Lopez, et al., 2001; Stunkard & Sorenson, 1993). Negative attitudes toward fat people are both pervasive and persistent (Grant, Mizzi, & Anglim, 2016), and on the increase (Andreyeva, Puhl, & Brownell, 2008; Latner & Stunkard, 2003). Fat people are reporting almost daily occurrences of stigmatizing experiences (Seacat, Dougal, & Roy, 2014; Vartanian, Pinkus, & Smyth, 2014). Experiences occur both publicly and privately, they transpire within close relationships (Collisson & Rusbasan, 2016), in graduate school admission (Burmeister, Kiefner, Carels, & Musher-Eizenman, 2012), in health care settings (Thomas, et al., 2008), in employment selection and promotion (Roehling, Roehling, & Pichler, 2007), in the military (Schvey et al., 2017), and at the gym (Cardinal, Whitney, Narimatsu, Hubert, & Souza, 2014; Schvey et al, 2016). Weight stigma has repeatedly been identified among primary health care providers (Foster et al., 2003; Malterud & Ulriksen, 2011; Setchell, Watson, Jones, Gard, & Briffa, 2014; Teachman & Brownell, 2001; Tomiyama, et al., 2015) including those specializing in “obesity” (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003). Weight stigma has also been found prevalent among health professional students
(Blanton, Brooks, & McKnight, 2015; Puhl, Luedicke, & Grillo, 2013; Swift, Hanlon, El-Redy, Puhl, & Glazebrook, 2012), dietician and nutrition students (Jung, Luck-Sikorski, Wiemers, & Riedel-Heller, 2015) nurses and psychology students (Waller, Lampman, & Lupfer-Johnson, 2012), medical students (Phelan, et al., 2015), dental hygienists (Essex, Miyahara, & Rowe, 2016) and physiotherapists (Setchel, et al., 2014), indicating that future health professionals will likely continue to express negative bias.

**Weight Stigma Consequences**

Experiencing weight stigma has negative consequences for the public and private lives of fat people, with employment, education and health care identified as the most common domains (Brewis, et al., 2011; Major, et al., 2012; Puhl & Brownell, 2001; Puhl & Heuer, 2009). In the area of employment fat people report discrimination at rates up to thirty-seven times higher than “normal” weight individuals (Roehling et al., 2007; Rothblum, Brand, Miller, & Oetjen, 1990). Findings revealed weight based employment discrimination, tends not only to be experienced to a greater extent by women (Roehling, et al., 2007), it also occurs at lower weight levels for women than for men (Morris, 2006). Fat women also earn less than non-fat women, with the same disparity not found for fat men (Fikken & Rothblum, 2012). In education, obesity has been associated with lower levels of higher education. (Wardle, Walter, & Jarvis, 2002), and as also having an impact on graduate school admissions (Burmeister, et al., 2012). The experience of stigma in health care situations is particularly consequential, and will be discussed in detail below.

Weight stigma also impacts on emotional health and well-being, with fat people reporting lower levels of self-worth and self-esteem (Lewis, et al., 1995; Myers & Rosen, 1999; Sikorski, Luppa, Luck, & Riedel-Heller, 2015; Wu & Berry, 2017),
relationship difficulties (Brewis, et al., 2011), and psychological distress (Ashmore, Friedman, Reichmann, & Musante, 2008; Carr & Friedman, 2005; Jackson, Steptoe, Beeken, Crocker, & Wardle, 2015; Phelan et al., 2015; Tomiyama, 2014). In particular, fat people report experiencing depression and anxiety (Major, et al., 2012; Myers & Rosen, 1999) as a consequence of weight related stigma and teasing (Greenleaf, Petrie, & Martin, 2017; Hatzenbuehler, Keyes, & Hasin, 2009). Weight stigma literature positions stigmatizing practices—keeping fat people “down” and keeping them “away”—as producing structural inequalities for fat people, making stigma an a form of “civilized oppression” (Rogge, et al., 2004), and social injustice (O’Hara & Gregg, 2012). This approach takes the focus and discourse away from the fat body, away from health and attribution, and focuses on the ways in which structural power is enacted on fat people (Cooper, 2010).

Within this body of work there is also literature addressing what have been labelled the ironic or the paradoxical consequences of stigma (Major, Hunger, Bunyan, & Miller, 2014; Nolan & Eshleman, 2016). This literature examines how fat people on the receiving end of weight bias and stigma report personal responses such as reduced likelihood of physical activity (Lewis et al., 2011; Vartanian & Shaprow, 2008), exercise avoidance (Vartanian & Novak, 2011) diminishing dietary and health intentions (Seacat & Mickelson, 2009; Vartanian, et al., 2016), reduced self-control around food (Major, et al., 2012), increased calorie consumption (Schvey, et al., 2011) and binge eating behaviour (Ashmore, et al., 2008). Focused on consequences of stigma that are connected with behaviours typically associated with weight gain, use of the labels “ironic” and “paradoxical” seems to reflect the notion that stigmatizing practices should have the ability to motivate change in the form of behaviours typically associated with weight loss, a notion that underlies the legitimization of stigmatizing
practices (Rogge et al., 2004). In contrast, there is weight stigma work that that focuses on the role of stigma in undermining the ability of fat people to pursue non-weight centric goals (LeBesco, 2011; Lee & Pausé, 2016; O’Hara & Gregg, 2012; Pausé, 2017). Evidence of these contrasting agendas within weight stigma research again highlights the difficulty in locating fat scholarship within a duality framework.

**Weight Stigma and Health Care**

As mentioned above, negative, stereotypic, and stigmatizing attitudes toward fat people are found amongst health professionals and health professional students alike. Health care stigma has created an environment that perpetuates health inequalities for fat people which in turn creates real and important health inequality and risk (Chrisler & Barney, 2017; Pausé, 2017; Sutin, Sephen, & Terracciano, 2015). This has been attributed to a medical model that promotes the notion that fatness is an individual behavioural problem (Foster et al., 2003). In medical environments patients have reported fat shaming (Chrisler & Barney, 2017; Johnston, 2012), unsolicited and patronizing weight loss advice (Reed, 2003), weight focused explanations for non-weight related conditions (Chrisler & Barney, 2017), of feeling judged (Setchell, Watson, Jones & Gard, 2015) and feeling humiliated (Thomas et al, 2008). Fat women who are pregnant report negative health care experiences, both during pregnancy and after birth (Mulherin, Miller, Barlow, Biedrichs, & Thompson, 2013). Such experiences have been cited as reasons for why fat people may avoided contact with health care professionals (Drury, & Loius, 2002; Malterud & Ulriksen, 2011). Fat women in particular tend to avoid or delay preventative health screenings, due to stigma experienced during contact with doctors and other medical professionals (Fikkan & Rothblum, 2012). As with the literature recognizing the role of stigma on health
practices, this body of work can be approached from a normative or critical standpoint, and as such can position either the fat person as the problem for avoiding health care, or health care stigma as the problem for the role it plays in doctor avoidance.

**Weight Stigma and Gender**

As part of their gendered experience, women tend to encounter frequent evaluation of their physical appearance (Orbach, 1984; Rice, 2007). The social construction of the ideal woman has historically and openly been connected to body weight (McKinley, 1999; Murray, 2008), and the impact of this is evident in the gendered experience of fat embodiment (Fikkan & Rothblum, 2012). Fat women experience higher levels of weight based discrimination in domains of employment (Fikken & Rothblum, 2012; Roehling et al., 2007), and education (Crandall & Schiffhauer, 1998). Discrimination also tends to occur at lower body weights for women, when compared to men (Morris, 2006) and is evidenced through experimental research (Schvey, Puhl, Levandoski, & Borwnell, 2013; Swami, Pietschnig, Stieger, Tovee, & Voracek, 2010) as well as real world occurrence (Brewis et al., 2011; Seacat et al., 2009) and subjective experience (Tishner & Malson, 2008). This body of literature documents the additional judgement and critique facing fat women, presenting the fat woman as the target and object of stigmatizing practices. This has indeed led to fat stigma becoming considered “a feminist issue” (Fikkan & Rothblum, 2012), garnering the attention of feminist and activist scholars including Susan Bordo (1993), Charlotte Cooper (1998; 2016), Marilyn Wann (1998), Kathleen LeBesco (2004), Samantha Murray (2008), and Abigail Saguy (2013).

While there has been much attention on women’s experiences with weight stigma, there is a smaller and emerging body of work focused on men’s embodiment.
Led by Lee Monaghan (Monaghan, 2015; Monaghan 2014; Monaghan & Malson, 2013; Monaghan, 2008a; 2008b), this body of work stems from the sociological exploration masculinity, and connects the critical study of masculinity with critical health and critical fat scholarship. Additional work in this area had explored fat men’s experiences of stigma (Lewis, Thomas, Hyde, Castle, & Komesaroff, 2011) and the strategies men enact to cope with stigma (Lozano-Sufrategui, Carless, Pringle, Sparkes & McKenna, 2016).

**Internalized Stigma**

While this section has focused on the experience of being stigmatized by others, negative attitudes and assumptions about fat people can also be internalized (Puhl, Moss-Racusin, & Schwartz, 2007). Survey research suggests that fat people do indeed hold negative attitudes toward fat people in general (Allison et al., 1991; Crandall, 1994; Schwartz, Vartanian, Nosek, & Brownell, 2005; Wang, 2008). This draws attention to the pervasiveness of weight stigma and illustrates the phenomenon that despite the majority of many western populations are now labelled “overweight or obese” (World Health Organization, 2014), fat people are not protected by the social process of in-group favouritism, commonly demonstrated by stigmatized groups (Crandall, 1994).

Many of the “ironic” consequences of weight stigma mentioned earlier, including exercise avoidance and disordered eating behaviour, have been found to be influenced and explained through weight bias internalization (Mensinger & Meadows, 2017; O’Brien, et al., 2016; Puhl, et al., 2007; Vartanian & Novak, 2011). Internalized weight stigma is more pronounced in individuals who are frequently exposed to stigmatizing experiences (O’Brien et al., 2016; Pearl, Dovidio, & Puhl, 2015), and, as
with the experience of external stigma, is linked to higher rates of psychological distress (Hilbert, et al., 2014). Within the broader stigma discourse, internalized stigma is noteworthy. Internalized stigma positions fat people as responsible for “buying in” to negative social constructions, and similarly positions them as responsible for doing the internal work of challenging and dispelling subjective negativity. Some of the ways in which this work may be taken up by fat people is found within resistance discourse.

**Resistance**

Messages that resist weight centric antifat beliefs and respond to the systemic stigma and oppression experienced by fat people have been instrumental in creating an alternate discourse around the “obesity” crisis, and around fat identity. While antifat evaluations persist, thanks to push back from resistance movements such as Fat Acceptance and Fat Activism, there are now alternate discourses and identities accessible to fat people. Resistance movements have been active through Fat Studies scholarship, an interdisciplinary (Wann, 2009) and intersectional field (Himmelstein, Puhl & Quinn, 2017; Pausé, 2014) that “critically examines societal attitudes about body weight and appearance, and that advocates equally for all people with respect to body size” (Rothblum, 2012, p. 3). Resistance movements also work through less formal and more accessible channels. The “fat-o-sphere” (Harding & Kirby, 2009) for example, refers to the collective of online blogs and forums that focus on Fat Acceptance and Activism and allow broad audiences access to this discourse. Such blogs and forums are themselves sites of resistance, as they create new spaces for fat people to connect, share, and engage (Dickins, et al., 2016). While the arguments of Fat Acceptance and Fat Activism share much in common, for the purpose of this review I separate these perspectives so as to draw attention to their personal and the political elements and to the different ways in which they frame the fat person. In this section I
also cover the Consumer Freedom discourse which, while quite different in nature to Fat Acceptance and Fat Activism, promotes some push back against anti-“obesity” discourse and constructs yet another characterization of fat people.

**Fat Acceptance**

Emerging in the late 1960s in the United States, The National Association to Advance Fat Acceptance (NAAFA) was established in 1969 (Dickens et al., 2016). NAAFA emerged in response to discrimination that predates the current level of discrimination experienced by fat people since the rise of the moral panics around “the obesity crisis” in the late 1990s (Cooper, 1998). Over recent decades Fat Acceptance as a movement has expanded, groups have formed to provide support and resources for: medical advocacy, self-esteem, fashion, socializing, and defense against discrimination (Wann, 2009). Fat Acceptance is best conceptualized as an ideology, encompassing fat liberation, fat pride, and fat acceptance messages (Cooper, 1998; Cooper, 2016). Offering a counter discourse to the thin ideal, Fat Acceptance rejects the devaluation of fat people (Donaghue & Clemitshaw, 2012), and seeks an end to oppression based on body size (Burgard, et al., 2009).

Through literature Fat Acceptance is approached in different ways. Some popular literature does this within a “self-help” type format with books such as *Fat! So?: Because you don’t have to apologize for your weight* (Wann, 1998) and more recently *You have the right of remain fat: A manifesto* (Tovar, 2018), offering advice on how to successfully negotiate a fat phobic society. Fat acceptance, or accepting one’s body and living life as an “unapologetic” fat person, that is a fat person not trying to lose weight, has been likened to a process of “coming out as fat”. Saguy and Riley (2011) suggest the “coming out” narrative aligns with the personal process of self-acceptance, rejecting
the internalization of negative stereotypes, and enabling positive identification with
being fat. In the academic literature Fat Acceptance is an important topic of enquiry,
with investigations on how Fat Acceptance works to negotiate new spaces and identities
for fat people (Colls, 2012) and how Fat Acceptance sits within a human rights
framework (Kirkland, 2008). Other literature explores how women identifying as fat
accepting negotiate this identity within current body image and beauty standards that
promote the thin ideal (Afful & Ricciardelli, 2015; Donaghue & Clemitshaw, 2012),
and how fat accepting women resist body dissatisfaction (McKinley, 2004). As Fat
Acceptance is mainly constructed as a “way of being” for fat women to embrace, how
this message permeates public discourse and is responded to by people not engaged
with these movements is also important to understand (Cain & Donaghue, 2018).

Fat Acceptance is a message of self-empowerment (Kirkland, 2008),
encouraging fat people to love and accept their bodies, and to make fat bodies visible in
is an example of this person centered approach, encouraging the reader to build a new
relationship with their own body, and liberate themselves from internalized oppression
and limitation. While an intentionally positive message, the premise that fat people may
change their lived experience by changing the way they think about their own bodies,
has received critique for locating the responsibility of liberation from oppressive
discourse, with the fat person (Murray, 2008). Fat Acceptance may be viewed, or even
promoted as an “option”, or new identity available to fat people, if they do the necessary
personal work. The process of personal change and detachment from internalized
stigma, is considered by some as the requisite forerunner for political activism (Saguy
& Ward, 2011).
Fat Activism

Fat Activism also has a long history, dating back to the 1970s (Cooper, 2009), and actively drawing upon feminist argument and strategies to call attention to discrimination and to de-stigmatize fat identities (Saguy & Ward, 2011). While there is much activist activity in online spaces (Lupton, 2013), Fat Activism also branches into public performative spaces (Cooper, 2010). Fat activism has been active in calling attention to how discrimination results in oppression (Rogge et al., 2004) and how current weight centred health policies are inconsistent with human rights obligations (O’Hara & Gregg, 2012). The framing of weight as a primary cause of disease is positioned as creating policies, programs and biases that lead to violations of human rights in areas of housing, education, employment, reputation and dignity (O’Hara & Gregg, 2012). Weight centric approaches to public health promotion are also viewed as promoting inequality and the oppression of fat people (Lupton, 2014; 2015). The Fat Liberation manifesto, for example, calls out “reducing” industries on their false claims, and the medical science which labels fat people unfit (Freespirit & Alderbaran, 1973). Fat Activism is essentially political—rather than advocating for fat individuals to change their minds about their bodies, Fat Activism makes a call for “others” to change. For many this is considered a more radical message as it poses a greater challenge to current western ideology regarding weight, health and neoliberal citizenship (Cain & Donaghue, 2018).

As Cooper (2010) posits, Fat Activist literature is oppositional in that it opposes the dominant monolithic “obesity” discourse and not only attempts to reframe the issue of “obesity” but also raises the point that the existence of “obese” people should not be the only focus. Fat Activism shift attention from the fat body and rather problematizes the ways in which fat people are structurally and systemically oppressed (Cooper,
Fat Activist interventions seek change in fat discourse, a shift from attribution and health frames, and a movement toward a discourse that recognizes the “agency and humanity” of all people (Cooper, 2010, p.186). Fat Activist literature is also interdisciplinary, and crosses academic and popular audiences, with publications such as *Things no one will tell fat girls: A handbook for unapologetic living* (Baker, 2015) and *Fat Activism: A radical social movement* (Cooper, 2016).

Fat Activism is also an avenue for expression and celebration of fat identity, of taking fat bodies from being invisible in terms of mainstream representation to being visible (Kent, 2001). Simply the act of living unapologetically in a fat body, in itself, can be considered a radical act (Chalkin, 2016). Fat Activism can indeed occur in many ways, both formally and informally, from outreach projects and workshops, to creative and cultural expressions, such as art and performances, and micro fat activism—individual acts such as challenging fat phobic comments in the workplace (Cooper, 2016). As with Fat Acceptance, Fat Activism positions the fat person as responsible for doing the work of actively embracing and negotiating a new identity for fat people. Within the fat activist framework, fat people are tasked with the additional work of moving from personal actions, to engage in some degree of public or political action that will in due course call upon others to effect change in the evaluations and perceptions of fatness and fat people.

**Consumer Freedom**

While Fat Acceptance and Fat Activism dominate the resistance narrative, there is another discourse that I also want to consider here. As a part of the “The Market Choice Frame” Consumer Freedom was brought into the fat framing literature by Kwan (2009). The Centre for Consumer Freedom (CCF) founded in 1996 is an American non-
profit organization devoted to promoting personal responsibility and protecting customer freedom. In relation to fatness, their goal is to push back against a “growing cabal of activists” that have “meddled in Americans’ lives in recent years” (CCF, 2004). The organization is supported by restaurants, food companies, and consumers and is particularly food focused (Thompson, 2009) targeting “anti-obesity do-gooders” who are attempting to increase prices and “limit accessibility for politically incorrect food…desserts of all types, and sodas” (D’Agostino, 2004, p.20). The CCF is concerned with the shift from individual responsibility accounts of fatness, toward systemic accounts, as the latter locate power for “fixing” fatness with governments, affording more opportunity to intervene in food advertising and food taxes, ultimately impacting company profits (Lupton, 2013; Thompson, 2009).

The CCF make the claim that “consumers have been force fed a diet of bloated statistics” (CCF, 2004), suggesting some alignment with arguments put forward in critical biomedical discourse. They also take the position that “Everyone should have the right to make their own choices about what to eat and drink” (CCF, 2004), situating themselves within the discourse that supports personal freedom and appears to resist weight centric health ideals. However, these messages need to be considered in context, as they are connected to an organization supported by industries that profit from food and beverage consumption. Indeed, calls have been made for transparency with regard to conflicts of interest, given the dark history of tobacco industry “front groups” (Yanamadala, Bragg, Roberto, & Brownell, 2012). While I discuss the CFF with other resistance frames, I do this to demonstrate the complex nature of fat discourse. While the CCF critique of antifat discourse appears more an attempt to avert reduction in industry profits (Yanamadala et al., 2012), the CCF do offer a unique avenue for
resistance that is not focused on the fat body. Although this discourse seeks push back against antifat industry regulation, it does little to champion the perspectives or voices of fat people, or to situate these within a particular frame. Rather, many messages put forward by the CFF appear to co-opt antifat rhetoric as a means to promote a corporate profit agenda.

Conclusion

Through this review I have identified key ways in which literature features the topic of fatness and the fat person. I acknowledge that this review is not exhaustive, as literature focused on disability and intersectionality for example, have not been included. As a goal of this review was to inform item writing for a measure that would quantify elements of contemporary fat discourse for use with a general audience, the focus was on discourse that I considered to have made the transition from academic to popular coverage. As a result I have distinguished four primary frames and 16 sub-frames that I see as reflecting important representations of fat people, as well as key messages that can be suitably quantified.

My goal in this review has also been to extend beyond the usual classifications of fat scholarship into anti and critical divisions (Gard, 2011; Kwan, 2009; Lupton, 2013; Saguy & Riley, 2005). In doing this I have been able to identify where perspectives sometimes overlap these common divisions, and where they align with one another. I am not suggesting that the anti and critical categorizations are no longer of value; what I hope to have demonstrated is that these divisions benefit from closer inspection. While division based on skepticism about weight related beliefs (Wann, 2009) is a useful framework, this taxonomy retains a focus on cause and consequence. This division is also unhelpful when it comes to scholarship that often times sits across
this divide, such as I have discussed in relation to HAES and weight stigma research. In constructing the Fat Attitudes Assessment Toolkit my desire is to move beyond a limited conceptualization of fat attitudes. That is not to say that conceptualizations of cause and consequence are unimportant—they do, from what we currently know, form the crux of negative evaluations toward fat people (Allison et al., 1991; Crandall, 1994; Latner et al., 2008; Lewis at al., 1995; Morrioson & O’Connor, 1999). Rather I am suggesting that there is more to know about how fat people are perceived and evaluated, and there is more to know about how the frameworks presented here are gaining traction in public discourse.
Chapter 3.
Concerns, Culprits, Counsel, and Conflict: A Thematic Analysis of “Obesity” and Fat Discourse in Digital News Media

Context Statement

This chapter explores current fat and “obesity” discourse as represented in western digital news media. Here move beyond the academic literature reviewed in the previous chapter to document how conversations about fatness and fat people are being played out in the public domain. The intention is to identify contemporary themes in fat discourse while paying particular attention to how messages critical of mainstream perspectives of fat people are introduced and responded to. Through sourcing material from digital news media, I am able to capture the ways in which particular news aggregators promote and legitimate different constructions of fat people. The digital source of this data allows, in most cases, for reader commentary to be included, offering insight into public response to these constructions. The material sourced for this analysis provides raw data that has informed item writing for the development of the Fat Attitudes Assessment Toolkit, Appendix A, Table A1 gives details of the articles included in this review. The thematic analysis offers insight into how critical positions are indeed gaining traction, and demonstrates a level of public understanding on the topics of weight stigma, and size acceptance. This has afforded me confidence in developing items on these topics, and also supports my thesis argument that it is time to move beyond a focus on antifat rhetoric.

This chapter was presented at Fat Studies, 29-30 June 2016, Massey, New Zealand and in poster format at the 4th International Weight Stigma Conference, 29-30 April 2016, Vancouver, Canada. The chapter appears in print as:
Abstract

In recent years “obesity” and fat discourse in western digital media have matured; the complexity and conflict around fat embodiment are increasingly becoming part of everyday discourse. The present study explores key themes structuring this discussion. Popular online news aggregators were searched using the key words, fat, obese, and obesity. Fifty-nine articles and their comments were subjected to qualitative thematic analysis. Three thematic areas characterized the current discourse: Concern, Blame and Advice. Findings show how concerns about fat shaming are coming to be constructed as part of dilemma in which concerns for the psychological well-being of fat people are set against the need to address the (putative) physical “harms” of “obesity.”

Introduction

In 1994 Crandall claimed “In contrast to racism and sexism, the overt expression of antipathy toward fat people is currently affected only modestly by normative pressure and concerns about social desirability” (p. 892). More than twenty years later, the expression of anti-fat sentiment may finally be being challenged. Although anti-fat ideology retains much of its taken-for-granted authority, voices promoting competing constructions of fat embodiment are increasingly participating in mainstream discourse. The growth of digital and social media has seen audiences become increasingly involved in the construction of public discourse. Online news provides a level of interactivity unavailable in traditional offline print and electronic media (Karlsson &
Stromback, 2010). This feature affords readers an opportunity to engage with the media, sharing their experiences and points of view and consequently becoming co-creators of content (Previtte & Gurrieri, 2015). Of course, not all news sites enable readers to engage with and extend upon news content in this way; however where they do there is the potential for more nuanced discourse surrounding topics of social interest to reach a wider audience, potentially exposing readers to alternate or dissenting perspectives that may have struggled to find a platform in traditional media formats (Kim & Willis, 2007; Lyons, 2000). In relation to “obesity” and fatness this may mean that critical perspectives previously restricted to the Fat Acceptance and Size Acceptance blogs and online forums referred to collectively as the “fat-o-sphere” (Harding & Kirby, 2009), are now able to make their way into mainstream commentary. Our aim in this paper is to provide a map of current “obesity” discourse as it is represented in online media, with particular consideration given to how and where perspectives positioning themselves as more “critical” are inserting themselves into the conversation around “obesity,” public health, and fat embodiment.

“Obesity” has been a popular subject of media coverage since the 1980s (Lupton, 2013). Although the central premise – that “obesity” is a “crisis” constituting an unprecedented threat to public health – has remained dominant across this period, other elements of “obesity discourse” have shifted in and out of focus over time (Gard, 2011; Gearhart, Craig, & Steed, 2012; Lupton, 2013). A range of studies has compared the content of “obesity” stories from the mid-1990s to the late 2000s, finding that reports concerning prevalence, prevention, treatment and health risks have remained a key focus of reporting (Gearhart et al., 2012), even while other factors such as “obesogenic environments” have received greater attention and simplistic individual behavioural frames have become increasingly questioned (Kim & Willis, 2007;
Lawrence, 2004). In their review of shifts in mass media framing of the “obesity crisis,” Kim and Willis (2007) conclude that the 2000s saw something of a rebalancing of personal and societal attributions for fatness, with a decline in attributions of personal responsibility and an increase in coverage of social causes and solutions. However, Lawrence (2004) cautions that the individual accountability frame has not lost its meaning across this shift. Even within analyses that recognize the role of systemic factors, a strong role is assigned for personal responsibility; an “obesogenic environment” may make it more difficult for people to manage their weight, but does not absolve them of the “responsibility” to do so. Kim and Willis also point out that the trend towards increasingly nuanced coverage of “obesity” has been more pronounced in print media than on television; popular weight-loss reality television shows such as *The Biggest Loser* still rely heavily on an individual responsibility framing of fatness in which any appeal to “external” factors is discredited as an excuse made by those unwilling to “do the work” (Monson, Donaghue, & Gill, 2016).

While questions about the relative importance of individual self-discipline versus environmental influences were a major focus of weight research in the 1990s and 2000s, more recently researchers have begun to seriously investigate the prevalence and effects of weight stigma. Mounting research has uncovered a wide range of negative repercussions of weight stigma across many public and private domains of life (e.g., Brewis, Hruschka, & Wutich, 2011; Major, Eliezer, & Rieck, 2012; Puhl & Heuer, 2009). The negative attitudes and attributions that underlie weight stigma are considered to be perpetuated by the media. Analyses of online news content suggests that around three-quarters of images depicting “overweight” or “obese” bodies are still negative and stigmatizing (Heuer, McClure, & Puhl, 2011; Puhl, Peterson, DePierre, &
Luedicke, 2013). Experimental investigation of the impact of these messages has confirmed that they do indeed lead people to express more negative attitudes towards fat people, even when the overt textual content associated with the images is neutral in orientation (McClure, Puhl, & Heuer, 2011). Such findings point to the importance of ongoing investigations into public discourse around fatness and “obesity”; media representations of fatness and “obesity” have wide-ranging consequences for the lives of people whose bodies are, in a very real sense, constructed in and through the social discourse surrounding them.

**The Present Study**

Research to date has focused very tightly on traditional print and television media, and this has provided insight into the mainstream, often anti-fat, perspectives. Our aim in this research is to investigate current digital news media reports on “obesity” and fatness from a variety of sources, many incorporating audience commentary. In doing this we will be able to take advantage of the insights such sources provide (Boero, 2013), providing a contemporary map of the discourse around “obesity” and fatness. While the conventional anti-fat discourse will be attended to through this research, our interest is primarily in where and how the more critical or dissenting voices insert themselves in this debate, and how mainstream anti-fat arguments talk back to them. Through engaging with these aspects of the discourse and debate, there is the opportunity to identify shifts in the way fatness and “obesity” are being portrayed and discussed. These shifts may in turn reveal important opportunities and strategies for further investigation, intervention and activism.

This investigation is underpinned by a critical realist epistemology (Sayer, 1997; Williams, 2003). This approach seeks to recognize and sit between a realist approach
which uses discourse to reify “obesity” as a medical condition and a social constructionist approach which considers fatness and “obesity” as always negotiable social identities (Patterson & Johnston, 2012). While the focus of our analysis is on the ways in which “obesity” and fatness are constructed in and through the digital media forum, our critical realist approach recognizes both the constructed and performative nature of each representation while also acknowledging the material impact these discourses have in shaping people’s lives.

**Method**

**The Data**

Generating a data set that would depict the current discourse around fatness and “obesity” involved searching online news sources for textual content. In order to access material representing a range of perspectives, from the more conservative to the more social justice and gender orientated, news aggregators Fox News, Yahoo News, Huffington Post, Buzz Feed, Daily Life, and Mamamia were selected for review. Including both U.S. and Australian content these sites afford the potential to reflect the range and variety in western media’s representations of fatness and “obesity.” To generate the data corpus sources were searched using the terms *fat*, “*obese*” and “*obesity*”. The first ten articles from each search were reviewed with articles exploring unrelated content and duplicate items excluded. To ensure a data set that captured both an adequate volume and range of data together with the most current features of the discourse and debate, the search was restricted to material published from 2013 onward. Article searches took place on the same day in November 2015. Search results generated a mixture of content; traditional news reportage was interspersed with opinion pieces and social commentary, illustrating the variety of genres through which this topic is circulating and offering up diverse and rich textual data. Where news sites allowed
for comments these were included for analysis, resulting in a final data set of fifty-seven articles, twenty-five including reader commentary. Material was reviewed and selectively coded with a focus on content most relevant to the research question, with the result of an initial body of instances of 50,112 words (Articles, 23, 292 words; Comments 26, 820 words).

**Ethics**

Management and analysis of data were informed by the ethical guidelines developed by the Association of Internet Researchers (AIOR, 2012). All source material exists in publicly available online sites, unprotected by logins or passwords. Authorship of articles, where available, has been recorded and for reader commentary, names and pseudonyms were deleted from the data corpus.

**Approach to Analysis**

The objective of our analysis was to identify the current perspective(s) toward fat and “obese” people and the “condition of obesity” represented within and through recent online news media articles and reader commentary. To achieve this, we used thematic analysis to identify and report themes and patterns within the data set (Braun & Clarke, 2006). Identified as particularly useful for investigating public conceptualizations around social constructs (Willig, 2013), thematic analysis has the ability not only to work with the explicit textual content in the data, but also to tap into the more implied or inferred meaning around an issue (Joffe, 2012). Of particular interest here are the patterns relating to the underlying ideas and assumption around fatness and “obesity” that are present in the arguments and tropes used to construct positions that either support or challenge mainstream understandings of “obesity.”

Analysis followed phases outlined by Braun and Clarke (2006) and began with repeated
reading and familiarization with the data set. Features of the data were then coded and collated resulting in the identification of 150 initial codes. These codes were then systematically collated into potential themes and refined into three key patterns of meaning relating to our research goals.

**Analysis and Discussion**

In analysing the discourse around “obesity” and fatness presented in the data, it is important to recognize that a variety of agendas, experiences and backgrounds are brought to the table when these topics are discussed in public forums. The discussion and debate that ensues thus begins at the very level of problematizing the meaning of fat embodiment. The conversations then often shift to pinpointing culprits, assigning blame and regaling the perceived individual and social consequences of fatness. Advice and instruction are also proffered throughout much of the discourse, again based on construction favoured and position taken. It becomes evident that within this discourse many voices are attempting to be heard, from the mainstream to the more critical and activist standpoints. Although some voices are louder than others, this interplay of expressions nonetheless generates a multifaceted and dense discussion. It is within this complex and nuanced discourse that we have identified three overarching themes: Concern, Culprits, and Counsel. Each theme highlights particular complexities and clashes, within each are threads that may potentially identify sites of change and it is the teasing apart of these that are of particular interest.

**Concern**

Concern in one form or another is captured in the way the topic of “obesity” and fatness is approached throughout the majority of articles and underpins much of the associated commentary. Concern is constructed through discourse which focusses on
the “actual” and potential outcomes of “obesity.” On some occasions this is communicated with regard to the condition of “obesity” itself with a focus on the negative outcomes for fat people and for society more broadly. In other instances, this worry is expressed in the discussion around the increasing exposure of critical perspectives such as Fat Acceptance and Health At Every Size. Discourse here expresses alarm that such perspectives are promoting fatness, with blatant disregard for the (alleged) consequences. Concern also pre-empts and grounds much of the subsequent “solution”-focused conversation.

**Concern for health and wellbeing.**

Beginning with the more routine concerns depicted through mainstream media is the positioning of fatness and “obesity” as having negative consequences on life and the prosperity of society. Within this, the framing of “obesity” as a health issue of epidemic proportions is an idea that remains a lively part of the discussion, as evidenced by the following article extracts.

The obesity epidemic is among the most critical health issues facing countries like the US and Australia. (Daily Life; The top five most well-exercised obesity myths, article)

I will not yield here, these people are unhealthy. The correlation between obesity and numerous health problems…is so strong it may as well be God-given fact. (Daily Life; Project Harpoon: The fat-shaming movement that needs to be stopped, article)

These concerns, typically expressed in articles, are not reproduced as legitimate by all readers:

"Health" is a highly dynamic state, and not predicted by body shape and size. Your health is none of my business; my health is none of your business. We do not owe "healthiness" to anyone. (Buzz Feed; The invention that could end obesity, comment)
Here, the comment suggesting health cannot be read from the body challenges the oft-cited weight-health connection that is the foundation of “obesity crisis” discourse. This comment also represents a push back against healthism and the pervasive tendency for contemporary western culture to moralize the pursuit of health (Crawford, 2006).

Weight and health concerns are also challenged via the suggestion that expressing alarm for health is really just a socially acceptable way of judging fat people.

Because let’s all just be honest here for a second: telling fat people how unhealthy it is to be obese is never really about their health is it? Concern for their health is just an excuse to judge and condemn them for looking different. (Buzz Feed; The full beauty project: Meet the body positivity artist who’s giving trolls a taste of their own medicine, comment)

Through the proposition that health concerns are really just alternative ways of judging people this comment raises the notion of “an aesthetic of health” (Jutel, 2005, p.119) and the notion that deviation from culturally enforced appearance norms are really the reason for public condemnation. Both comments operate as attempts to shut down the “concern for well-being” argument that features heavily throughout the news commentary.

**Concern over fat shaming.**

Concern over fat shaming captures alarm over the idea, experience and perceived acceptance of the practice of shaming fat and “obese” people. Rather than supporting the idea that fat shaming and stigmatizing practices will motivate fat people to change (Rogge, Greenwald, & Golden, 2004), this perspective expresses concern about the harm these still common practices inflict upon people. The following extract illustrates these strongly expressed beliefs.

These things go beyond hurt feelings. They go beyond self-esteem. They are brutal barriers to life. They are discrimination. These
things are abusive and violent. They are damaging and unimaginably cruel. (Daily Life; Making fun of obesity has nothing to do with free speech, article)

This article reflects concerns that guide weight stigma research more broadly (see Carr & Freidman, 2005; Hatzenbuehler, Keyes, & Hasin, 2009; Puhl & Heuer, 2009; Vartanian & Shaprow, 2008). The following extract, also from a news article, exemplifies the concern over fat shaming as a detrimental practice while also drawing on the notion of weight as an obligation and symbol of social value.

I refuse to entertain the notion that publicly shaming people for being big, or fat, or anything that makes you uncomfortable, is anything but completely demeaning, ignorant, and disgusting. You should know that it’s no one’s job to defend themselves as being worthy of existence. You’re making the world worse. Stop. (Mamamia; Fat shaming week happened and it was the worst, article)

Such coverage effectively “shames the fat shamers” and highlights how the critical push back against mainstream “obesity” concern has begun to gain traction within contemporary public discussion. However, it is perhaps worth noting that these examples have come from media sites focusing on gender related content and with an explicit social justice agenda.

**Concern about the new social movements.**

Concern about the new social movements revolves around awareness that there are emerging trends attempting to arrest fat shaming and contest the ideology around fatness and negativity in some quarters. Fat positive messages evoke concern over the conflicting and “counterproductive” signals they are seen to be sending. Due to the stronghold of the weight-health association, messages focused on body acceptance and positivity are called out as being dangerous for promoting “obesity.”
I simply cannot find anything beautiful about morbid obesity and I believe that it does not augur well for society when we gloss over the dangers of obesity with platitudes about 'the right to feel beautiful' no matter how much a person weighs. (Mamamia; The full beauty project: Promoting obesity or self-love, comment)

Comments such as these utilize the link between weight and health to shut down the idea that beauty is available to people who are “obese,” an argument that was frequently raised in the comment sections of articles that discuss aspects of the fat acceptance movement. In this extract the right for a person to even have a subjective experience of beauty is also denied. The purported threat that these social movements pose to society is reflected in the claim that it is “dangerous” to allow fat people to feel good about themselves – in this view, fat people must be reviled for the greater good of society.

Numbers are power. The more fat people we have in the population, who refuse to face or address their own problems, who viciously attack anyone who dares to confront them, the harder it will become to cure this epidemic. (Mamamia; Today show obesity expert, comment)

As reports on the proliferation of “obesity” continue, there is growing concern that being fat or “obese” is now the “new normal.” Arguments constructed from this perspective present “obese” and fat people as having the potential to wield power in a way that shuts down debate, so that any “cure” or challenge to this “epidemic” grows more remote. Such concerns were however frequently met with challenge:

The idea around the "fat" movement is not to glorify fat. But give fat people a chance at feeling accepted, studies have shown "shaming" people thin doesn't work, if it did no one would be fat. (Huffington Post; Fat acceptance is a farce, comment)

Again presenting a more critical voice, these arguments in support of the emerging social and political movements frequently run alongside and attempt to counter anti-fat commentary. Such reader comments attempt to re-educate the audience on the
intention of the Size Acceptance movements while highlighting the ineffectiveness of fat shaming as a health-promoting practice.

Culprits

The theme Culprits encapsulates the orientation within the discourse to a perceived need to both identify the cause and assign the “blame” for the individual or collective “condition of obesity.” Accusations point towards either an internal or an external agent. The discourse around internal “blame” circulates around individual character and actions, with particular focus on lack of will power, lack of character, and lack of moral fortitude. Less frequently, individualistic accounts of “obesity” move away from character judgements and instead focus on psychological “vulnerabilities” and/or metabolic disturbances, which may themselves have environmental or genetic origins. At other times the focus shifts to external culprits, insinuating that systemic forces are at work on the person, thus rendering the individual less accountable. These forces, including modern lifestyles and the food industry are depicted as conspiring to create our “obesogenic environment.” It is with these distinctions in mind that we identified three subthemes around culpability: irresponsible people, medicalization, and modern life.

Irresponsible individuals.

In contemporary neoliberal society individuals are depicted as having both the agency and the responsibility to control their body weight (Crandall & Martinez, 1996). In this view, fat bodies may be seen as evidence of failed self-responsibility (LeBesco, 2011). Such perspectives position the individual at the center of conversations around “obesity.” It follows that if members of affluent western societies, having access to myriad opportunities and resources, fail to manage their obligations effectively, blame
falls to the individual. The following extract is a succinct example of this message voiced throughout much of the data.

There is clearly a fat epidemic that there never used to be. It’s from lack of exercise except when lifting hand to mouth. Stop being PC and just say it how it is… no excuses. (Mamamia; The full beauty project: Promoting obesity or self-love? article)

The “energy in – energy out” explanation of body weight was frequently pitched as the logic underlying the argument of personal responsibility, with the fat individual “obviously” guilty of not managing this process. Interestingly, this extract implicitly acknowledges the arguments that “obesity” is more complicated than simplistic energy imbalance accounts would suggest, but dismisses such arguments as damaging political correctness; this writer positions her/himself as a “truth teller,” willing to hold fat people accountable in a way that is constructed as necessary in order to address the “fat epidemic.” The idea of weight as a matter of control and choice was not a perspective taken up solely by non-fat people, with evidence of personal declarations also present, particularly throughout reader commentary.

My weight goes up and down. When I CHOOSE to eat healthy it goes down. When I CHOOSE to eat unhealthy it goes up. When I CHOOSE to exercise, it goes down. When I CHOOSE to be lazy it goes up. 90% of the time CHOICES predict the outcome.

(Huffington Post; Fat acceptance is a farce, comment)

Extracts such as this show the investment that many people, whether fat or thin, maintain in the belief that thinness is a matter, and indeed a badge, of personal responsibility. When such positions are taken up by individuals declaring their role in weight outcomes, they serve to draw attention to the enmeshment of “obesity” discourse within the broader cultural logics of neoliberalism, and the difficulty of thinking outside of individualistic frames of meaning and accountability (Donaghue, 2014).
Medicalization.

The construction of weight as the consequence of mental or physical health conditions, or the medications used to treat them, also featured throughout the data. This reasoning, found mostly in the reader commentary, was frequently used to undermine straightforward attributions of “personal responsibility,” and worked to depict fat individuals as non-deviant and less “blameworthy,” as evident in the following extract.

You have no idea how much genetics, hormones, metabolism and other uncontrollable factors influence a person to be predisposed to put weight on easily, and how hard it is to lose it again. (Mamamia; Fat shaming week happened and it was the worst, comment)

While several “conditions” were put forward as responsible for excess weight, often these explanations were called out as inaccurate or implausible.

My partner is a pharmacist, and I can tell you there is no medicine, or illness in the world that makes you weigh 20+ stone. (Mamamia; Man pens a complaint letter to Jetstar after sitting next to obese man, comment)

These claims effectively allow perceived causes to be relabelled “excuses,” opening them up to challenge and contention. As in the previous theme, the complexity of this discourse is made visible through “overweight” people also endorsing these perspectives.

Overweight people with medical conditions are actually a very small percentage. Most of us, like me, this is a consequence to our poor eating choices. (Huffington Post; Fat acceptance is a farce, comment)

Comments such as these are an example of the attempts to shut down medicalized explanations. This effectively shifts the argument from being one about chance to one about choice and reengages the much promoted idea of personal irresponsibility as the central vector of “obesity,”
The notion that “obesity” is the result of psychological malaise or influence also circulates within the data. Ideas are expressed that refer to food as a source of comfort and eating as a form of addiction.

Most commonly, chronic weight issues are a manifestation of psychological issues - just like any substance abuse issue. It is rarely such an easy solution as “just stop eating so much”. (Mamamia, The full beauty project: Promoting obesity or self-love? comment)

Generally, the conceptualization of food as addictive tended to correspond with an acknowledgement of the complexities involved in this topic and a rejection of simplistic solutions, as evident in the above comment.

**Modern life.**

The third culprit identified within this subtheme describes forces such as modern lifestyles and the high price of fresh or “good food” as responsible for widespread weight gain. Such concerns are exemplified in the following article extract.

Researchers describe the society we live in as “obesogenic”. That means that our environment makes it much easier to gain weight than stay healthy. Unhealthy food is cheaper and more easily available than healthy food, leisure activities are increasingly about sitting in front of a screen, and our towns and cities are built more for cars than for pedestrians or cyclists. (Mamamia; How families can fight childhood obesity, article)

The role of the modern environment in creating “obese” and fat individuals is indeed the subject of ongoing investigations (see Brownell et al., 2010; Giskes, van Lenthe, Avendano-Pabon, & Brug, 2011), with some considering “obesity” to be a natural response to our current modern environment (James, 2007) - a sentiment echoed throughout many of the articles.
Another culprit singled out through the discourse was the food industry. With their profit agendas they were portrayed as aggressively attempting to undermine the will of the individual.

Meanwhile, the food industry has developed tens of thousands of products with more calories per bite, as well as new, effective marketing strategies to encourage us to buy and consume more than necessary. (Daily Life; The top five most well exercise obesity myths, article)

Such messages, often pitched in ways that appear to let the individual “off the hook,” retain the underlying belief system that overconsumption of food and lack of activity lead to “excess” weight. While many were prepared to accept these arguments, some dispute the idea that environmental forces override personal decision making and attempt to bring responsibility back to the individual.

It doesn’t cost a lot to eat healthy. If I eat junk with my son, for example KFC, it costs us about $20. For $20, I can buy an organic chicken ($10) and then veggies would be about $5. That’s $15 for food that would feed us for two nights. (Mamamia; Japan’s metabo law where being overweight is illegal, comment)

These perspectives suggest that people have the autonomy to rise above the current situation, take charge of their health and stop making excuses. Whether individuals are the unwilling victim of such manipulation is debated, again individuals are expected to exercise restraint and autonomy when it comes to the management of their body size.

Counsel

Connected to the previous themes, Counsel represents advice in response to the concerns surrounding fatness and “obesity” along with recommendations for tackling the culprits responsible. As “obesity” and fatness are often depicted through the news media as a problem to be eradicated, it follows that the majority of the advice proposes
methods for getting rid of fat. Where fatness is understood as a transgression of the individual, advice tends to center on diet restriction and increased activity. Where psychological conditions are perceived responsible, the recommendations encourage people to seek assistance in tackling the root of their “weight problem,” as well as working on self-esteem and self-love. Similarly, where the problem is understood to stem from modern living conditions, the advice focuses on government regulation and penalties imposed on “Big Food” businesses as a means of changing the food environment. In a shift away from weight focused solutions more critical voices are also active, advocating for size acceptance, an end to fat shaming and eradicating weight stigma and discrimination. Here again three subthemes have been identified: Targeting the individual, Fixing the food environment and Size acceptance.

**Targeting the individual.**

The ideas expressed through this theme continue a thread running through this discourse, one demonstrating concern for health and wellbeing and positioning the individual as the central “offender.” Taking on the dominant idea that weight is the result of an energy in-energy out imbalance, self-management is portrayed as the logical solution as evident in the following comment.

I have a better idea on how to stop obesity. PUT DOWN THE FORK AND GO EXERCISE. (Buzz Feed; The intervention that could end obesity, comment)

Such solutions are however frequently problematized. Responses seldom go as far as to totally shut down such counsel; rather challenges connect to the perceived usefulness of such messages as evident in the following comment.
"Eat less and move more" isn't bad advice, but it suggests obesity is one size fits all for everyone. (Huffington Post; Fat acceptance is a farce, comment)

Other critiques suggest the mainstream message around health and weight is not only ineffective, it is creating an environment where shame, low self-esteem and poor psychological health prosper.

Ok, being overweight increases your risk of other lifestyle related conditions - wow that's ground breaking guys, never heard of that before huh? The truth of it is, we've had that message shoved down our throats for decades and it hasn't made a shred of difference. If anything it’s just made us more unhealthy because society makes us feel so crap about ourselves. (Mamamia; The full beauty project: Promoting obesity or self-love? comment)

The idea that self-management is the appropriate response to the “problem of obesity” appears to be beginning to lose traction and some credibility (James, 2007). While there is no doubt that champions of this traditional approach remain, such sentiment is increasingly being challenged as overly simplistic, ineffective and damaging to well-being.

A different method for achieving individual change was voiced through reader commentary attempting to shift focus from weight loss and onto health, as expressed in the following comment;

As a culture we are so obsessed with losing weight and failing miserably! I believe if we focused more on being active and eating nourishing foods because it would give us more energy, because it makes us feel better, because we deserve to feel good, then becoming a healthier nation is possible. (Mamamia; Why I’m not trying to lose weight, comment)

While such messages were often met with approval, there remained dissenting voices such as those expressed earlier, challenging the notion of health as a moral
responsibility claiming “we do not owe healthiness to anyone…” (Buzz Feed; The invention that could end obesity, comment).

**Fix the food environment.**

In response to the suggestion that the modern environment, and in particular the food environment, is to blame for fatness and “obesity” comes the proposal that this environment needs fixing. The solution suggests tackling the trappings of modern life with a focus on “junk food” and urban design. Through modifying these domains, individuals may no longer have to contend with the systemic factors nudging them towards “obesity.” This thinking is exemplified in the following extract.

Preventing obesity means tough government action to limit the promotion of junk food, especially to children, to ensure healthier food is offered at work, in schools and institutions, and to encourage physical activity through better urban design and transport systems. (Huffington Post; Global obesity rise puts UN goals on diet-related disease beyond reach, article)

The likelihood of such events occurring is however met with disbelief in the reader commentary, particularly in relation to “Big Food” as articulated in the following comment;

The reality is no government around the world has the balls to take on the big food giants. Those companies are the real culprits and should be taxed so heavily that junk food becomes a luxury item. (Mamamia; Japan’s metabo law where being overweight is illegal, comment)

The suggestion of a junk food tax was frequently raised as a solution to “obesity.” Such advice is also met with doubt, with the probability of such action deemed unlikely given the power wielded by “Big Food.”
**Size acceptance.**

Representing a more critical perspective, this subtheme brings together ideas challenging the notion that the response to fatness and “obesity” is to make changes that will allow, encourage, or enable weight loss. Rather, the conversation on size acceptance suggests changing the individual and social responses to fatness. These sentiments tended to be more prominent throughout reader commentary and also more frequently and clearly articulated on sites focused on gender related content.

If we are to change these attitudes and behaviours in society, we need to reduce stigma by creating a safe and supportive environment. To minimise and eventually eradicate this negative culture, we as a society should be making it unacceptable to make derogatory comments on a person's body image. (Mamamia; Skinny shaming isn’t as bad a fat shaming, comment)

Rather than making fatness unacceptable, this extract seeks to turn the tables and make body shaming unacceptable. Given the aforementioned concerns and negative impact of weight stigma and discrimination, challenging society’s tolerance for fat shaming is an important push back against the apparent acceptability of such practice. Along with the need to encourage a broader social acceptance of fat bodies, the idea of self-acceptance as a private action was also the topic of much discussion. While self-acceptance and size-acceptance were generally considered welcome advice, others were not convinced, placing boundaries on the “type” of people deemed worthy of such pursuits.

I definitely believe in body confidence at different sizes and accepting yourself for who you are but that’s for healthy women who do their best to take care of themselves. (Mamamia; The full beauty project: Promoting obesity or self-love, comment)

The notion that self-acceptance is a worthy goal for (only) some women suggests that there are conditions on who should be encouraged to embrace this concept. While the spirit of such ideas may be well understood within the size acceptance community, it
becomes apparent that work is required in promoting a shared understanding of these concepts in the broader population. The idea of self-acceptance of a large body size is also held up as a remote possibility, given the dominant discourse around weight.

The Self-Worth Diet is not easy. Feeling good about yourself in spite of your weight is extremely difficult, especially when it’s been deeply ingrained in you that you shouldn’t. (Mamamia; Dear concern trolls fat people are trying, article)

Society is not viewed as fostering an environment where such self-beliefs, let alone self-expressions, are able to be easily achieved. Again, belief in, and promotion of the dominant health related weight paradigm is depicted as continuing to shape even the most private experiences of the embodied fat self.

Conclusion

This study set out to distil the key features of the current public discourse around fatness and “obesity.” Of particular interest were the ways critical voices engaged with traditional anti-fat rhetoric. Digital news media provided an opportunity to investigate this exchange through the inclusion of both media generators and public commentators. Aggregation of these voices revealed three key discourses operating simultaneously: concern regarding “obesity” and fatness; identification of the responsible culprits; and counsel regarding what should be done with a “problem like obesity.” Throughout all themes, conflicting perspectives were notable with all standpoints subject to critique and counter-critique. Although similar arguments were present across the target articles and the reader comments, there were some notable differences between them. In particular, while a few of the target articles did include critical fat perspectives, the majority of the critical arguments found in this data set were contained in the reader comments. Where the target articles did challenge simplistic formulations of “obesity”
as a matter of personal self-discipline, they were most likely to do so by blaming the rigours and constraints of modern life, a finding aligned with earlier reports of a shift toward societal attributions of responsibility in print media (Kim & Willis, 2007). Overall our findings show that attempts to disrupt the dominant anti-“obesity” rhetoric are indeed making their way into the public discourse, albeit primarily through the more informal channels afforded by comments sections of digital media.

The problems associated with fat shaming were the dominant element of critical fat discourse that we saw in this data set. Fat shaming was widely condemned, both for the hurt and harm that its targets experience and for the counterproductive effects it is considered to have on “healthy living.” However, concerns about fat shaming appeared to be largely disconnected from other elements of critical fat discourse, such as the notion that the “harms” of “obesity” are vastly overstated and that health is largely independent of weight (Gard, 2011). Instead of a general rise in public consciousness around the complexity of “obesity,” it seems that concerns about fat shaming and weight stigma are working to construct a dilemma in which concern for the psychological well-being of fat people is set at odds with the need to address the (still undisputed) physical “harms” of “obesity.” In many cases, this dilemma is reflected in a desire for new tactics in the promotion of weight loss; in this view, fat people should be encouraged to accept and respect themselves in order that they will enjoy sufficient self-esteem to be motivated to engage in the “health”-seeking behaviors that (it is assumed) will result in them eventually becoming thin. While a reduction in fat shaming and weight stigma would surely be welcomed by fat activists, if a more radical undoing of the assumptions underlying “obesity crisis” discourse is to be achieved it seems that these assumptions will need to be tackled directly. Focusing on the harms of fat
shaming does not appear to “spill over” into a wider scepticism about the alleged harms of “obesity.”

In addition to fat shaming and weight stigma, other notable features of the discourse that did make inroads into traditional anti-fat rhetoric included concern over the power and culpability of “Big Food” businesses and some qualified support for fat acceptance movements. Together these perspectives may be evidence of a refocusing of attention away from accounts of “obesity” that emphasize individual behaviour and toward ideas of social causation, acknowledgement of different agendas, and a growing awareness of the multiple options available for embodying fatness in contemporary western society. From a critical realist perspective it becomes evident that while opposing representations of the fat body are available, there may simultaneously be real conflict when it comes to people’s experiences of their own bodies (see Donaghue & Clemitshaw, 2012 for a discussion of ambivalence in relation to fat acceptance discourse and embodied experiences of fatness).

While there are challenges to the dominant “anti-obesity” discourse manifesting throughout the data, we are hesitant to fully celebrate this apparent swing away from a univocal approbation of fatness, given the places these voices do not yet go. The idea that health is largely determined by factors other than lifestyle and body weight (Monaghan, 2013) remains largely unchallenged. There was very little discussion in our data of the ways in which fatness intersects with other aspects of identity (such as race, gender, age, able-bodieness, socioeconomic status), and the particular forms of discrimination and disadvantage that occur at these intersections.

Notwithstanding the limits to the reach of critical fat perspectives into public discourse around “obesity,” recognizing those shifts that are occurring may offer some
new directions for future efforts to produce more nuanced public understandings of the complex and multidimensional nature of “obesity” and fat embodiment. To date much intervention-based research has focused on information intended to manipulate beliefs regarding the causes and consequences of “obesity” or information and stories intended to evoke empathy, both with limited success (see Danielsdottir, O’Brien, & Ciao, 2010). This study identifies topic areas which may open up different approaches to weight stigma interventions, particularly in experimental settings. Future research highlighting the negative and “counterproductive” nature of fat shaming, for example, may be effective in disrupting anti-fat sentiment or at least provide additional insight into the operation of weight stigma. However, as we note above, there may be limits to the effectiveness of stigma-focused interventions in challenging the generalised pathologization of fatness. With fatness and “obesity” such openly debated topics, keeping track of public understandings and concerns, from all perspectives, may showcase breaks in the discourse that may provide opportunities to disrupt assumptions about the supposed harms of “obesity” as part of a multipronged strategy to reduce weight based stigma, prejudice and discrimination.
CHAPTER 4.

WEIGHT STIGMA INTERVENTIONS: A REVIEW AND RECOMMENDATIONS FROM THE 5TH ANNUAL WEIGHT STIGMA CONFERENCE

Context Statement

This chapter reviews weight stigma research with several intentions. In developing a new measure of attitudes toward fat people, I needed to consider the ways in which this measure may be used. Understanding the landscape of research investigating attitudes toward fat people allows for the gaps between research objectives and the constructs that current measures quantify, to come to light. Mismatches allow me to determine which constructs are underrepresented in measurement, and to develop items that tap into these constructs. As development of the FAAT is grounded in critique of antifat measurement, I was also curious to explore the domain of stigma investigation and reduction research, where antifat measures are employed. Would this field of research also benefit from a critical lens? To achieve my second goal, I enlisted the assistance of the weight stigma community. Part one of this chapter reviews weight stigma investigation and intervention research from 1991 to 2017. This review formed part of a workshop I presented at the 5th International Weight Stigma Conference, 6-7 June 2017, Prague, Czech Republic under the title Experiments, interventions and strategies: Generating new approaches to weight stigma research. The workshop was promoted as an opportunity to collaborate and generate new ideas for stigma reduction strategies and audiences. I informed workshop participants that their recommendation would contribute to a chapter in my thesis. Part two of this chapter is a summary of the feedback from this workshop. Delegates from multiple disciplines shared my concerns about weight stigma research that perpetuated negative representations of fat people,
and made a host of recommendations for moving stigma reduction research further along the critical path. This chapter includes several tables from the workshop presentation, workshop slides are presented in Appendix B.

**Introduction**

Efforts to reduce weight bias, stigma, and discrimination see researchers employ a range of investigation and intervention research strategies. Recent years have seen participants engaging with a variety of material, including mainstream messages regarding the harms of “obesity” (Fredrick, Saguy, & Gruys, 2015), critical content relating to the complex nature of “obesity” (Diedrichs & Barlow, 2011), and first person reports of stigmatizing experiences (Gapinski et al., 2003; Teachman, et al., 2003). Participants have also engaged in more unusual approaches, such as calorie restricted diets (Cotugna & Mallick, 2010) and play reading (Mathaur, Shapiro, Hammer, Kravits, Wilson, & Fitzgerald, 2014). Despite limited evidence of effectiveness (Lee, et al., 2014) intervention-based research remains popular, as researchers explore different strategies in attempts to shift stigmatising beliefs and negative attitudes toward fat people.

In this chapter I review weight stigma investigation and reduction research published between 1991 and 2017. My focus is on the type of interventions carried out, the underpinning theory or strategy for change, the materials used and the messages employed. The purpose of this review is threefold. First, I am interested in the types of attitude-change strategies employed by researchers and the types of knowledge and evaluations that they are attempting to change. In developing an instrument to be applied in this field of research, knowledge of common strategies and targets for change
will inform item writing. If researchers are attempting to evoke empathy as an agent of change, for example, then having a way of quantifying empathy will be valuable.

I am also interested in the stimulus materials that are used in weight stigma research. I am concerned that some of the materials presented to participants serve to reinforce and also potentially legitimise negative attitudes towards fat people. To evaluate the impact of stigma reduction interventions, researchers need a point for comparison. There are two main ways that researchers may achieve this; by including a control group, or with pre and post intervention testing. Control group designs generally include a normative (negative) depiction of fat people that emphasize negative stereotypes and views of fat people (for example, Smith, Schmoll, Konk, & Oberlander, 2007; McClure, et al., 2011). It is this material that I am interested in, and whether there is any attempt to mitigate the negative impact of such material through debriefing practices.

My third aim in reviewing the body of weight stigma intervention scholarship is to consider the broader future of intervention research. While the focus of this thesis is the development of a new approach to measurement, critique of the research space in which this new measure will be adopted is important. Bringing a new intention and a more critical approach to measurement could be undermined if the ways in which a new measure is employed remains unexamined. To critique the field of intervention research, I have brought in the voices of the weight stigma community. This chapter also provides and account of and feedback from the workshop developed for the 5th Annual International Weight Stigma Conference.

The research reviewed here has been designed to explore the impact of various factors on attitudes towards fat people. When deciding on studies to be included,
previous reviews of weight bias research were first consulted. From the 2009 review by Puhl and Heuer, eight studies were identified and the subsequent review by Danielsdottir, et al. (2010) identified another two. Following this, the meta-analysis by Lee, et al., (2014) identified an additional nine, and the systematic review by Alberga et al. (2016) added a further six studies. To bring this review up to date, I replicated the systematic search of Lee et al., (2014) as they were the only authors to declare an explicit search strategy. My search covered from January 2013 (the year the Lee et al. search finished) to January 2017. The strategy included the databases Science Direct, PsychINFO and Proquest Dissertations, and included two sets of terms; “fat” Or “Weight” Or “obesity” AND “discrimination” OR “prejudice” OR “stereotype”, and “obesity bias” OR “obesity stigma” OR “weight bias” OR “weight stigma” OR “anti-fat” Or “fat phobia” AND “reduce” OR “reduction” OR “modify” OR “intervention” OR “change” OR “alter” (p. 253). In addition to this, following consultation with a librarian experienced in systematic reviews, the databases Scopus, Pub Med, CINAHL and Proquest were added. Through the review of abstracts, this search identified an additional 13 publications detailing research designed to investigate or reduce weight bias. To this, a further four publications were added from my own personal library. The additional four studies (Carels et al., 2013; Donaghue, 2014; Frederick, et al., 2015; Fredrick, Saguy, Sandhu, & Mann, 2016; Pearl, Puhl, & Brownell, 2012) are all investigative studies that compare different ways in which fatness can be framed. As the search terms used by myself and Lee at el., (2014) include no reference to images, framing, or portrayals of fat people, these studies have not previously been captured. In total 45 studies are included in this review.
Researching Weight Stigma

In reviewing this body of research, I recognized that studies took one of two forms; studies designed to explore weight stigma (17 studies), and studies designed to reduce weight stigma (28 studies). Within these two groupings, I then classified studies according to participants sampled, namely student, and other populations. For research to reduce stigma, student samples were further categorised according to discipline, with health professional and medical students identified separately to general, (predominantly psychology) students. Research designed to reduce stigma also included practicing health professionals and other populations. Given that negative attitudes and weight-based stereotypes have repeatedly been reported by health professionals (Teachman & Brownell, 2001; Foster et al., 2003; Schwartz, et al., 2003; Malterud & Ulriksen, 2011; Tomiyama, et al., 2014) and that such attitudes can result in negative health care encounters for fat people (Thomas, et al., 2008) and doctor avoidance (Fikkan & Rothblum, 2012), research that focuses on health professionals and health professional students is important to consider. After classifying studies according to type and participant group, I then considered the theory of change, intervention type and stimulus materials, Tables 4.1 to 4.6 offer a summary of this information. These summaries were presented to delegates during the workshop conducted at the 5th Annual Weight Stigma Conference.
Table 4.1

Exploratory interventions with general populations

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>McClure et al. (2011)</td>
<td>Framing</td>
<td>Visual images – stereotypical or non stereotypical.</td>
</tr>
<tr>
<td>Pearl et al. (2012)</td>
<td>Framing</td>
<td>Visual images – stigmatizing or positive</td>
</tr>
<tr>
<td>Lippa &amp; Sanderson (2012)</td>
<td>Role of genetics</td>
<td>Text – genetic or non-genetic or genetic &amp; environment interaction causes.</td>
</tr>
<tr>
<td>Carels et al. (2013)</td>
<td>Framing</td>
<td>Visual images – stereotypical or non stereotypical.</td>
</tr>
<tr>
<td>Donaghue (2014)</td>
<td>Framing</td>
<td>Text- responsibility or environment or overstated harms.</td>
</tr>
<tr>
<td>Fredrick et al. (2016)</td>
<td>Role of framing</td>
<td>Text – Negative frame or Positive frame.</td>
</tr>
<tr>
<td>Kahn, Tarrant, Weston, Shah &amp; Farrow. (2017)</td>
<td>Psychological etiology role</td>
<td>Text – psychological or genetic or behavioural causes.</td>
</tr>
<tr>
<td>Hoyt, Burnette, Auster-Gussman, Blodorn &amp; Major (2017)</td>
<td>Role of etiology</td>
<td>Text – obesity as a disease or obesity as changeable.</td>
</tr>
</tbody>
</table>
Table 4.2
Exploratory interventions with student populations

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lewis et al. (1995)</td>
<td>Attribution</td>
<td>Text – behavioural control factors or metabolic and heredity factors.</td>
</tr>
<tr>
<td>Smith et al. (2007)</td>
<td>Language</td>
<td>Text - Negative, positive, neutral, or no descriptor of a female body in a personal advertisement.</td>
</tr>
<tr>
<td>Fredrick et al. (2015)</td>
<td>Impact of framing</td>
<td>Text – Public health crisis or weight as personal responsibility or HAES or Fat rights.</td>
</tr>
<tr>
<td>Humphrey et al. (2015)</td>
<td>Impact of HAES</td>
<td>Health At Every Size general education course (3 lectures).</td>
</tr>
<tr>
<td>Fredrick et al. (2016)</td>
<td>Role of framing</td>
<td>Text – Negative frame or Positive frame.</td>
</tr>
</tbody>
</table>
Table 4.3

Stigma reduction interventions with student populations

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris, Walters &amp; Waschull (1991)</td>
<td>Attribution</td>
<td>Text – descriptions of high status overweight target, or similar status overweight target.</td>
</tr>
<tr>
<td>Puhl, Schwartz &amp; Brownell (2005)</td>
<td>Social consensus</td>
<td>Manipulated feedback – less positive than other participants or less positive than in-group. Follow up testing.</td>
</tr>
<tr>
<td>Ciao &amp; Latner (2011)</td>
<td>Consensus &amp; dissonance</td>
<td>Manipulated feedback - inconsistent with core values, or much stronger than peers. Follow up testing.</td>
</tr>
<tr>
<td>Diedrichs &amp; Barlow (2011)</td>
<td>Attribution</td>
<td>Lecture on obesity, weight bias, and multiple determinants of weight or lecture on obesity and behavioural determinants.</td>
</tr>
<tr>
<td>Kobal &amp; Carels (2015)</td>
<td>Contact hypothesis</td>
<td>Intergroup conversation based on different types of contact – direct, imagined or vicarious.</td>
</tr>
</tbody>
</table>
### Table 4.4

Stigma reduction interventions with medical and health professional students

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiesse, Wilson, Jones, &amp; Neises (1992)</td>
<td>Elaboration likelihood Attribution</td>
<td>Curriculum embedded 3 phase - video (empathy) written activity (contribution of genetics) and role playing (taking others perspective).</td>
</tr>
<tr>
<td>Cotugna &amp; Mallick (2010)</td>
<td>Empathy</td>
<td>Calorie restricted diet for 1 week (F=1200; M=1500 calories).</td>
</tr>
<tr>
<td>Roberts et al. (2011)</td>
<td>Contact</td>
<td>Student patient (bariatric) longitudinal (12 month) relationship &amp; student reflective journal.</td>
</tr>
<tr>
<td>Poutschi et al. (2013)</td>
<td>Attribution</td>
<td>Curriculum embedded – Videos “Weight bias in health care” &amp; “sharing experiences of encountering obese patients”.</td>
</tr>
<tr>
<td>Kushner, Zeiss, Feinglass, &amp; Yelen (2014)</td>
<td>Contact</td>
<td>Communication skills unit (curriculum embedded). Readings – communication issues about weight &amp; obesity and stigma, an interview (scenario) with an overweight standardized patient, and debriefing.</td>
</tr>
<tr>
<td>Publication</td>
<td>Theory/Strategy</td>
<td>Stimulus Materials</td>
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<tr>
<td>-----------------------------</td>
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</tbody>
</table>

Table 4.5

Stigma reduction interventions with health professionals

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gujral, Tea, &amp; Sheridan (2011)</td>
<td>Education</td>
<td>Bariatric sensitivity training (online) overview of obesity, bias, discrimination and available resources.</td>
</tr>
<tr>
<td>McVey et al., (2013)</td>
<td>Education</td>
<td>Interactive workshop – weight bias negative effects.</td>
</tr>
</tbody>
</table>
Table 4.6

Stigma reduction interventions with general populations

<table>
<thead>
<tr>
<th>Publication</th>
<th>Theory/Strategy</th>
<th>Stimulus Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robinson, Bacon, &amp; O’Reilly</td>
<td>Not Specified</td>
<td>Self-esteem/Body image program. Objective - reducing blame for weight (external factors) and broadening perceptions of beauty. Participants – women reporting negative body image.</td>
</tr>
<tr>
<td>(1993)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Teachman et al. (2003)       | Information & Empathy | 1. Text - genetics or behaviour causes.  
2. Story of severe discrimination. |
| Hilbert (2016)               | Attribution     | Interactive audio-visual - psychoeducation, guided discovery & mental imagery. Causes, societal pressures & prevalence and consequences of weight stigma (replication with general population sample). |
| Gloor & Puhl (2016)          | Empathy & Attribution | Four interventions - 1) First person narrative - evoke empathy, 2) Writing about a typical day of an obese person – perspective taking, 3) Reading about the complex causes of obesity – attribution, 4) Combination of the empathy and causal information. |

**Strategies for Change**

In order to reduce weight stigma, prejudice and discrimination, the negative attitudes that underpin oppressive evaluations and actions need to be changed. To achieve this end a degree of cognitive re-organization is required (Katz, 1960). If attitudes are understood as being formed through cognitive, affective and behavioral routes (Fazio & Olsen, 2003), then attitude change strategies may target one of these
avenues. The most commonly adopted strategies employed in stigma reduction research to date have been strategies that focus on changing beliefs on attributions, reframing negative fat stereotypes, evoking empathy toward fat people, and promoting contact with fat people.

**Beliefs and attribution.**

Attribution theory, the most frequently cited theory of change (16 studies), suggests that events lead people to seek out explanation or a cause (Weiner, 1986). In doing this, people attribute a reason for an outcome. In the case of fatness, beliefs about the controllability of weight dominate and people are considered accountable for their body size. Interventions based on attribution theory provide participants with information that presents different attributions for fatness, explanations that in particular challenge the assumptions of personal controllability, for example Crandall (1994) and Deidrichs & Barlow (2011). In a similar strategy, the Elaboration Likelihood Model of persuasion (three studies), may also use information to facilitate change. The Elaboration Likelihood Model suggests that offering a strong, comprehensive and believable message that a participant is motivated to process, and encouraged to elaborate on, can facilitate attitude change (Petty & Cacioppo, 1986).

**Framing.**

The next most commonly employed strategy involves framing manipulation (seven studies). The way that an event or person is “framed” has implications for how it is/they are perceived, and acted upon (Goffman, 1974). The way a social phenomenon or problem is framed, has an impact not only on public response, but also the solutions deemed most appropriate (Entman, 1993). Fatness has typically been framed in terms of personal responsibility and negative outcomes, for both self and society (Flint,
Hudson, & Lavallee, 2016; Gearhart, 2012; Jenkin, Signal, & Thomson, 2011; Hilton, Patterson & Teyhan, 2012; Lawrence, 2004; Saguy & Allmeling, 2008). Frame based interventions seek to challenge this and reframe fatness and the fat person. This may be achieved through the selection, emphasis, or omission of particular representations (Entman, 1993). Framing differs from attribution in that re-framing does not necessarily need to reattribute cause, although it often does.

**Affective engagement.**

Evoking empathy is a strategy that has historically resulted in improved attitudes toward other stigmatized groups, such as racial and ethnic minorities, people who are homeless, or people with AIDS (Batson, et al., 1997). To generate an empathic response, participants need to have an emotional response that is oriented toward the target individual or group (Batson, Chang, Orr, & Rowland, 2002). This response may arise from a state of emotional matching or concern, feeling for the other person, or it may arise from a more cognitive response, imagining how the other person feels, or how one would feel in another’s situation (Batson & Ahmed, 2009). To evoke empathy in a research setting, materials that illustrate the experiences of the stigmatized individual or group may be employed, although other interventions such as workshops and simulation exercises have also been adopted (Batson & Ahmed, 2009). Seven studies have adopted this change strategy.

**Contact.**

Lastly, the strategy of manipulating intergroup contact was adopted in three studies. Intergroup contact has been shown to reduce negative bias with groups defined by race, ethnicity, sexual orientation, physical and mental disability, and age (Pettigrew
& Tropp 2006). As advised by Allport (1954), for contact to reduce negative bias, specific features of the interaction should be met. This includes meetings that foster positive experiences, perceived equality of status, common goals, cooperation and social support. One example of contact manipulation identified in this review is between health professionals and participants in a consultation setting (Roberts et al., 2011).

While there were other approaches to interventions, such as social influence and social consensus (Ciao & Latner, 2011; Harper & Carels, 2014; Zitek & Hebl, 2006), the strategies of attribution, framing, and evoking empathy dominate this body of work. Strategy is important as it is from here that intervention materials are determined. As mentioned, my interest in reviewing intervention is not only on the strategies and targets of change, it is in the types of stimulus materials that research participants engage with: what do they read? what are they shown? what do they do?

**Stimulus for Change**

In this section I consider stimulus materials, with a focus on the materials and methods designed to shift understandings on the causes of fatness, dispel stereotypes of fatness, promote critical perspectives, and evoke empathy as a means of reducing negative attitudes toward fat people. While the intention of the research reviewed here may be to learn more about the underpinnings of stigma, and ultimately work to reduce negativity, there is the possibility that the focus of some materials may inadvertently be cementing rather than challenging negative evaluations.

**Causes of fatness.**

If viewing body weight as within individual control is associated with negative attitudes toward fat people (Crandall & Resser, 2005), it then follows that shifting such
beliefs should result in less negative attitudes. By far the most common intervention method to date, involves attempting such a shift. Studies informed by Attribution Theory and the Elaboration Likelihood Theory fall into this category, as do approaches that investigate the roles of etiology and genetics. The common approach here is to provide participants with material that puts forward a case for “non-controllable” causes for fatness in order to evoke more positive (or less negative evaluation), and this is employed in both exploratory and reduction oriented studies.

Investigative research of this nature tends to compare factors considered within individual control with those considered outside of personal control. This approach attempts to offer participants alternate and plausible explanations for fatness in the expectation that this will reduce person centred attributions. Lewis et al., (1997) presented information on behavioural control versus biogenic control, as causes for fatness, and Lippa and Sanderson (2012) presented information on behavioural, genetic and environmental attributions. The concern I have with these methods, is that although I appreciate the need to demonstrate that material focused on personal (mis)behaviours leads to more negative appraisals of fat people, in comparison to factors positioned as outside of personal control, these approaches continue to perpetuate stigmatizing information and experiences through the inclusion of the individual responsibility frame.

Some interventions designed to reduce negativity, exclude the individual responsibility messages, and instead focus on presenting material on alternate causes. Messages focused on genetic (Teachman et al., 2003), biomedical (Lewis et al., 1997, or environmental attribution are used (Lippa & Sanderson, 2012). This approach however, still depicts fatness as a problem, and can still serve to locate the “problem” with the
individual. While depicted as being outside of individual control, messages of genetic or biomedical attribution, still retain the message that fatness is a “problem”. In contrast with this approach, Donaghue (2014) includes a third message. Together with the messages of individual responsibility and an “obesogenic” environment is a third message detailing how the harm of the “obesity” epidemic have been overstated. The inclusion of this message is important as it takes the focus away from attribution, and presents participants with an alternative perspective. Also an important feature of this study, is that during the debriefing phase, participants are given all three messages. With this design debriefing becomes a beneficial extension to the intervention, as the contested nature of claims about fatness/fat people are presented to all participants.

A study by O’Brien et al., (2010) with health professionals and public health students, compared material on the controllable reasons (diet/exercise) for obesity against uncontrollable (genes/environment) reasons. Diedrichs and Barlow (2011) used a similar design with undergraduate psychology students, where students received a lecture on weight bias and the multiple determinants of weight, or a lecture on the behavioural determinants of weight. These studies by O’Brien et al., and Diedrichs and Barlow, although framed as research designed to reduce stigma, have nonetheless included normative messages of control and responsibility as comparisons. What is particularly concerning is that these have taken place in an educational setting and as such influenced student education. While I appreciate the division of groups is necessary for the purpose of comparison, my concern with design is that it appears, in most cases, that students are only receiving access to one argument or one explanation. The studies by Diedrichs and Barlow (2011) and O’Brien et al. (2010) do not provide details on debriefing protocols or materials, indicating that there may have been student groups that received only the normative explanation for fatness.
Fat framing and stereotypes.

Interventions focused on framing or re-framing are popular with exploratory studies, where the strategy here is to compare the impact of negative or stereotypical content against positive or non-stereotypic content. This is achieved in various ways, often with images, although sometimes with information that suggest different causes of fatness, in the same way that attribution methods attempt to stimulate change. Lewis et al., (1997) positioned information regarding behavioural-control and biogenic-control against each other, and Frederick et al., (2016) constructed news articles framing fatness as either a) unhealthy, uncontrollable and acceptable to stigmatize, or b) healthy, uncontrollable, and unacceptable to stigmatize. Similarly, Smith et al., (2007) presented undergraduate students with a personal advertisement in which the female advertiser used either a negative, positive or objective descriptor of her large-sized body. Interventions that use images adopted similar strategies in which stereotypical or unflattering photographic images of fat people are presented to one group of participants, while non-stereotypical or positive images are presented to another (McClure et al., 2011; Pearl et al., 2012). Once again, information relating to debriefing practices is limited; Lewis et al., (1997) do mention that participants are debriefed, but there is no mention that participants in the behavioural-control condition were also given access to the information on biogenic-control. The image based studies by McClure et al., (2011) and Pearl et al., (2012) do not provide detail of their debriefing practices.

Critical perspectives.

Some research presents and integrates material from critical perspectives, such as online education modules (for health professional and medical students) that support
size acceptance approaches (Hague & White, 2005) or educational videos on the prevalence and consequence of weight-based prejudice and weight bias in health care (Poustichi, et al., 2013; Swift et al., 2013). These interventions take a pre-test/post-test design to assess attitude change. The material used by Hague and White (2005) focused on a non-diet approach to health and was particularly comprehensive, including coverage of: controversy around the aetiology of obesity; the physical, psychological and social effects of weight stigma; risks associated with weight loss efforts; and promoting bias free behaviour in the classroom. Prior to use, the module was reviewed by experts in nutrition and obesity as well as size acceptance.

Interventions promoting critical perspectives have also been undertaken with practicing health professionals. These tend to take the form of professional development—often in the form of online modules. Falker and Sledge (2011) conducted a self-learning Bariatric Sensitivity Program with health care professionals. The program sought to “improve knowledge and understanding of obesity” (p.74) as a means of promoting patient sensitivity and decreasing stigma. The program included information on the multiple causes of obesity, discriminatory actions, and improper responses by health care professionals. Attitude measures were completed prior to completing the module, with a follow up one month after. The objective here was to both educate and evoke empathy. Although this research is situated within an obesity prevention framework, the message is critical in nature, focusing on the negative effects of weight bias, ways to avoid weight and shape preoccupation in delivering health messages, as well as incorporating mental health promotion in healthy weight messaging. The full day workshop, designed for health promoters, was over a year in the making and included input from an interdisciplinary team, although unlike Hague
and White (2005) the team did not include input from a critical fat or fat acceptance perspective.

**Evoking empathy.**

Interventions adopting this strategy have participants engage with materials or experiences intended to reduce negativity by evoking an empathic response to fat people. Swift et al., (2013) and Burmeister et al., (2017) have both used video content for this purpose. Swift et al., (2013) used two videos developed by the Rudd Centre for Food Policy and Obesity, *Weight Prejudice: Myths and Facts* and *Weight Bias in Healthcare*, while Burmeister (2017) presented a segment from the HBO documentary *The Weight of the Nation*. Gapinski et al., (2006) also presented videos, constructed from media clips that included fat people giving first person accounts of the difficulties of being overweight and the cruel treatment they experienced. Gloor and Puhl (2016) followed a similar approach using first person written accounts, with a narrative focused on a man’s struggle to lose weight despite concerted effort. Teachman et al., (2003) similarly used written material, presenting the story of a young woman sent to a “fat camp” who died after being verbally abused and forced to exercise in hot conditions.

Here an array of materials have been presented, the inclusion of first person accounts of the experience of being fat, align with recommendations that have been made for future stigma reduction efforts (Puhl, Himmelstein, Gorin, & Suh, 2017; Puhl, Moss-Racusin, Schwartz, & Brownell, 2008)

One study designed to evoke empathy, which causes me concern is from Cotugna and Mallick (2010). In this study 40 dietetics and health promotion students followed a calorie restricted diet for one week. For women, calories were restricted to 1200, and for men 1500. Attitudes were measured before and after the intervention.
Participants also completed journal entries, reflecting on the restricted diet and answering questions including “How did you deal with the level of hunger?” and “What was the most difficult level of compliance?” (p.322). Authors of this study report their outcomes in positive terms “…it was apparent that students had a new found appreciation for people who are overweight or obese and are struggling to lose weight.” (p.323). Using this strategy to evoke empathy also suggests that fat people are only deserving of empathic response because weight loss is difficult, a premise that assumes fat people are ubiquitously trying to lose weight.

Summary

In reviewing this body of work, it is apparent that there is some interesting and thoughtful research being conducted. However, I believe there is still a way to go. Researchers attempting to reduce negative evaluations of fat people need to consider the possibility that the control conditions used in their studies may inadvertently be cementing the very attitudes they are attempting to shift. Having some research participants engage with material that presents negative representations of fat people or stigmatizing beliefs does give researchers the opportunity to compare response patterns, however at what cost? Messages of control and responsibility are already pervasive (LeBesco, 2011; Lupton, 2014), and the body of research to date has established their relationship with negative evaluation. I suggest it is now time to recognize work with research designs that either avoid such materials, or include debriefing practices intended to mitigate their negative effect.

It is perhaps also time to reconsider attribution focused research. While I have no argument with the demonstrated link between personal responsibility and negative attribution, I suggest it may be time to consider whether shifting this belief is a
necessary precursor to more positive evaluations. The continued focus on encouraging participants to consider “what makes people fat” whether that be perceived as within or outside of individual control, maintains the focus on fatness as a “condition” that needs to be explained. To explore these ideas further, I created a workshop that summarized this body of work and posed questions for generating future lines of enquiry.

**Generating New Approaches to Stigma Reduction Interventions Workshop**

The one-hour workshop, *Experiments, Interventions, and Strategies: Generating New Approaches to Weight Stigma Research*, was one of two breakout sessions at the 5th Annual Weight Stigma Conference, held in Prague, Czech Republic, on June 6th-7th, 2017. The Weight Stigma conference is an interdisciplinary conference focused on matters of research, policy, rhetoric, and practice around the topic of weight stigma. The workshop was described as an opportunity to discuss issues central to research around weight stigma, with examples of common types of interventions presented for discussion. Participants were invited to collaborate in generating ideas relating to: strategies for future interventions, appropriate stimulus materials, and potential target audiences. Twenty-two participants took part in the workshop, seated in four groups of four to six delegates. Participants were informed that this workshop would provide material for a chapter in my thesis, and were encouraged to provide their names and affiliations so that their contribution could be acknowledged. To commence the workshop, I provided an overview of the aims and structure of the workshop, which was to discuss the current state of stigma reduction research, the interventions, participants and strategies for change, and to generate ideas for future lines of enquiry.

To summarise stigma reduction research, Tables 4.1 to 4.6 were presented and briefly discussed. In addition a summary of the common themes (see Table 4.7) was
presented. Following this a brief account of research by Puhl, et al. (2017) and Puhl et al. (2008) was presented. This research engaged the perspectives of fat people in generating ideas for stigma reduction strategies. Suggestions included a need for increasing public understandings of the causes and consequences of fatness and fat stigma (Puhl, et al., 2008) as well as some recommendations for stigma reduction efforts (Puhl et al., 2017), see Table 4.8 for a summary. Following this, group discussion commenced. Delegates worked in groups to generate ideas for future interventions that honoured the lived experience of participants of all body sizes. Some prompts for discussion ideas were displayed for participants to reference, see Table 4.9. Participants recorded ideas on large sheets of paper and after 20 minutes of discussion in groups, each group shared their ideas. After closing the workshop and thanking participants, work sheets were collected and transcribed verbatim at a later date. After transcription, the comments were considered and categorized in relation to the key discussion ideas posed to groups. Extracts from the discussion are presented here on the topics current and future interventions, important audiences, and working within a social justice framework.
Table 4.7

Intervention research summary

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Theory/Strategy</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text/message based</td>
<td>13</td>
<td>Attribution</td>
<td>16</td>
</tr>
<tr>
<td>Curriculum/education</td>
<td>12</td>
<td>Framing (visual)</td>
<td>7</td>
</tr>
<tr>
<td>Manipulation of feedback</td>
<td>4</td>
<td>Empathy</td>
<td>7</td>
</tr>
<tr>
<td>Contact</td>
<td>4</td>
<td>Contact</td>
<td>4</td>
</tr>
<tr>
<td>Images</td>
<td>3</td>
<td>Social influence</td>
<td>3</td>
</tr>
<tr>
<td>Video</td>
<td>3</td>
<td>Elaboration likelihood</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participants</th>
<th></th>
<th>Participants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate students</td>
<td>16</td>
<td>Health/medical students</td>
<td>11</td>
</tr>
<tr>
<td>Health professionals</td>
<td>3</td>
<td>Other</td>
<td>13</td>
</tr>
</tbody>
</table>
Table 4.8

Recommendations for research

<table>
<thead>
<tr>
<th>Suggestions for stigma reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>We need increased public understandings of</td>
</tr>
<tr>
<td>The multiple and complex causes of obesity</td>
</tr>
<tr>
<td>The difficulties of weight loss</td>
</tr>
<tr>
<td>The inaccuracies of common stereotypes</td>
</tr>
<tr>
<td>The emotional consequences of being stigmatized (Puhl et al., 2008)</td>
</tr>
<tr>
<td>We should focus on</td>
</tr>
<tr>
<td>School based anti-bullying policies</td>
</tr>
<tr>
<td>Health care approaches – promoting compassionate and respectful care</td>
</tr>
<tr>
<td>Including weight in anti-harassment training (Puhl et al., 2017)</td>
</tr>
<tr>
<td>Weight stigma interventions should include a self acceptance element (Himmelstein &amp; Tomiyama, 2015)</td>
</tr>
</tbody>
</table>
Table 4.9

Workshop discussion ideas

<table>
<thead>
<tr>
<th>Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What types of interventions/materials are NO longer relevant?</td>
</tr>
<tr>
<td>How important is attribution?</td>
</tr>
<tr>
<td>How do we incorporate more critical perspectives?</td>
</tr>
<tr>
<td>Effectiveness versus ethics?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do we need different interventions for different audiences?</td>
</tr>
<tr>
<td>Which audiences are the most important to target now?</td>
</tr>
<tr>
<td>Should we be doing more research that targets internalized stigma?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do we do this without “othering” fat people?</td>
</tr>
<tr>
<td>How do we do this while respecting diversity of lived experience?</td>
</tr>
<tr>
<td>How do we do this while honouring all participants’ body sizes?</td>
</tr>
<tr>
<td>How do we do this without contributing to weight stigma and oppression?</td>
</tr>
</tbody>
</table>

**Current and Future Interventions**

In regard to some of the stimulus materials used in interventions, there were concerns that, despite being well intended, some materials were likely perpetuating stigma. Materials that perpetuated normative messages of individual controllability and weight-based messages of health were considered problematic. It was suggested that changing the focus of intervention research could start with the researchers.
Extract one (Group three)

Can we change the approach of researchers? This is probably not as hard as changing societal views – scientists care about validity of findings…

…reset the default to reduce harm in research process.

This recommendation recognizes the perhaps unintended harm that may result from conducting research that focuses on “others”. Where investigative research continues to assess the impact of normative or stereotypical depictions of fat people, the strategy of including negative messages for comparison with critical messages was seen as problematic. Making researchers aware of the potential harm created by this strategy was identified as one way of putting an end to this practice. In addition, there were questions on whether some research was “self-perpetuating” in cementing negative beliefs rather than challenging and changing them.

Intervention materials that focused on “education” about the complexity of weight and the impact of weight stigma were also critiqued. Participants emphasized that while education on these matters was important within this research protocol, it should not fall upon fat people to teach “others” about their oppression.

Extract two (Group two)

Content needs to be informed by the target group.

- Consider diversity in target group
- It is not the burden of higher body weight individuals to teach about their oppression
- Non-fat individuals need to do homework
Include target group and intersectional identities from research question – methods – implementation.

Seek broad sources of information

- Non-peer reviewed sources
- Lived experience

In the spirit of research justice, including the perspectives and voices of fat people and recognizing the intersectionality of weight stigma featured in all groups’ feedback. In regard to the types of interventions that were considered important and appropriate going forward, there was the suggestion that it was time to move away from a “focus on health” and instead move to a “focus on the person”. There was also a call for future intervention materials to be thought provoking and powerful enough to stimulate paradigm shifts.

Extract three (Group four)

Fat people as human people

- Empathy
- Perspective taking
- Shared values and interests

Extract four (Group one)

Create “light bulb” moments for participants.

Biology vs social discrimination – change the constant focus on health
Interventions that focused on portraying a positive image of “the fat person” were deemed the way forward, as a means of not only shifting negative attitudes, but also as a means of empowering fat people as research contributors, collaborators, and beneficiaries.

**Important Audiences**

Ideas about the participants and audiences appropriate for intervention research focused on reach and access, as well as considering options for engaging with “the right people in the right ways”. There were suggestions that researchers need to start extending their scope.

Extract five (Group one)

We need different audiences!

- Politicians
- Health care professionals/students
- The general public!
- Children, teens, and their parents
- Teachers

Extract six (Group two)

What is the setting? What can be changed?

Interventions need to be tailored

In targeting broader audiences, delegates suggested that interventions should be designed with specific settings in mind. Asking ourselves “What can be changed?” was considered important when designing research protocols. As depicted in Tables 4.1
through 4.6, attempting to change beliefs about attributions is a common strategy. As beliefs about the personal responsibility and the control people have over body weight have been cited as central to negative attitudes (Crandall & Resser, 2005), attempting to change such beliefs has become a feature of many stigma reduction interventions. Given the limited evidence of effectiveness (Lee et al., 2014) and the power and pervasiveness of weight centric meanings of health when compared to critical perspectives such as Health At Every Size (Cain & Donaghue, 2010), continued focus on changing beliefs regarding attribution may remain limited.

New ways of delivering interventions were also discussed. “Ports of entry” were considered, and from the recommendations made, avenues with pre-existing “legitimized” structures were considered good options. The health and education systems were seen as opportunities to target students, by incorporating intervention/educational material into existing curriculum. Professional development setting were also seen as affording good avenues of entry.

Extract seven (Group 3)

Ports of entry

Use existing structures – education/health system

- Existing curriculum critique
- Size diversity as a component of intersectional/diversity.

As demonstrated in Table 4.4 and Table 4.5, interventions with health professionals and students are already popular. The suggestion of including size diversity into “diversity” focused education is a strategy that has not appeared in the research to date, and one that would be interesting to explore. Presenting material designed to reduce stigma in an
education or professional development setting, regardless of the audience, may have the added benefit of legitimizing the message, provided of course, the message and the delivery is inclusive and consistent with a social justice framework.

The discussion around audience moved from a conversation about the people and groups that are important to engage as research participants, to a conversation on the audiences that are important for research dissemination. The suggestion was that research outcomes need to be communicated more broadly.

Extract eight (Group four)

Need data to be used in policy/politics/practice – not just academia

- How much more research is necessary?

These comments suggest that the current body of weight stigma scholarship is already sufficient to demonstrate both the prevalence and consequence of stigma. The focus now needs to be on disseminating research findings beyond critical health academia, and into arenas where there is the potential to instigate real change in the practices that impact fat people.

Social Justice

The importance of weight stigma as a social justice issue was echoed throughout the workshop discussion. Consistent in all group feedback were comments about respect, inclusion, and learning from predecessors. Despite being well intended, stigma reduction interventions tend to be structured in ways that result in researchers conducting studies about fat people, as opposed to conducting research with fat people, an approach that is described by Charlotte Cooper as akin to positioning fat people as
“abjected objects” (Cooper, 2016, p.39). Taking an inclusive approach, and avoiding the traditional divisions between researcher, research subject and research participant, was advocated as a necessary way forward.

Extract nine (Group one)

Respect body autonomy

Extract ten (Group two)

Why not ask the individuals affected? - Affected individuals need to be included

“Nothing about us without us”

Extract eleven (Group three)

What can we learn from other marginalized groups?

Extract twelve (Group four)

Which words are appropriate to use for different audiences or in other languages?

Within this discussion, terminology was frequently mentioned. While the convention of using the word “fat” is established in domains of fat acceptance and critical research (Fikkan & Rothblum, 2012), the term “fat” has also been shown to have a negative biasing effect in research (Brochu & Esses, 2011). Despite fat people reporting a preference for the term (Thomas et al., 2008) negative connotations for the word remain (Brochu & Esses, 2011; Trainer, Brewis, Williams, & Chavez, 2015). Given that the majority of research reviewed here takes place in western cultures, the question of terminology, and how different audiences may understand or react to the word fat is
important. Terminology best practice was discussed at the 3rd Annual International Weight Stigma Conference in 2015, with the recommendation to “respect and honour the wishes of the person or people we were speaking to or about in any given situation” (Meadows & Danielsdottir, 2016, p.157). While this is valuable advice that may be put into practice with certain types of research, perhaps interview based research, where the participant can articulate their preference, this is more difficult with researcher driven projects, such as interventions.

Recognizing the ways in which weight stigma intersects with other forms of oppression was also advocated.

Extract thirteen (Group four)

Intersectionality

Extract fourteen (Group one)

Research needs to include intersectional identities

Researchers have investigated the way weight stigma interacts with other identities, such as, race and class (Herndon, 2005), race and gender (Puhl, Luedicke, & Heuer, 2013), sexuality (McPhail & Bonmak, 2015) and socioeconomic status (Donaghue (2014). What was evident in the workshop discussion was that there is a need to extend our focus on intersectionality from being a topic of research, to becoming the way in which we do research, a suggestion that is also evident in these final recommendations.

Extract fifteen (Group one)

Not all voices available in the literature

Outside University
Grounded in community

- Key informants
- Class
- Barriers to participation

These comments align with the suggestion that we need to “…create spaces that allow for intersectional scholarship, and be willing to sit at a variety of tables” (Pausé; 2014, p.83). If we restrict ourselves to academic environments, we miss opportunities to engage with the lived experience of the people we are purporting to do our work for. By extending our reach beyond the academic space and the university environment when both designing and conducting intervention research, we have access to information and opportunities that have perhaps been excluded or beyond our awareness.

Rethinking Interventions

This workshop brought together a multidisciplinary group of delegates with the common interest of addressing weight stigma. Valuable ideas for future intervention research were generated, and from these recommendations it is apparent that a paradigm shift is in order. Feedback from this workshop puts out a call for researchers to “get in amongst it”, to make the shift from doing research about fat people to doing research with fat people, and to do this while honouring and respecting diversity of lived experience. Researchers are also called on to include the voices and perspectives of fat people in research, and while Extract two (group two) argues that “it is not the obligation of the fat person to teach of their oppression”, this workshop recommends that researchers afford fat people this opportunity, should they wish to engage. As well as “getting in amongst it”, there was simultaneously a call for research to “step out”, to
break from the confines of academia and to engage more with audiences that have the potential to make a difference through instigating change that has a real impact. Weight stigma scholars are in the fortunate position to be able to learn from a long history of stigma-reduction research. The conference delegates taking part in this workshop have already recognized this opportunity, and it is my intention to honour these ideas as I develop and collaborate on intervention research using the Fat Attitudes Assessment Toolkit.
CHAPTER 5.

QUANTIFYING OR CONTRIBUTING TO ANTIFAT ATTITUDES?

Context Statement

Chapter 5 is a qualitative review of seven popular fat attitude measures. In this chapter I begin my in-depth critique of current approaches to measurement through an analysis of explicit item content. In Chapter 6, I continue this critique with a systematic review of the development process and psychometric properties of these measures. This chapter is a condensed version of a longer content and thematic analysis. The chapter is co-authored by my supervisors and is due to appear in the forthcoming International Handbook of Fat Studies, edited by Katie LeBesco and Cat Pausé. The content and thematic analysis has also been presented at the 4th International Weight Stigma Conference, 29-30 April 2016, Vancouver, Canada under the title Stigma in weight bias assessment tools: Review and recommendations for a critical approach to quantification. The full content and thematic analysis that forms the basis of this chapter is solely my own, and is provided in Appendix D, with additional item analysis in Appendix E.

Introduction

Suppose you are a researcher and you want to develop and conduct an intervention designed to reduce negative attitudes toward fat people. Before you start, there will be decisions to make: What type of intervention is best? Who will participate? How many participants do I need? Will I have a control group? How will I demonstrate success? This last decision typically involves selecting a means of measurement. So, as an astute researcher, you turn to a selection of antifat attitude measures recommended
and endorsed by other academics (Lee, Ata, & Brannick, 2014; Morrison, Roddy, & Ryan, 2009; UConn Rudd Centre for Food Policy and Obesity, 2015). When reading through this selection, you are struck by the following items: “Jokes about fat people are funny” (Lewis, Cash, Jacoby & Bubb-Lewis, 1995); “Fat people have bad hygiene” (Latner, O’Brien, Durso, Brinkman, & MacDonald, 2008); “Obese people should not expect to live normal lives” (Allison, Bastile, & Yuker, 1991); “It is disgusting when a fat person wears a bathing suit at the beach” (Morrisson & O’Connor, 1999); and “Although some fat people are surely smart, in general, I think they are not quite as bright as normal weight people” (Crandall, 1994). At this point you start to wonder, what are these measures actually doing? Quantifying antifat attitudes or contributing to them?

In this chapter, we review key measures of antifat attitudes and examine the assumptions, meaning, and content evident within. We assess the depth and breadth of item content to establish the overall scope of measures and identify where and how these instruments focus attention on problematic representations of fatness and fat people. In doing this we work to highlight how the current approach almost completely overlooks the work that has been done by fat activists and scholars in the field of Fat Studies, as well as how the growing complexity and nuance with which fatness is beginning to be treated in (some) mainstream social discourse (Cain, Donaghue, & Ditchburn, 2017) is overlooked. We seek to expose the limitations within this field of research and highlight the need for future strategies that not only honor all bodies but also reflect the colorful and complex landscape of fat discourse.
Figuring the “Fat Person” of Antifat Attitude Measurement

As in all measurement of attitudes towards groups of people, antifat attitude measures assume that respondents have a mental model of the figure of “the fat person” on which they base their responses to specific evaluative statements. Assumptions about this figure guide the content of the items that constitute the attitude measure. Two assumptions stand out in relation to the figure of the fat person: first, that fatness is an embodied manifestation of controllable behaviours (primarily eating and exercise); and, second, that the fat figure is an “other”. We discuss each of these in turn below.

Attributions of controllability dominate social understandings of fatness (Crandall & Resser, 2005; Weiner, Perry, & Magnusson, 1988). For several decades in Western societies we have had a simultaneous circulation of two key ideas; the “obesity crisis” has connected fatness or “obesity” with poor health, and at the same time, healthism (Crawford, 2006) has located responsibility for health onto the individual, and positioned fat people as responsible for their weight via the idea that fatness is controllable. Despite being highly contested (e.g., Campos, Saguy, Ernsberger, Oliver, & Gaesser, 2006), this narrative positions fat people as reneging on a key requirement of citizens in neoliberal societies, to engage in responsible self-management that will prevent them from “overburdening” shared social resources (such as health care; see Murray, 2008) A lean body has become the aesthetic of responsible neoliberal selfhood, with the look and size of the body relied upon as an indicator of health (Donaghue & Allen, 2016; Jutel, 2005). The assumption that a fat body is a corporeal manifestation of “unhealthy choices” is reproduced by lay people and health professionals alike, and serves to foster pervasive stigma, creates barriers to health, and undermines wellness (LeBesco, 2011; Lee & Pausé, 2016). When fat people are considered to be responsible for their fatness the overt expression of negative sentiment can be seen as deserved
Indeed, practices such as fat shaming are often justified as a method for motivating weight loss (Rogge, Greenwald, & Golden, 2004)—which is uncritically assumed to be the desired goal of/for all fat people.

The majority of adults in most affluent western countries are fat; according to the World Health Organization most adults in these countries fall into either “overweight” or “obese” categories. (World Health Organization, 2014). Yet, as we will show, antifat measurement neither acknowledges nor reflects this. Participants respond to items that essentially “other” fat people, yet there is the possibility the respondents themselves will be “fat”, and as such will be responding to negative items relating to themselves. While the situation in which members of groups targeted by an attitude measure many find themselves completing that measure isn’t unique to antifat attitudes, the potential harms that might result from this are brought into stark relief by the fact that the “stigmatized” group is the population majority. The complications of measuring (negative) attitudes towards a majority group is further compounded by the vague and permeable boundaries that exist around the category of fatness. Unlike gender or “race”, which are (problematically) socially understood as involving discrete categories, fatness exists on a continuum. Most studies measuring antifat attitudes do not define the criteria for fatness, nor do they ask respondents whether they personally identify as fat. Thus, when asked to respond to statements about “fat people” respondents are required to conjure their own image of fatness and to decide for themselves (undisclosed to researchers) whether or not they are “fat”.

The figure of the fat person assumed in antifat measurement reflects a common narrative, a “negative cultural knowingness” (Murray, 2008, p.4) based on the assumption that a fat body is irresponsible, and the result of poor individual choices
(LeBesco, 2011; Pausé, 2017). The fat person’s identity has come to be largely defined by stigma (Harjunen, 2016) based on the assumption that outward appearance reflects an inner “true” self (Jutel, 2005). The fat individual is thus constructed as a “recalcitrant other”, a citizen who is, either wilfully or haplessly, failing in appropriate self-governance (Harjunen, 2016; LeBesco, 2011)

**How we Currently Measure Antifat Attitudes**

Quantifying antifat attitudes, like any attitude, involves investigating and measuring a hypothetical or intangible construct (Mueller, 1986). A construct that, according to the popular three-component model of attitudes, manifests through beliefs, feelings, or behaviors (Katz & Stotland, 1959). Should a researcher ascribe to this particular model, then measuring an attitude would mean measuring overt manifestations of beliefs, feelings, and actions (behavior) toward the target of interest (Katz & Stotland, 1959; Rosenberg & Hovland, 1960). Identifying these components would be important as they have demonstrated theoretical links with the constructs of prejudice, stereotyping, and discrimination. Evaluation/attitudes have been linked to prejudice, beliefs to stereotypes, and actions/behavior to discrimination (Lee, et al., 2014). If antifat attitudes are the root of stigma, prejudice, and discrimination, it appears logical that to reduce weight-based stigma and oppression we need methods of measurement, to establish where negative attitudes are most prevalent, and so that we can assess strategies for persuasion and attitude change.

There are currently seven measurement instruments used to quantify attitudes towards fat and “obese” people and of the “conditions” of fatness and “obesity” that are recommended (Morrison, et al., 2009; UConn Rudd Centre for Food Policy and Obesity, 2015). These measures, in order of publication are; *The Attitudes Toward*
Obese Persons Scale (ATOP) and Beliefs About Obese Persons Scale (BAOP; Allison, et al., 1991), the Antifat Attitudes Questionnaire (AAQ; Crandall, 1994), the Antifat Attitudes Test (AFAT; Lewis, et al., 1995), the Antifat Attitudes Scale (AFAS; Morrison, & O’Connor, 1999), the Fat Phobia Scale – Short Form (FPS-SF; Bacon, Scheltema, & Robinson, 2001) and the Universal Measure of Bias- Fat Scale (UMB-FS; Latner, et al., 2008). It should be noted that while these measures are the most frequently employed (Lee, et al., 2014) they are not the only instruments for assessing attitudes toward fatness (for details on other measures see Lacroix, Alberga, Russell-Mathew, McLaren, & von Ranson, 2017).

Attitudes Toward Obese Persons Scale.

The Attitudes Toward Obese Persons Scale (ATOP) is a 20 item scale developed in conjunction with the Beliefs About Obese Persons Scale (BAOP; Allison et al., 1991). The development of dual scales was to enable the relationship between evaluations of fat people and beliefs about the causes of “obesity” to be investigated. The ATOP consists of items relating to evaluations of fat people with a focus on personal characterises and perceived self-evaluations, such as “Obese people are more emotional than non-obese people” and “Very few obese people are ashamed of their weight”.

Beliefs About Obese Persons Scale.

The Beliefs About Obese Persons Scale (BAOP; Allison et al., 1991) is an eight item scale examining the extent to which respondents believe that “obesity” is within individual control. As mentioned, the BAOP was developed in conjunction with the ATOP to assess the relationship between beliefs about controllability of weight and negative attitudes and includes items such as “Obesity is usually caused by overeating”
and “Obesity often occurs when eating is used as a form of compensation for lack of love or attention”.

**Antifat Attitudes Questionnaire.**

The Antifat Attitudes Questionnaire (AAQ; Crandall, 1994) is a 13 item scale. The measure was developed to investigate whether antifat attitudes were structured in a similar way to other symbolic attitudes, such as symbolic racism. Symbolic attitudes are said to develop in relation to established social values and involve emotional responses concerning the degree to which the target group is perceived to be aligned with important social values (Herek, 1986). The AAQ consists of three subscales: “Willpower” assesses the belief that weight is a function of personal control, “Dislike” assesses antipathy toward fat people, and “Fear of Fat” measures personal concerns around weight and weight gain. Prejudice toward fat people is operationalised in the Willpower subscale with the beliefs that fat people fail to meet key western values relating to the Puritan work ethic and self-determination with items such as “Fat people tend to be fat pretty much through their own fault”. The dislike subscale then reflects a desire to keep fat people “away” with items such as “Fat people make me somewhat uncomfortable” and the Fear of Fat scale reflects self beliefs with items such as “I feel disgusted with myself when I gain weight”. The AAQ is the only major antifat attitude measure to include a self-reflection scale.

**Antifat Attitudes Test.**

The Antifat Attitudes Test (AFAT; Lewis et al., 1995) is a 47 item measure. In developing the AFAT Lewis et al., (1995) reviewed previous measures of attitudes toward obesity (including Allison et al., 1991 & Crandall, 1994) and expressed
particular concern over the inclusion of both self-relevant items and items relating to social attitudes, considering the two concepts conceptually different. For this reason, the AFAT includes only items relating to social attitudes toward fatness. The AFAT includes three subscales: “Social/Character disparagement” measures both disregard for fat people and the attribution of undesirable personality traits, “Physical/Romantic Attractiveness” measures the perceptions that fat people make undesirable partners, and “Weight Control/Blame” measures beliefs about the personal controllability of weight. Items include “If fat people don’t get hired, it’s their own fault” and “Fat people don’t care about anything except eating”.

**Antifat Attitudes Scale**.

The Antifat Attitudes Scale (AFAS; Morrison & O’Connor, 1999) is a five item scale, also developed to address perceived limitations in existing measures. Morrison and O’Connor also criticised the inclusion of self-relevant items, such as those expressed in the “Fear of Fat” subscale of the AFAT (Crandall, 1994). The need for a much shorter measure as an alternative to existing long scales was also motivation for developing the five-item instrument. Items include, “I would never date a fat person”.

**Fat Phobia Scale: Short Form**.

The Fat Phobia Scale: Short Form (FPS-SF; Bacon, et al., 2001) is a 14 item, shortened version of the 50 item Semantic Differential Fat Phobia Scale by Robinson, Bacon, and O’Reilly developed in 1993. The semantic differential scales present opposing adjective pairs such as “Good self-control – Poor self-control” and “Lazy – Industrious” and the participant rates the object, in this case “fat people” somewhere on that continuum. The original 50 item scale has six factors: undisciplined, inactive, and unappealing; grouchy and unfriendly; poor hygiene; passivity; emotional/psychological
problems, and; stupid and uncreative. The first subscale undisciplined, inactive, and unappealing accounted for most of the variance in the long form of the scale, and so to increase utility of the measure in a range of clinical and research settings, this became the basis of the short form (Bacon, Scheltema, & Robinson, 2001). It is interesting to note that this is the only measure to use the term “phobia” in relation to fatness. The term “fat phobia” as it is used here relates to the “pathological fear of fatness” (Robinson, Bacon, & O’Reilly, 1993, p. 468) a fear that is believed to manifest in negative perception and evaluations of fat people. Thus by assessing one’s fear of fat, negative attitudes toward fat people are accessed.

**Universal Measure of Bias – Fat Scale.**

The Universal Measure of Bias – Fat Scale (UMB-FS; Latner et al., 2008) is a 20 item measure designed to provide a means of comparing weight bias to other common biases. The measure also provides a “standard” measure for evaluating bias across different groups. The measure was developed with reference to three target populations – “fat”, “gay” and “Muslim”. These populations were selected because they were considered common targets for overt bias in Western Society, and less likely to be prone to “socially desirable” responses (Latner et al., 2008). Items are based on their ability to capture the underlying drivers of bias across disparate groups so as to allow the relative strength of bias to be compared and include the items “I try to understand the perspective of fat people” and “Fat people are a turn off”.

**Qualitative Item Review**

Turning now to item content, it becomes obvious that negative appraisals dominate these measures, and given their explicit antifat intention, this could be
expected. What is more revealing is the focus of this negativity. Almost half of the items emphasize personal qualities and attributes (42 items). Following this, content centres on the desire to dissociate from fat and “obese” people (22 items), responses to fatness (21 items), perceived causes of fatness (19 items), and appearance (13 items). Lastly, some items (10 items) seem to take on a critical perspective, that is, they represent ideas beyond a normative or negative approach to fatness. Probing further to consider the themes underlying the items, we reveal assumptions and evaluations that despite being arguably anticipated, say things about fat people that should be cause for concern.

**Fat People Have Impaired Character**

Overall, content relating to personal qualities dominates. Participants completing these measures are continually responding to statements regarding the overall character or personality features ascribed to fat people (of which they indeed may be one). Participants are specifically required to make ratings on attributed traits such as trustworthiness, moodiness or thoughtlessness, self-esteem, and even personal hygiene, as the following items demonstrate. “Fat people obviously have a character flaw, otherwise they wouldn’t become fat” (AFAT; Lewis et al., 1995), “Most obese people feel they are not as good as other people” (ATOP; Allison et al., 1991), and “Fat people have bad hygiene” (UMB-FS Latner et al., 2008).

As anticipated, items are primarily negative in orientation, presenting a picture of “obese” and fat people as lacking in many socially desirable traits and characteristics. Furthermore, these presumed faults or deficits are not even weight related, with items frequently referring to emotional states, such as “Most fat people are moody and hard to get along with” (AFAT; Lewis et al., 1995), “I tend to think that people who are
overweight are a little untrustworthy” (AAQ; Crandall, 1994) and “Most fat people are boring” (AFAT; Lewis et al., 1995). This attention illustrates the importance creators of these measurement have placed on character appraisal as a major contributor to the overall evaluation of fat people. Judgments of (negative) personal qualities are deemed important, indicating that disparagement directed toward fat people is more than simply about body size, rather it is about the “type” of person they are assumed to be.

In specific instances, fat people are depicted as being impaired in some way, for example, “Most fat people are lazy” and “Fat people have no willpower” (AFAT; Lewis et al., 1995). In some cases, inferences suggest that these impairments cause a person to be fat, such as “Obesity often occurs when eating is used as a form of compensation for lack of love or attention” (BAOP; Allison et al., 1991). Such items focus on the idea that there is something fundamentally wrong with a fat person, particularly around perceived “energy in – energy out” management; fat people are fat because they eat too much or exercise too little (and they eat too much and exercise too little because their character is impaired).

If fat people are believed to be impaired, we might ask, impaired in relation to whom? Although not explicitly stated in the items above, it appears evident that a comparison should be made to “non-fat” or “normal weight” people. Several items do make such judgment explicit, overtly making a comparison, positioning the fat person as inferior to the “normal” weight person. These evaluations occur across different life domains; “Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people” (AAQ; Crandall, 1994), “Most obese people have different personalities than non-obese people”, “Obese workers cannot be as successful as other workers” (ATOP; Allison et al., 1991), and “On average, fat
people are lazier than thin people” (AFAS; Morrison & O’Connor, 1999). While these measures explicitly label themselves antifat, we must start to question whether responding to items that represent fat people as stupid, different, failed, and lazy is really an acceptable practice, given what we know about the impact of internalized weight stigma (Carels, et al., 2013). With items such as these, respondents are afforded no opportunity to reflect positive beliefs about fat people; the best option that is possible is disagreement with negative statements.

**Fat People are to be Avoided**

The next category of items focuses on desire to disassociate with or avoid contact with (other) fat people. It follows that these are negatively oriented and include items such as; “I would not like to have a fat person as a roommate”, “I don’t enjoy having a conversation with a fat person” (UMB-FS; Latner et al., 2008) and, “I can’t stand to look at fat people”, “I prefer not to associate with fat people” (AFAT; Lewis et al., 1995). There are two domains that depict specifically the spaces where fat people were to be shunned; in employment situations “If I were an employer looking to hire, I might avoid hiring a fat person” (AAQ; Crandall, 1994) and “If I owned a business I would not hire fat people because of the way they look” (AFAT; Lewis et al., 1991). And in relationships, particularly romantic partnerships; “I can’t believe someone of average weight would marry a fat person”, “I would not want to continue in a romantic relationship if my partner became fat” (AFAT; Lewis et al., 1991) and “I would never date a fat person” (AFAS; Morrison & O’Connor, 1999). Despite the objectionable nature and wording of these items they unfortunately do reflect key domains where fat people are discriminated against (Brewis, Hruschka, & Wutich, 2011; Major, Eliezer, & Rieck, 2012; Puhl & Brownell, 2001; Puhl & Heuer, 2009).
Interestingly, within this category the AAQ includes self-relevant items, with aversion toward fatness expressed toward the self, or specifically, the potential or future fat self. These include “One of the worst things that could happen to me would be if I gained 25 pounds” and “I worry about becoming fat” (AAQ; Crandall; 1994). Such items represent the idea that fat is to be avoided at all costs, whether fat is personally embodied or disconnected, they are also written in such a way that assumes the respondent is not currently fat.

**Fat People are Disparaged**

A sentiment of avoidance permeates through the items categorized here, they reflect disapproval, ridicule, disgust, contempt, and shame. Some of the items expose broad disapproval and ridicule such as “I hate it when fat people take up more room than they should in a theatre or on a bus or plane” or “Jokes about fat people are funny” (AFAT; Lewis et al., 1995) as well as “I have a hard time taking fat people too seriously” (AAQ; Crandall, 1994). Other items signal explicit disgust “Fat people are disgusting”, “It is disgusting to see fat people eating” (AFAT; Lewis et al., 1995) and “It is disgusting when a fat person wears a bathing suit at the beach” (AFAS; Morrison & O’Connor, 1999). Focusing in on disgust for a moment, as an emotional response disgust has been considered a reaction to moral violations relating to tenets of divinity and purity, as well as “degradation of the self and the natural order of things” (Rozin, Lowery, Imada & Hait, 1999, p.576). In this context assessing the response of disgust may have been an attempt to associate fatness and fat people with the sins of “sloth” and “gluttony”. Indeed, such negative moral judgments have indeed been found to align with the denigration of fat people (Crandall & Martinez, 1996). Unfortunately, for some, disgust and fatness appear connected. Disgust is even deliberately elicited in
relation to fat bodies. It is a response often provoked via public health campaigns, rationalized by the argument that disgust is considered a motivator for change, a tactic that has not gone without critique (Lupton, 2015).

Some items within this grouping focused more on contempt and shame and specifically relate to friends and family members. These include: “I’d lose respect for a friend who started getting fat” and “If someone in my family were fat, I’d be ashamed of him or her” (AFAT; Lewis et al., 1995). Apparent in the above items, is the idea that even positive feelings toward a person one is supposedly close to, are not enough to protect against derogation, should that person become fat. Seemingly, no one is exempt.

**Fat People are out of Control**

This category of items operationalizes the idea that weight is within individual control, with many items featuring assessments of eating and behavior. “Most obese people cause their problem by not getting enough exercise” and “The majority of obese people have poor eating habits that lead to their obesity” (BAOP; Allison, et al., 1991). In support of this is the dismissal of other explanations regarded as not within individual control “The idea that genetics causes people to be fat is just an excuse” (AAT; Lewis et al., 1995). These items reflect an assumption that the fat body is evidence not only of a lack of restraint, but also of some form of misbehaviour that fat people try to cover up with “excuses”. Such opinions represent the fat life as one lived with reckless abandon, with the fat body proof of such transgressions. These beliefs and assumptions are reflected in items included in most measures. “Fat people only have themselves to blame for their weight” (AFAS; Morrison & O’Connor, 1999), “If fat people really wanted to lose weight, they could” (AFAT; Lewis et al., 1995), “Fat people tend to be fat pretty much through their own fault” (AAQ; Crandall, 1994) and “Fat people tend
toward bad behaviour” (UMB-FS; Latner et al., 2008). Central to these beliefs is the idea that if people did not engage in these “bad” behaviours—if they “behaved correctly”—then they would not be fat.

There are some deviations from these very individualized attributions, items relating to the biological or external causes of fatness are represented, although to a much lesser extent. “In many cases, obesity is the result of a biological disorder” and “People can be addicted to food, just as others are addicted to drugs, and these people usually become obese” (BAOP; Allison et al., 1991). Evident here is more balance between negative and neutral items. While replacing a “bad character” view of fatness with an “addiction” model does shift the moral status of the fat person, these items still reflect a view that fatness is an undesirable state, which needs to be both “explained” and “cured”. Nonetheless, these items do provide opportunities for participants to engage with alternative points of view, albeit briefly. Depending on the measure completed, participants may be witness to a shift from negative to more neutral portrayals of fat people. The more neutral items do tend to focus on external yet still individualized accounts of why and how someone would come to be fat. Such items continue to position fatness as a condition that requires an explanation.

**Fat People are Unattractive – Fat People are Attractive**

The next topic of interest is appearance. The high proportion of items dedicated to this subject, signposts the importance placed on evaluating a fat person’s attractiveness as a facet of attitudes toward fat people. Some items here relate to the perceived unattractiveness and offensiveness of the fat body, reflecting the idea that people should manage the public display of their fat body so as not to offend others; “Fat people shouldn’t wear revealing clothing in public” (AFAT; Lewis et al., 1995)
and “Fat people are a turn off” (UMB-FS; Latner et al., 2008). Not all items, however, reflect negative appraisals; juxtaposed with the above judgments is the notion that fat people are appealing with items such as “I find fat people to be sexy” and “I find fat people attractive” (UMB-FS; Latner; 2008). Within this category there are as many positively or neutrally worded items as there are negative, demonstrating a shift in perspective and offering participants the opportunity to engage with less oppressive items. The positively framed items feature mainly in the most recently developed measure, the UMB-FS (Latner, 2008) perhaps reflecting a more progressive or inclusive perspective by the developers, or perhaps this is related to the scales applicability for multiple targets. As mentioned, UMB is the only scale that is not specifically written to be about fat people, rather it is designed for multiple targets, with “fat people” interchangeable with the targets “gay” and “Muslim”. It may be that the multiple applicability of this scale allows for the possibility that fat people have positive qualities to be entertained. Or perhaps this framing does indeed reflect the beginning of a shift away antifat rhetoric dominating quantification.

**Fat People Need Special Consideration**

This grouping of items reflects an awareness that fat people are marginalized within society and as such may require protection from discrimination and negative consequences. While not overtly reflecting positive evaluations of fat people, these items measure endorsement of the belief that fat people’s rights are often infringed. The items include: “The existence of organizations to lobby for the rights of fat people in our society is a good idea” (AFAT; Lewis et al., 1995), “I try to understand the perspectives of fat people” and “Special effort should be taken to make sure that fat people have the same rights and privileges as other people” (UMB-FS; Latner et al.,
While some may not consider these items altogether “critical” in regard to a critical fat approach to embodiment, politics or scholarship, in this instance we consider them as representing a more critical approach, given that they focus on and recognize the importance of inclusion and equal rights. These items again offer respondents an opportunity to engage with messages that contrast with the dominating messages that epitomise negativity, disparagement, and derision.

**Fat People are (Actually) ok**

Lastly, we identified a group of items that reflect the idea that fat people are really no different to people who are not fat. Despite comparing fat and non-fat people or “obese” and “non-obese” people, these items do the work once again of challenging negative representations. They include; “Obese people are just as healthy as non-obese people”, “Obese people are just as self-confident as other people”, “Obese people are just as sexually attractive as non-obese people” (ATOP; Allison et al., 1991) and “People who are fat have as much physical coordination as anyone” (AFAT; Lewis et al., 1995). These evaluations represent the flip side of previously identified items focused on (un)attractiveness or poor character, although in more positive, or at least equalizing terms. The inclusion of these topics is again of note as very few measures have presented any alternative perspective, particularly with regard to health and the fat body. Health-related items have typically been excluded from quantification due to concern that such items may potentially reflect concern for a person’s health rather than reflecting explicit attitudes toward fatness (Lewis et al., 1995).
Rethinking Measurement

From this close reading of antifat attitudes measures, it becomes apparent that researchers attempting to quantify and reduce negative attitudes and evaluations of fat people have more to consider than the measure they employ. They need to consider the possibility that the measure they choose may inadvertently be perpetuating negative attitudes toward fat people. With respect to the measures we have reviewed, the majority of instruments were developed during the 1990s, a time when the “obesity epidemic” was gaining attention and the “war on obesity” began to be waged (Lupton, 2013). During this time weight management became a focus for many western countries (Jutel, 2005) with the ensuing public health policies creating what has been termed an adipophobicogenic environment, epitomized by fat hatred and stigma (O’Hara & Taylor, 2014). Unfortunately little has changed, as the overt expression of antipathy towards fat people shows no sign of decline (Andreyeva, Puhl, & Brownell, 2008; Latner & Stunkard, 2003). When it comes to quantifying evaluations of other people or groups, Stangor’s (2009) observation that “If we were to study the really bigoted, then perhaps we would feel more comfortable using direct measures” (p.5) perhaps depicts the atmosphere of measure development at the time. It may be that the reason antifat measurement has taken this current form, is simply—because it could.

It is also worth noting that not all research and researchers concerned about weight stigma are working from a position that accepts fatness as an ordinary aspect of human diversity. In recent years, many researchers have identified weight stigma as a concern because it may lead to diminished dietary intentions (Seacat & Mickelson, 2009), increased calorie consumption (Schvey, Puhl, & Brownell, 2011), and decreased interest in exercise (Nolan & Eshleman, 2016) for reviews see Puhl and Suh (2015), and
In other words, some of the concern about weight stigma derives from the belief that it is a counterproductive to efforts to encourage fat people to “improve” their health via weight loss. This concern among some researchers reflects a recent tendency for some public discourse about fatness to be characterised as a dilemma in which concerns about the mental health and civil rights of fat people (as a result of weight stigma) are set against the unquestioned assumption that fat people must nonetheless continue to be exhorted to lose weight in order to become “healthy” (Cain et al, 2017; Cain & Donaghue, 2018). With this in mind, it is important that critical fat scholars continue to pay attention not only to the nature of the measures used to assess attitudes towards fat people, but also the ends to which such measures are used.

It is becoming increasingly apparent that a refocus of attention is in order, “Who researches fat people and who creates knowledge about fatness is important” (Cooper, 2016, p.32). One issue made apparent in this review, is that the instruments presented here reflect more an approach to doing research about fat people, than with fat people, a tactic that is akin to positioning fat people as “abjected objects” (Cooper, 2016, p.39). Going forward we need to challenge and change this default, and commit to research practices that foreground ethical practice and harm minimization. In short, we need new ways of measuring evaluations of fat people. We need to move away from quantifying negativity and instead focus on measurement that allows for a range of perspectives to be expressed. We need to embrace and include the work of fat activists and scholars, and we need to represent critical fat discourse in measurement. In doing this, we not only have the opportunity to broaden the scope of measurement and understand more about the endorsement of elements of contemporary discourse, we will
be able to assess the important progress of fat voices and fat movements as they work to destabilize anti-“obesity” rhetoric and reconstruct what it means to be fat.
CHAPTER 6.

ANTIFAT MEASURES: DEVELOPMENT AND VALIDATION REVIEW

Introduction

In this review, I approach the seven instruments used to quantify attitudes toward and evaluations of fat and “obese” people from a different perspective. The *Attitudes Toward Obese Persons Scale* (ATOP) and *Beliefs About Obese Persons Scale* (BAOP; Allison, et al., 1991), the *Antifat Attitudes Questionnaire* (AAQ; Crandall, 1994), the *Antifat Attitudes Test* (AFAT; Lewis, et al., 1995), the *Antifat Attitudes Scale* (AFAS; Morrison, & O’Connor, 1999), the *Fat Phobia Scale – Short Form* (FPS-SF; Bacon, et al., 2001) and the *Universal Measure of Bias- Fat Scale* (UMB-FS; Latner, et al., 2008) will be evaluated for their measure development protocols and psychometric strengths and weaknesses. As noted in Chapter 5, while these measures are not the only instruments for assessing attitudes toward fatness (see Lacroix, et al., 2017, for a recent review of the psychometric properties of 40 weight bias questionnaires) they are the most frequently employed by researchers interested in assessing and monitoring attitudes toward fat people.

In a meta-analysis of weight bias interventions Lee, et al., (2014) focused on the seven measures, referring to them as the key validated measures of weight bias. The measures are also recommended for use by The Rudd Centre for Food Policy and Obesity. The Rudd Centre is an internationally recognized multidisciplinary research centre, and while one goal of the Rudd Centre is obesity prevention, the Rudd Centre is also committed to providing solutions to weight bias and discrimination (UConn Rudd Centre for Food Policy and Obesity, 2015). In addition, four of the seven instruments (AAQ, AFAT, AFAS, and ATOP) are recommended by the Handbook of Assessment...
Methods for Eating Behaviours and Weight Related Problems (Allison & Baskin 2009). The Handbook reviews multiple assessment tools for both researchers and clinicians working in the areas of eating disorders, obesity, and weight bias. In citing these endorsements, I recognize that recommendations from the Rudd Centre and a handbook referring to “weight related problems” align with a normative approach to weight and fatness; I provide these examples, not in support of weight centric ideals, but rather to illustrate the recognition and endorsement of the measures under review.

With regard to academic citation, as of February 2017, according to Web of Science, the AAQ (Crandall, 1994) is the most cited of the measures with 555 citations. Following this is the ATOP and BAOP (Allison et al., 1991) with 111 citations, the FPS-SF (Bacon et al., 2001) with 77 citations, the AFAT (Lewis et al., 1995) with 66 citations, the UMB-FS (Latner et al., 2008) and the AFAS (Morrison & O’Connor, 1999) with 39 citations each. Over the last two decades, these instruments have been employed in a variety of research settings (see Puhl & Heuer, 2009; Danielsdottir, et al., 2010; Lee, et al., 2014; Alberga et al., 2016 for reviews of intervention research), with those developed earliest, particularly the AAQ (Crandall, 1994) still in frequent use.

In structuring this review, I am guided by the rational-empirical approach to test construction. Endorsed by test developers this approach looks to both theory and psychometric properties to guide development and decision making (Clarke & Watson, 1995). While there may be slight variations in the steps reported by different academics, there are commonalities regarding the key requirements for scale development. Here I draw from the work of Nunnally and Bernstein (1994), Worthington and Whitaker (2006), and DeVellis, (2012) to structure the review. The criteria I evaluate the current measures against cover both the development process and the psychometric properties...
and includes: item generation, item characteristics, measure format, sample properties, factor structure, reliability, and validity.

**Development Review**

**Item Generation**

Items in an attitude or evaluative scale represent a sample of possible opinions, beliefs, feelings, and behaviours toward the construct under investigation. Item writing is often the result of extensive literature review (DeVellis, 2012) and generates (or should generate) a broad pool of potential items (Mueller, 1986; Worthington & Whitaker, 2006). This approach aligns with the domain sampling model of measurement (Nullally & Bernstein, 1994) and is designed to ensure the construct under investigation is adequately captured. It is difficult to specify the optimum number of items to be included in an item pool, although commencing with an item pool three or four times the potential size of the final scale is a safeguard against poor internal consistency (DeVellis, 2012). Best practice then suggests the item pool is then revised and reduced via an iterative process of pilot testing, subject matter expert review, and statistical techniques (Springer, Abell, & Hudson, 2002; Worthington & Whittaker, 2006).

In relation to item generation, it is difficult to evaluate and compare measures, as some publications provide only limited information on the item generation process. Although, from the information provided, it is apparent that the recommended iterative process of item generation has not been widely reported. Many report utilizing items from existing measures, and where items have been constructed by authors, there is little connection to source literature declared; see Table 6.1 for item pool numbers. The
only measure to explicitly declare the use of an over inclusive initial item pool is the most recently developed measure, the UMB-FS. The items developed for this scale were based on broadly conceptualised components of stigma and also modelled on other measures of bias, including The Homophobia Scale (Wright, Adams, & Bernat, 1999) and the Subtle and Blatant Prejudice Scale (Pettigrew & Meertens, 1995). Item selection for the UMB-FS began with 48 items and following analysis, 20 items were retained (Latner et al., 2008).

Items generated for the ATOP were primarily adapted from the Attitudes Toward Disabled Persons Scale (Yuker & Block, 1986), and the disparaging image factor of the Attitudes Toward Obesity and the Obese Among Professionals Scale (Maiman, Wang, Becker, Finlay, & Simonson, 1979). Items were selected on the basis of performance and face validity. All remaining items were constructed by authors (Allison et al., 1991). Similarly, the item pool for the BAOP was developed using items from the aforementioned measures together with items from the Beliefs About Obesity Measure by Harris and Smith (1982). Again, additional items were constructed by the authors, with items again selected on the basis of face validity and past utility. The original item pool consisted of ten items and the final measure includes eight items.

A research team of nine (disciplines unspecified) led item generation for the AFAT, generating 54 statements to reflect antifat attitudes. Following psychometric analysis of items, seven items were eliminated. To construct the original FPS scale, items were generated from the clinical experience of the authors (psychology and community health), together with adjective lists generated from a small (unspecified number) sample of people
Table 6.1
Antifat measures: Item generation and response options

<table>
<thead>
<tr>
<th>Scale Property</th>
<th>ATOP</th>
<th>BAOP</th>
<th>AAQ</th>
<th>AFAT</th>
<th>AFAS</th>
<th>FPS-SF</th>
<th>UMB-FS</th>
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<tbody>
<tr>
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<td></td>
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<td>26</td>
<td>54</td>
<td>n/s</td>
<td>n/s</td>
<td>48</td>
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<td>13</td>
<td>47</td>
<td>5</td>
<td>14</td>
<td>20</td>
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<td>No</td>
<td>Yes</td>
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<tr>
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<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
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<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Response format</td>
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</tbody>
</table>

Note. n/s = not specified

entering a motor vehicle license bureau in a Minnesota suburb. People recruited at the license bureau were asked to generate lists of adjectives to describe fat people. The long form scale comprised six factors. The 14 item factor, labelled Undisciplined, Inactive, and Unappealing, accounted for most of the measure variance and became the basis of the short form scale. The remaining two measures, the AAQ and AFAS, offer limited information regarding item generation processes. The AAQ began with an item pool of
26 items (no reference to the source of items is provided) with the final scale reduced to 13 items. For the AFAS there is no information regarding the item generation process or the item selection method.

The item development phase of measure development is an important one, as the scope and quality of items impacts on the construct validity and internal consistency of the measure (Clarke & Watson, 1995; DeVellis, 2012). Of the measures reviewed, none report following the recommended process of item pool generation and revision. Several of the measures describe adopting items from existing measures deemed similar enough in nature, although none explicitly declared any other analytic, theoretical, or qualitative investigation informed item generation.

**Response Options and Scoring**

For the sake of compatibility, decisions regarding scoring format and item writing should ideally occur at the same time (DeVellis, 2012). All of the measures reviewed (apart from the FPS-SF, a semantic differential scale) consist of brief statements relating to the thoughts, feelings, evaluations, and behaviours towards fat or “obese” people. Items structured in this way allow response with varying degrees of endorsement, a format lending itself to a Likert response option that is popular in attitude measurement (DeVellis, 2012). Indeed, all measures reviewed (with the exception of the FPS-FS) include a Likert response format (See Table 6.1 for a summary). All scales assign numbers to response options, and with the exception of the ATOP and the BAOP, higher total scores indicate stronger antifat attitudes.

With regard to response options, the AAQ has the most, adopting a nine-point scale where 0 = very strongly disagree and, 9 = very strongly agree. The UMB-FS has a seven-point scale ranging from 1 = strongly agree to 7 = strongly disagree. While the
ATOP and BAOP both have six point scales ranging from -3 = I strongly disagree to +3 = I strongly agree. The remaining scales (AFAT, AFAS, and FPS-SF) all use five-point scales ranging from 1 = strongly disagree to 5 = strongly agree. The number of items in the response scale is important and linked to reliability as fewer response options may reduce variance and consequently scale reliability (Mueller, 1991). Advice on the number of response categories to include in a Likert response scale varies, although five to nine categories are cited as the optimum number (Schaeffer & Presser, 2003). Even though all measures fall within the recommended range, there are other aspects of scoring format that may influence results.

Other decisions regarding scoring format include the use of a midpoint (“neither agree nor disagree” option), and the labelling of numeric categories. With regard to mid-point, earlier measures (ATOP, BAOP, and AAQ) do not offer a midpoint option, while later measures do. The lack of midpoint forces respondents to select a scoring option on either the positive or negative side. While this strategy discourages “fence sitting” it fails to accommodate participants who have neutral attitudes to report (Krosnik & Presser, 2010). A neutral response is still a response, and considering attitude measures are frequently used in conditions attempting to foster change, moving from a negative to a neutral response, would indicate a noteworthy shift. In regard to response option labelling, it is not clear if all measures label all points on the response spectrum or just end points. Labelling all response options has been found to contribute positively to measure reliability (Alwin & Krosnick, 1991).
Item Characteristics

Quantification of antifat attitudes, like the measurement of any attitude, involves a hypothetical or intangible construct (Mueller, 1986). According to the popular three component model (Katz & Stotland, 1959) attitudes manifest through cognitions (beliefs), feelings, and behaviours. Identifying these different attitude components within measurement reveals important information on the foundations and structure of attitudes; feelings have been linked to prejudice, beliefs to stereotypes, and behaviour to discrimination (Lee, Ata, & Brannick, 2014). While the three component model of attitudes remains popular (Breckler, 1984), other conceptualizations of attitudes focus less on components and more on the overall positive or negative evaluation of a target (Mueller, 1986).

For the purpose of reviewing item characteristics, I have elected to classify items according to whether they relate to cognition, affect, behaviour, or overall evaluation. Items representing a combination of components are labelled as such. In categorising items according to attitude component, I aim to determine the focus of item content and speak to construct representation (see Table 6.2 for a summary and Appendix F for a complete listing). To verify the accuracy of coding, codes were reviewed by supervisors.

To generate meaningful responses, items should conform to some important characteristics, including: simplicity of language, brevity, the absence of ambiguity, singular focus, and lack of bias (DeVaus, 1995, Worthington & Whittaker, 2006). In this section, I also evaluate items according to these criteria. In addition to this, I consider the impact that item content may have on participants. Given that several measures are explicitly antifat in orientation (AAQ, AFAT, and AFAS), it is important
to consider how negative items may be perceived by participants, especially as sampled participants are likely to include people who identify as fat. I now review item characterises for each of the seven measures in turn.

Table 6.2
Antifat measures: Item characteristics

<table>
<thead>
<tr>
<th>Scale Property</th>
<th>ATOP</th>
<th>BAOP</th>
<th>AAQ</th>
<th>AFAT</th>
<th>AFAS</th>
<th>FPS-SF</th>
<th>UMB-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item distribution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>n/a</td>
<td>9</td>
</tr>
<tr>
<td>Cognition</td>
<td>17</td>
<td>7</td>
<td>5</td>
<td>24</td>
<td>2</td>
<td>n/a</td>
<td>10</td>
</tr>
<tr>
<td>Behaviour</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>n/a</td>
<td>0</td>
</tr>
<tr>
<td>Mixed</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>n/a</td>
<td>1</td>
</tr>
<tr>
<td>Reverse score items</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>n/a</td>
<td>12</td>
</tr>
</tbody>
</table>

Note. n/s = not specified

**The Attitudes Toward Obese Persons scale.**

Items in the ATOP focus on cognitions about personal attributes, such as personality traits, and self-esteem. Seventeen of the 20 items relate to cognitions, and the remainder represent a combination of cognitive and affective components (see Appendix F, Table F1 for the item list). Seven items represent positive or neutral statements and these items are reverse scored. On first inspection, items appear relatively clear and concise, although there are several items I regard as problematic. Item 5 “Most non-obese people would not want to marry anyone who is obese” and Item 10 “Most people feel uncomfortable when they associate with obese people”
require participants to take on the role of responding on behalf of other people. Although these items are perhaps attempting to represent perceived social consensus, by their nature they are likely to be less sensitive to change when used in research designed to bring about shifts in attitudes.

**Beliefs About Obese Persons Scale.**

Items in the ATOP focus on cognitions about the *causes* of obesity, they assess the extent to which obesity is considered within individual control (Allison et al., 1991). Items focus on eating behaviour, with five of the eight items referencing food consumption (see Appendix F, Table F2 for the item list). One item that I identify as problematic is Item 8, “People can be addicted to food, just as others are addicted to drugs”. Although this item is possibly designed to establish the level of perceived control, response to this item will depend on the participant’s evaluations and beliefs on addiction more broadly and on drug addiction more specifically.

**Antifat Attitudes Questionnaire.**

The AAQ includes items relating to affect, cognitions, and behaviour, as well as combinations of these. Items here focus more on evaluations of fat people (see Appendix F, Table F3 for the item list). Divided into three subscales, items relate to dislike, fear of fat, and willpower. Within the dislike scale, there are several items I consider problematic: Item 4 “Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people”, and Item 5 “I have a hard time taking fat people too seriously”. While no doubt tapping into antifat sentiment, these items present derogatory and demeaning evaluations of fat people, and the negative impact these statements may have on participants (regardless of weight) should be considered. The fear of fat subscale includes items that are self-reflective in
nature, a distinction of the AAQ. Despite lack of correlation between the fear of fat subscale and the willpower \( r = .01 \) and dislike subscales \( r = .01 \); Crandall, 1994), this subscale offers another dimension of comparison and analysis. Once again, items such as Item 8 “I feel disgusted with myself when I gain weight” may be triggering, or negatively impact participants.

**Antifat Attitudes Test.**

The AFAT is the longest of the scales, with 47 items and three factors: Social/character disparagement, Physical/romantic unattractiveness, and Weight control/blame. The items include references to affect, cognition, and behaviour, as well as a combination of constructs (see Appendix F, Table F4 for the item list). In addition to the three factor structure, 13 items not loading onto any of the three factors are also included (the rationale for their inclusion is not provided by Lewis et al., 1995). The AFAT includes some items that I consider representative of a critical fat perspective such as: Item 16, “If I were single, I would date a fat person”, Item 45 “The existence of organizations to lobby for the rights of fat people in our society is a good idea”, and Item 47 “It makes me angry to hear anybody say insulting things about people because they are fat”. Items like these have not typically been included in previous measures. Interestingly, these items are among those not loading on any of the identified factors.

This measure also includes two items concerning the employability of fat people. One, Item 7, is phrased in a fat positive manner—“Fat people are just as competent in their work as anyone”—while the other, Item 43, is worded in traditional antifat orientation: “If I owned a business I would not hire fat people because of the way they look”. It is worth noting that, Item seven loaded on the social/character disparagement subscale, while Item 43 did not load on any scale. The reason for this can
only be speculated; perhaps reasons for not hiring the fat person relate more to assumptions about character or competence than to appearance. The double-barrel nature of item 43 may also make responding difficult. Similar to the AAQ, the AFAT also includes several items that represent fat people in very disparaging and denigrating ways, such as: Item 35 “Jokes about fat people are funny”, Item 38 “Fat people are disgusting”, Item 14 “Fat people are unclean”, and Item 20 “It’s disgusting to see fat people eating”.

**Antifat Attitudes Scale.**

The five item AFAS (Morrison & O’Connor, 1999) is the shortest scale. Items relate to beliefs, cognitions, and behavioural intention (see Appendix F, Table F5 for the item list). With only five items, this scale has been critiqued for construct under representation (Morrison et al., 2009). Despite the limited number of items, it is interesting that two items relate to the appraisal of physical characteristics: Item 1 “Fat people are less sexually attractive than thin people”, and Item 5 “It is disgusting when a fat person wears a bathing suit at the beach”. For Item 1, the comparison between fat and thin people is potentially problematic—for some respondents, thinness may be considered an unattractive physical feature, in which case a negative response would reflect more of an anti-thin attitude than a fat positive attitude.

**Fat Phobia Scale – Short Form.**

The FPS-SF (Bacon, et al., 2001) requires respondents to rate fat people according to pairs of common adjectives and is the only semantic differential scale reviewed (Bacon et al., 2001), see Appendix F, Table F6 for the adjective list. The semantic differential approach to measurement is generally considered appropriate for assessing people’s feelings (affect) toward an attitude object; it is considered useful
when people have strong feelings but not well considered opinions (Henderson, et al., 1987). Looking at the adjectives used in this scale, there are several pairings that I consider problematic, in that they are open to different interpretations. For example, the pairing of “weak – strong” could be understood as a physical characteristic, a personality characteristic, or a “moral” characteristic such as willpower. Additionally, the pairing “under eats – over eats” is also concerning, in that it appears to position “undereating” as the more positive behaviour. Perhaps a more appropriate combination would be something that relates to “healthy” eating. While a semantic differential is an effective method for measuring affect, this approach does not offer researchers much insight into the beliefs and opinions that give rise to responses.

**Universal Measure of Bias – Fat Scale.**

The UMB-FS (Latner, et al., 2008) was designed to be able to measure bias toward three common targets of discrimination, “gay people”, “Muslim people”, and “fat people”. The 20 items relate to affect or cognition, there are no items relating to behaviour (see Appendix F, Table F7 for the item list). Given the interchangeable nature of the targets assessed by this scale, there are no items relating to beliefs about the causes of fatness. As the perception that fatness is controllable is a key assumption supporting antifat attitudes (Crandall, 1994; Puhl & Brownell, 2003), the exclusion of items relating to causes of fatness, means that this construct is not captured. Despite this, the UMB-FS does address other important elements of bias, including impact on income, education, housing, rights, and social privileges. Another strength of this measure is that positively framed items are included, such as Item seven, “I like fat people” and Item 13, “I find fat people to be sexy”. With half of the UMB-FS items
framed in a neutral or positive manner, this scale offers participants and researchers a less explicitly antifat option.

**Sample Properties**

To establish scale reliability and validity it is important to use development samples that are both representative and adequately sized (Springer et al., 2002). In the development of the current measures, a small range of populations have been sampled. The majority of scales in this review have been developed with university student populations that are made up of predominantly young female participants (for a summary of sample populations, see Table 6.3).

**Sample representativeness.**

In developing the ATOP and BAOP, three samples were used: 514 members of the National Association to Advance Fat Acceptance (NAAFA), 72 undergraduate students, and 52 graduate psychology students. Established in 1969, NAAFA was formed to fight weight-based oppression and provide support for fat people (Cooper, 1998). In this sample 82% of participants were women, and the mean age was 40 years. The University sample also included a female majority. The reports on reliability, intercorrelations, and factor structure for both the ATOP and BAOP were similar across all three samples, supporting the validity of these scales (Alison et al., 1991).

To develop the FPS-SF a composite sample was also used. Participants were recruited via an insert in a women’s sport and health membership newsletter \( n = 207 \) and from a weight loss group “Take off pounds sensibly”, \( n = 48 \) (Bacon et al., 2001). The sample was then combined with an earlier (1984-1991) sample of 1135 participants used to develop the full 50 item FPS (Robinson, et al., 1993). This sample was recruited
from similar sources and also included American college students (unspecified number). Comparison of the samples revealed no difference in mean scores.

Table 6.3
Antifat measures: Sample properties

<table>
<thead>
<tr>
<th>Scale Property</th>
<th>ATOP</th>
<th>BAOP</th>
<th>AAQ</th>
<th>AFAT</th>
<th>AFAS</th>
<th>FPS-SF</th>
<th>UMB-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>638</td>
<td>638</td>
<td>251</td>
<td>285</td>
<td>312</td>
<td>1390</td>
<td>368</td>
</tr>
<tr>
<td>Women</td>
<td>82%</td>
<td>82%</td>
<td>53%</td>
<td>61%</td>
<td>n/s</td>
<td>91%</td>
<td>75%</td>
</tr>
<tr>
<td>Mean age</td>
<td>27</td>
<td>n/s</td>
<td>n/s</td>
<td>22</td>
<td>n/s</td>
<td>n/s</td>
<td>21</td>
</tr>
<tr>
<td>Sample source</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>19%</td>
<td>19%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>% n/s</td>
<td>100%</td>
</tr>
<tr>
<td>Other</td>
<td>81%</td>
<td>81%</td>
<td></td>
<td></td>
<td></td>
<td>% n/s</td>
<td></td>
</tr>
</tbody>
</table>

Note. n/s = not specified

Developers of the ATOP and BAOP and developers of the FPS-SF have taken different approaches toward purposive sampling. Allison et al. (1991) used a sample active in the size acceptance community, while Bacon et al. (2001) have targeted a sample active in a weight loss/exercise related community. What is interesting to note is that while targeting a sample that may have included higher body weights, or as Bacon et al., emphasize were “the most likely target audience for future use of the scale” most participants (71% for sample one, and 68% for sample two) reported BMIs within what is considered the “normal” range. The analysis did not make comparisons between groups based on reported or identified weight or body status. Allison et al., (1991) did make comparisons between the student and the NAAFA samples. While the participants
from the NAAFA sample demonstrated significantly higher body weight than the university sample, factor structure and reliability for both the ATOP and the BAOP were similar.

**Sample size.**

All measures report adequate sample sizes, meeting the criteria of five responses per scale item that is the base requirement for conducting statistically powerful factor analysis (Tabachick & Fiddel, 1996). If additional standards are applied, such as the recommended minimum sample of 300 for good sampling, and 500 for very good sampling (Child, 1990) the AAQ ($n = 251$), AFAT ($n = 285$), AFAS ($n = 312$) and UMB-FS ($n = 368$) may actually be considered to have marginal sample sizes.

**Psychometric Properties Review**

The quality of an instrument is determined through the assessment of both the reliability and validity of the measure (Mueller, 1986). Instruments should measure the construct they claim to measure and do so consistently and accurately (Henderson, et al., 1987). In this section, I review the psychometric properties of the current measures and the statistical processes used to establish them.

**Reliability**

To establish and report reliability, measure developers typically use Cronbach’s alpha ($\alpha$), a coefficient demonstrating the inter-correlation of items, as an indication that items are measuring the same underlying construct (Mueller, 1986). For attitude scales, Cronbach’s alpha should ideally be greater than 0.7, although values greater than 0.6 can still be acceptable (Kline, 2000). When reporting, some measures report full-scale reliability and some report reliability by subscale. The ATOP and the BAOP also report reliability by participant group (see Table 6.4 for a complete listing). Despite a range of
reliability values, all coefficients fall within an acceptable range. For the AFAT subscales, values are also provided by gender. For the Social Character Disparagement subscale; \( \alpha = .91 \) for Men and \( \alpha = .87 \) for women, for the Physical/Romantic Attractiveness subscale; \( \alpha = .79 \) for Men and \( \alpha = .84 \) for women and for the Weight Control/Blame subscale \( \alpha = .77 \) for Men and \( \alpha = .85 \) for women. Once again, despite the variance in scores, ranges fall within acceptable levels. This variance in reliability does demonstrate that there are some differences in responses to the scales between the different sample populations, reflecting earlier concerns over the potential impact of sample representativeness.

Reliability may also be determined in other ways. Test-retest reliability involves establishing scale consistency over time by administering the scale to the same group of people on two or more occasions, usually a few weeks apart, with good stability of the scores over time providing evidence of reliability (Mueller, 1986). Good test-retest reliability is particularly important for measures that are used to assess the effectiveness of interventions, as without it, it is difficult to attribute any change that occurs over time to the influence of an intervention. Split-half reliability or internal consistency involves comparing scores on one-half of the scale items with scores on the other half for the same participants, with stability of scores again offering an estimate of reliability (Springer, et al., 2002). None of the measures reviewed have reported these additional tests of reliability.
Table 6.4

Antifat measures: Reliability

<table>
<thead>
<tr>
<th>Scale Property</th>
<th>ATOP</th>
<th>BAOP</th>
<th>AAQ</th>
<th>AFAT</th>
<th>AFAS</th>
<th>FPS-SF</th>
<th>UMB-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full scale α</td>
<td>.80-.84</td>
<td>.65-.82</td>
<td>n/s</td>
<td>.95</td>
<td>.72</td>
<td>.87-.91</td>
<td>.87</td>
</tr>
<tr>
<td>Subscale 1 α</td>
<td>n/a</td>
<td>n/a</td>
<td>.84</td>
<td>.87-.91</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Subscale 2 α</td>
<td>n/a</td>
<td>n/a</td>
<td>.79</td>
<td>.79-.84</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Subscale 3 α</td>
<td>n/a</td>
<td>n/a</td>
<td>.66</td>
<td>.77-.85</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>NAAFA sample</td>
<td>.84</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate student</td>
<td>.81</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate student</td>
<td>.80</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. n/a = not available

**Factor Structure**

To investigate the constructs underlying item responses, particularly when working with a large item pool, factor analysis is a commonly employed statistical technique (DeVellis; 2012). Through Principle Components Analysis (PCA) and/or Exploratory Factor Analysis (EFA) items that represent a similar construct can be grouped into factors, the resulting subscales then allow for measurement length to be optimized and data simplified (Worthington & Whittaker, 2006). The ATOP, AAQ, and AFAT have all identified a three factor structure, while the UMB-FS identified four. The BAOP and AFAS are designed as single factor scales, and the FPS-SF is a subscale
of the longer measure, also having a single factor structure. When approaching factor analysis, several decisions need to be made, including the method to employ, the type of rotation, and the criteria for extracting factors. Each of these choices has the potential to impact upon overall results of analysis (DeVellis, 2012; Worthington & Whittaker, 2006). For most of the seven measures under review, PCA and EFA are employed (for a comparison of techniques see Table 6.5).

Table 6.5
Antifat measures: Factor structure and validity

<table>
<thead>
<tr>
<th>Scale Property</th>
<th>ATOP</th>
<th>BAOP</th>
<th>AAQ</th>
<th>AFAT</th>
<th>AFAS</th>
<th>FPS-SF</th>
<th>UMB-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCA</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>EFA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>CFA</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Factors</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Validity assessed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convergent</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Discriminant</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Note. n/a = not available

PCA = Principle Components Analysis; EFA = Exploratory Factor Analysis; CFA = Confirmatory Factor Analysis
An important step in Factor Analysis is the rotation of factors, a process important for determining the number of factors to examine and retain (Thompson, 2004). Factors can be rotated two ways, on the orthogonal axis or on the oblique axis, the choice of rotation depends on the perceived relationship between factors (DeVellis, 2012). Researchers tend to use orthogonal rotation when factors are assumed to be independent, and oblique rotation when factors are known or assumed to be correlated (Worthington & Whittaker, 2006). Within the social sciences, factors have a tendency to naturally correlate, for this reason, oblique rotation is often the preferred option (Kline, 2000). In the next sections, I discuss the factor analytic techniques for each of the measures. It is interesting to note that the majority of measures here have employed Varimax rotation (an orthogonal technique), where Oblimin rotation (an oblique technique) that makes allowances for underlying construct correlations could have been expected.

**Attitudes Toward Obesity and Beliefs About Obesity.**

Factor structure for the ATOP was identified through PCA, and based on scree plot examination, with three factors, accounting for 42% of variance. A scree plot graphically maps eigenvalues with the number of factors. Eigenvalues are of interest as they show the amount of variance explained by each factor. Ideally, eigenvalues of retained factors should be greater than one, ensuring factors account for more than one unit of variance (Schumacker & Lomax, 2016). Factors were rotated using both Varimax and Oblimin rotation; Oblimin rotation failed to produce a simpler structure, and Varimax rotation with three factors was retained. Factor one, *Different Personality* (23% of variance) identified attribution of negative, different or inferior personality characteristics. Factor two, *Social Difficulties* (11% of variance) included assumptions
that obese people experienced or produced difficulties in social interactions. Factor three, *Self-esteem* (8% of variance) focused on fat people’s perceived self-esteem. The BAOP developed in conjunction with the ATOP was designed as a single factor scale and not subjected to factor analysis.

**Antifat Attitudes Questionnaire.**

The AAQ identified a three factor structure, also employing PCA with Varimax rotation. In this analysis eigenvalues > 1 were used as criteria for component extraction. Factor one, labelled *Dislike*, reflects evaluations, factor two, labelled *Fear of Fat*, represents individual concern over weight and weight gain, and the third factor labelled *Willpower*, reflects views on controllability of weight. The proportion of variance accounted for by each of factor was not reported.

**Antifat Attitudes Test.**

Principle components analysis (PCA) with Varimax rotation identified three factors, accounting for 41% of total variance, with scree plot examination the method of extraction. Of the 47 items, 34 items loaded uniquely or significantly (loading > .4) on one of the three factors, resulting in three subscales; *Social/Character Disparagement* (31% of variance), *Physical/Romantic Attractiveness* (5% of variance) and *Weight Control/Blame* (4% of variance). The remaining 13 items, despite not loading on a specific factor, are retained and contribute to the composite score.

**Antifat Attitude Scale.**

For the five item AFAS, factor structure was identified through comparison of the AFAS with the Dislike subscale from the AAQ. After combining the scale results, PCA with Oblique rotation was conducted. A three factor solution demonstrated the
independence of the measures, items from the AFAS loaded on factor one and three, while items from the Dislike subscale loaded on factor two. The proportion of variance accounted for by each of factor was not reported.

**Fat Phobia Scale – Short Form.**

The FPS-SF is identified as having a unidimensional factor structure. The Short Form Scale is one subscale (Undisciplined, Inactive and Unappealing) from the original six factor Fat Phobia Scale. The subscale, Undisciplined, Inactive and Unappealing, was identified via PCA with an a priori specification, based on six hypothesized dimensions generated from the obesity literature (Robinson, et al., 1993).

**Universal Measure of Bias – Fat Scale.**

Lastly, the UMB-FS used Exploratory Factor Analysis (EFA) with Varimax rotation to extract factors at two stages of development. Exploratory factor analysis with Varimax rotation on the initial 42 items extracted four factors with eigenvalues > 2, accounting for 46% of the variance. Factor analysis was repeated once the scale had been reduced to 20 items, with the same four factors emerging, accounting for 59% of variance. The factors were labelled; Equal Rights (16% of variance), Attraction (16% of variance), Negative Judgement (15% of variance) and Distance (11% of variance).

**Validity**

Once exploratory analysis has established the measure structure, follow-up confirmatory techniques, such as Confirmatory Factor Analysis (CFA) can be employed as a means of supporting the validity of the scale (Kline, 2000; Worthington & Whittaker, 2006). Essentially CFA provides information on how well observed data fit a particular model (DeVellis, 2012). CFA tests the fit of observed data against a
hypothesised factor structure derived from existing theory, literature, and/or observation. CFA is researcher driven, as opposed to the data driven EFA (DeVellis, 2012). As illustrated in Table 6.5, none of the measures reviewed have conducted CFA. More detail on the value of CFA in the development process is provided in Chapter 8.

Other assessments of validity used in the scale development process are convergent and discriminant validity. A measure has convergent validity if scores correlate highly with another measure assessing a similar variable when completed by participants at the same time (Kline, 2000). Discriminant validity is assessed through comparison to another measure with which the target measure is not expected to correlate (Kline, 2000). The AFAS assessed both convergent and discriminant validity during the development process. Discriminant validity was assessed using the Golfarb Fear of fat Scale (GFFS). As expected, AFAS scores did not correlate with the GFFS ($r = .130$). Convergent validity was assessed through positive correlations with the Authoritarianism Scale ($r = .37$), the Homonegativity Scale ($r = .37$), and Level of Political Conservatism ($r = .18$).

The most recently developed measure, the UMB-FS used the ATOP and AFAS to determine convergent validity, with moderate correlations demonstrated for both measures; ATOP ($r = .58$) and AFAS ($r = .50$). While convergent validity does illustrate that certain tests provide similar trends in results, concerns have been raised over establishing convergent validity with very similar measures (Kline, 2000). If a measure correlates strongly with an existing measure, then the utility of the new measure could be questioned. Where this occurs, it is important to establish whether the new measure provides specific advantages over existing measures. In the case of the UMB-FS, the advantage can be seen in the universal nature of the scale (being adaptable to other
target groups) as well as adopting more “balanced” item content in comparison to other antifat measures.

Another factor that can impact the validity of a measure is social desirability bias. This is the extent to which participants tend to give their “true” responses, rather than responding in socially desirable ways (Henderson, et al., 1987). When measuring antifat attitudes, it is fortunate (for researchers, not fat people of course) that responses to date have not demonstrated the desire to hide expressions of negativity toward fat people. As a testament to this point, during the development of the AFAT, AFAS and UMB-FS participants completed the Marloe-Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1960), and in all cases, responses appeared not to be influenced by social desirability bias. Interestingly, a study by Perez-Lopez, Lewis et al. (2001) using the AFAT and the SDS did find a positive correlation between the physical/romantic attractiveness subscale of the AFAT and the SDS; this correlation was however positive, suggesting the more socially desirable response was to evaluate fat people as unattractive.

**Strengths and Limitations**

The measures included in this review represent the most frequently used and recommended measures of attitudes toward obesity and fatness (Lee et al., 2014; Morrison, et al., 2009; UConn Rudd Centre for Food Policy and Obesity, 2015). The reliability reported for all measures falls within acceptable ranges, as does reliability for subscales where reported. With regard to the processes followed throughout the development of these measures, several limitations are evident. There are limitations with regard to item pool development, sampling, and statistical assessment of psychometric properties. There are also limitations in regard to item content and
language. There are many instances where demeaning and derogatory language is used to describe fat people, a practice that effectively reinforces negative, oppressive and disparaging beliefs. Responding to such items would, for many people, be a negative, invalidating, shaming, stigmatizing experience—an outcome that is contradictory to the goals of weight stigma research. Alternatively, for participants who hold self-directed negative attitudes, reading and responding to such statements may serve to reinforce and validate internalized bias.

While negative attitudes and individual attributions clearly underlie much weight stigma and discrimination (Crandall, 1994; Crandall & Martinez, 1996), antifat measurement defines the aspects of public sentiment that researchers are able to quantify. Antifat quantification enables us to successfully assess antifat attitudes, but largely restricts possible expressions of fat positivity (which can only be inferred in the absence of negativity). Existing measures fail to capture the complexity and nuance of contemporary fat discourse. In recent years voices and movements that contest the dominant antifat narrative, have gained attention (Cain, et al., 2017) and are becoming (a still small) part of the mainstream conversation.

In critiquing these measures it is important to reflect on their timeline. These measures have been developed at various points over the past 25 years, with some more recent offerings building upon earlier measures. There has already been some shift over time in the type of content included, moving from a focus on purely antifat ideas toward greater incorporation of ideas around social justice and equity. While the approach to measuring attitudes toward fatness or obesity appears to be shifting, there is still much progress to be made.
CHAPTER 7.
DEVELOPMENT OF THE FAT ATTITUDES ASSESSMENT TOOLKIT

Context Statement

Chapter 7 and 8 detail the development and validation process of the Fat Attitudes Assessment Toolkit. The toolkit has been disseminated via the following conference presentations.


Following presentation of the FAAT at the 6th International Weight Stigma Conference, the construct of Complexity was re-examined, this analysis appears as an Addendum to Chapter 7.

Introduction

The development of a measurement instrument is a lengthy process. Decisions made at every stage have the power to influence the utility and the applicability of the final product (Worthington & Whittaker, 2006). In this chapter, I document the many decisions made during the development of the Fat Attitudes Assessment Toolkit (FAAT). As a guide for the development of the FAAT I drew upon models of best practice in scale design from Nunnally and Bernstein (1994), Worthington and
Whitaker (2006), and DeVellis, (2012). Here I cover details relating to: construct definition, the format of the measure, item generation, response options and scoring, subject matter expert review, pilot testing, and sample selection. In this chapter, I also provide an overview of the decisions made during both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) stages of development, as well as reliability analysis.

**Construct Definition and Measure Format**

Defining the construct to be measured was my first priority, as it is from here that all other decisions flow (DeVellis, 2012). For some constructs, a definition may be relatively straightforward, while others may be somewhat less tangible, more abstract, and difficult to pin down. In this case, the construct was not so much elusive, as evaluations of fatness and fat people are not a “taboo” topic, rather it is the breadth of the construct that poses a challenge. My goal in moving away from the restricted notion of antifat attitudes is to capture responses to elements of the broader discourse around fatness and fat people. Not only did I seek to capture the breadth of fat discourse, I was specifically interested in representing “critical fat” discourse. As discussed in Chapter 5, this discourse, while central to the maturing social conversation around fatness and fat people, is not reflected in current approaches to measurement. Current Antifat approaches to measurement present respondents with an array of mostly negative statements about fatness and fat people; although participants can of course disagree with these negative statements, rarely do they have an opportunity to respond to positive representations of fat people. Furthermore, these negatively focused measures, often administered in contexts with substantial institutional authority, can reinforce the widespread social view of the existence of fatness and fat people (rather than the stigma and discrimination experienced by fat people) as a legitimate target of social concern.
With my goal of quantifying endorsement of elements of fat discourse established, the next task was to select a measure format. As the goal is to quantify people’s endorsement of different aspects of fat discourse, a suitable format would offer a range of perspectives, opinions, or beliefs about fatness and fat people, and allow participants to demonstrate agreement or disagreement with these concepts. Suitable for this format are measures that consist of a statement declaring an opinion (a stem), together with a range of response options. This design aligns with the Likert scale format, one popular in the social sciences for measuring beliefs, evaluations, or attitudes (DeVellis, 2012). It is advised that decisions about response options and item writing should occur at the same time (DeVellis, 2012), in view of this, I elected for declarative statements with a Likert scale response option.

**Response Options**

With a Likert scale response format, the number of options available for responding can be linked to scale reliability. As discussed in Chapter 6, a seven-point Likert scale provides a good balance of optimal variance and ease of participant response (Mueller, 1991). Seven points also offers a neutral response option, as such participants do not need take an active position that they many not actually ascribe to. Labelling response options has been shown to clarify the meaning, reduce cognitive burden on the participant, and contribute to reliability (Alwin & Krosnick, 1991; Krosnik & Presser, 2010). Response options for the FAAT will be labelled: Strongly Disagree – Disagree – Mildly Disagree – Neither Agree or Disagree – Mildly Agree – Agree – Strongly Agree. For analysis purposes, the point Strongly Disagree will be assigned a value of one and Strongly Agree assigned a value of seven, meaning that higher scores will indicate more positive evaluations of fat people.
**Item Development**

As mentioned in Chapter 6, the length of the initial item pool can be difficult to determine. As my objective in developing this measure is the inclusion of a broad range of beliefs about and evaluations of fat people, my focus was less on achieving arbitrary numbers of items, and more on ensuring that the item pool achieved adequate domain sampling (DeVellis, 2012). In developing items, I was guided by Worthington and Whittaker’s (2006) recommendations on desirable item characteristics, including: simplicity of language, brevity, absence of ambiguity, singular focus, and lack of bias.

When sourcing ideas for items to quantify elements of contemporary of fat discourse, I turned to a variety of sources.

Firstly, I looked to academic and popular literature - as reviewed in Chapter 4. Of particular interest was discourse that has crossed from academic to popular audiences, such as *Big fat lies: The truth about your weight and your health* (Gaesser, 2002) and *The obesity myth: Why America’s obsession with health is hazardous to your health* (Campos, 2004). Secondly, the review of fat discourse in social media news commentary (Cain, et al., 2017) has been a source of item material, with many items being drawn, in some cases verbatim, from online articles and reader commentary. I have also drawn on prior research and reexamined focus group transcripts from a study where participants responded to messages of Health At Every Size and Fat Acceptance (Cain & Donaghue, 2018).

As this measure will likely be used in research to reduce weight stigma and negative perceptions of fat people, I have also been guided by potential research applications and the current approaches to research, reviewed in Chapter 4. In particular interventions designed to evoke empathy (for example, Cotugna & Mallick, 2010;
Falker & Sledge, 2011; Gapinski, et al., 2006) or that highlight the seriousness of discrimination and punitive consequences (for example, Gujral, et al., 2011; McVey et al., 2013) were of interest, as there has previously been no way of quantifying the specific impact of such strategies. To align with these research protocols, I developed items relating to empathy, stigma awareness, and activism orientation.

While my primary goal in item generation was to capture the breadth and depth of contemporary fat discourse, my motivation was to reflect as much as possible, “fat positive” or “critical fat” discourse. As a consequence, most items are written in positive terms or depict positive representations. However, I have decided to include some items that reflect a normative (antifat) stance. Negativity towards fatness and fat people remains a dominant part of contemporary fat discourse, albeit a part that many are striving to change. In developing these items I was mindful of using nonjudgmental language and avoiding references to disparaging character traits.

On the topic of language, during the initial phase of item development, I used both terms, “fat” and “obese” (without the scare quotes). My reason is that in the development phase I wanted to reflect terms used in the broader public discourse. I am aware that the Fat Acceptance movement has been instrumental in reclaiming the word fat (Saguy & Riley, 2005) and fat is the preferred descriptive term for many people (Thomas, et al., 2008); however, the terms “obese” and “overweight” remain in common public use. This creates a dilemma, as I am developing an instrument that will be used in a wide range of contexts with respondents who have not necessarily been exposed to the positive reclamation of the word “fat”. For initial item writing I also included the terms recommended by the 3rd Annual International Weight Stigma Conference roundtable on terminology - “higher weight” and “high body weight”
(Meadows and Danielsdottir, 2016). I elected to begin with this range of terms, and respond to the advice of subject matter expert reviewers and pilot study participants.

To offer an additional dimension to the FAAT, self-relevant items were also included in the item pool. The self-relevant items do not form part of the item pool that measures how fatness and fat people are evaluated; rather their inclusion provides the possibility of using these items to better position the respondent in relation to their attitudes. To date, only one measure, Crandall’s Antifat Attitudes Questionnaire (1994) includes self-relevant items. The Fear of Fat subscale reflects participants fear of gaining weight and is often compared with scores on the subscales Dislike and Willpower. While there has been no strong indication that fear, or lack of fear for becoming fat translates in to negativity or positivity to others (Crandall, 1994), the inclusion of self-reflective items remains a potential way for researchers to understand how respondents’ own positioning in relation to fatness might influence their overall attitudes towards fat people. The items I included here are positively framed and relate to body acceptance and self-esteem.

The initial item pool included over 300 items, across 21 categories. Table 7.1 indicates the number of items per category, the full list of items and source details are provided in Appendix F. As can be seen from the item summary, some topics include more items than others. A primary reason for this is due to topics such as Size Acceptance and weight-based discrimination not previously being represented in measurement; as such I wanted to ensure that the breadth and nuance of these constructs were appropriately explored.
Table 7.1

Item Pool Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Items</th>
<th>Category</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrimination</td>
<td>38</td>
<td>Healthism</td>
<td>12</td>
</tr>
<tr>
<td>Size acceptance</td>
<td>37</td>
<td>Empathy for fat people</td>
<td>11</td>
</tr>
<tr>
<td>Interventions</td>
<td>28</td>
<td>Health At Every Size</td>
<td>9</td>
</tr>
<tr>
<td>Social Justice</td>
<td>24</td>
<td>Gender</td>
<td>9</td>
</tr>
<tr>
<td>Health</td>
<td>24</td>
<td>Obesity crisis</td>
<td>9</td>
</tr>
<tr>
<td>Environmental influence on fatness</td>
<td>24</td>
<td>Children</td>
<td>8</td>
</tr>
<tr>
<td>Causes of fatness</td>
<td>19</td>
<td>Consumer freedom</td>
<td>7</td>
</tr>
<tr>
<td>Fat Shaming</td>
<td>16</td>
<td>Critical biomedical</td>
<td>7</td>
</tr>
<tr>
<td>Public health campaigns</td>
<td>14</td>
<td>Disability</td>
<td>7</td>
</tr>
<tr>
<td>Morality/Ideology</td>
<td>13</td>
<td>Health professional responses</td>
<td>7</td>
</tr>
<tr>
<td>Personal Embodiment</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subject Matter Expert Review

Once the initial item pool was finalized, subject matter experts were considered. A list was compiled including academics and researchers working in the field of fat scholarship, this included: members of the editorial board for the journal *Fat Studies*, researchers from the Rudd Centre for Food Policy and Obesity, members of the *Association for Size Diversity and Health* and the *National Association to Advance Fat Acceptance*, together with Fat activists, writers, bloggers, and dieticians working within a Health At Every Size framework. Attendees from the 2016 and 2017 *Weight Stigma Conference* and the 2016 *Fat Studies Conference* were also considered. In total 110 subject matter experts were approached via an email detailing the objective of the project, and the nature of the review sought. Twenty-six respondents agreed to
participate and were sent a cover letter explaining the project in more detail, along with the list of 334 items (see Appendix G for this communication). The email suggested that feedback would be appreciated within four weeks. As a follow-up action, a reminder email was sent to people who had not provided feedback by the suggested date. Reviewers were informed that I would be recognizing everyone providing feedback in the acknowledgment section of my thesis as well as in any publications arising from the work, although specific comments would not be linked to individuals, reviewers were given the option to opt out of any public acknowledgment. In total, 12 people provided feedback (see Appendix H for details of subject matter experts).

In the document sent to reviewers, several options for responding were presented. As the document was lengthy, reviewers were advised that should they wish to limit their time commitment, partial responses were still desirable. Respondents were also given the option to respond with checking yes or no as an indicator of item appropriateness and to give additional comments and recommendations as desired. Given these options, the feedback received ranged in depth and volume.

**General feedback.**

Overall, the response to the project was positive. There were, however, some responses suggesting the measure should take a more critical position. While there was the acknowledgment that items from a normative stance were expected, there was concern that the inclusion of these items meant that the measure as a whole seemed to depict a normative, rather than a critical stance. This response may have been in part a consequence of “order effects”. The feedback document began with sections relating to explanations for fatness, health implications, and the obesity crisis. Given that very few respondents provided feedback through the whole document, it may have been the case
that early categories were instrumental in creating an impression of the whole project. Also, as subject matter experts were critical fat scholars, and Fat Acceptance community members, this response is understandable. In response to my use of the dual terms “fat” and “obese” reviewers expressed concern, suggesting that respondents may conceptualize these terms differently. Reviewers recommended the term “fat” be adopted.

**Category and item level feedback.**

Turning now to the more detailed reviewer feedback. The section, relating to perceived “causes” of obesity, was intended to reflect various attributions around “why people are fat”. This section raised criticism from some reviewers. The need to rate and respond to “explanations for fatness” was considered problematic, and not different enough to the current antifat approaches to measurement. There was reviewer concern over terminology; for some items, I had included the term “disorder” in items such as “Obesity and Fatness can be the result of a genetic disorder”, several respondents recommended removing the term “disorder” and replacing with a more neutral term such as “factors”. Reviewer feedback was incorporated during revisions of the above and similar items. As already mentioned, there were concerns with the terms “fat” and “obese”, as I had used these terms interchangeably, and sometimes, as in the above example, in combination. Feedback strongly suggested the use of only the term fat, a suggestion that was implemented during item revision.

Within the category of “causes”, there was also some concern over scoring, some reviewers expressed uncertainty over whether agreement or disagreement with particular attributions would be interpreted as “fat positive” or “fat negative”. These comments drew attention to how the dimensions of this construct may be quantified,
and whether they do indeed fit along a positivity – negativity continuum. The intention in developing items related to causation was to be able to isolate differences according to attributions, particularly with regard to individual, biological, and environmental attribution, as these are the key perspectives compared in experimental and intervention research (Deidrichs & Barlow, 2011; Kahn, et al., 2018; Lippa & Sanderson, 2012; O’Brien et al., 2010). While personal attribution is a key factor underlying stigma (Crandall, 1994; Puhl & Brownell, 2003) and explanations focused on environmental or biological are associated with less antifat attitudes (Deidrichs & Barlow, 2011; O’Brien et al., 2010) does this mean that personal attribution is necessarily negative and external attribution necessarily positive? Following feedback, and item analysis, the meaning of the score on this construct shifted from the positive – negative continuum to one reflecting a perceived level of complexity in relation to “causes” of fatness. While I am moving away from an explicit positive or negative meaning for a score, attributing fatness to a complex range of non-behavioural causes has been the objective of much stigma reduction intervention research (for example, Diedrichs & Barlow, 2011; Lippa & Sanderson, 2012). A complex assessment of fatness is contrary to the simplistic mainstream understandings of fatness as a simple result of eating too much and/or exercising too little, and likely to be correlated with a less judgemental view of fat people. For this reason level of complexity becomes an important new construct to quantify.

For the items relating to weight and health, reviewers suggested the inclusion of items that compared fat people more favorably to thin people, such as “Fat people are less likely to die of cancer than thin people” and “Some studies show that fat people live longer than thin people”. Although unsure if the general public’s knowledge of such
evidence would enable meaningful response, after consideration, and given the aforementioned cross over from academic to popular literature, these items were included in the revised item pool. As with items relating to health, there were also suggestions that items generally positioning fat people more favorably should be added. Two reviewer recommended items, “Fat people are happier than thin people” and “Fat people are sexier than thin people”, were included in the revised item pool.

For items focused on health Professionals, healthism, obesity crisis, and environment, the feedback was mostly positive, with suggestions focused on making items more concise. The sections including items on empathy, discrimination, Fat Acceptance, and Health At Every Size were very positively received with the highest level of consensus for the Yes/No (inclusion/exclusion) feedback option. These sections generally received fewer comments than earlier sections, perhaps a result of reviewer fatigue (these items were positioned towards the end of the item pool), or the less contentious nature of these topics. Within these sections, there was one item that generated negative commentary. The response to the item “Size Acceptance is the first step to making positive choices with regard to health and well-being” was mixed. Some reviewers felt that “health and well-being” could imply “weight loss”, and as such size acceptance was being wrongly positioned. This advice was considered, however as this message had been identified as a perhaps misunderstood element of Fat Acceptance discourse (Cain et al., 2107) it was important to explore whether this rhetoric aligned with other elements of fat discourse. As such, I decided to retain this item to the next stage.
Response and revisions.

In response to reviewer feedback, I made several modifications to the item pool. Firstly, I looked to the broad Yes/No responses given at item level, and reconsidered items that had a majority of No responses. For these items, I also looked at associated comments and made a decision to retain or revise. Next, I looked at instances where I had more than one version of similar items and based on which iteration had the most positive feedback, again made a decision to retain or revise. As mentioned, several items were taken from actual social commentary, some of these items were critiqued for not using language considered appropriate or “neutral”, and some items were judged to be too lengthy. Revision here focused on improving clarity and precision without the loss of meaning. During the revision process, I also removed the terms “overweight” and “obese” and replaced with the term “fat”. This process resulted in the retention of 125 items across five categories: beliefs about fatness ($n = 33$), evaluations of fat people ($n = 10$), attitudes toward weight stigma ($n = 41$), attitudes toward size acceptance ($n = 34$), and personal embodiment/self-beliefs ($n = 7$).

Pilot Study

The revised item pool was then subjected to a pilot study, where a general population sample reviewed items and provided feedback. A convenience sample of 35 adults was approached and asked if they would be able to assist in providing feedback on a list of 125 statements on beliefs and evaluations of fatness, as well as attitudes toward weight stigma and size acceptance. While the goal of subject matter expert review was to establish the appropriateness of items, the goal of the pilot study was to determine the accessibility of items; that is, whether people found terms confusing, ambiguous or unfamiliar. Twenty-two people agreed to provide feedback and were sent the list of items plus some additional information on the project and instructions, (see
Appendix I). Participants were encouraged to provide feedback within a two-week time frame and advised that they should not provide actual answers to the survey questions. In total, fourteen people provided feedback.

**Feedback and revisions.**

Overall, respondents did not identify any major concerns with item content. Feedback related to small but important details. One suggestion was to include the abbreviation BMI on the item relating to Body Mass Index, as the abbreviation BMI may be more commonly understood or recognized by the general public. There was also the recommendation to replace the term “body weight” with “fat” so as to emphasize that items are relating to fatness, not the spectrum of body weight, which could potentially be construed as including low body weight. Double-barrelled items were also highlighted and subsequently split. The item “I think it’s important to try and achieve body norms and ideals” became two separate items, one referencing body “norms” and one referencing body “ideals”. There were several comments on the item “People today are the offspring of earlier generation who survived famine and drought”, an item that was recommended by a subject matter expert. There was concern over the use of the term “offspring” as well as some broader concern over the relevance of the item. After considering a reviewer suggestion, the item was revised to “People today are the descendants of earlier generations who survived famine and drought”. Another revision was to the item “The media should stop portraying fat people negatively”. As one reviewer pointed out, this wording relies on the assumption that a person agrees that the media does, in fact, depict fat people in a negative light. In response, the item was revised to “The media should not portray fat people negatively”.

During final revisions, twenty-three items were added to the item pool. This was the outcome of separating items considered to be double-barrelled and also because there were some items that I considered important to trial with variations in wording. Following this, the item pool comprised 148 items and was considered comprehensive enough to take to the next stage of development. At this point the list of items could be grouped into six categories: beliefs about the causes of fatness (n= 20), beliefs about health and fatness (n= 17), evaluations of fat people (n= 15), attitudes toward weight-based discrimination (n= 42), attitudes toward size acceptance (n= 43), and personal embodiment/self-beliefs (n= 11). However, for the purpose of being able to manage comparison of order effects, these were combined into three groups: group one combined items pertaining to causes, beliefs about health and evaluations of fat people (52 items), group two combined items relating to evaluations of weight stigma and size acceptance (85 items), and group three included items relating to personal embodiment/self-beliefs (11 items). The order of these groups was systematically varied across the next stage of piloting.

**Sampling**

Obtaining a sample that is both representative of the population of interest and sufficiently sized is important (Springer, et al., 2002). A good attitude measure captures everyone’s attitude. As such the inclusion of all perspectives is needed. As covered in Chapter 6, current measures have tended to sample from a small range of populations, with most scales developed with university/college student populations, samples that tend to be young and disproportionately female. In developing the FAAT, I decided to source a sample that was more reflective of the general population. Oversampling of any one group during this stage could lead to bias, omission or inclusion of items that
lack broad relevance. The use of crowdsourcing platforms has grown in recent years with Amazon Mechanical Turk (MTurk) the most commonly used (Palan & Schitter, 2018). Crowdsourcing platforms such as MTurk offer researchers access to a broad range of participants, in a short period of time and at a low cost. Although there are apparent benefits of recruiting participants in this way there are concerns that online platforms do not allow sufficient environmental control and pose a risk that where identities are not verified, participants may indeed participate in studies multiple times (Chandler, Mueller, & Paolacci, 2014). Despite these concerns, platforms such as MTurk have been used to successfully replicate experiments in psychology (Crump, McDonnell & Gureckis, 2013), and platforms such as Prolific have been shown to deliver higher quality than university subject pools (Peer, Brandimarte, Samat, & Acquistini, 2017).

*Prolific* is a crowdsourcing platform established in the United Kingdom in 2014. While launched in the United Kingdom, Prolific has over 40,000 registered participants worldwide and offers a variety of demographic screening tools. At present over 40% of participants registered with Prolific are in fulltime employment, over 30% have undergraduate degrees and over 50% are aged 30 or older (Prolific, 2018). Prolific was an attractive option for this project several reasons. The “ethical rewards structure” used by Prolific means that participants are renumerated at a minimum of £5.00 per hour, a policy that delivers a transparent and fair pricing structure for researchers and participants (Prolific, 2018). Also with Prolific, researchers can review participant ratings and preview responses before authorising payments. In a comparative study Peer et al., (2017) found participants recruited through prolific to be more honest, more internationally diverse and less exposed to common research tasks in comparison to participants recruited through MTurk.
Ethics approval for all data collection was granted by Murdoch University (Western Australia) Human Research Ethics Committee. Ethics approval has been communicated on all participant materials, with researcher and ethics department contact information provided (see Appendix J for materials distributed during the exploratory phase of data collection and Appendix L for materials distributed during the confirmatory and validation phase).

As Prolific recruits worldwide, it is possible to draw upon participants from a range of countries. While recruiting a multinational sample was considered, it was decided that an American sample would enable like comparisons with existing measures (all developed on American populations) and instil user confidence. To recruit the sample, pre-screening for participants identified as American was first undertaken. In addition, participants were also pre-screened according to their gender identification. The aim was to have equal numbers of men and women in each sample. During data collection, participants were asked some additional demographic questions. One question asked participants to indicate their gender, and gave the options of male, female and other, allowing people an additional option for responding. Participants were also asked to indicate their age and their highest level of education, options for reporting education are shown in Table 7.2. During scale development, three samples were collected: the first sample for Exploratory Factor Analysis, the second for Confirmatory Factor Analysis, and the third for follow-up test-retest reliability (see Table 7.2 for details of sample properties).

At the end of the data collection, participants were presented with two optional questions: “How would you describe your body weight?” with an open-ended response, and “Do you identify as fat?” with a Yes/No response option. These questions were
Table 7.2

FAAT development: Sample properties

<table>
<thead>
<tr>
<th>Exploratory Factor Analysis</th>
<th>Confirmatory Factor Analysis</th>
<th>Test-retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>$n = 771$</td>
<td>$n = 390$</td>
</tr>
<tr>
<td>Women</td>
<td>$n = 369$</td>
<td>$n = 191$</td>
</tr>
<tr>
<td>Men</td>
<td>$n = 378$</td>
<td>$n = 196$</td>
</tr>
<tr>
<td>Other</td>
<td>$n = 4$</td>
<td>$n = 3$</td>
</tr>
<tr>
<td>Age Range</td>
<td>18-77 years</td>
<td>18-71 years</td>
</tr>
<tr>
<td>Age Mean</td>
<td>35.63 ($SD$ 11.91)</td>
<td>31.68 ($SD$ 10.27)</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>1.3%</td>
<td>1.0%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>10%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Some college</td>
<td>20.2%</td>
<td>25.9%</td>
</tr>
<tr>
<td>2 year degree</td>
<td>9.2%</td>
<td>10.3%</td>
</tr>
<tr>
<td>4 year degree</td>
<td>39.9%</td>
<td>33.1%</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>13.1%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3.5%</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

designed to provide additional information about the sample. Analysis could then compare groups according to their self-reported embodiment, allowing comparisons of factor reliability for different groups, highlighting variations with the potential to impact measure utility. The optional questions were asked of all samples, and in both instances, the majority of participants responded. Table 7.3 provides further details of the sample properties based on Yes/No. The open responses to the question, How would you
describe your body weight? have not been analysed at this stage, these data may be used in forthcoming qualitative analysis.

Table 7.3
FAAT development: Optional responses

<table>
<thead>
<tr>
<th>Do you identify as fat?</th>
<th>Exploratory Factor Analysis</th>
<th>Confirmatory Factor Analysis</th>
<th>Test-retest Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n = 771$</td>
<td>$n = 390$</td>
<td>$n = 103$</td>
</tr>
<tr>
<td>Response rate</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Response YES</td>
<td>$n = 227$</td>
<td>$n = 87$</td>
<td>$n = 23$</td>
</tr>
<tr>
<td>Age Mean</td>
<td>38.26 ($SD = 12.33$)</td>
<td>34.2 ($SD = 11.26$)</td>
<td>31.69 ($SD = 10.71$)</td>
</tr>
<tr>
<td>Women</td>
<td>38.1%</td>
<td>30.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Men</td>
<td>27.6%</td>
<td>18.3%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Response NO</td>
<td>$n = 465$</td>
<td>$n = 264$</td>
<td>$n = 70$</td>
</tr>
<tr>
<td>Age Mean</td>
<td>34.50 ($SD = 11.87$)</td>
<td>30.94 ($SD = 10.06$)</td>
<td>29.90 ($SD = 8.72$)</td>
</tr>
<tr>
<td>Women</td>
<td>61.9%</td>
<td>69.3%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Men</td>
<td>72.4%</td>
<td>81.7%</td>
<td>84.1%</td>
</tr>
</tbody>
</table>

Sample Size

Participant numbers for both the Exploratory Factor Analysis and the Confirmatory Factor Analysis phases were determined by the criteria of five responses per scale item, a base requirement for conducting statistically powerful factor analysis (Tabachick & Fiddel, 1996). This resulted in 771 participants recruited for the Exploratory Factor Analysis, and 390 for the Confirmatory Factor Analysis. For test-retest reliability, 100 participants were recruited, ensuring a large enough sample to establish test-retest reliability (Kline, 2000).
Exploratory Factor Structure

Procedure

An online version of the scale comprising the 148 items retained after the pilot study review was built using Qualtrics online research software and shared through Prolific. Pre-screened (American) participants were provided with a brief description of the research. The project was advertised as a study investigating attitudes, beliefs, and evaluations of fatness, weight stigma, and size acceptance. Once participants had decided to take part in the study they were provided with more detail regarding the nature and requirements of the study and information relating to consent to participate. Participants were also told that the term Fat would be used throughout this survey, and that this term is now often used as a descriptive term in preference to the term obesity - a medical term, and the term overweight - which implies a comparison to a preferred standard, and advised that should they find the term offensive not to continue.

Participants were also advised on details relating to privacy and were provided contact details of the lead researcher and Murdoch Universities Ethics Office (see Appendix J for participant communication). Survey items were divided into three sections, beliefs about fatness, evaluations of weight stigma and size acceptance, and personal embodiment/self-beliefs. The sections were presented in systematically varied order so any order effects could be detected. Items within the sections remained in the same order. Following completion of the scale items, participants were asked the additional demographic questions, with the optional questions relating to personal embodiment presented last.
Data Screening

Once sample size had been reached, data were downloaded from Qualtrics. One advantage of using Prolific, is that data can be inspected before participants are renumerated. All data was screened for unusual and common response patterns. Time to complete the study had been estimated at 20 minutes, after inspection of completion times, participants recording unusually fast completion time, were considered in detail. Where anomalies were identified, participants were advised they would not be remunerated and their data not used. Fewer than ten participants from both the EFA and CFA samples met this criterion. Where participants were excluded, the survey was reopened so that additional responses could be obtained in order to meet the sample requirements.

Initial work on each data set involved reverse coding and assigning values to identify order effects. As mentioned, the scale was divided into three sections (for both the EFA and CFA samples) so as to determine order effects. When data was downloaded, variables were assigned to participants according to the order they took each section of the survey. Participants were then assigned a number between one and six to represent each of the six possible order combinations (tests for order effect are discussed in Chapter 9). Mean and sum scores were also calculated for each survey section and sub-section prior to further analysis.

Exploratory Factor Analysis

To investigate the structure of the measure and identify latent constructs, an Exploratory Factor Analysis was performed. Prior to analysis, the Kaiser-Meyer Olkin measure of sampling adequacy was examined, with KMO = .971 (well above the acceptable level of .6), the sample was considered factorable. Initial factor analysis
using Principal Axis Factoring and Oblimin rotation on 148 items was run. Oblimin (oblique) rotation was selected because it allows more freedom for the factors to correlate, a feature important in the social sciences (Kline, 2000). The result of the Pattern matrix revealed a 24 factor solution that converged in 62 rotations. Thirteen of the 24 factors reported eigenvalues greater than one. The goal of this phase of analysis is not only to establish factor structure, it is also to identify and eliminate items that contribute little to the overall makeup of a factor. Item loadings less than .30 were excluded, this left 79 items loading on thirteen factors (see Appendix L, Table L1 for component loadings). Inspection of the scree plot, showed eigenvalue levelling off markedly after factor five. While examination of the thirteen factors did reveal some structure, for example, factors relating to injustice, health, causation, and self-reflection, 69 of the original 148 items had been excluded due to low factor loadings. Given the early elimination of so many items and the form of the scree plot, a further factor analysis was conducted.

A second factor analysis using Principal Axis Factoring and Oblimin rotation on the 148 items was conducted, this time controlling for the number of factors. As the scree plot levelled off after five factors, and given that the items were initially grouped into six categories (beliefs about the causes of fatness, beliefs about health and fatness, evaluations of fat people, attitudes toward weight-based discrimination, attitudes toward size acceptance, and personal embodiment/self-beliefs), it was decided to fix the number of factors to extract at six. Once again, item loadings less than .30 were suppressed. The pattern matrix showed a six factor solution converged in 23 rotations, and included 137 items (see Appendix L, Table L2 for component loadings across the six factors). This solution did appear more meaningful with factors representing somewhat more discrete constructs. Factor two, for example, related to the “causes” of
fatness, and factor three to evaluation of the injustices faced by fat people. Factor four related to health and fatness, and factor five to control and responsibility. Lastly, factor six related to personal reflections.

Factor one of this solution was particularly large with 61 items, including a combination of items relating to empathy, discrimination, and size acceptance. While the items in this factor appear to share a connection, the prospect of reducing items to a level appropriate for test administration could mean that much of the nuance I hoped to achieve in this measure would be lost. For this reason, further factor analysis was conducted on factor one items. On this occasion, there was no restriction set on the number of factors to extract, although items loading less than .30 were suppressed, and Oblimin rotation selected. Analysis on the 61 factor one items solution revealed a seven factor solution converging in 30 rotations, and including 56 items (see Appendix L, Table L3 for component loadings). Of the seven factors, four were particularly meaningful. Factor one included items relating to disapproval of fat shaming and weight bias, factor three items relating to empathy, factor four items relating to recognition of injustice and discrimination, and factor seven items representing fat acceptance. Factors two, five and six were considered neither cohesive nor extensive enough for further analysis. Factor two included three negatively loaded items relating to weight loss, weight focused approaches to health and food. Factor five included two items relating to weight shaming and weight loss and one item relating to public health promotion, and factor six included two items on health promotion, one item on weight loss diets and one item on social pressure.

Taking the results of the last two analysis into account, there appeared a strong case for a nine factor solution. To test this, factor analyses was conducted on the 108
items loading onto factors two through six in the fixed factor solution, and factors one, three, four and seven from the subsequent analysis on factor one items. Principal Component Analysis on the 108 items, indicated a 17 factor solution including 88 items, with nine factors indicating eigenvalues above one. This solution, while providing confirmation of a nine factor solution, resulted in the omission over half of the 108 items, as only 52 items loaded onto one of the nine factors. Following this, a nine factor forced solution on the 108 items was conducted. This solution, once again offered a similar structure to the six factor solution, with factor one containing approximately one-third of items. On further inspection of this solution, it was decided that the original six factor solution with additional analysis on factor one, demonstrating a higher order factor with three lower order dimensions, offered the most meaningful starting point for further analysis, and it was on this structure that reliability testing was conducted.

**Reliability**

While factor loadings indicate that different items group together and identify an underlying construct, reliability testing can identify where items contribute and where they detract from the internal consistency of the construct (DeVellis, 2012). Cronbach’s alpha is used as an indication that items within a scale or subscale are tapping into a single construct (Kline, 2000). It is considered that a Cronbach’s alpha of above 0.8 is a demonstration of good internal consistency, although levels of above 0.7 are also deemed appropriate (De Vellis, 2012; Kline, 2000). At this stage of development, I was not attempting to determine the final structure of the measure—this will be achieved following the Confirmatory Factor Analysis and final reliability testing. Rather the objective of this phase was to investigate the constructs identified thus far. In analysing the factor items, values for Cronbach’s alpha, and Cronbach’s alpha if item deleted were reviewed, then an iterative process of removing highly correlated items and items not
contributing to the reliability of the scale was undertaken. Throughout this process, factor analysis was repeated to ensure that both optimum alpha levels were achieved and factor structure retained.

Factor one, from the six factor fixed solution, was particularly large (61 items), and when these items were factor analysed, seven factors were identified with four considered meaningful. Factors one and seven included items relating to fat acceptance, with factor one items loading negatively and factor seven items loading positively. These items thus appeared to be tapping into a similar latent construct and were combined for reliability testing. During item development, 85 items were developed around the topics of fat acceptance and weight-based discrimination. As a construct previously unexplored through measurement, having a range of items for this area was important. Through reliability analysis my goal was to reduce items to a more manageable number. The items from these three factors were combined for the iterative process of reliability testing. This resulted in a 16 item factor labelled Fat Acceptance, with a Cronbach’s alpha of .963. Higher scores on this factor would reflect more fat positive attitudes.

The second factor from the original six factor solution included 21 items relating to various explanations for fatness. Through reliability analysis this was reduced to 12 items with a Cronbach’s alpha of .884. The items retained represent a range of beliefs surrounding the reasons why people may be fat. The items represent different perspectives, enabling respondents to agree with one or many of the options. Broadly speaking this construct represents non-behavioural causation; notably, it does not include causes related to a person’s eating and/or exercise behaviour. However, given that the range of options available include environmental, medical, and genetic factors,
a high score on this factor does not point to one particular explanation. As discussed, the scoring of these items was a concern to reviewers, with questions raised over how responses would sit on a dimension of positivity to negativity. Considering the items retained, scores on this factor will not represent an intrinsically positive or negative finding, rather a high score will indicate how many circumstances a respondent considers to be contributing to, or explaining, fatness, and as such represents a perceived degree of complexity. Higher scores indicate attribution to more varied factors, and lower scores, indicate a more limited, or less complex view. Rejecting simplistic behavioural causation in favour of a range of complex factor, while not itself “positive”, is likely to represent lower levels of personal attribution and be associated with more positive attitudes towards fat people.

Factor four of the six factor solution included items relating to evaluations of fat bodies, including perceptions of health and attractiveness. Several items within this factor cross loaded, with some cross loading on more than one factor. For example, the items “Fat bodies are capable bodies” and “Fat bodies are not bad bodies” loaded on factors one and three (loadings higher than .30). Inter-correlations of these items were examined, where items correlated highly, only the positively worded item was retained for further reliability analysis. From here, once again the iterative process of reliability testing, item reduction, and factor analysis progressed until 15 items were retained with a Cronbach’s alpha of .917. Higher scores on this factor indicate more positive perceptions of fat bodies, including the idea that fat bodies are healthy. While the majority of items in this factor relate to health, there are two items about the visual appeal of the fat body, “Fat people are sexy” and “Fat people are attractive”. Subsequent factor analysis on the retained items revealed that “attractiveness” related items separated onto a second factor. However, due to their limited number it was decided that
the next stage of analysis would include additional items on this topic. This would give an opportunity to identify if attractiveness does indeed represent a separate construct.

Factor five of the six factor solution comprised nine items reflecting neoliberal ideas around control and responsibility. In this factor, items reflecting control are “other person” focused, for example, “Overeating and under exercising are the main reason people are fat”, while items reflecting responsibility are “self-focused”, for example “I feel like I should follow government dietary recommendations”. Because of this distinction a two factor structure was tested. This resulted in “self-focused” items loading on factor one and “other person” focused items loading onto factor two. However, half of the “self-focused” items cross loaded (negatively) on the “other person” focused items. Based on this outcome, and Cronbach’s alpha values it was decided to retain three “other person” focused items from this factor, with a reliability coefficient of .728. As with the previous factor, it was decided to add additional items (other person focused) on this topic for the next phase of analysis.

As a central argument of this thesis is that negative items, the current focus of quantification, are inadvertently perpetuating negativity, my decision to expand on this area may seem incongruous. While my intention with this measure is to bring a critical perspective to measurement, my objective is to also quantify elements of fat discourse, and this creates a dilemma. While beliefs around controllability of weight and individual responsibility are problematic, they remain nonetheless a prominent part of current fat discourse. In developing the FAAT I face this tension, between representing a negative part of the discourse, so that it may be quantified and monitored, and having a measure that may be rejected by some researchers. At this point of analysis my
decision was to include the normative content so as to explore how this content sat in relation to the other factors.

Factor six of the six factor solution included the self-reflective items. After reliability analysis, four items remain with a Cronbach’s alpha of .844. As this factor was designed as primarily a point of comparison, offering a different dimension to measurement, and Cronbach’s alpha was acceptable, I elected not to add any additional items for subsequent analysis.

Returning now to the secondary factor analysis on the 61 items from the first factor. As already covered, two sub factors, one and seven were meaningful and have been combined and identified as the Fat Acceptance factor, with 16 items and a Cronbach’s alpha of .96. Of the remaining factors, factors three and four also appeared meaningful. Factor three included items relating to empathy, and factor four comprised items relating to the perceived injustice and seriousness of weight-based discrimination. After reliability analysis of the 12 items in factor three, all items were retained, with a Cronbach’s alpha of .901. Similarly, for the eight items in factor four, all were retained, with a Cronbach’s alpha of .947.

The exploratory phase of analysis concludes with a preliminary seven factor structure for the FAAT, with all factors demonstrating strong reliability, see Figure 7.1. Given the strong coefficients for many factors, there may be items within factors that are contributing equally to the internal consistency of the scales; that is items that have the potential to be redundant. The next phase of analysis, the Confirmatory Factor Analysis, will highlight if this is happening.
Figure 7.1 Preliminary factor structure following EFA (n = 750)

**Confirmatory Factor Structure**

Now that a tentative factor structure had been established, the next phase of analysis was to determine how well this structure fits with the measurement model. As the objective of this measure is to quantify a range of different fat discourses, it is important to determine how well these items align with this intention. While the Exploratory Factor Analysis offers a solution, additional investigation using Confirmatory Factor Analysis (CFA), will confirm the solution in a new independent sample and also identify factor relationships, including possible higher order relationships (Byrne, 2001). As noted in Chapter 6, the major antifat attitude measures currently in use concluded analysis at the exploratory stage, in conducting CFA, I
address this limitation and follow best practice in scale design (DeVellis, 2012; Nunnally & Bernstein, 1994; Worthington & Whitaker, 2006).

For the purpose of the CFA, a new sample was recruited. While data gathered for exploratory analysis may be used at this stage, an independent sample of 390 participants was recruited to ensure that chance effects did not confound conclusions about the measure (DeVellis, 2012). Sample size was again based on five participants per item (Tabachick & Fiddel, 1996). Confirmatory Factor Analysis was conducted on the 71 items established at the conclusion of the exploratory phase, together with additional items relating to attractiveness ($n = 5$), and to individual control ($n = 3$). Recruiting a second sample also provided an opportunity to determine if the exploratory factor structure is replicable. In addition, with regard to factor structure, it is important to consider correlations between factors (Worthington & Whitaker, 2006). High correlations are an indication that factors are tapping into a similar construct, while weak correlation is indicative of more discrete constructs. Established correlations between the extracted factors can also be investigated through CFA, as a way of determining the final structure and scoring (discrete or composite) of the measure.

**Procedure**

Once again, an online version of the survey was built using Qualtrics online research software and shared through Prolific. Pre-screened (American) participants were provided a brief description of the research survey (see Appendix M). Once participants had decided to take part in the study, they were provided with more detail regarding the nature and requirements of the study, and information relating to consent to participate. Participants were also advised on details relating to privacy and provided
contact details of lead researchers and Murdoch Universities Ethics Office (see Appendix M).

Participants were presented with the 79 items, again separated into three sections (Beliefs about fatness and fat bodies, Evaluations of weight stigma and size acceptance, and personal embodiment/self-beliefs), and presented in random order. The objective of data collection this time was twofold: to establish the final structure of the measure and to establish the validity of the measure. Additional questionnaires designed to establish convergent, discriminant and predictive validity were asked of participants, the outcomes of which are discussed in Chapter 8. At the conclusion of the study, participants completed demographic details and optional questions. As demonstrated in Table 7.2 and Table 7.3, the demographic properties of this sample are similar to the exploratory sample.

**Exploratory Factor Analysis**

To determine if the exploratory factor structure derived in the previous sample was replicable, EFA was conducted using this second data set \( n = 390 \). Prior to analysis, the Kaiser-Meyer Olkin measure of sampling adequacy was examined, with KMO = .953 (well above the acceptable level of .6), the sample was considered factorable. Initial factor analysis using Principal Axis Factoring and Oblimin rotation on 78 items was run, with factor loadings less than .30 repressed. Analysis indicated a thirteen factor solution, converging in 43 rotations. Nine of the 13 factors reported eigenvalues greater than one (see Appendix N, TableN1 for item loadings on 74 items). As this initial factor analysis demonstrated a nine factor solution, a second analysis was
run on the 78 items, this time implementing a nine factor forced solution, and with factor loadings less than .40 suppressed. The increase in loading value to repress was to ensure that only items making the strongest contribution were included, as item reduction during this phase remained an objective. The nine factor solution converged in 26 iterations and included 59 items (see Appendix N, Table N2 for component loadings). From this analysis, eight meaningful factors emerged relating to: weight-based discrimination or injustice, control, self-reflection, complexity, attractiveness, fat bodies and health, size acceptance, and empathy. As hypothesized, the inclusion of additional items on the topics of attractiveness and control, resulted in separate factors emerging for these constructs.

Reliability was then determined for the eight factors, with item reduction, based on Cronbach’s alpha and item total correlation, adopted. Moving forward to the next phase of analysis were nine items in the discrimination/injustice factor ($\alpha = .95$), five items in the responsibility/control factor ($\alpha = .89$), four items in the self-reflections factor ($\alpha = .84$), six items in the complexity factor ($\alpha = .84$), five items in the attractiveness factor ($\alpha = .90$), eight items in the fat bodies/health factor ($\alpha = .88$), eight items in the size acceptance factor ($\alpha = .95$), and eleven items in the empathy factor ($\alpha = .92$). Next, correlations were investigated in order to assess factor relationships. As demonstrated in Table 7.4 most factors correlate well with one another, with the exception of the self-reflective scale. A lack of correlation between “self” and “other” focused items has previously been demonstrated, with Crandall’s (1994) Fear of Fat subscale showing a similar relationship. Aside from this, the factors Empathy, Discrimination, Size Acceptance, Attractiveness, and Health demonstrated strong correlations of above 0.5, indicating that they were potentially tapping into a similar latent construct (Cohen, 1988). This relationship was explored using CFA.
Table 7.4

Exploratory factor analysis: Correlations ($n = 750$)

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Discrimination</td>
<td>.754**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Size Acceptance</td>
<td>.730**</td>
<td>.804**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Attractiveness</td>
<td>.482**</td>
<td>.615**</td>
<td>.663**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Health</td>
<td>.576**</td>
<td>.608**</td>
<td>.654**</td>
<td>.571**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Complexity</td>
<td>.527**</td>
<td>.489**</td>
<td>.492**</td>
<td>.309**</td>
<td>.467**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Responsibility</td>
<td>.300**</td>
<td>.341**</td>
<td>.328**</td>
<td>.300**</td>
<td>.347**</td>
<td>.261**</td>
<td></td>
</tr>
<tr>
<td>8. Self-reflection</td>
<td>-.091</td>
<td>.006</td>
<td>.032</td>
<td>.038</td>
<td>.085</td>
<td>-.012</td>
<td>-.119*</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Confirmaory Factor Analysis

Confirmatory factor analysis can be used in the scale development process to support the validity of the scale (Worthington & Whittaker, 2006). Once a meaningful factor structure has been established with Exploratory Factor Analysis, the soundness of this structure can be enhanced through Structural Equation Modelling (SEM).

Achieving good model fit for the factors supports both the reliability of the factor structure and scale validity (Worthington & Whittaker, 2006). CFA is important for measure development as it allows for structural relationships between factors to be tested, including potential hierarchical relationships among factors (Byrne, 2001). In developing the FAAT, I employ CFA as a means to assess the soundness of the exploratory factor structure, and to test the hypothesis that the factors, Empathy, Discrimination, Size Acceptance, Attractiveness, and Health are facets of a higher order
construct. I also use CFA to identify potentially redundant items within factors. Confirmatory Factor Analysis followed the guidelines of Byrne (2001) and used SPSS Amos Version 24.0 (IBM, 2016).

Firstly, models were drawn for each of the factors, where factors are represented as latent variables, and the scale items are represented as observed variables. To establish the consistency of the model fit, several indices are reviewed (Wang & Straver, 2001). Observations were made of the Root Mean Square Error of Estimation (RMSEA; values < .08 indicate reasonable fit and values < .05 indicate good fit), as well as baseline comparisons, the Goodness of Fit Index (GFI; values > .90 indicate good fit), and the Tucker-Lewis Fit Index (TLI; values > .90 indicate good fit) as indicators of model fit (Schreiber, Nora, Stage, Barlow & King, 2006). Observations for chi-square were also made, while a non-significant chi square, p > .05 indicates good model fit, chi square is particularly sensitive to large sample sizes (Byrne, 2001), and as such, in models demonstrating significant chi square values, other model fit indicators were considered. Where model fit fell below recommended levels, the Modification Indices (an indicator of parameter change in the model) were reviewed. From this, items generating highly similar responses were identified, and for the sake of parsimony, items were deleted until no further increment in model fit could be achieved. If, after this process, the model still fell short of recommended model fit indices, the modification indices were again reviewed for covariance. Where covariance between items resulted in improved model fit, covariance was included in the model (indicated by arrows between observed variables). A satisfactory model fit was achieved individually for each factor (see Table 7.5 for model fit indices and Figures 7.5 to 7.9 for model fit figures). To represent the factor loadings of items, standardized parameter estimates are reported in all figures.
Table 7.5

Confirmatory factor analysis: Subscale model fit indicators ($n = 390$)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathy</td>
<td>26.595</td>
<td>.014</td>
<td>13</td>
<td>2.046</td>
<td>.984</td>
<td>.990</td>
<td>.052</td>
</tr>
<tr>
<td>Discrimination</td>
<td>33.735</td>
<td>.001</td>
<td>12</td>
<td>2.811</td>
<td>.984</td>
<td>.991</td>
<td>.068</td>
</tr>
<tr>
<td>Size Acceptance</td>
<td>17.402</td>
<td>.026</td>
<td>8</td>
<td>2.175</td>
<td>.991</td>
<td>.995</td>
<td>.055</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>1.477</td>
<td>.224</td>
<td>1</td>
<td>1.477</td>
<td>.996</td>
<td>1.00</td>
<td>.035</td>
</tr>
<tr>
<td>Health</td>
<td>11.834</td>
<td>.037</td>
<td>5</td>
<td>2.367</td>
<td>.979</td>
<td>.990</td>
<td>.059</td>
</tr>
<tr>
<td>Complexity</td>
<td>5.213</td>
<td>.266</td>
<td>4</td>
<td>1.303</td>
<td>.997</td>
<td>.999</td>
<td>.028</td>
</tr>
<tr>
<td>Responsibility</td>
<td>12.621</td>
<td>.027</td>
<td>5</td>
<td>2.524</td>
<td>.974</td>
<td>.991</td>
<td>.063</td>
</tr>
<tr>
<td>Body Acceptance</td>
<td>1.52</td>
<td>.218</td>
<td>1</td>
<td>1.52</td>
<td>.996</td>
<td>.999</td>
<td>.036</td>
</tr>
</tbody>
</table>
Figure 7.2. Empathy subscale CFA model with loading.
8. Discrimination due to fatness leads to denial of human rights

9. Activism is necessary because of the discrimination fat people experience

10. The existence of organizations to lobby for the rights of fat people is a good thing

11. Discussions and programs recognizing diversity need to include body weight

12. We need to weight-based discrimination as seriously as other forms of discrimination

13. There is a need for Fat Activism because fat shaming is widespread

14. We should have public health campaigns that focus on the negative impact of weight stigma and fat

Figure 7.3. Discrimination subscale CFA model with loading.
15. We should celebrate all bodies

16. Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies

17. Size Acceptance should be encouraged

18. Size Acceptance is a foundation for making healthy lifestyle choices

19. We need more positive images of fat people in the media

20. Size Acceptance is an important social movement

---

**Figure 7.4.** Size Acceptance subscale CFA model with loading.

21. Fat people are sexy

22. Confident fat people are appealing

23. Fat people are attractive

24. If I were single I would go out with a fat person

25. Fat people are sexier than thin people

---

**Figure 7.5.** Attractiveness subscale CFA model with loading.
26. Body weight isn’t a reliable indicator of health

27. Health is not predicted solely by body weight

28. Fat people are not necessarily unhealthy

29. Body Mass Index (BMI) is a poor indicator of health

30. Healthy bodies come in all shapes and sizes

Health

31. There are genetic factors that cause people to be fat

32. There are medical factors that cause people to be fat

33. There are many factors that cause people to be fat

34. There are factors outside of personal control that contribute to high body weight

35. There are biological factors that result in people being fat

Complexity

Figure 7.6. Health subscale CFA model with loading.

Figure 7.7. Complexity subscale CFA model with loading.
**Figure 7.8.** Responsibility subscale CFA model with loading.

- 36. People can control their body weight
- 37. Fatness is the result of lifestyle factors
- 38. Fat people lack willpower
- 39. Overeating and under exercising are the main reasons people are fat
- 40. Fat people eat too much “junk food”
- 41. Self-control is important for weight control

**Figure 7.9.** Body Acceptance subscale CFA model with loading.

- 42. I feel good about my body
- 43. I feel happy about my weight
- 44. I do not feel defined by my body weight
- 45. My self-esteem is not impacted by my body weight
Next, I investigated the correlation between factors. As mentioned, the factors Empathy, Discrimination, Size Acceptance, Attractiveness, and Health demonstrated strong correlations. Through CFA this relationship was explored in order to determine whether these factors suited a hierarchical model. If good second order model fit is found, this would indicate that these factors could be combined to create an overarching scale and a composite score. The same process of model drawing, fit indicator assessment, and modification was followed with a good second order model fit indicated. As individual model fit was established, there was no need for further item reduction. The higher-order factor was labelled Fat Acceptance, see Table 7.6 for model fit indicators, and Figure 7.10 for the model fit figure.

Table 7.6

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>836.681</td>
<td>.000</td>
<td>397</td>
<td>2.162</td>
<td>.946</td>
<td>.952</td>
<td>.055</td>
</tr>
</tbody>
</table>
Figure 7.10. Fat Acceptance Scale second order CFA model with loading
The FAAT Final Structure

Following CFA, eight robust subscales were established (see Appendix O for the toolkit structure and items). The FAAT includes the scales: Empathy, Discrimination, Size Acceptance, Attractiveness, Health, Complexity, Responsibility, and Body Acceptance. The Empathy scale assesses the degree to which respondents recognise and empathise with the negative evaluations fat people face in everyday life, and the impact this has on lived experience. The Discrimination scale extends upon empathic awareness and reflects the idea that, antifat discrimination is serious and unacceptable, and that something should be done at a social and structural level to prevent such practices and the harm they inflict. The Size Acceptance scale represents popular ideas from the Size Acceptance movement, such as all bodies should be celebrated, and the Attractiveness scale reflects perspectives on the attractiveness of fat people. The Health scale depicts ideas around health and the fat body, namely that weight is not an indicator of health. Higher scores on all scales align with the endorsement of more positive evaluations of fat people. These five scales reflect ideas that align with critical fat perspectives and literature, as such they share a common underlying construct, and as demonstrated through CFA, their scores can be combined to create an overall Fat Acceptance Score. This score may be used in place of, or in addition to the subscale scores.

The scales Complexity and Responsibility, reflect more normative ideas and concepts about fatness. As mentioned previously, the inclusion of these ideas was met with concern from some of the subject matter experts; despite this, I judged these constructs important to capture as they remain a dominant part of everyday discourse, and as such add important breadth to the toolkit. The scale Complexity includes statements of various attributions for fatness, which relate to factors outside of
individual control. Rather than being scored on a continuum of positivity to negativity, a high score on the Complexity scale indicates that a respondent agrees with multiple possible causes for fatness, which can be deemed outside of personal control; conversely, a low score would indicate a limited number of perceived causes, or disagreement with the idea that fatness can be the result of external factors. The Responsibility scale captures ideas that focus in on individual attribution. The responsibility subscale is reverse scored, meaning that a higher score indicates respondents assign fewer factors relating to personal responsibility to the causes of fatness. Lastly, the Body Acceptance scale is a way of capturing how respondents appraise their own bodies and their body weight, within the broader social context. Once again, higher scores reflect more positive and stable evaluations. The score range is one to seven on all scales. As the scales Complexity and Responsibility function as standalone subscales, the inclusion of these is at researcher discretion, meaning that researchers who do not want to engage with these ideas can omit these scales.

**Reliability and Descriptive Statistics**

With the final structure established, reliability coefficients were again determined, and descriptive statistics examined. During data collection, participants were asked to report on their gender (male, female, or other) and also asked the optional question “Do you identify as Fat?” These categorizations enabled reliability to be investigated within four sub-populations (the number of participants selecting the category Other for gender was too small ($n = 3$) to allow for statistical analysis). Table 7.7 shows Cronbach’s alpha for the Fat Acceptance Scale, and subscales, for the full sample, and sub samples; men, women, identifying as fat, and not identifying as fat.
Table 7.7
Reliability coefficients (α) for composite scale and sub scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>(n = 390)</th>
<th>Men (n = 191)</th>
<th>Women (n = 196)</th>
<th>Identifying as Fat (n = 87)</th>
<th>Not identifying as Fat (n = 264)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat Acceptance</td>
<td></td>
<td>.96</td>
<td>.96</td>
<td>.96</td>
<td>.96</td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
<td>.89</td>
<td>.89</td>
<td>.87</td>
<td>.85</td>
</tr>
<tr>
<td>Discrimination</td>
<td></td>
<td>.94</td>
<td>.94</td>
<td>.95</td>
<td>.95</td>
</tr>
<tr>
<td>Size Acceptance</td>
<td></td>
<td>.94</td>
<td>.94</td>
<td>.94</td>
<td>.94</td>
</tr>
<tr>
<td>Attractiveness</td>
<td></td>
<td>.90</td>
<td>.92</td>
<td>.88</td>
<td>.88</td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td>.82</td>
<td>.83</td>
<td>.81</td>
<td>.84</td>
</tr>
<tr>
<td>Complexity</td>
<td></td>
<td>.89</td>
<td>.88</td>
<td>.90</td>
<td>.86</td>
</tr>
<tr>
<td>Responsibility</td>
<td></td>
<td>.84</td>
<td>.83</td>
<td>.85</td>
<td>.82</td>
</tr>
<tr>
<td>Body Acceptance</td>
<td></td>
<td>.84</td>
<td>.81</td>
<td>.85</td>
<td>.85</td>
</tr>
</tbody>
</table>

As demonstrated, reliability coefficients are maintained at a level above 0.8 and also show a relatively consistent pattern across the different samples, an indication that all scales demonstrated good internal consistency across these different populations (Kline, 2000). The only scale to demonstrate some variance across subpopulation is the Body Acceptance scale. In the sample of respondents “Not identifying as fat” Cronbach’s alpha is 0.76, lower than the full sample α = 0.84 and the sample “Identifying as fat” α = 0.85. Reliability for the subgroup “Not identifying as fat” is still
within an acceptable range (Kline, 2000) indicating that the scale performs relatively consistently across different subsets of the sample.

Descriptive statistics for the full sample \( (n = 390) \) and each of the subpopulations were also calculated, and are listed in Table 7.8. Independent sample \( t \) tests were used to compare mean scores between Men \( (n = 191) \) and Women \( (n = 196) \), and between people identifying as fat \( (n = 87) \) and people not identifying as fat \( (n = 264) \). Table 7.8 also shows \( t \) statistics and effect size. Only results where the assumption of homogeneity of variance has not been violated are reported. In comparing scores between men and women, men scored significantly lower on the Responsibility subscale, indicating that men attribute fatness more to factors of personal responsibility than women do. With respect to group comparison based on whether respondents identified as fat or not, there were several differences. People who identified as fat scored significantly higher on the scales Empathy, Discrimination, Size Acceptance, and Attractiveness, indicating more positive and empathic responses across these constructs. People who did not identify as fat scored significantly higher on the Body Acceptance scale. The objective in performing this analysis is not for the sake of establishing group differences. This analysis is conducted within the scope of establishing reliability, as demonstration that the psychometric properties of the scales are consistent, even across groups who score quite differently on the scales.
Table 7.8
Descriptive statistics and scale comparisons for gender and response to “Do you identify as fat?”

<table>
<thead>
<tr>
<th>Scale</th>
<th>Women (n = 390)</th>
<th>Men (n = 196)</th>
<th>Fat - YES (n = 87)</th>
<th>Fat - NO (n = 264)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Fat Acceptance</td>
<td>4.70 (1.13)</td>
<td>4.88 (1.02)</td>
<td>4.51 (1.20)</td>
<td>5.01 (1.03)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.60 (1.13)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.01**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>Empathy</td>
<td>5.24 (1.10)</td>
<td>5.04 (1.61)</td>
<td>5.43 (1.01)</td>
<td>5.56 (0.93)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.17 (1.12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.91**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>Discrimination</td>
<td>4.61 (1.46)</td>
<td>4.43 (1.54)</td>
<td>4.79 (1.36)</td>
<td>4.91 (1.41)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.52 (1.44)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.20*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
</tr>
<tr>
<td>Size Acceptance</td>
<td>4.72 (1.51)</td>
<td>4.45 (1.58)</td>
<td>4.50 (1.38)</td>
<td>5.11 (1.38)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.62 (1.52)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.69**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>3.79 (1.36)</td>
<td>3.66 (1.47)</td>
<td>3.93 (1.21)</td>
<td>4.23 (1.29)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>3.59 (1.33)</td>
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<td></td>
<td></td>
<td>3.91**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.05</td>
</tr>
<tr>
<td>Health</td>
<td>4.93 (1.31)</td>
<td>4.81 (1.19)</td>
<td>5.05 (1.06)</td>
<td>5.03 (1.19)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.88 (1.13)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.01</td>
</tr>
<tr>
<td>Complexity</td>
<td>5.65 (1.03)</td>
<td>5.55 (1.08)</td>
<td>5.75 (0.95)</td>
<td>5.79 (0.96)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.63 (1.04)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.30</td>
</tr>
<tr>
<td>Responsibility</td>
<td>2.82 (0.94)</td>
<td>2.62 (0.93)</td>
<td>3.02 (0.91)</td>
<td>2.81 (0.91)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.83 (0.95)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.18</td>
</tr>
<tr>
<td>Body Acceptance</td>
<td>4.36 (1.46)</td>
<td>4.76 (1.33)</td>
<td>3.95 (1.48)</td>
<td>3.00 (1.39)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.79 (1.20)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-11.49**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.14</td>
</tr>
</tbody>
</table>

** p < .01 (2-tailed)
* p < .05 (2-tailed)
Test-retest Reliability

To assess the consistency of scores over time, test-retest reliability was carried out. Through Prolific, participants from the Confirmatory Factor Analysis sample \((n = 390)\) were reapproached two weeks after participating and invited to take part in a follow up study. Participants \((n = 101)\) completed the same 78 items. The sample was relatively similar in terms of demographic properties, although slightly younger than the previous samples (see Table 7.3). A two week time period between studies is considered adequate to assess test-retest reliability; participants are not likely to be influenced by either recollection bias or actual attitude change (Marx, Menezes, Horovitz, Jones & Warren, 2003). A sample of 100 participants is considered large enough to establish test-retest reliability (Kline, 2000).

To establish test-retest reliability, mean scores were determined for each participant at time one and time two, across retained items for each of the subscales. A two-tailed paired samples \(t\) test with an alpha level of .05 was used to compare time one and time two mean scores. For all subscales, with the exception of Attractiveness, differences between scores were not significant (see Table 7.9); across the two week period responses remained consistent, indicating good test-retest reliability. For the Attractiveness subscale, scores are higher at re-test, indicating that when completing this scale for a second time, participants recorded more positive evaluations. Although the difference is significant, the size of the difference is small. This result nonetheless points to the possibility that this scale has some temporal sensitivity, a finding that will be necessary to explore further.
Table 7.9

Test-retest reliability by subscale (n =101)

<table>
<thead>
<tr>
<th>Item grouping</th>
<th>Time 1</th>
<th>Time 2</th>
<th>t</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>5.16 (1.13)</td>
<td>5.05 (1.18)</td>
<td>1.70</td>
<td></td>
</tr>
<tr>
<td>Discrimination</td>
<td>4.45 (1.55)</td>
<td>4.52 (1.55)</td>
<td>-0.83</td>
<td></td>
</tr>
<tr>
<td>Size Acceptance</td>
<td>4.51 (1.57)</td>
<td>4.49 (1.52)</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>3.45 (1.35)</td>
<td>3.67 (1.39)</td>
<td>-2.56*</td>
<td>-0.02</td>
</tr>
<tr>
<td>Health</td>
<td>4.67 (1.29)</td>
<td>4.74 (1.20)</td>
<td>-0.85</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>5.49 (1.14)</td>
<td>5.49 (1.15)</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Responsibility</td>
<td>2.89 (0.90)</td>
<td>2.98 (1.03)</td>
<td>-1.46</td>
<td></td>
</tr>
<tr>
<td>Body Acceptance</td>
<td>4.34 (1.44)</td>
<td>4.26 (1.46)</td>
<td>1.03</td>
<td></td>
</tr>
</tbody>
</table>

**p <.01 (2-tailed)**
* p <.05 (2-tailed)
Addendum

After establishing the structure of the FAAT, I reflected on the range and scope of the final scales. I wanted to feel confident that this offering was adequately capturing the breadth of contemporary fat discourse. In considering the final structure, I focused particular attention on the Complexity scale. As mentioned, the items relating to causes and explanation of fatness were critiqued by some subject matter experts, who expressed the opinion that including this part of the discourse did not align with their preferred critical perspective. As I made the decision to proceed with quantifying this construct, I wanted to give additional consideration to the items that make up this subscale. Relooking at the Complexity scale, I reflected on the scope and targets of items and identified that the concept of economic or socioeconomic disadvantage as a factor thought to influence fatness had not been represented in the item pool. Although reviewing literature suggesting socio-economic disadvantage was a factor contributing to the “obesogenic” environment (Drewnowski, 2009; Giskes, et al., 2011), I had not developed items relating to these ideas that were more specific than the general category of “environmental factors”. While I take responsibility for this omission, I want to note that this oversight was also not raised during the subject matter expert review process.

To investigate whether the topic of socio-economic disadvantage connected to the construct of complexity, I developed an additional set of new items, see Table 7.10. The items were similar in format to the existing items, with changes made to the topic of interest. Items were reviewed by my supervisors and it was decided to take four items through for further analysis.
Table 7.10

New pool: Socio-economic complexity

<table>
<thead>
<tr>
<th>New Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are factors relating to social inequality that cause people to be fat *</td>
</tr>
<tr>
<td>There are economic factors that contribute to people being fat *</td>
</tr>
<tr>
<td>There are environmental factors that contribute to high body weight *</td>
</tr>
<tr>
<td>There are factors relating to social disadvantage that lead people to be fat *</td>
</tr>
<tr>
<td>Social disadvantage can cause people to be fat</td>
</tr>
<tr>
<td>Social disadvantage can lead to people being fat</td>
</tr>
<tr>
<td>There are social factors that cause people to be fat</td>
</tr>
<tr>
<td>Social inequality can contribute to high body weight</td>
</tr>
<tr>
<td>Social inequality can lead to people being fat</td>
</tr>
<tr>
<td>Being marginalized can contribute to people being fat</td>
</tr>
<tr>
<td>Being a member of a marginalized group can contribute to high body weight</td>
</tr>
<tr>
<td>Environmental factors can contribute to people being fat</td>
</tr>
<tr>
<td>Western environments contribute to high body weight</td>
</tr>
</tbody>
</table>

* Items used in analysis

Four new items were added to the existing five items making up the Complexity scale, to form a new item pool. The nine items were then subjected to EFA and CFA. To ensure sample consistency, the 390 participants from the original CFA sample were reapproached and asked to complete the follow-up nine item survey, with 258 people responding. The sample included $n = 133$ identifying as female ($Age \ M = 32.51; SD = 11.53$) and $n = 123$ identifying as male ($Age \ M = 30.43; SD = 8.68$), and $n = 2$ identifying as other ($Age \ M = 23.50; SD = 3.54$). Of the 231 responses to the optional
question – Do you identify as fat? 53 participants responded with yes, with more women identifying as fat ($n = 37$) than men ($n = 16$).

Exploratory Factor Analysis was first conducted. Prior to analysis, the Kaiser-Meyer Olkin measure of sampling adequacy was examined, with KMO = .879 (well above the acceptable level of .6), the sample was considered factorable. Initial factor analysis using Principal Axis Factoring and Oblimin rotation on 9 items was run, with factor loadings less than .30 repressed. Analysis indicated a two factor solution, converging in 7 rotations, and included all nine items, see Table 7.11 for item loadings. Interestingly three of the four new items separated onto the second factor, with the remaining new item “There are environmental factors that contribute to people being fat” loading with the existing items relating to complexity. While the original item pool did include items relating to the environment, none of these items were retained through exploratory and confirmatory statistical analysis. In this two factor solution, factor one appeared to represent a general notion of complexity, while factor two related specifically to socio-economic complexity. Reliability analysis on the two factors demonstrated strong Cronbach’s alpha coefficients for both, with $\alpha = .856$ for the six item factor one, and $\alpha = .903$ for the three item factor two. There was no need to delete items to improve reliability.
Table 7.11

Principal Component Analysis: Component loadings on nine items (n = 256)

<table>
<thead>
<tr>
<th>Component</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are biological factors that result in people being fat</td>
<td>.961</td>
<td></td>
</tr>
<tr>
<td>There are genetic factors that cause people to be fat</td>
<td>.863</td>
<td></td>
</tr>
<tr>
<td>There are medical factors that cause people to be fat</td>
<td>.593</td>
<td></td>
</tr>
<tr>
<td>There are many factors that cause people to be fat</td>
<td>.574</td>
<td></td>
</tr>
<tr>
<td>There are factors outside of personal control that contribute to high body weight</td>
<td>.531</td>
<td></td>
</tr>
<tr>
<td>There are environmental factors that contribute to high body weight</td>
<td>.409</td>
<td></td>
</tr>
<tr>
<td>There are factors relating to social inequality that cause people to be fat.</td>
<td></td>
<td>.911</td>
</tr>
<tr>
<td>There are economic factors that contribute to people being fat</td>
<td></td>
<td>.775</td>
</tr>
<tr>
<td>There are factors relating to social disadvantage that lead people to be fat</td>
<td></td>
<td>.887</td>
</tr>
</tbody>
</table>

The second stage of analysis, investigated model fit through CFA. Model fit for the two individual factors was first tested. Factor one, now labelled General Complexity, demonstrated good model fit, as did factor two, now labelled Socio-economic Complexity, see Table 7.12 for model fit indices and Figure 7.11 and 7.12 for model fit diagrams.
Table 7.12

Confirmatory Factor Analysis: Complexity subscale model fit indicators (n = 258)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>11.554</td>
<td>.173</td>
<td>8</td>
<td>1.443</td>
<td>.990</td>
<td>.995</td>
<td>.042</td>
</tr>
<tr>
<td>Socio-economic</td>
<td>.435</td>
<td>.510</td>
<td>1</td>
<td>.435</td>
<td>1.003</td>
<td>1.00</td>
<td>.000</td>
</tr>
</tbody>
</table>

There are environmental factors that contribute to high body weight
There are genetic factors that cause people to be fat
There are biological factors that result in people being fat
There are medical factors that cause people to be fat
There are factors outside of personal control that contribute to high body weight
There are many factors that cause people to be fat

Figure 7.11: General complexity subscale CFA model with loading.
There are factors relating to social inequality that cause people to be fat

There are economic factors that contribute to people being fat

There are factors relating to social disadvantage that lead people to be fat

Socio-economic Complexity

Correlation between factors was also investigated, with a moderate correlation 
($r = .599$), demonstrating that factors were tapping into a similar construct. Following this, a hierarchical model fit was investigated. As hypothesized both factors loaded onto a higher order construct, which was labelled Attribution Complexity, see Table 7.13 for model fit indicators and Figure 7.13 for model fit diagram. Given the second order model fit, the construct of complexity is now represented as a composite scale with two subscales, Table 7.14 shows Cronbach’s alpha for the new scales across sample sub-populations, and Table 7.15 shows descriptive statistics. The subscales are sufficiently psychometrically robust to be used as stand-alone scales.

Table 7.13

Confirmatory Factor Analysis: Attribution complexity scale model fit indicators 
($n = 258$)

<table>
<thead>
<tr>
<th>$\chi^2$</th>
<th>$p$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.151</td>
<td>.064</td>
<td>19</td>
<td>1.534</td>
<td>.985</td>
<td>.992</td>
<td>.046</td>
</tr>
</tbody>
</table>
There are environmental factors that contribute to high body weight

There are genetic factors that cause people to be fat

There are biological factors that result in people being fat

There are medical factors that cause people to be fat

There are factors outside of personal control that contribute to high body weight

There are many factors that cause people to be fat

There are factors relating to social inequality that cause people to be fat

There are economic factors that contribute to people being fat

There are factors relating to social disadvantage that lead people to be fat

Figure 7.13. Attribution Complexity second order CFA model with loading.
Table 7.14
Reliability coefficients (α) for Attribution Complexity composite scale and subscales

<table>
<thead>
<tr>
<th></th>
<th>Full Sample (n = 258)</th>
<th>Men (n = 123)</th>
<th>Women (n = 133)</th>
<th>Identifying as Fat (n = 53)</th>
<th>Not identifying as Fat (n = 179)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribution Complexity</td>
<td>.89</td>
<td>.89</td>
<td>.89</td>
<td>.82</td>
<td>.91</td>
</tr>
<tr>
<td>General complexity</td>
<td>.86</td>
<td>.88</td>
<td>.85</td>
<td>.76</td>
<td>.87</td>
</tr>
<tr>
<td>Socio-economic complexity</td>
<td>.90</td>
<td>.90</td>
<td>.91</td>
<td>.87</td>
<td>.91</td>
</tr>
</tbody>
</table>
Table 7.15

Descriptive statistics: Attribution Complexity composite scale and subscales

<table>
<thead>
<tr>
<th>Scale</th>
<th>(n = 258) M (SD)</th>
<th>Women (n = 132) M (SD)</th>
<th>Men (n = 122) M (SD)</th>
<th>t</th>
<th>Fat YES (n = 53) M (SD)</th>
<th>Fat NO (n = 179) M (SD)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribution Complexity</td>
<td>5.54 (0.89)</td>
<td>5.54 (0.94)</td>
<td>5.55 (0.86)</td>
<td>.107</td>
<td>5.54 (0.76)</td>
<td>5.50 (0.95)</td>
<td>.245</td>
</tr>
<tr>
<td>General Complexity</td>
<td>5.68 (0.84)</td>
<td>5.64 (0.87)</td>
<td>5.72 (0.81)</td>
<td>.792</td>
<td>5.64 (0.70)</td>
<td>5.65 (0.90)</td>
<td>-.067</td>
</tr>
<tr>
<td>Socio-economic Complexity</td>
<td>5.26 (1.31)</td>
<td>5.33 (1.35)</td>
<td>5.19 (1.27)</td>
<td>-.797</td>
<td>5.33 (1.29)</td>
<td>5.20 (1.33)</td>
<td>.591</td>
</tr>
</tbody>
</table>

**p <.01 (2-tailed)  
* p <.05 (2-tailed)
The final structure of the Fat Attitudes Assessment Toolkit, now includes nine independently robust scales and two composite scales (see Figure 7.14 for the final structure, and Appendix O for the item list). This new factor structure now allows perceptions of Socio-economic Complexity to be assessed. This I believe has two advantages over the previous format. Firstly, future intervention research may want to assess whether these constructs are individually amenable to change, and/or are individually associated with other evaluations of fat people. Secondly, researchers not wanting to engage with the messages put forward in the items representing general complexity now have an alternative that better reflects social, situational, and intersectional factors.
Figure 7.14. Final structure of the Fat Attitudes Assessment Toolkit
CHAPTER 8.
VALIDATION OF THE FAT ATTITUDES ASSESSMENT TOOLKIT

Introduction

In this chapter, I outline the validation process of the FAAT. As discussed in Chapter 6, previous measures have demonstrated validation in limited ways, and in developing the FAAT, I sought to improve on this practice and to establish the validity of the FAAT in relation to a number of theoretically related constructs. While strong reliability statistics are important for establishing the internal structure of a measure (Kline, 2000), assessments of validity focus more on external comparisons, in order to show how the construct of interest, performs in the way it would be expected to (DeVellis, 2012). To validate the FAAT, scores on FAAT scales will be compared to scores on a range of other measures and questions. In addition to this, I also cover the possible influence of social desirability bias on responses. As mentioned in Chapter 6, several of the current measures (AFAT, AFAS, and UMB-FS) have included measures of social desirability bias during the development phase, and while no links have been detected, I considered it important to continue to monitor this influence, particularly as my approach to measurement differs from those previously investigated. Lastly, I will cover the influence of order effects.

Data for establishing validity was collected at the same time as data for the Confirmatory Factor Analysis (sample properties are presented in Chapter 7, Table 7.2 and 7.3). Participants completed additional scales, subscales, and questions after they had completed the 78 items pertaining to the FAAT. In keeping with the topic of fat attitudes, participants first completed items from several of the current antifat measures. Following this, participants completed measures to assess social desirability in
responding. Lastly, participants completed items pertaining to criterion related validity, some of which were optional.

**Validity**

There are several ways of assessing the validity of a measure. DeVellis (2012) identifies three types of validity—content validity, criterion-related validity, and construct validity—as ways of determining how adequately a construct is being measured. Content validity is related to the representativeness of the item pool, and concerns the extent to which items are illustrative of the domain being investigated (DeVellis, 2012). While the construct I sought to quantify was broad, I have used multiple sources to inform item writing, as well as undertaken an extensive item generation and review process. The resulting nine subscales that constitute the FAAT attest to the breadth and scope of this measure, and the findings from the EFA and CFA demonstrate how the items fit with the constructs they define. For these reasons, I am comfortable in claiming that content validity has been established. In the next section, I will focus on empirical demonstrations of validity, through criterion-related and construct validity.

**Criterion-related Validity**

Criterion-related validity is a way of assessing whether scores on a measure are associated with a particular criterion (Worthington & Whitaker, 2006). This association may be predictive in nature, or it may occur concurrently (DeVellis, 2012). While a theoretical basis for the relationship is not a prerequisite for criterion-related validity, in this instance I am interested in associations that have been implied through literature. As previous test developers have not investigated criterion-related validity, I did not have examples to work from, although the critical fat and antifat attitudes literatures
provides evidence of patterns of beliefs and behaviours that tend to be associated with positive or negative attitudes towards fat people and I draw on these criteria against which to assess the FAAT.

As mentioned in Chapter 2, negative attitudes toward fatness are linked to neoliberal ideologies, and notions of individual responsibility, political conservatism, and homophobia (Crandall, 1994; Crandall & Biernat, 1990; Crandall & Schiffhauer, 1998; Perez-Lopez, et al., 2001; Quinn & Crocker, 1999). As a measure of positive attitudes towards fat people the FAAT would be expected to be negatively correlated with measures of these constructs. To identify the presence of such belief systems, two approaches were taken. Firstly, participants completed a measure of Social Dominance Orientation – Short Form (SDO–SF; Ho et al., 2015). This measure is designed to capture preference for hierarchical ordering among social groups, and to predict social and political attitudes as well as intergroup attitudes and behaviour. The SDO-SF is an eight item scale scored on a seven point Likert response format, ranging from Strongly disagree (1) to Strongly agree (7); higher scores indicate a stronger preference for group based hierarchy. Items included “some groups of people are simply inferior to other groups” and “It is unjust to try to make groups equal” (the full item list is presented in Appendix M). The SDO-SF demonstrates good reliability, with coefficients ranging from \( \alpha = .79 \) to .90. Social Dominance Orientation has been found to be negatively correlated with empathy and tolerance for difference (Pratto, Sidanius, Stallworth, & Malle, 1994) and has been used as an indicator of individual variance in stigma reduction research (Meadows et al., 2017).

As a second way of capturing support for individual responsibility and political conservatism, participants were also asked their responses to two statements “I support universal health care” and “I support same-sex marriage”. These items were developed
based on their ability to capture related beliefs, while presenting ideas that are topical and current. Response options for these items were scored on a seven-point Likert scale from Strongly disagree (1) to Strongly agree (7), with higher scores indicating more support. It was predicted that people who agreed with these statements would generally score more positively on the FAAT.

As the FAAT includes an empathy subscale, I included a general measure of empathy to establish criterion-related validity. The Toronto Empathy Scale (TES; Spreng, McKinnin, Mar, & Levine, 2009) measures empathy as an emotional process, demonstrating good reliability, \( \alpha = .85 \). The sixteen items are scored on a five point Likert scale ranging from Never (0) to Always (4), items include “I do not feel sympathy for people who cause their own serious illness” (reverse scored) and “It upsets me to see someone being treated disrespectfully”. The full item list is presented in Appendix M. Higher scores demonstrate higher levels of empathy.

Lastly, research has also shown a connection between exercise and attitudes toward fatness (Cardinal, et al., 2014; Flint & Reale, 2016). People who exercise more frequently have been found to express negative evaluations of fat people (Flint & Reale, 2016), and so it was hypothesized that exercise participation would be negatively correlated with the FAAT. Participants were asked the optional question, “If you exercise regularly, how many times a week do you exercise?” This question was marked as optional so that participants not wanting to engage with this type of content would not need to.
Results.

Mean scores for the scales of Social Dominance Orientation (SDO-SF) and Empathy (TES), and for the items “I support universal health care” and “I support same-sex marriage” were calculated and correlated with mean scores on the FAAT subscales (see Table 8.1 for descriptive statistics). As expected, scores on the SDO-SF correlated negatively with scores on the FAAT subscales and scores on the TES showed positive correlations. As Table 8.2 shows, scores on the TES showed the highest correlation with the Empathy subscale, and indicating that these scales are tapping into similar constructs. While a higher correlation was expected, this result may point to a difference in general empathy and empathy towards fat people. Correlations with the subscales discrimination, size acceptance, and complexity, were also moderate (Cohen, 1988), suggesting some underlying association between empathy and these constructs. Scores on the SDO-SF, also had the strongest negative correlation with the subscale empathy, indicating that people scoring high on social dominance, do not score high on empathy toward fat people. While the SDO-SF correlated negatively with the FAAT, and the TES correlated positively, the patterns of correlation for these two validation scales were similar. With regard to social dominance, there were similar patterns of correlations to the TES; with the discrimination, and size acceptance subscales both demonstrating moderate negative correlations.

Responses to the single items “I support universal health care” and “I support same-sex marriage” were correlated with the FAAT subscales, See Table 8.3 for correlations. It was expected that these items were tapping into a similar construct, and would perform in ways similar (although with a reverse orientation) to scores on the SDO-SF. Response to the question “I support same sex marriage” showed weak correlations across all subscales, indicating that this question, although performing as
expected, was not the stronger predictor. Response to the question “I support universal health care” proved a stronger criterion variable, performing in a pattern similar to the SDO-SF demonstrating moderate positive correlations with subscales, empathy, discrimination, and size acceptance.

Table 8.1
Descriptive statistics: Criterion validity measures ($n = 390$)

<table>
<thead>
<tr>
<th>Measure/Item</th>
<th>$M$</th>
<th>$SD$</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Dominance Orientation</td>
<td>2.51</td>
<td>1.27</td>
<td>.87</td>
</tr>
<tr>
<td>Toronto Empathy Scale</td>
<td>3.82</td>
<td>0.60</td>
<td>.89</td>
</tr>
<tr>
<td>“I support universal health care”</td>
<td>5.99</td>
<td>1.60</td>
<td>n/a</td>
</tr>
<tr>
<td>“I support same-sex marriage”</td>
<td>5.95</td>
<td>1.77</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Table 8.2

Criterion validity correlations: Social Dominance Orientation and Empathy ($n = 390$)

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Discrimination</td>
<td>.754**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Size Acceptance</td>
<td>.730**</td>
<td>.804**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Attractiveness</td>
<td>.482**</td>
<td>.615**</td>
<td>.663**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Health</td>
<td>.576**</td>
<td>.608**</td>
<td>.654**</td>
<td>.571**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Complexity</td>
<td>.527**</td>
<td>.489**</td>
<td>.492**</td>
<td>.309**</td>
<td>.467**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Responsibility</td>
<td>.300**</td>
<td>.341**</td>
<td>.328**</td>
<td>.300**</td>
<td>.347**</td>
<td>.261**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Body Acceptance</td>
<td>-.091</td>
<td>.006</td>
<td>.032</td>
<td>.038</td>
<td>.085</td>
<td>-.012</td>
<td>-.119*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. SDO-SF</td>
<td>-.337**</td>
<td>-.333**</td>
<td>-.325**</td>
<td>-.142**</td>
<td>-.263**</td>
<td>-.260**</td>
<td>-.306**</td>
<td>.170**</td>
<td></td>
</tr>
<tr>
<td>10. Empathy (TES)</td>
<td>.386**</td>
<td>.321**</td>
<td>.364**</td>
<td>.228**</td>
<td>.224**</td>
<td>.311**</td>
<td>.297**</td>
<td>-.172**</td>
<td>-.506**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Table 8.3
Criterion validity correlations: Support for same sex marriage and universal health care (n = 390)

<table>
<thead>
<tr>
<th>Factor/Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Discrimination</td>
<td>.754**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Size Acceptance</td>
<td>.730**</td>
<td>.804**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Attractiveness</td>
<td>.482**</td>
<td>.615**</td>
<td>.663**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Health</td>
<td>.576**</td>
<td>.608**</td>
<td>.654**</td>
<td>.571**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Complexity</td>
<td>.527**</td>
<td>.489**</td>
<td>.492**</td>
<td>.309**</td>
<td>.467**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Responsibility</td>
<td>.300**</td>
<td>.341**</td>
<td>.328**</td>
<td>.300**</td>
<td>.347**</td>
<td>.261**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Body Acceptance</td>
<td>-.091</td>
<td>.006</td>
<td>.032</td>
<td>.038</td>
<td>.085</td>
<td>-.012</td>
<td>-.119*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Same sex marriage support</td>
<td>.172**</td>
<td>.097</td>
<td>.122*</td>
<td>.179**</td>
<td>.172**</td>
<td>.151**</td>
<td>.029</td>
<td>-.007</td>
<td></td>
</tr>
<tr>
<td>10. Universal health care support</td>
<td>.366**</td>
<td>.301**</td>
<td>.305**</td>
<td>.190**</td>
<td>.216**</td>
<td>.233**</td>
<td>.105*</td>
<td>.023</td>
<td>.387**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Lastly, I explored whether there was a relationship between scores on the FAAT and exercise frequency. Based on previous findings (Flint & Reale, 2016), it was hypothesized that people who reportedly exercised more frequently would report more negative attitudes towards fat people. To investigate this relationship, response to the question “If you exercise regularly, how many times a week do you exercise?” was divided into categories so as to differentiate between levels of exercise frequency, in total 263 participants reported exercising once or more per week, see Table 8.4 for frequencies.

Table 8.4

Self-reported exercise frequency

<table>
<thead>
<tr>
<th>Exercise frequency</th>
<th>n</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per week</td>
<td>31</td>
<td>11.8</td>
</tr>
<tr>
<td>Twice per week</td>
<td>68</td>
<td>25.9</td>
</tr>
<tr>
<td>Three or four times per week</td>
<td>90</td>
<td>34.2</td>
</tr>
<tr>
<td>Five or more times per week</td>
<td>74</td>
<td>28.1</td>
</tr>
</tbody>
</table>

Comparisons were made for each of the subscales using a one-way between groups analysis of variance (ANOVA). The ANOVA was statistically significant for the Body Acceptance subscale only \( F(3, 259) = 3.66, p = .013 \). Post-hoc analysis with Tukey’s HSD (using \( \alpha = .05 \)) revealed that people who exercised three or four times a week \( (M = 4.58, SD = 1.28) \) and five or more times \( (M = 4.59, SD = 1.51) \) had significantly higher scores on the Body Acceptance scale, compared to people reportedly exercising once per week \( (M = 3.68, SD = 1.63) \). These findings are not consistent with my hypothesis, indicating that for this sample, exercise frequency had
no bearing on evaluations of others, rather exercise frequency influenced how people evaluated their own bodies. This finding offers an interesting avenue for future research.

**Construct Validity**

To establish construct validity, I examined how scores on the subscales of the FAAT compared, positively or negatively, to scores of similar constructs (DeVellis, 2012). It is important to note here that all validity analysis has been conducted with the original five item version of the Complexity scale, not the revised Attribution Complexity scales. As the key argument of this thesis is that the current approach to fat attitude measurement is too antifat, options for finding a scale that would demonstrate convergent validity through positive correlations were limited. For this reason several of the measures I have selected are attempts to demonstrate construct validity through negative correlations.

The FAAT includes a body acceptance factor, and to align with this construct, I selected the Fear of Fat subscale ($\alpha = .79$) from Crandall’s (1994) Antifat Attitudes Questionnaire. The Fear of Fat subscale is expected to demonstrate a negative correlation and establish construct validity. As there is an attractiveness factor, I selected the Physical/Romantic Attractiveness factor ($\alpha = .79-.84$) from the Antifat Attitudes Test (Lewis, et al., 1995) which actually measures how unattractive fat people are considered. This scale was also expected to demonstrate negative correlations and to establish construct validity. Lastly, Crandall’s (1994) Dislike subscale ($\alpha = .84$) was also included. It was expected that this scale would demonstrate negative correlations with the factor Fat Acceptance. I also selected the Beliefs About Obese Persons Scale ($\alpha = .65-82$; Allison et al., 1991). This scale includes items relating to individual responsibility “Obesity is usually caused by overeating” and causes of fatness “In many
cases, obesity is the result of a biological disorder”. I hypothesised that this scale would correlate positively with the factors Responsibility and Complexity. Items and response options for all scales used to establish construct validity are listed in Appendix M.

Results.

Mean scores for the subscales Fear of Fat, Physical/Romantic Attractiveness, and Dislike, and the Beliefs About Obese Persons scale were calculated and correlated with mean scores on the FAAT subscales (see Table 8.5 for descriptive statistics and Table 8.6 for correlations). As hypothesised the Fear of Fat subscale showed a negative correlation with the Body Acceptance factor, although the correlation was moderate, this indicates that both subscales are tapping into a similar construct, although from different perspectives. In a similar trend to the Body Acceptance scale the Fear of Fat scale showed weak correlation with the other factors in the FAAT. The Physical/Romantic Attractiveness factor from the Antifat Attitudes Test showed a strong negative correlation with the attractiveness subscale, again indicating these constructs are inversely related. The Physical/Romantic Attractiveness factor also demonstrated a strong negative correlation with the Size Acceptance factor, and moderate negative correlations with all other factors (except Body Acceptance). Lastly, the Dislike subscale, expected to correlate negatively with factors relating to Fat Acceptance, showed only weak negative correlations with the factors, Empathy, Discrimination, Size Acceptance, Attractiveness, and Health. Interestingly, the strongest negative correlation for Dislike was with the factor Responsibility. Given that the Responsibility factor is reverse scored, this would indicate that dislike for fat people increases with greater attribution of personal responsibility. While not a demonstration of construct validity, this draws attention to an interesting association for future exploration.
Table 8.5

Descriptive statistics: Antifat measures (n = 390)

<table>
<thead>
<tr>
<th>Measure/Item</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of Fat</td>
<td>4.47</td>
<td>2.16</td>
<td>.83</td>
</tr>
<tr>
<td>Physical/Romantic Attractiveness</td>
<td>3.15</td>
<td>1.19</td>
<td>.88</td>
</tr>
<tr>
<td>Dislike</td>
<td>2.11</td>
<td>1.89</td>
<td>.93</td>
</tr>
<tr>
<td>Beliefs About Obese Persons</td>
<td>3.20</td>
<td>0.90</td>
<td>.78</td>
</tr>
</tbody>
</table>

The Beliefs About Obese Persons (BAOP) scale was expected to correlate positively with the subscales Responsibility and Complexity. As seen in Table 8.6, a strong positive correlation with Responsibility is demonstrated. However, the weak positive correlation with the scale Complexity was not expected. As mentioned previously, at the time of selecting validation measures, the final structure of the FAAT was not known. While the BAOP does include items relating to perceived causes of “obesity”, these causes focus on individual factors, hence the strong relationship with the Responsibility scale. The final items included in the Complexity subscale, on the other hand, include items relating to factors that are outside of personal control, making these constructs less related.
Table 8.6
Construct validity correlations: Antifat measures \((n = 390)\)

<table>
<thead>
<tr>
<th>Factor/Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Empathy</td>
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<td>2. Discrimination</td>
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<td>3. Size Acceptance</td>
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<td>4. Attractiveness</td>
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<td>5. Health</td>
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<td>8. Body Acceptance</td>
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<td>9. Fear of Fat</td>
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<td>10. Physical/Romantic Attractiveness</td>
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<td>11. Dislike</td>
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<tr>
<td>12. Beliefs About Obese Persons</td>
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**Correlation is significant at the 0.01 level (2-tailed)**

*Correlation is significant at the 0.05 level (2-tailed)*
Social Desirability Bias

Where self-report measures are used in research there is always the chance that participants may misrepresent their responses so as to appear to be responding in socially desirable ways (Barger, 2002). When measuring constructs that are influenced by social norms and practices, social desirability has the potential to contaminate results. Knowing whether items in a scale elicit socially desirable responses, rather than “true” responses, is important in establishing the validity of the measure (Henderson et al., 1987). In this instance assessing socially desirable responding is a way of establishing discriminant validity with the FAAT. As covered in Chapter 6, during the development of the AFAT, the AFAS, and the UMB-FS, social desirability was assessed using the Marlowe-Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1960). Low correlation between scores on the SDS and the measure of interest was an indication that the scale was not measuring social desirability bias. With respect to the previous measures, there was no indication that participants were influenced by social desirability bias. While attitudes toward fat people do not appear to be influenced by a desire to appear favourable, to allow for comparison with existing measures, and to support the validity of the FAAT, social desirability bias was investigated.

The SDS (Crowne & Marlowe, 1960) is a commonly used measure of social desirability bias (Barger, 2002). The scale includes items such as “I sometimes try to get even, rather than forgive and forget” and “I have never deliberately said something that hurt someone’s feelings”, and is scored with a True/False response option ($\alpha = .76$). While the SDS remains popular, there has been recent critique regarding the dimensionality and adequacy of both the long and short versions of this scale (Barger, 2002). There has also been critique over the current relevance of items, given that the
items for the scale were developed in the late 1950s (Strober, 2001). For this reason, in addition to the SDS, a second more recently developed measure, the Social Desirability Scale – 17 (SDS-17; Strober, 2001) was also included. The SDS-17 is a 17 item scale ($\alpha = .80$) with a True/False response option, and includes items such as “In traffic I am always polite and considerate of others” and “In conversations I always listen attentively and let others finish their sentences”. Items for both scales are listed in Appendix M.

**Results**

Mean scores for the SDS ($M = 5.56; SD = 2.76$) and the SDS-17 ($M = 12.36; SD = 2.67$) were calculated and correlated with mean scores on the FAAT subscales, see Table 8.7 for correlations. The SDS and the SDS-17 demonstrated similar reliability SDS ($\alpha = .75$) and SDS-17 ($\alpha = .79$) as well as similar patterns of correlation, across the eight subscales. Neither scale demonstrated more than low level correlation coefficients. Interestingly, the strongest correlation values for both scales were with the Size Acceptance factor, possibly indicating that messages supporting body acceptance are gaining traction, and perhaps starting to become considered preferred social rhetoric. Given the similar pattern of correlation and the high correlation between the SDS and the SDS-17, the addition of the second measure did not provide support for the claim that the SDS was lacking in relevance. Overall it appears that participants are not responding to the FAAT in ways that would suggest a desire to reflect favourable or socially acceptable viewpoints.
Table 8.7

Social Desirability: Correlations \((n = 390)\)

<table>
<thead>
<tr>
<th>Factor/Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>1. Empathy</td>
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<tr>
<td>2. Discrimination</td>
<td>.754**</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. Size Acceptance</td>
<td>.730**</td>
<td>.804**</td>
<td></td>
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<tr>
<td>4. Attractiveness</td>
<td>.482**</td>
<td>.615**</td>
<td>.663**</td>
<td></td>
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<td></td>
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<tr>
<td>5. Health</td>
<td>.576**</td>
<td>.608**</td>
<td>.654**</td>
<td>.571**</td>
<td></td>
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</tr>
<tr>
<td>6. Complexity</td>
<td>.527**</td>
<td>.489**</td>
<td>.492**</td>
<td>.309**</td>
<td>.467**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Responsibility</td>
<td>.300**</td>
<td>.341**</td>
<td>.328**</td>
<td>.300**</td>
<td>.347**</td>
<td>.261**</td>
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<tr>
<td>8. Body Acceptance</td>
<td>-.091</td>
<td>.006</td>
<td>.032</td>
<td>.038</td>
<td>.085</td>
<td>-.012</td>
<td>-.119*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. SDS</td>
<td>-.016</td>
<td>.092</td>
<td>.189**</td>
<td>.109*</td>
<td>.017</td>
<td>-.075</td>
<td>.013</td>
<td>.102*</td>
<td></td>
</tr>
<tr>
<td>10. SDS-17</td>
<td>-.057</td>
<td>.046</td>
<td>.144**</td>
<td>.066</td>
<td>-.011</td>
<td>-.091</td>
<td>-.023</td>
<td>.160**</td>
<td>.707**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Order Effects

As mentioned, during both the EFA and the CFA data collection, items from the FAAT were divided into three sections; items relating to beliefs and attributions of fatness, items relating to size acceptance and weight-based discrimination, and self-focused items relating to body satisfaction. These groupings separated out items of a more normative nature, items with a more critical stance, and items that ask participants to reflect on their feelings toward their own bodies. As the FAAT item incorporated these different types of items, I wanted to see whether item group order had any influence on response. For both phases of data collection (EFA and CFA), the three groupings of items were presented to participants in a randomised order, within the sections, individual items were not randomized, and remained in the same order. Mean scores were calculated and compared for each item groupings across the different order combination.

Results

To enable comparison, items relating to beliefs and attribution were labelled Group 1, items relating to size acceptance and weight-based stigma, were labelled Group 2, and items relating to body acceptance were labelled Group 3. Randomisation of the groups created six different ways that the items could be presented to participants. For the first round of comparisons, Group 1 included 52 items, Group 2, 85 items, and Group 3, 11 items. Table 8.8, shows the sample sizes and descriptive statistics for the six groupings.
Table 8.8

Order effects: Descriptive statistics from EFA data set.

<table>
<thead>
<tr>
<th>Group Order</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>1,2,3</td>
<td>129</td>
<td>4.99</td>
<td>0.59</td>
</tr>
<tr>
<td>1,3,2</td>
<td>121</td>
<td>5.12</td>
<td>0.56</td>
</tr>
<tr>
<td>2,1,3</td>
<td>125</td>
<td>4.17</td>
<td>0.68</td>
</tr>
<tr>
<td>2,3,1</td>
<td>113</td>
<td>4.96</td>
<td>0.53</td>
</tr>
<tr>
<td>3,1,2</td>
<td>135</td>
<td>5.18</td>
<td>0.68</td>
</tr>
<tr>
<td>3,2,1</td>
<td>133</td>
<td>5.06</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Comparisons were made for each of the groupings using a one-way between groups analysis of variance (ANOVA). The ANOVA was statistically significant only for the Group 1 (beliefs and attributions) scores $F(5, 750) = 2.76, p = .018$. Post-hoc analysis with Tukey’s HSD (using $\alpha = .05$) revealed that differences in Group 1 scores did not demonstrate a significant difference for any of the group orders ($p = .056$), indicating that there were no systematic order effects.

The same analysis was conducted with data collected for the CFA. At this stage of analysis fewer items were retained. Group 1, on beliefs and attribution, included 11 items (Responsibility and Complexity subscale), Group 2, on size acceptance and weight-based stigma, included 30 items (Empathy, Discrimination, Size Acceptance, Attractiveness, and Health subscales), and Group 3, on body acceptance, included 4 items (Body Acceptance subscale), see Table 8.9 for sample sizes and descriptive statistics across the six groupings. Once again group comparisons were made using an
ANOVA. This time the ANOVA was statistically significant only for the Group 3 (body acceptance) scores $F(5, 384) = 3.71, p = .003$. People who completed items relating to body acceptance in the order 1,2,3, had significantly more positive body acceptance scores ($M = 4.95; SD = 1.30$) than those who completed the body acceptance items in the order 2,3,1 ($M = 3.94; SD = 1.43$) or 3,1,2 ($M = 4.12; SD = 1.56$). While this result seems to indicate that completing the items relating to body acceptance last leads to higher body acceptance scores, this effect was not systematic. Participants completing the items in the order 2,1,3 ($M = 4.41; SD =1.43$) did not show a similar statistical difference. Completing the body acceptance items directly after the items relating to size acceptance (regardless of whether the Body Acceptance scale was completed second or last) similarly did not influencing body acceptance scores, as the order 2,3,1 ($M = 3.94; SD = 1.43$) and 1,2,3 ($M = 4.95; SD = 1.30$) showed the largest mean difference.

Table 8.9

Order effects: Descriptive statistics from CFA data set.

<table>
<thead>
<tr>
<th>Group Order</th>
<th>Group 1</th>
<th></th>
<th>Group 2</th>
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<th>Group 3</th>
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<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>1,2,3</td>
<td>61</td>
<td>4.74</td>
<td>0.61</td>
<td>4.88</td>
<td>1.00</td>
<td>4.95</td>
</tr>
<tr>
<td>1,3,2</td>
<td>62</td>
<td>4.67</td>
<td>0.68</td>
<td>4.56</td>
<td>1.18</td>
<td>4.78</td>
</tr>
<tr>
<td>2,1,3</td>
<td>64</td>
<td>4.87</td>
<td>0.63</td>
<td>4.80</td>
<td>1.06</td>
<td>4.41</td>
</tr>
<tr>
<td>2,3,1</td>
<td>76</td>
<td>4.77</td>
<td>0.67</td>
<td>4.97</td>
<td>1.04</td>
<td>3.94</td>
</tr>
<tr>
<td>3,1,2</td>
<td>64</td>
<td>4.73</td>
<td>0.69</td>
<td>4.77</td>
<td>1.09</td>
<td>4.19</td>
</tr>
<tr>
<td>3,2,1</td>
<td>63</td>
<td>4.76</td>
<td>0.76</td>
<td>4.75</td>
<td>1.10</td>
<td>4.29</td>
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</table>
The analysis of order effects has shown no evidence of systematic order effects across the three different groupings of items. However, this is not to say that order effects are not important to consider in future applications of the FAAT. The analysis on the CFA sample data showed some evidence of order effect, that although not systematic enough to draw firm conclusions, suggests the possibility that scores on the Body Acceptance scale may be influenced by the scales completed prior. Given that the Body Acceptance scale is designed to provide insight into how participants position themselves in relation to body acceptance, it may not be surprising that responses are affected by the content of previous items in the measure. Monitoring this effect would be valuable in future research, particularly research with interventions designed to promote size acceptance, or increase body esteem.

**Conclusion**

In this chapter, I have detailed the range of ways in which I have validated the FAAT. Criterion-related validity has been demonstrated through comparisons to established scales of Social Dominance Orientation (Ho et al., 2015) and Empathy (Spreng et al., 2009) and response to the statement “I support universal health care”. Construct validity has been established through convergent and discriminant comparisons to scales from existing fat attitude measures, including the Fear of Fat subscale (Crandall, 1994), the physical/romantic attractiveness factor (Lewis, et al., 1995) and the Beliefs About Obese Persons scale (Allison et al., 1991). In addition to this, the prevalence of social desirability in response, and the impact of order effects have been examined. The lack of systematic findings in relation to these investigations, further supports the validation of the FAAT as a psychometrically robust measure.
CHAPTER 9.
CONCLUSION

“So, where will my measure be useful?

It may be used for assessing attitudes within different populations, such as with medical professionals, unfortunately a source of much shame for fat people, or for assessing the impact of different approaches to public health campaigns, as some campaigns regrettably contribute to negative attitudes. My measure may also be used for assessing the impact of important stigma reduction interventions.

My thesis will create a better measure of attitudes toward fat people, a more sensitive and nuanced measure, that will ultimately contribute to reducing the bullying, discrimination, and social inequity, experienced by too many people in society today.”

This closing to my Three Minute Thesis presentation in 2015 announced my future aspirations for the Fat Attitudes Assessment Toolkit—I would like for the FAAT to become the preferred option for measuring attitudes towards fat people. In expanding the scope of measurement beyond antifat evaluations, the FAAT has the potential to make an important contribution to stigma reduction scholarship.

The FAAT represents a new approach to fat attitude assessment, and provides researchers the ability to quantify evaluations of fat people across multiple dimensions, including: perceptions of weight based discrimination, endorsement of messages that promote size acceptance, empathic responses to fat people, consideration of the complex relationship between health and weight, and recognition of the attractiveness of
fat people. The FAAT also enables researchers to independently quantify complex associations between factors perceived as contributing to fatness, as well as capturing participant appraisal of their own bodies. These options for measurement have not previously been available and they represent an important shift away from the current approach of quantifying antifat rhetoric. While many of these constructs may be at odds with mainstream psychology’s weight centric notions of health, they have the potential to make an important addition to critical fat scholarship and the measurement of attitudes towards fat people. The multiple options provided in the toolkit also allow for nuanced comparisons to be made, the likes of which have also not previously been possible. I aspire for the FAAT to be used in range of research settings. I am especially hopeful that the focus of the five Fat Acceptance scales will stimulate the development of more critical fat research interventions.

**Strengths and Limitations**

The FAAT provides researchers nine independent subscales able to assess a broad range of fat discourse. Quantitative researchers now have the opportunity to explicitly measure positive evaluations of fat people, whereas previously, positive assessments were only able to be measured through an absence of antifat evaluations. Quantitative researchers also now have instruments that align a range of constructs and topics of interest, such as empathy and stigma awareness. Researchers can now assess the inroads that contemporary and critical fat discourse is making, for example, in the endorsement of Size Acceptance, or Health At Every Size messages.

In expanding the scope of measurement and offering the ability to tap into critical fat discourse, the FAAT still retains the ability to quantify constructs that remain a dominant part of mainstream fat discourse. Measuring beliefs about responsibility and
attribution for fatness, not only provide insights into these constructs, they enable researchers to compare how and where changes that align with endorsement of critical discourse parallel changes in normative discourse, and whether these change in uniform ways. In addition, the FAAT allows for potential differences between those for whom “fat people” is an ingroup or an outgroup to be explored.

The toolkit format of the FAAT provides researchers with the flexibility to select the scales that best target the purpose of their study, a feature particularly useful for intervention research. As scales range in length from four to eight items, there is the added benefit of reduced participant burden when using the toolkit in this way. Alternatively researchers interested in exploratory research can include all nine scales and investigate the relationships between the different constructs. Even when all scales are used the participant burden is only 49 items.

In developing and validating the FAAT I followed best practice in measurement design (DeVellis, 2012; Nunnally & Bernstein, 1994; Worthington and Whitaker, 2006) and in doing so addressed many limitations of current measures. I sought and included the advice of both subject matter experts and non-experts to ensure a representative and accessible item pool. I conducted both Exploratory and Confirmatory Factor Analysis, assessed test-retest reliability, and included a host of validation measures to establish the psychometric properties of the final scales. While these steps attest to the reliability and validity of the scale, the body of work I present in this thesis extends beyond the development and validation process.

Several reviews have been instrumental to the development of the FAAT. Firstly, fat discourse is examined in both academic and popular literature. This review was important, not only for generating items for the FAAT, the review delivered new
insights into the complexities of contemporary fat discourse, showing how and where critical fat and antifat perspectives intersect and overlap. The review of digital media coverage identified how the critical fat – antifat division typically found in academia is becoming evident in everyday discourse, as the media and members of the public take up these different positions.

The qualitative and psychometric reviews of antifat measurement, identified limiting aspects of existing antifat measures and was instrumental in building a case for a new approach to quantification. These reviews provide comprehensive documentation of the progression of antifat attitudes measurement over the last three decades, and although I seek to identify limitations, I am mindful to place these measurers within their historic context. While I seek move in a different direction I do not want to undermine the value and the contribution that these measures have made. Without these instruments, researchers would not have been be able to make quantifiable claims about the extent and strength of antifat bias that has driven weight stigma scholarship to date.

Lastly, the review of weight stigma intervention research provides an evaluation of current scholarship that has been influential in guiding construct development for the FAAT. This review also provides insight into the landscape of stigma reduction research. The FAAT will be a new entrant into this field of scholarship, and as such it is important to have an understanding of the potential ways in which the FAAT may be used. The intervention review was also a way to “take stock” and consider options for moving weight stigma research forward. The workshop that evolved from this review brought voices from the weight stigma community into this thesis. Capturing recommendations from this interdisciplinary field has shown support for a shift towards intervention research that respects the lived experience of fat people. A shift that
warrants a move away from the limiting antifat approaches to measurement and confirms a need for the options provided through the FAAT.

While I have adhered to best practice in designing the FAAT, I do not naively make the claim that the FAAT is the definitive solution when it comes to measuring attitudes towards fatness and fat people. The nine subscales focus on what I have considered to be the dominant elements of contemporary fat discourse. While incorporating a range of important perspectives, this taxonomy is not definitive. For example, there are discourses on sexuality, intersectionality, and microaggressions that I did not incorporate into my original review. In addition, despite original item generation, there are several discourses that did not progress into factors and subscales. These include discourses on healthism, disability, children, and gender. I foresee that future scholars may want to extend on my work, incorporate additional perspectives and create measures that further explore evaluations and social responses to fatness, and fat people.

As mentioned in Chapter 7, I faced a dilemma when it came to including item content relating to attribution and responsibility. While I decided this aspect of fat discourse remained an important topic to quantify, I have created a toolkit format where this content remains available, yet is optional. I am aware that the FAAT will be used by researchers operating within the field of mainstream psychology, and as such some of the critical constructs measured are at odds with the weight centric model of health typically advocated. Research focused on the impact weight stigma has on eating and exercise behaviours aligns well with mainstream approaches to psychology that support the notion that weight is a malleable physical trait. Researchers interested in exploring these topics and outcomes will likely elect to use the Responsibility and Attribution scales from the FAAT. However, given the format of the FAAT, there is the potential
for researchers approaching the toolkit with a normative intention, upon exposure to the range of other options, to consider quantifying some more critical topics. In other words, it is possible that the very nature of the toolkit may inspire more critical approaches to quantification research. The flow on effect of this could also mean the inclusion of more critical stimulus materials in intervention based research. Although an ambitious goal, should this translate to more critical quantitative research, this may begin to disrupt focus on the weight centric consequences of fat attitudes. The nature of the FAAT means that it has the ability to move across mainstream and critical research, and in doing so may exert critical influence on more conservative research. Movements along this continuum are important if weight stigma research is to disentangle from restrictive weight centric models of health (McHugh & Kasardo, 2012; Watkins & Gerber, 2016).

**Future applications**

Quantitative researchers interested in understanding and improving social attitudes towards fat people have been limited in the constructs they could measure, particularly researchers approaching from a critical perspective. While critical fat research aligns more with a constructionist research paradigm and qualitative methodology, the need for measurement is important when it comes to identifying attitudes within specific populations, assessing the effectiveness of stigma reduction interventions, and as a part of mixed methods research. In approaching the development of the FAAT from a critical psychology and critical fat studies approach I now enable critical perspectives and as such become a part of the scholarship on fat attitude measurement.
In Chapter 3 I discuss how critical fat discourse and particularly Size Acceptance discourse now inflects mainstream social discourse on fatness and fat people. With the FAAT endorsement of elements of this discourse will now be able to be measured. This will be relevant across a range of important populations. As covered in Chapter 4 the attitudes of health professionals and health professional students alike have been a focus for many researchers. Through the FAAT researchers will now be able to assess whether health professionals, who may have a greater investment in normative approaches to health, are influenced, or are able to be influenced by critical arguments.

One proposition that the FAAT will be able to assess is the notion that ideas focused on personal responsibility need to be challenged in order to achieve more positive evaluations of fat people. While individual attribution has been identified as a foundation of negative evaluations of fat people (Crandall, 1994), research targeting attribution as a means for reducing negative attitudes has had mixed findings (Lee, et al., 2014). One relationship that will be particularly interesting to explore in more detail is this relationship between individual attribution and positive evaluation. Could researchers perhaps foster more positive evaluations of fat people without addressing attribution directly? For example, could an intervention using stimulus materials designed to evoke empathy, or to portray fat people as attractive, lead to more positive evaluations, regardless of whether there is a shift in individual attribution? This is another reason why the Responsibility and Attribution Complexity scales are an important inclusion, as they enable these comparisons to be investigated.

As well as being able to compare levels of endorsement across a range of fat discourse, the FAAT also enables the impact of targeted interventions to be determined. The review of weight stigma research in Chapter 4 showed a range of strategies and
materials are being employed in intervention research. These include: HAES messages, information on the prevalence and consequences of weight stigma, materials designed to evoke empathy, and positive images of fat people. Until now it has not been possible to evaluate the impact these interventions have on participant endorsement of each specific discourse. Nor has it been possible to know how endorsement of these messages translates, if at all, to changes in other evaluations towards fat people, and whether such evaluations change in uniform ways.

**In Closing**

Since presenting the FAAT at the 2018 Weight Stigma Conference (18-19 June, Leeds, UK.) and the 2018 Appearance Matters Conference (12-14 June, Bath, UK.) there has been much interest in the toolkit. There has been interest in investigating cross cultural validation with a French and Mexican sample and measurement invariance with a New Zealand sample. There has also been interest in using the toolkit with health professionals in Canada and Australia, and with health professional students in America, Australia, and the United Kingdom. This early interest attests to the need for a new approach to measurement, the readiness for researchers to engage with this type of measure, and potential for practical applications of the FAAT.

What I hope to have achieved in this thesis is the creation of “a better measure of attitudes toward fat people”. Through a rigorous development process informed by a host of academic and social resources, I have created not just one measure, rather I have produced a toolkit for researchers. The Fat Attitudes Assessment Toolkit offers nine independently robust scales that afford new options for quantification. The FAAT allows researchers to step out of the current confines of antifat quantification, to respect
the lived experience of fat participants, and to test new avenues for reducing weight-based stigma and oppression.
REFERENCES


doi:10.1002/oby.20171


doi:10.1080/21604851.2018.1448174


Fredrick, D. A., Saguy, A. C., & Gruys, K. (2015). Culture, health, and bigotry: How exposure to cultural accounts of fatness shape attitudes about health risk, health policies, and weight based prejudice. *Social Science and Medicine, 1*–*9*
doi:10.1016/j.socscimed.2015.12.031


doi:10.1038/oby.2005.105


Lewis, S., Thomas, S.L., Hyde, J., Castle, D., Blood, R.W., & Komesaroff, P. (2010). “I don’t eat a hamburger and large chips every day” A qualitative study of the


Meadows, A., Higgs, S., Burke, S. E., Dovidio, J. F., van Ryn, M., & Phelan, S. M. (2017). Social dominance orientation, dispositional empathy, and need for cognitive closure moderate the impact of empathy-skills training, but not patent
contact, on medical students’ negative attitudes toward higher-weight patients. 


doi:10.1111/medu.12770


Wertz, F. J. (2014). Qualitative inquiry in the history of psychology. *Qualitative Psychology, 1*, 4-16. doi:10/1037/quip00000007


APPENDICES
### APPENDIX A: CHAPTER 2

#### Qualitative Data Summary

Table A1

Qualitative Data Summary for Thematic Analysis of “Obesity” and Fat Discourse in Digital Media

<table>
<thead>
<tr>
<th>Article title</th>
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<th>Words</th>
<th>Posted</th>
<th>Source</th>
<th>Term</th>
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<tr>
<td>Autism more likely in women who are overweight during pregnancy, study finds.</td>
<td>Amy Packham</td>
<td>147</td>
<td>06/10/15</td>
<td>Huffington Post</td>
<td>Obese</td>
<td><a href="http://www.huffingtonpost.com.au/2015/10/07/autism-overweight-pregnant_n_8252868.html">http://www.huffingtonpost.com.au/2015/10/07/autism-overweight-pregnant_n_8252868.html</a></td>
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<td>Cancer Council Victoria’s anti-soft drink Ad echo’s 90’s ‘Every cigarette is doing you damage’ campaign</td>
<td>Cayla Dengate</td>
<td>216</td>
<td>12/10/15</td>
<td>Huffington Post</td>
<td>Fat</td>
<td><a href="http://www.huffingtonpost.com.au/2015/10/12/graphic-soft-drink-ad_n_8277588.html">http://www.huffingtonpost.com.au/2015/10/12/graphic-soft-drink-ad_n_8277588.html</a></td>
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<td>Celebrities are now fat shaming themselves</td>
<td>Holly Wainwright</td>
<td>105</td>
<td>03/03/15</td>
<td>Mamamia</td>
<td>Fat</td>
<td><a href="http://www.mamamia.com.au/khloe-kardashian-weight-loss-selfie/">http://www.mamamia.com.au/khloe-kardashian-weight-loss-selfie/</a></td>
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<td>College study finds Oreo cookies are as addictive as drugs</td>
<td>N/A</td>
<td>83</td>
<td>16/10/13</td>
<td>Fox News</td>
<td>Obesity</td>
<td><a href="http://www.foxnews.com/health/2013/10/15/college-study-finds-oreo-cookies-are-as-addictive-as-drugs.html">http://www.foxnews.com/health/2013/10/15/college-study-finds-oreo-cookies-are-as-addictive-as-drugs.html</a></td>
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<td>David Cameron “Doesn’t see need” for sugar tax recommended by childhood obesity report.</td>
<td>Laura Silver Comments</td>
<td>305</td>
<td>23/10/15</td>
<td>Buzz Feed</td>
<td>Obese</td>
<td><a href="http://www.buzzfeed.com/laurasilver/david-cameron-I-see-a-need-for-a-sugar-tax-recommended#.yxNa3BVG2">http://www.buzzfeed.com/laurasilver/david-cameron-I-see-a-need-for-a-sugar-tax-recommended#.yxNa3BVG2</a></td>
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<td>Fat shaming week happened and it was the worst</td>
<td>Rosie Waterland Comments</td>
<td>320</td>
<td>10/10/15</td>
<td>Mamamia</td>
<td>Fat</td>
<td><a href="http://www.mamamia.com.au/fat-shaming-week-happened-and-it-was-the-worst/">http://www.mamamia.com.au/fat-shaming-week-happened-and-it-was-the-worst/</a></td>
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<td>“Hey you fat b*tch” Strangers actually yell this out to me</td>
<td>Laura Hampson Comments</td>
<td>506</td>
<td>16/06/15</td>
<td>Mamamia</td>
<td>Fat</td>
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<tr>
<td>I was bullied by my PE teacher</td>
<td>Catherine Rodie</td>
<td>501</td>
<td>10/08/15</td>
<td>Daily Life</td>
<td>Obese</td>
<td><a href="http://www.dailylife.com.au/health-and-fitness/i-was-bullied-by-my-pe-teacher-20150807-gityxf">http://www.dailylife.com.au/health-and-fitness/i-was-bullied-by-my-pe-teacher-20150807-gityxf</a></td>
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<td>Meet the body positivity artist who’s giving trolls a taste of their own medicine</td>
<td>Nora Whelan Comments</td>
<td>126</td>
<td>30/09/15</td>
<td>Buzz feed</td>
<td>Fat</td>
<td><a href="http://www.buzzfeed.com/norawhelan/rachele-cateyes-body-positive-art#.yixqdp5gD">http://www.buzzfeed.com/norawhelan/rachele-cateyes-body-positive-art#.yixqdp5gD</a></td>
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<td>Nearly half of US pregnant women gain too much weight</td>
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<td>06/11/15</td>
<td>Fox News</td>
<td>Obesity</td>
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<td>Skinny-shaming isn’t as bad as fat-shaming</td>
<td>Justine Wood</td>
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<td>19/04/15</td>
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<td>Sodas linked to increased heart failure risk</td>
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<td>The invention that could end obesity</td>
<td>Joel Oliphint Comments</td>
<td>248</td>
<td>27/02/15</td>
<td>Buzz Feed</td>
<td>Obesity</td>
<td><a href="http://www.buzzfeed.com/joeloliphint/the-invention-that-could-end-obesity#.ioqVqrJ6z">http://www.buzzfeed.com/joeloliphint/the-invention-that-could-end-obesity#.ioqVqrJ6z</a></td>
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<tr>
<td>This baby was so overweight it had to be “rescued” by a charity</td>
<td>Grace Jennings-Edquist Comments</td>
<td>143</td>
<td>21/03/14</td>
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<td>Obese</td>
<td><a href="http://www.mamamia.com.au/overweight-baby-chubby-hearts-foundation/">http://www.mamamia.com.au/overweight-baby-chubby-hearts-foundation/</a></td>
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<tr>
<td>This runner is getting noticed to inspire people to run at any size</td>
<td>Sally Tamarkin Comments</td>
<td>138</td>
<td>29/09/15</td>
<td>Buzz Feed</td>
<td>Fat</td>
<td><a href="http://www.buzzfeed.com/sallytamarkin/mirna-rules#.krQ5R6Eyk">http://www.buzzfeed.com/sallytamarkin/mirna-rules#.krQ5R6Eyk</a></td>
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<tr>
<td>Woman in North Dakota says she will hand out anti-obesity flyers to overweight trick-or-treaters.</td>
<td>Rachel Zarrell Comments</td>
<td>193</td>
<td>31/10/15</td>
<td>Buzz Feed</td>
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<td><a href="http://www.buzzfeed.com/rachelzarrell/woman-to-hand-out-letters-calling-children-obese-halloween#.ipVeV2bd1">http://www.buzzfeed.com/rachelzarrell/woman-to-hand-out-letters-calling-children-obese-halloween#.ipVeV2bd1</a></td>
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APPENDIX B: CHAPTER 4

Experiments Interventions and Strategies: Generating New Approaches to Weight Stigma Research

5th Annual Weight Stigma Conference
Prague 2017

Experiments, interventions, and strategies: Generating new approaches to weight stigma research

Workshop Presented by Patricia Cain
Quantification of “Obesity” and Fat Discourse: The Development and Validation of Multidimensional Measures

Publications:

about today...

Discuss and develop ideas and strategies for future weight stigma reduction/intervention research

➢ Overview of weight bias investigation/reduction research
   ▪ Interventions, participants, strategies and theory for change.

➢ Implications
   ▪ Quantifying or contributing to weight bias – risks.
   ▪ Oppression, “othering”, and research justice.

➢ Generating new approaches
   ▪ Strategies for future interventions.
   ▪ Appropriate stimulus materials.
   ▪ Potential target audiences.
A new approach to measurement...

- Multidimensional measures
- Inclusive/non oppressive language

- Assess the breadth of fat/"obesity" discourse & perceptions
  - Health Concern versus Moral Concern
  - Individualism
  - Environment
  - Critical obesity/ Critical Biomedical
  - Social Justice/ Discrimination
  - Size Acceptance & Health At Every Size®
  - Empathy
  - Self Relevant Beliefs

Currently looking for Subject Matter Expert reviewers

---

A review....

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<tr>
<th>Publications</th>
<th>Weight Stigma Exploratory &amp; Reduction Research</th>
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<td>+6</td>
<td>Alberga et al., (2016). Weight bias in health professionals: A systematic review.</td>
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<td>+4</td>
<td>Previously identified studies from personal library</td>
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<td>+13</td>
<td>Updated search 2013-present (replication Lee et al.,)</td>
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## Exploratory - Undergraduate/Psychology

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<tr>
<td>Levis et al. (1997)</td>
<td>Text – behavioural control factors versus metabolic and heredity factors</td>
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<td>Smith et al. (2007)</td>
<td>Text – Negative, positive, neutral, or no descriptor of female body in a personal advertisement.</td>
<td>Language</td>
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<td>Fredrick et al. (2015)</td>
<td>Text – Public health crisis or weight as personal responsibility or HAES or Fat rights</td>
<td>Impact of framing</td>
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<tr>
<td>Fredrick et al. (2016)</td>
<td>Text – Negative frame or Positive frame</td>
<td>Role of framing</td>
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<tr>
<td>Humphrey et al. (2015)</td>
<td>Health At Every Size general education course (3 lectures)</td>
<td>Impact of HAES</td>
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## Exploratory - Other populations

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<tr>
<td>McClure et al. (2011)</td>
<td>Visual images – stereotypical or non stereotypical</td>
<td>Role of imagery</td>
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<tr>
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<td>Visual images – stereotypical or non stereotypical</td>
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<td>Pearl et al. (2012)</td>
<td>Visual images – stigmatising or positive</td>
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<td>Lippa &amp; Sanderson (2012)</td>
<td>Text – genetic or non genetic or genetic &amp; environment interaction causes</td>
<td>Role of genetics</td>
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<td>Beames et al. (2016)</td>
<td>Text – offset information; weight loss effort</td>
<td>Role of effort</td>
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<tr>
<td>Rudolph &amp; Hilbert (2017)</td>
<td>Text – making behavioural changes to enhance health/healthy lifestyle</td>
<td>Role of health messages</td>
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<tr>
<td>Kahn et al. (2017)</td>
<td>Text – psychological or genetic or behavioural causes</td>
<td>Psychological etiology role</td>
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<tr>
<td>Hoyt et al. (2017)</td>
<td>Text – obesity as a disease or obesity as changeable</td>
<td>Role of etiology</td>
</tr>
<tr>
<td>Fredrick et al. (2016)</td>
<td>Text – Negative frame or Positive frame</td>
<td>Role of framing</td>
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### Undergraduate/Psychology

<table>
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<th>Author</th>
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<tr>
<td>Harris et al. (1999)</td>
<td>Interview transcripts – factual information, or high status overweight target, or similar status target.</td>
<td>Attribution</td>
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<td>Randell (1994)</td>
<td>Persuasive text – weight and uncontrollable factors</td>
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<tr>
<td>Puhl et al. (2007)</td>
<td>Manipulated feedback – responses - more positive from other participants or from in-group. Causes – uncontrollable. Versus controllable</td>
<td>Social consensus Attribution</td>
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<tr>
<td>Cico &amp; Latner (2011)</td>
<td>Manipulated feedback - inconsistent with core values, or much stronger than peers, APAT completed again.</td>
<td>Consensus &amp; dissonance</td>
</tr>
<tr>
<td>Kobal &amp; Casela (2015)</td>
<td>Intergroup conversation based on contact – direct, imagined or vicarious</td>
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<td>Dirdica &amp; Barlow (2011)</td>
<td>Lecture on obesity, weight bias, and multiple determinants of weight or lifestyle.</td>
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<td>Hilbert (2006)</td>
<td>Interactive audio-visual - psychoeducation, guided discovery &amp; mental imagery. Causes, societal pressures &amp; prevalence and consequences of weight stigma</td>
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<td>Gapinski, et al. (2006)</td>
<td>Three stage - Video to evoke empathy – Video with positive or negative depictions – CV Rating for fater slim job applicants</td>
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<td>Burnmister et al. (2017)</td>
<td>Video – HBO ‘The weight of the nations’ documentary – weight stigma portion only</td>
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### Health Students

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<tr>
<td>Rakavina et al. (2008)</td>
<td>Curriculum embedded – prevalence and consequence of weight bias, terminology, &amp; perspective taking. Practical - community based fitness program</td>
<td>Attribution learning</td>
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<td>Cotugna &amp; Mallick (2010)</td>
<td>Calorie restricted diet for 1 week (F=1200; M=1500 calories)</td>
<td>Empathy</td>
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### Education

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<tr>
<td>Hagae &amp; White (2005)</td>
<td>Online education module promoting Size Acceptance. (Teachers and teaching students)</td>
<td>Elaboration likelihood</td>
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### Medical Students

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<td>Wiess et al. (1992)</td>
<td>Curriculum embedded 3 phase - video (empathy) written activity (contribution of genetics) and role playing (taking others' perspective)</td>
<td>Elaboration likelihood Attribution</td>
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<td>Kushner et al. (2014)</td>
<td>Communication skills unit (curriculum embedded). Readings – communication issues about weight &amp; obesity and stigma, an interview (scenario) with an overweight standardized patient, and debriefing</td>
<td>Contact</td>
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<td>Persky &amp; Eceleston (2011)</td>
<td>Interaction with virtual female patient – obese or non-obese</td>
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<td>Roberts et al. (2012)</td>
<td>Student patient (bariatric) longitudinal (12 month) relationship &amp; student reflective journal</td>
<td>Contact</td>
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### Health Professionals

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<td>Gujral et al. (2011)</td>
<td>Bariatric Sensitivity training (online) overview of obesity, bias, discrimination and available resources.</td>
<td>Education</td>
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<td>Falkor &amp; Sledge (2011)</td>
<td>Bariatric surgery education module (44 pages) educate on multiple causes of obesity and promote sensitivity.</td>
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<tr>
<td>McVey et al., (2013)</td>
<td>Interactive workshop – weight bias negative effects.</td>
<td>Education</td>
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### Other populations

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<tr>
<th>Author</th>
<th>Intervention Type</th>
<th>Theory/Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachman et al. (2013)</td>
<td>1. Text - genetics or behaviour causes 2. Story of severe discrimination</td>
<td>Information Empathy</td>
</tr>
<tr>
<td>Robinson et al. (1993)</td>
<td>Self-externality/Body image program. Objective: reducing blame for weight (internal factors) and broadening perceptions of beauty. Participants: women reporting negative body image.</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Hilbert (2016)</td>
<td>Interactive audio-visual - psychoeducation, guided discovery &amp; mental imagery. Causes, societal pressures &amp; prevalence and consequences of weight stigma (replication with general population sample)</td>
<td>Attribution</td>
</tr>
<tr>
<td>Cloor &amp; Pull (2016)</td>
<td>Four interventions: First person narrative - evoke empathy; writing about a typical day of an obese person - perspective taking; reading about the complex causes of obesity - attribution; combination of the empathy and causal information.</td>
<td>Empathy Attribution</td>
</tr>
</tbody>
</table>

### Common themes

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Theory/Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text/message based</td>
<td>Attribution</td>
</tr>
<tr>
<td>Curriculum/education</td>
<td>Framing (visual)</td>
</tr>
<tr>
<td>Manipulation of feedback</td>
<td>Empathy</td>
</tr>
<tr>
<td>Contact</td>
<td>Contact</td>
</tr>
<tr>
<td>Images</td>
<td>Social influence</td>
</tr>
<tr>
<td>Video</td>
<td>Elaboration likelihood</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate students</td>
</tr>
<tr>
<td>Health/medical students</td>
</tr>
<tr>
<td>Health professionals</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>
Future research

Suggestions from fat adults for stigma reduction efforts

We need increased public understanding of
• The multiple and complex causes of obesity
• The difficulties of weight loss
• The inaccuracies of common stereotypes
• The emotional consequences of being stigmatized (Puhl et al., 2006)

We should focus on
• School-based anti-bullying policies
• Healthcare approaches – promoting compassionate and respectful care
• Including weight in anti-harassment training (Puhl et al., 2017)

Weight Stigma interventions to include self-acceptance element

• Negative self-perceptions can influence stigmatization (Himmelstein & Tomiyama, 2015)

Some discussion ideas...

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Audiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>What types of interventions/materials are no longer relevant?</td>
<td>Do we need different interventions for different audiences?</td>
</tr>
<tr>
<td>How important is attribution?</td>
<td>Which audiences are the most important to target now?</td>
</tr>
<tr>
<td>How do we incorporate more critical perspectives?</td>
<td>Should we be doing more research that targets internalized stigma?</td>
</tr>
<tr>
<td>Effectiveness versus ethics?</td>
<td></td>
</tr>
</tbody>
</table>

Social Justice

How do we do this without “othering” fat people?
How do we do this while respecting diversity of lived experiences?
How do we do this while honouring all participants body sizes?
How do we do this without contributing to weight stigma and oppression?
Thank-you for your valuable contribution
If you would like a summary of ideas from today’s workshop please contact me at...
p.cain@murdoch.edu.au

School of Psychology and Exercise Science Western Australia

This research is supported by an Australian Government Research Training Program (RTP) Scholarship.

References

References


References


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References


APPENDIX C: CHAPTER 5

Antifat Attitude Measures

Table C1

Attitudes Toward Obese Persons Scale (Allison et al., 1991)

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Obese people are as happy as non-obese people.</td>
</tr>
<tr>
<td>2 Most obese people feel that they are not as good as other people.</td>
</tr>
<tr>
<td>3 Most obese people are more self-conscious than other people.</td>
</tr>
<tr>
<td>4 Obese workers cannot be as successful as other workers</td>
</tr>
<tr>
<td>5 Most non-obese people would not want to marry anyone who is obese.</td>
</tr>
<tr>
<td>6 Severely obese people are usually untidy.</td>
</tr>
<tr>
<td>7 Obese people are usually sociable.</td>
</tr>
<tr>
<td>8 Most obese people are not dissatisfied with themselves.</td>
</tr>
<tr>
<td>9 Obese people are just as self-confident as other people.</td>
</tr>
<tr>
<td>10 Most people feel uncomfortable when they associate with obese people.</td>
</tr>
<tr>
<td>11 Obese people are often less aggressive than non-obese people.</td>
</tr>
<tr>
<td>12 Most obese people have different personalities than non-obese people.</td>
</tr>
<tr>
<td>13 Very few obese people are ashamed of their weight.</td>
</tr>
<tr>
<td>14 Most obese people resent normal weight people.</td>
</tr>
<tr>
<td>15 Obese people are more emotional than non-obese people.</td>
</tr>
<tr>
<td>16 Obese people should not expect to live normal lives.</td>
</tr>
<tr>
<td>17 Obese people are just as healthy as non-obese people.</td>
</tr>
<tr>
<td>18 Obese people are just as sexually attractive as non-obese people.</td>
</tr>
<tr>
<td>19 Obese people tend to have family problems.</td>
</tr>
<tr>
<td>20 One of the worst things that could happen to a person would be for him to become obese.</td>
</tr>
</tbody>
</table>

Scored with a six point Likert scale ranging from -3 = I strongly disagree to +3 = I strongly agree.
<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Obesity often occurs when eating is used as a form of compensation for lack of love or attention.</td>
</tr>
<tr>
<td>2</td>
<td>In many cases, obesity is the result of a biological disorder.</td>
</tr>
<tr>
<td>3</td>
<td>Obesity is usually caused by overeating.</td>
</tr>
<tr>
<td>4</td>
<td>Most obese people cause their problem by not getting enough exercise.</td>
</tr>
<tr>
<td>5</td>
<td>Most obese people eat more than non-obese people.</td>
</tr>
<tr>
<td>6</td>
<td>The majority of obese people have poor eating habits that lead to their obesity.</td>
</tr>
<tr>
<td>7</td>
<td>Obesity is rarely caused by lack of will power.</td>
</tr>
<tr>
<td>8</td>
<td>People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.</td>
</tr>
</tbody>
</table>

Scored with a six point Likert scale ranging from -3 = I strongly disagree to +3 = I strongly agree.
Table C3

Anti-fat Attitudes Questionnaire (Crandall, 1994)

<table>
<thead>
<tr>
<th>Item</th>
<th>Dislike subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I don’t really like fat people much.</td>
</tr>
<tr>
<td>2</td>
<td>I don’t have many friends that are fat.</td>
</tr>
<tr>
<td>3</td>
<td>I tend to think that people who are overweight are a little untrustworthy.</td>
</tr>
<tr>
<td>4</td>
<td>Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people.</td>
</tr>
<tr>
<td>5</td>
<td>I have a hard time taking fat people too seriously.</td>
</tr>
<tr>
<td>6</td>
<td>Fat people make me somewhat uncomfortable.</td>
</tr>
<tr>
<td>7</td>
<td>If I were an employer looking to hire, I might avoid hiring a fat person.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Fear of Fat subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>I feel disgusted with myself when I gain weight.</td>
</tr>
<tr>
<td>9</td>
<td>One of the worst things that could happen to me would be if I gained 25 pounds.</td>
</tr>
<tr>
<td>10</td>
<td>I worry about becoming fat.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Willpower subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>People who weigh too much could lose at least some part of their weight through a little exercise.</td>
</tr>
<tr>
<td>12</td>
<td>Some people are fat because they have no willpower.</td>
</tr>
<tr>
<td>13</td>
<td>Fat people tend to be fat pretty much through their own fault.</td>
</tr>
</tbody>
</table>

Scored with a 10 point Likert scale ranging from 0 = very strongly disagree to 9 = very strongly agree.
Table C4

Anti-fat Attitudes Test (Lewis et al., 1995)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>If fat people don’t get hired, it’s their own fault.</td>
</tr>
<tr>
<td>2</td>
<td>Fat people don’t care about anything except eating.</td>
</tr>
<tr>
<td>3</td>
<td>I’d lose respect for a friend who started getting fat.</td>
</tr>
<tr>
<td>4</td>
<td>Most fat people are boring.</td>
</tr>
<tr>
<td>5</td>
<td>Society is too tolerant of fat people.</td>
</tr>
<tr>
<td>6</td>
<td>When fat people exercise they look ridiculous.</td>
</tr>
<tr>
<td>7</td>
<td>Fat people are just as competent in their work as anyone.</td>
</tr>
<tr>
<td>8</td>
<td>Being fat is sinful.</td>
</tr>
<tr>
<td>9</td>
<td>I prefer not to associate with fat people.</td>
</tr>
<tr>
<td>10</td>
<td>Most fat people are moody and hard to get along with.</td>
</tr>
<tr>
<td>11</td>
<td>If bad things happen to fat people they deserve it</td>
</tr>
<tr>
<td>12</td>
<td>Most fat people don’t keep their surroundings neat and clean.</td>
</tr>
<tr>
<td>13</td>
<td>Society should respect the rights of fat people.</td>
</tr>
<tr>
<td>14</td>
<td>Fat people are unclean.</td>
</tr>
<tr>
<td>15</td>
<td>It’s hard to take fat people seriously.</td>
</tr>
<tr>
<td>16</td>
<td>If I were single, I would date a fat person.</td>
</tr>
<tr>
<td>17</td>
<td>Fat people are physically unattractive.</td>
</tr>
<tr>
<td>18</td>
<td>Fat people shouldn’t wear revealing clothing in public.</td>
</tr>
<tr>
<td>19</td>
<td>I can’t believe someone of average weight would marry a fat person.</td>
</tr>
<tr>
<td>20</td>
<td>It’s disgusting to see fat people eating.</td>
</tr>
<tr>
<td>21</td>
<td>It’s hard not to stare at fat people because they are so unattractive.</td>
</tr>
<tr>
<td>22</td>
<td>I would not want to continue in a romantic relationship if my partner became fat.</td>
</tr>
<tr>
<td>23</td>
<td>I don’t understand how someone could be sexually attracted to a fat person.</td>
</tr>
<tr>
<td>24</td>
<td>People who are fat have as much physical coordination as anyone.</td>
</tr>
<tr>
<td>25</td>
<td>Fat people should be encouraged to accept themselves the way they are.</td>
</tr>
<tr>
<td>Item</td>
<td>Statement</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>26</td>
<td>There’s no excuse for being fat.</td>
</tr>
<tr>
<td>27</td>
<td>Most fat people buy too much junk food.</td>
</tr>
<tr>
<td>28</td>
<td>Most fat people are lazy.</td>
</tr>
<tr>
<td>29</td>
<td>If fat people really wanted to lose weight, they could.</td>
</tr>
<tr>
<td>30</td>
<td>Fat people have no will power.</td>
</tr>
<tr>
<td>31</td>
<td>The idea that genetics causes people to be fat is just an excuse.</td>
</tr>
<tr>
<td>32</td>
<td>If fat people knew how bad they looked, they would lose weight.</td>
</tr>
<tr>
<td>33</td>
<td>Most fat people will latch onto almost any excuse for being fat.</td>
</tr>
<tr>
<td>34</td>
<td>Fat people do not necessarily eat any more than other people.</td>
</tr>
<tr>
<td>35</td>
<td>Jokes about fat people are funny.</td>
</tr>
<tr>
<td>36</td>
<td>If someone in my family were fat, I’d be ashamed of him or her.</td>
</tr>
<tr>
<td>37</td>
<td>I can’t stand to look at fat people.</td>
</tr>
<tr>
<td>38</td>
<td>Fat people are disgusting.</td>
</tr>
<tr>
<td>39</td>
<td>If I have the choice, I’d rather not sit next to a fat person.</td>
</tr>
<tr>
<td>40</td>
<td>I hate it when fat people take up more room than they should in a theatre or on a bus or plane.</td>
</tr>
<tr>
<td>41</td>
<td>Most fat people don’t care about anyone but themselves.</td>
</tr>
<tr>
<td>42</td>
<td>Fat people don’t care about their appearance.</td>
</tr>
<tr>
<td>43</td>
<td>If I owned a business I would not hire fat people because of the way they look.</td>
</tr>
<tr>
<td>44</td>
<td>I’d feel self-conscious being seen in public with a fat person.</td>
</tr>
<tr>
<td>45</td>
<td>The existence of organizations to lobby for the rights of fat people in our society is a good idea.</td>
</tr>
<tr>
<td>46</td>
<td>Fat people obviously have a character flaw, otherwise they wouldn’t become fat.</td>
</tr>
<tr>
<td>47</td>
<td>It makes me angry to hear anybody say insulting things about people because they are fat.</td>
</tr>
</tbody>
</table>

Scored with a 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.
Table C5

Anti-fat Attitudes Scale (Morrison & O’Connor, 1999)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fat people are less sexually attractive than thin people.</td>
<td></td>
</tr>
<tr>
<td>2 I would never date a fat person.</td>
<td></td>
</tr>
<tr>
<td>3 On average, fat people are lazier than thin people.</td>
<td></td>
</tr>
<tr>
<td>4 Fat people only have themselves to blame for their weight.</td>
<td></td>
</tr>
<tr>
<td>5 It is disgusting when a fat person wears a bathing suit at the beach.</td>
<td></td>
</tr>
</tbody>
</table>

Scored with a 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.
Table C6

Fat Phobia Scale – Short Form (Bacon et al., 2001)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lazy - Industrious</td>
</tr>
<tr>
<td>2</td>
<td>No will power – Has will power</td>
</tr>
<tr>
<td>3</td>
<td>Attractive - Unattractive</td>
</tr>
<tr>
<td>4</td>
<td>Good self-control – Poor self-control</td>
</tr>
<tr>
<td>5</td>
<td>Fast - Slow</td>
</tr>
<tr>
<td>6</td>
<td>Having endurance – Having no endurance</td>
</tr>
<tr>
<td>7</td>
<td>Active - Inactive</td>
</tr>
<tr>
<td>8</td>
<td>Weak - Strong</td>
</tr>
<tr>
<td>9</td>
<td>Self-indulgent – Self-sacrificing</td>
</tr>
<tr>
<td>10</td>
<td>Dislikes food – Likes food</td>
</tr>
<tr>
<td>11</td>
<td>Shapeless - Shapley</td>
</tr>
<tr>
<td>12</td>
<td>Undereats - Overeats</td>
</tr>
<tr>
<td>13</td>
<td>Insecure - Secure</td>
</tr>
<tr>
<td>14</td>
<td>Low self-esteem – High self-esteem</td>
</tr>
</tbody>
</table>

Scored with a five point scale between the adjective pairs
Table C7

Universal Measure of Bias – Fat Scale (Latner et al., 2008)

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fat people tend toward bad behavior.</td>
</tr>
<tr>
<td>2 Fat people are sloppy.</td>
</tr>
<tr>
<td>3 Sometimes I think that fat people are dishonest.</td>
</tr>
<tr>
<td>4 Fat people have bad hygiene.</td>
</tr>
<tr>
<td>5 In general, Fat people don’t think about the needs of other people.</td>
</tr>
<tr>
<td>6 I would not like to have a fat person as a roommate.</td>
</tr>
<tr>
<td>7 I like Fat people.</td>
</tr>
<tr>
<td>8 I don’t enjoy having a conversation with a fat person.</td>
</tr>
<tr>
<td>9 I would be comfortable having a fat person in my group of friends.</td>
</tr>
<tr>
<td>10 I would like having a fat person at my place of worship or community center.</td>
</tr>
<tr>
<td>11 I find fat people attractive.</td>
</tr>
<tr>
<td>12 Fat people make good romantic partners.</td>
</tr>
<tr>
<td>13 I find fat people to be sexy.</td>
</tr>
<tr>
<td>14 Fat people are a turn off.</td>
</tr>
<tr>
<td>15 I find fat people to be pleasant to look at.</td>
</tr>
<tr>
<td>16 Special effort should be taken to make sure that fat people have the same rights and privileges as other people.</td>
</tr>
<tr>
<td>17 Special effort should be taken to make sure that fat people have the same salaries as other people.</td>
</tr>
<tr>
<td>18 Special effort should be taken to make sure that fat people have the same educational opportunities as other people.</td>
</tr>
<tr>
<td>19 Special effort should be taken to make sure that fat people have the same housing opportunities as other people.</td>
</tr>
<tr>
<td>20 I try to understand the perspective of fat people.</td>
</tr>
</tbody>
</table>

Scored with a seven point Likert scale ranging from strongly agree to strongly disagree
APPENDIX D: CHAPTER 5

Qualitative Review of Antifat Measures.

Seven measurement instruments designed to quantify explicit evaluations of fat and “obese” people and of the “conditions” of fatness and “obesity” have been selected for analysis. The instruments, in order of publication are; The Attitudes Toward Obese Persons Scale (ATOP) and Beliefs About Obese Persons Scale (BAOP; Allison, Bastile, & Yuker, 1991), the Antifat Attitudes Questionnaire (AAQ; Crandall, 1994), the Antifat Attitudes Test (AFAT; Lewis, Cash, Jacoby & Bubb-Lewis, 1995), the Antifat Attitudes Scale (AFAS; Morrison, & O’connor, 1999), the Fat Phobia Scale – Short Form (FPS-SF; Bacon, Scheltema, & Robinson, 2001) and the Universal Measure of Bias- Fat Scale (UMB-FS; Latner, O’Brien, Durso, Brinkman, & MacDonald, 2008). These instruments represent the key validated measures of weight bias, recommended and used in the domain of weight stigma research. All seven have been recommended by The Rudd Centre for Food Policy and Obesity, an internationally recognized multidisciplinary research centre, focused on obesity prevention and providing solutions to weight bias and discrimination (UConn Rudd Centre for Food Policy and Obesity, 2015). In addition to this, four of the seven instruments (AAQ, AFAT, AFAS and ATOP) receive additional endorsement from the Handbook of Assessment Methods for Eating Behaviours and Weight Related Problems (Allison & Baskin 2009), a reference reviewing multiple assessment tools for both researchers and clinicians working in the areas of eating disorders, obesity and weight bias. Furthermore, in a recent meta-analysis of weight bias interventions, Lee, Ata and Brannick (2014) focused on these seven instruments, identifying them as the key validated measures of weight bias adopted by researchers.
Approach to Analysis

All except the FPS-SF, are statement and response measures, the items from six measures were investigated as a collective data corpus of 127 statements. Items were collated and subjected to separate content and thematic analysis. Content analysis enables qualitative data to be transformed and accounted for quantitatively (Creswell, 2005), data is classified according to explicit content and allocated to mutually exclusive categories (Willig, 2013). In this instance, the general content of each item was identified for categorization, and this formed the basis of coding. Items were systematically grouped into key content areas with associated subcategories (See Appendix B). During this process items were labeled according to their orientation, negative, positive, or neutral. Following this, the data corpus was approached again, on this occasion with the objective of identifying the inferred meaning underlying explicit item content. Identified as having the ability to tap latent meaning (Joffe, 2012), thematic analysis is a method for detecting implied evaluations. Analysis adhered to the stages of thematic analysis outlined by Braun and Clarke. These stages include; “Familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes.” (Braun & Clarke, 2006, p. 87). Coding and collation of the items resulted in six distinct concepts, with links through hierarchical relationships.

Content Analysis

In reviewing the items that make up the weight bias measures, it is apparent that the majority of content reflects negative appraisals of fatness and “obesity”. Given that the explicit intention of most of these measures is to assess antifat sentiment, this of course could be expected. In terms of focus, almost half of the items concentrate on the personal qualities and characteristics of fat people as well as the desire to dissociate
from fat people. Following this, content centres on responses to fatness, perceived
causes of fatness, and the appearance and attractiveness of fat people. Within the mix of
items there are also items that either do not take, or take less of a negative perspective,
and these I have identified as critical perspectives. Table D1 indicates the number of
items within each these categories.

Table D1
Content analysis summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Qualities</td>
<td>42</td>
<td>29</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Social Distance</td>
<td>22</td>
<td>16</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Responses to fatness</td>
<td>21</td>
<td>20</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Causes</td>
<td>19</td>
<td>8</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Appearance</td>
<td>13</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Critical Perspectives</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>81</td>
<td>29</td>
<td>17</td>
</tr>
</tbody>
</table>

**Personal Qualities**

Overall, content relating to personal qualities dominated. Statements relate to the
overall character or personality features ascribed to fat people and more specifically to
perceived traits such as trustworthiness, moodiness or thoughtlessness, self-esteem, and
even personal hygiene, as the following examples indicate.
Most fat people are moody and hard to get along with. (AFAT; Item 10)

Fat people obviously have a character flaw, otherwise they wouldn’t become fat. (AFAT; Item 46)

Most obese people feel they are not as good as other people. (ATOP; Item 2)

Fat people have bad hygiene. (UMB-FS; Item 4)

Items present a picture of fat people as lacking in many socially desirable traits and characteristics. Presumed faults or deficits go beyond the domain of weight, with items frequently referring to emotional rather than physical states. In some cases, inferences are made that character traits have indeed to the “condition of obesity” while in other instances the connection is unclear. Within this pool of items judgments regarding (negative) personal qualities features heavily, indicating that evaluations of fat people is about more body size, rather it is about the “type” of people they are assumed to be.

Social Distance

Social distance items focus on a desire to disassociate with or avoid contact with fat people, it follows that these items were oriented in negative terms.

I would not like to have a fat person as a roommate (UMB-FS; Item 6)

I can’t stand to look at fat people. (AFAT; Item 37)

While items offer no specific rationale for wanting to avert physical and even visual contact, there is nonetheless the implication that fat people prompt avoidance. There are
two domains that depict specifically the spaces where fat people are shunned; in employment situations and in relationships, particularly romantic partnerships.

If I were an employer looking to hire, I might avoid hiring a fat person. (AAQ; Item 7)

I can’t believe someone of average weight would marry a fat person. (AFAT; Item 19)

Despite the objectionable nature of these items they do recognize important domains in which weight based discrimination is experienced (Brewis, Hruschka & Wutich, 2011; Major, Eliezer & Rieck, 2012; Puhl & Brownell, 2001; Puhl & Heuer, 2009).

Responses to fatness

Given the overt anti fat orientation of the majority of these measures, it is not surprising that the primary responses to fatness are negative. The foremost response to fatness and fat people was Blame, with individuals held accountable for their body size.

Fat people only have themselves to blame for their weight. (AFAS; Item 4)

Fat people tend to be fat pretty much through their own fault. (AAQ; Item 13)

Following this content focused on disgust, ridicule and shame.

Fat people are disgusting (AFAT; Item 38)

Jokes about fat people are funny (AFAT; Item 35)
If someone in my family were fat, I’d be ashamed of him or her

(AFAT; Item 36)

Of particular interest here is the content related to disgust. As an emotional response, the assessment of disgust can be considered a reaction to a moral violation (Rozin, Lowery, Imada & Hait, 1999). Here the violation may connect to the sins of “sloth” and “gluttony”, such moral judgements strongly align with denigration of fat people (Crandall & Martinez, 1996; Crandall & Schiffhauer, 1998).

Causes

The group of items relating to the causes of fatness featured assessments relating to eating and activity, reflecting the dominant normative perspective that body weight is the product of what has become commonly known as “energy in – energy out” balance. Items relating to the biological causes of fatness are represented to a much lesser extent.

Most obese people cause their problem by not getting enough exercise.

(BAOP; Item 4)

The majority of obese people have poor eating habits that lead to their obesity (BAOP; Item 6)

The idea that genetics causes people to be fat is just an excuse. (AAT; Item 31)

Also evident in this category is more of a balance between items of a negative nature and items of a neutral nature.

In many cases, obesity is the result of a biological disorder. (BAOP; Item 2)
People can be addicted to food, just as others are addicted to drugs, and these people usually become obese. (BAOP; Item 8)

While the overall balance of items sits fairly evenly between the negative and neutral categories, the neutral items tend to focus mainly on external yet still individualized accounts of why and how someone would become fat.

**Appearance**

This category of items relates to the perceived unattractiveness, including sexual unattractiveness and offensiveness of the fat body, particularly when displayed in public. Items do not all demonstrate negative appraisals, there are equal numbers of neutral and positive items here, presenting more balance, although this perspective is limited to the more recently developed UMB-FS.

- Fat people shouldn’t wear revealing clothing in public. (AFAT; 18)
- Fat people are a turn off. (UMB-FS; Item 14)
- I find fat people to be sexy. (UMB-FS; Item 13)
- I find fat people attractive. (UMB-FS; Item 11)

While in this case fewer items are negative, the high proportion of items dedicated to appearance signposts the importance placed on this evaluation. Many items reflect the idea that fat people should manage the public display of their body so as not to offend others. Juxtaposed with this is the idea that fat bodies are attractive and sexy. While all survey items are gender neutral, the normative beauty standard typically imposed on women’s bodies render these items particularly interesting. Fat female bodies are often hypersexualized, demonstrating large and prominent female features (Lupton, 2013)
raising the question; is the fat body considered attractive in the way that a “thin” body may be, or are fat bodies found desirable because they are fat? There is of course no way of extracting answers to these questions given the current items available.

**Critical Perspectives**

While some may not consider the items I have labelled critical as “critical” in terms of a critical fat approach to embodiment, politics or scholarship, in this instance I identify them as representing a more critical approach within the data corpus, given that items focus on size acceptance, the ability to be fat and healthy, anti-discrimination, and equal rights.

Fat people should be encouraged to accept themselves the way they are. (AAT; Item 25)

Special effort should be taken to make sure that fat people have the same rights and privileges as other people. (UMB-FS; Item 16)

Obese people are just as healthy as non-obese people. (ATOP; Item 17)

The existence of these items, although representing a relatively small proportion of the item pool, represent challenges to the normative weight centric health paradigm and anti-obesity rhetoric. Again it is worth noting that most items are from the UMB-FS, possibly reflecting a shift away from the dominance of anti-fat rhetoric in quantification.
Thematic Analysis

During the initial analysis two broad categories first emerged, negative evaluations and positive/neutral evaluations, then within these groupings further themes were identified. Within the positive/neutral evaluations, were two themes, ‘Equality’ and ‘Consideration’. Within the negative evaluations, four theme pairings were identified; ‘Impaired and Inferior’, ‘Disapproval and Disgust’, ‘Aversion and Avoidance’, and ‘Controllability and Misbehaviour’. In relation to the controllability of weight, some items position the fat person as failing in their ability to manage their body, while others depict weight as outside of individual control. Despite the contradiction, ‘control’ was mainly framed in negative in terms of ‘lack’, playing a role in establishing the ‘Controllability and Misbehaviour’ theme.

Controllability and Misbehaviour

Controllability and misbehaviour captures the idea that people have ultimate control over the size of their body, and that fat people do not exercise the appropriate control to keep their body within a suitable socially sanctioned range. The items reflect an assumption that the fat body is evidence of a lack of appropriate restraint and hence a form of misbehaviour on the part of fat people. Ideas expressed here not only relate to beliefs people have about the causes of weight, they depict the fat life as one lived with reckless abandon and the fat body as proof of such transgressions. Such beliefs and assumptions are reflected in items included throughout most measures.

Fat people only have themselves to blame for their weight. (AFAS; Item 4)
If fat people really wanted to lose weight, they could. (AFAT; Item 29)

Obesity is usually caused by overeating (BAOP; Item 3)

People who weigh too much could lose at least some part of their weight through a little exercise (AAQ; Item 11)

The statements are also evidence of the commonly held and very individualized ‘energy in - energy out’ approach to understanding weight (Brownell, 1991). Other items depict a more overarching sentiment, suggesting a tendency for fat people to behave in ways considered “bad”.

Fat people tend toward bad behaviour (UMB-FS; Item 1)

Central to this is the idea that if people did not engage in “bad” behaviour, then they would not be fat. Here the specifics of what constitutes badness is not revealed, leaving participants to attach their own inferences.

**Impaired and Inferior**

This theme links together several ideas. Firstly, in relation to the previous theme of Misbehaviour, this theme reflects a belief that the reason fat people misbehave, and become fat, is that they are impaired in some way. For example,

Most fat people are lazy (AFAT; Item 28)

Fat people have no willpower (AFAT; Item 30)

Obesity often occurs when eating is used as a form of compensation for lack of love or attention (BAOP; Item 1)
These beliefs suggest that there is something different about fat people, not just in the way they behave, but in their underlying character and motives. More specifically, fat people are impaired in their “energy in – energy out” management; they eat too much or exercise too little. In addition to this, items suggest fat people are impaired in other domains disconnected from body weight.

    Fat people are unclean (AFAT; Item 14)

    Fat people are sloppy (UMB-FS; Item 2)

    Most fat people are boring (AFAT; Item 4)

    Obese people tend to have family problems (ATOP; Item 19)

    I tend to think that people who are overweight are a little untrustworthy

    (AAQ; Item 3)

These items reflect the beliefs that people are “failing” across multiple life domains. If fat people are believed to be impaired, then the question remains, impaired in relation to whom? Although not explicitly stated in the above items, it is evident that the comparison should be made to a non-fat or ‘normal’ weight person. Several items do overtly make this comparison, indicating that the fat person is indeed inferior to the ‘normal’ weight person. Evaluations made between fat and non-fat people also occur across different domains.

    Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people (AAQ; Item 4)

    Most obese people have different personalities than non-obese people

    (ATOP; Item 12)
On average, fat people are lazier than thin people (AFAS; Item 3)

Obese workers cannot be as successful as other workers (ATOP; Item 4)

Direct comparisons identify the fat subject as inferior to their non-fat counterpart, however there are other assumptions operating. Several of these items identify the fat person as having an impairment that leads to their fatness and consequent inferiority, such as “On average, fat people are lazier than thin people” (AFAS; Item 3), here it is assumed that the person becomes fat because they are lazy. In contrast, items such as “Obese workers cannot be as successful as other workers” (ATOP; Item 4) imply that it is the weight itself making the person impaired and subsequently inferior.

**Disapproval and Disgust**

This theme reflects the negative feelings that are purported to be evoked in response to fat people. Feelings of disapproval appear linked to the beliefs expressed in the previous themes, of irresponsibility, impairment and misbehaviour. Fat people are condemned for their size and character, as evident in the following items.

I hate it when fat people take up more room than they should in a theatre or on a bus or plane (AFAT; Item 40)

I have a hard time taking fat people too seriously (AAQ: Item 5)

I’d lose respect for a friend who started getting fat (AFAT; Item 3)

If someone in my family were fat, I’d be ashamed of him or her (AFAT; Item 36)
Apparent in these items, is the idea that even positive feelings toward friends and family, are not enough to protect against disapproval, should that person become fat. Items here represent a shift away from items, relating to the “condition of fatness” and instead focus on emotive individualized responses, again demonstrating a particular focus on disgust.

Fat people are disgusting (AFAT; Item 38)

It is disgusting when a fat person wears a bathing suit at the beach
(AFAS; Item 5)

It is disgusting to see fat people eating (AFAT; Item 20)

Exposing a fat body or engaging in food consumption, are both pubic actions that are represented as offensive and unpleasant to witness. As already mentioned, the response of disgust is related to violations of particular moral codes, such as those surrounding divinity, purity and degradation of both the self and the natural order of things (Rozin et al., 1999). Disgust, as a response to fatness, has been used as a tactic in public health campaigns, based on a rationale that disgust is a motivator for change, a tactic that has not been without critique (Lupton, 2015). It is in relation to disapproval and disgust that the next theme develops, as disapproval and disgust cause people to seek distance.

**Aversion and Avoidance**

Aversion and avoidance reflects the idea that deliberate actions are taken or intend to be taken to avoid association and contact with fat people. Behaviours are based on feelings of disgust and disapproval, apparent in the previous theme.

I prefer not to associate with fat people (AAT; Item 9)
I don’t enjoy having a conversation with a fat person (UMB-FS; Item 8)

Interestingly, within this theme the focus of attention turns toward the self,

One of the worst things that could happen to me would be if I gained 25 pounds (AAQ; Item 9)

I worry about becoming fat (AAQ; Item 10)

These items reflect the idea that fatness should be be avoided, at all costs. The item “One of the worst things that could happen to me would be if I gained 25 pounds” (AAQ; Item 9) highlights the perceived severity of personal weight gain, however why this would be “the worst” is left to the participant to conceive.

Negative evaluations of fat people reinforce the desire for distance, this extends to avoiding fat people in relationships and employment situations.

I would never date a fat person (AFAS; Item 2)

I would not want to continue in a romantic relationship if my partner became fat (AFAT; Item 22)

If I owned a business I would not hire fat people because of the way they look (AFAT; Item 43)

These items reflect the idea that fat people are considered undesirable as romantic partners and potential employees, echoing the many items focused social distance, identified in the Content Analysis.
**Consideration**

The last themes reflect awareness that fat people are marginalized within society and may require protection from discrimination and negative consequences. While not specifically reflecting positive evaluations of fat people, the ideas represented are a shift away from justified negative judgements.

I try to understand the perspectives of fat people (UMB-FS; Item 20)

The existence of organizations to lobby for the rights of fat people in our society is a good idea (AFAT; Item 45)

It makes me angry to hear anybody say insulting things about people because they are fat (AFAT; Item 47)

Although reflecting the notion that consideration is important, the reason why consideration is necessary is not attended to.

**Equality**

The final theme centres on evaluations of fat and obese people as equal to ‘others’ or people referred to as “non-obese”. Examples of this theme include;

Obese people are just as self-confident as other people (ATOP; Item 9)

Obese people are just as sexually attractive as non-obese people (ATOP; Item 18)

Some of these items reflect ideas that have been represented in negative terms through items, relating to character and attractiveness. These representations, while limited in number throughout the measures, reflect more positive evaluations of fat people. Also evidenced here are items relating to physical ability and to health;
People who are fat have as much physical coordination as anyone
(AFAT; Item 24)

Obese people are just as healthy as non-obese people (ATOP; Item 17)

These items are noteworthy as very few measures have presented alternative perspective, particularly with regard to health and the fat body. Health related items have typically been excluded from measures due to reported concerns that health related items may reflect participants concern for fat people’s health rather than reflecting explicit attitudes toward fatness (Lewis et al., 1995). Interestingly the item suggesting that “obese people are just as healthy as non-obese people” now presents somewhat of a paradox, since “obesity” has been labelled a disease by the American Medical Association in 2013 (Frellick, 2013).
### APPENDIX E: CHAPTER 5

**Item Content Analysis Summary**

Table E1

Content analysis of antifat measures

<table>
<thead>
<tr>
<th>Content</th>
<th>Quantity</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
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### APPENDIX F: CHAPTER 6

**Item Categorization of Antifat Measures**

Table F1

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<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1. Obese people are as happy as non-obese people.</td>
<td>Evaluation</td>
<td>Disposition</td>
</tr>
<tr>
<td>2. Most obese people feel that they are not as good as other people.</td>
<td>Evaluation</td>
<td>Self-esteem</td>
</tr>
<tr>
<td>3. Most obese people are more self-conscious than other people.</td>
<td>Evaluation</td>
<td>Self-esteem</td>
</tr>
<tr>
<td>4. Obese workers cannot be as successful as other workers</td>
<td>Evaluation</td>
<td>Employment</td>
</tr>
<tr>
<td>5. Most non-obese people would not want to marry anyone who is obese.</td>
<td>Cognition</td>
<td>Relationships</td>
</tr>
<tr>
<td>6. Severely obese people are usually untidy.</td>
<td>Cognition</td>
<td>Hygiene</td>
</tr>
<tr>
<td>7. Obese people are usually sociable.</td>
<td>Cognition</td>
<td>Disposition</td>
</tr>
<tr>
<td>8. Most obese people are not dissatisfied with themselves.</td>
<td>Cognition</td>
<td>Self-esteem</td>
</tr>
<tr>
<td>9. Obese people are just as self-confident as other people.</td>
<td>Evaluation</td>
<td>Self-esteem</td>
</tr>
<tr>
<td>10. Most people feel uncomfortable when they associate with obese people.</td>
<td>Cognition/Affect</td>
<td>Association</td>
</tr>
<tr>
<td>11. Obese people are often less aggressive than non-obese people.</td>
<td>Evaluation</td>
<td>Disposition</td>
</tr>
<tr>
<td>12. Most obese people have different personalities than non-obese people.</td>
<td>Evaluation</td>
<td>Character</td>
</tr>
<tr>
<td>13. Very few obese people are ashamed of their weight.</td>
<td>Cognition</td>
<td>Shame</td>
</tr>
<tr>
<td>15. Obese people are more emotional than non-obese people.</td>
<td>Evaluation</td>
<td>Disposition</td>
</tr>
<tr>
<td>Item</td>
<td>Component</td>
<td>Topic</td>
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<tr>
<td>------</td>
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<tr>
<td>16</td>
<td>Obese people should not expect to live normal lives.</td>
<td>Cog/Affect</td>
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<td>17</td>
<td>Obese people are just as healthy as non-obese people.</td>
<td>Evaluation</td>
</tr>
<tr>
<td>18</td>
<td>Obese people are just as sexually attractive as non-obese people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>19</td>
<td>Obese people tend to have family problems.</td>
<td>Cognition</td>
</tr>
<tr>
<td>20</td>
<td>One of the worst things that could happen to a person would be for him to become obese.</td>
<td>Cog/Affect</td>
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</table>

Table F2

Item characteristics: Beliefs About Obese Persons Scale (Allison et al., 1991)

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<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Obesity often occurs when eating is used as a form of compensation for lack of love or attention.</td>
<td>Cognition</td>
</tr>
<tr>
<td>2</td>
<td>In many cases, obesity is the result of a biological disorder.</td>
<td>Cognition</td>
</tr>
<tr>
<td>3</td>
<td>Obesity is usually caused by overeating.</td>
<td>Cognition</td>
</tr>
<tr>
<td>4</td>
<td>Most obese people cause their problem by not getting enough exercise.</td>
<td>Cognition</td>
</tr>
<tr>
<td>5</td>
<td>Most obese people eat more than non-obese people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>6</td>
<td>The majority of obese people have poor eating habits that lead to their obesity.</td>
<td>Cognition</td>
</tr>
<tr>
<td>7</td>
<td>Obesity is rarely caused by lack of will power.</td>
<td>Cognition</td>
</tr>
<tr>
<td>8</td>
<td>People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.</td>
<td>Cognition</td>
</tr>
</tbody>
</table>
Table F3

Item characteristics: Anti-fat Attitudes Questionnaire (Crandall, 1994)

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dislike subscale</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>I don’t really like fat people much.</td>
<td>Affect</td>
</tr>
<tr>
<td>2</td>
<td>I don’t have many friends that are fat.</td>
<td>Behaviour</td>
</tr>
<tr>
<td>3</td>
<td>I tend to think that people who are overweight are a little untrustworthy.</td>
<td>Cognition</td>
</tr>
<tr>
<td>4</td>
<td>Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people.</td>
<td>Evaluation</td>
</tr>
<tr>
<td>5</td>
<td>I have a hard time taking fat people too seriously.</td>
<td>Affect</td>
</tr>
<tr>
<td>6</td>
<td>Fat people make me somewhat uncomfortable.</td>
<td>Affect</td>
</tr>
<tr>
<td>7</td>
<td>If I were an employer looking to hire, I might avoid hiring a fat person.</td>
<td>Behaviour</td>
</tr>
<tr>
<td><strong>Fear of Fat subscale</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I feel disgusted with myself when I gain weight.</td>
<td>Affect</td>
</tr>
<tr>
<td>9</td>
<td>One of the worst things that could happen to me would be if I gained 25 pounds.</td>
<td>Cognition/Affect</td>
</tr>
<tr>
<td>10</td>
<td>I worry about becoming fat.</td>
<td>Affect</td>
</tr>
<tr>
<td><strong>Willpower subscale</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>People who weigh too much could lose at least some part of their weight through a little exercise.</td>
<td>Cognition</td>
</tr>
<tr>
<td>12</td>
<td>Some people are fat because they have no willpower.</td>
<td>Cognition</td>
</tr>
<tr>
<td>13</td>
<td>Fat people tend to be fat pretty much through their own fault.</td>
<td>Cognition</td>
</tr>
<tr>
<td></td>
<td>Item</td>
<td>Component</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1</td>
<td>If fat people don’t get hired, it’s their own fault.</td>
<td>Cognition</td>
</tr>
<tr>
<td>2</td>
<td>Fat people don’t care about anything except eating.</td>
<td>Cognition</td>
</tr>
<tr>
<td>3</td>
<td>I’d lose respect for a friend who started getting fat.</td>
<td>Affect</td>
</tr>
<tr>
<td>4</td>
<td>Most fat people are boring.</td>
<td>Cognition</td>
</tr>
<tr>
<td>5</td>
<td>Society is too tolerant of fat people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>6</td>
<td>When fat people exercise they look ridiculous.</td>
<td>Cognition</td>
</tr>
<tr>
<td>7</td>
<td>Fat people are just as competent in their work as anyone.</td>
<td>Cognition</td>
</tr>
<tr>
<td>8</td>
<td>Being fat is sinful.</td>
<td>Cognition</td>
</tr>
<tr>
<td>9</td>
<td>I prefer not to associate with fat people.</td>
<td>Behaviour</td>
</tr>
<tr>
<td>10</td>
<td>Most fat people are moody and hard to get along with.</td>
<td>Cognition</td>
</tr>
<tr>
<td>11</td>
<td>If bad things happen to fat people they deserve it.</td>
<td>Cog/Affect</td>
</tr>
<tr>
<td>12</td>
<td>Most fat people don’t keep their surroundings neat and clean.</td>
<td>Cognition</td>
</tr>
<tr>
<td>13</td>
<td>Society should respect the rights of fat people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>14</td>
<td>Fat people are unclean.</td>
<td>Cognition</td>
</tr>
<tr>
<td>15</td>
<td>It’s hard to take fat people seriously.</td>
<td>Affect</td>
</tr>
<tr>
<td>16</td>
<td>If I were single, I would date a fat person.</td>
<td>Behaviour</td>
</tr>
<tr>
<td>17</td>
<td>Fat people are physically unattractive.</td>
<td>Cognition</td>
</tr>
<tr>
<td>18</td>
<td>Fat people shouldn’t wear revealing clothing in public.</td>
<td>Cognition</td>
</tr>
<tr>
<td>Item</td>
<td>Statement</td>
<td>Component</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>19</td>
<td>I can’t believe someone of average weight would marry a fat person.</td>
<td>Affect</td>
</tr>
<tr>
<td>20</td>
<td>It’s disgusting to see fat people eating.</td>
<td>Affect</td>
</tr>
<tr>
<td>21</td>
<td>It’s hard not to stare at fat people because they are so unattractive.</td>
<td>Behaviour/Affect</td>
</tr>
<tr>
<td>22</td>
<td>I would not want to continue in a romantic relationship if my partner became fat.</td>
<td>Behaviour/Affect</td>
</tr>
<tr>
<td>23</td>
<td>I don’t understand how someone could be sexually attracted to a fat person.</td>
<td>Affect</td>
</tr>
<tr>
<td>24</td>
<td>People who are fat have as much physical coordination as anyone.</td>
<td>Evaluation</td>
</tr>
<tr>
<td>25</td>
<td>Fat people should be encouraged to accept themselves the way they are.</td>
<td>Cog/Affect</td>
</tr>
<tr>
<td>26</td>
<td>There’s no excuse for being fat.</td>
<td>Cognition</td>
</tr>
<tr>
<td>27</td>
<td>Most fat people buy too much junk food.</td>
<td>Cognition</td>
</tr>
<tr>
<td>28</td>
<td>Most fat people are lazy.</td>
<td>Cognition</td>
</tr>
<tr>
<td>29</td>
<td>If fat people really wanted to lose weight, they could.</td>
<td>Cognition</td>
</tr>
<tr>
<td>30</td>
<td>Fat people have no will power.</td>
<td>Cognition</td>
</tr>
<tr>
<td>31</td>
<td>The idea that genetics causes people to be fat is just an excuse.</td>
<td>Cognition</td>
</tr>
<tr>
<td>32</td>
<td>If fat people knew how bad they looked, they would lose weight.</td>
<td>Cog/Affect</td>
</tr>
<tr>
<td>33</td>
<td>Most fat people will latch onto almost any excuse for being fat.</td>
<td>Cognition</td>
</tr>
<tr>
<td>34</td>
<td>Fat people do not necessarily eat any more than other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>35</td>
<td>Jokes about fat people are funny.</td>
<td>Cog/Affect</td>
</tr>
<tr>
<td>36</td>
<td>If someone in my family were fat, I’d be ashamed of him or her.</td>
<td>Affect</td>
</tr>
<tr>
<td>37</td>
<td>I can’t stand to look at fat people.</td>
<td>Affect</td>
</tr>
<tr>
<td>Item</td>
<td>Component</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td>38</td>
<td>Affect</td>
<td>Disgust</td>
</tr>
<tr>
<td>39</td>
<td>Behaviour/Affect</td>
<td>Avoidance</td>
</tr>
<tr>
<td>40</td>
<td>Affect</td>
<td>Likeability</td>
</tr>
<tr>
<td>41</td>
<td>Cognition</td>
<td>Character</td>
</tr>
<tr>
<td>42</td>
<td>Cognition</td>
<td>Character</td>
</tr>
<tr>
<td>43</td>
<td>Behaviour</td>
<td>Employment</td>
</tr>
<tr>
<td>44</td>
<td>Affect</td>
<td>Association</td>
</tr>
<tr>
<td>45</td>
<td>Cognition</td>
<td>Anti-discrimination</td>
</tr>
<tr>
<td>46</td>
<td>Cognition</td>
<td>Character</td>
</tr>
<tr>
<td>47</td>
<td>Affect</td>
<td>Size Acceptance</td>
</tr>
</tbody>
</table>

Table F5

Item characteristics: Antifat Attitudes Scale (Morrison & O’Connor, 1999)

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Evaluation</td>
<td>Sexual Attractiveness</td>
</tr>
<tr>
<td>2</td>
<td>Behaviour</td>
<td>Relationships</td>
</tr>
<tr>
<td>3</td>
<td>Evaluation</td>
<td>Character</td>
</tr>
<tr>
<td>4</td>
<td>Cognition</td>
<td>Blame</td>
</tr>
<tr>
<td>5</td>
<td>Affect</td>
<td>Disgust</td>
</tr>
</tbody>
</table>
Table F6

Item characteristics: Fat Phobia Scale – Short Form (Bacon et al., 2001)

<table>
<thead>
<tr>
<th>Item (Adjective pairs)</th>
<th>Component</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lazy - Industrious</td>
<td>N/A</td>
<td>Activity</td>
</tr>
<tr>
<td>2 No will power – Has will power</td>
<td></td>
<td>Willpower</td>
</tr>
<tr>
<td>3 Attractive - Unattractive</td>
<td></td>
<td>Attractiveness</td>
</tr>
<tr>
<td>4 Good self-control – Poor self-control</td>
<td></td>
<td>Willpower</td>
</tr>
<tr>
<td>5 Fast - Slow</td>
<td></td>
<td>Activity</td>
</tr>
<tr>
<td>6 Having endurance – Having no endurance</td>
<td></td>
<td>Activity</td>
</tr>
<tr>
<td>7 Active - Inactive</td>
<td></td>
<td>Activity</td>
</tr>
<tr>
<td>8 Weak - Strong</td>
<td></td>
<td>Activity</td>
</tr>
<tr>
<td>9 Self-indulgent – Self-sacrificing</td>
<td></td>
<td>Character</td>
</tr>
<tr>
<td>10 Dislikes food – Likes food</td>
<td></td>
<td>Eating</td>
</tr>
<tr>
<td>11 Shapeless - Shapley</td>
<td></td>
<td>Attractiveness</td>
</tr>
<tr>
<td>12 Undereats - Overeats</td>
<td></td>
<td>Eating</td>
</tr>
<tr>
<td>13 Insecure - Secure</td>
<td></td>
<td>Self Esteem</td>
</tr>
<tr>
<td>14 Low self-esteem – High self-esteem</td>
<td></td>
<td>Self-esteem</td>
</tr>
</tbody>
</table>

Table F7

Item characteristics: Universal Measure of Bias – Fat Scale (Latner, 2008)

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fat people tend toward bad behavior.</td>
<td>Cognition</td>
<td>Morality</td>
</tr>
<tr>
<td>2 Fat people are sloppy.</td>
<td>Cognition</td>
<td>Character</td>
</tr>
<tr>
<td>3 Sometimes I think that fat people are dishonest.</td>
<td>Cognition</td>
<td>Morality</td>
</tr>
<tr>
<td>4 Fat people have bad hygiene.</td>
<td>Cognition</td>
<td>Hygiene</td>
</tr>
<tr>
<td>Item</td>
<td>Component</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>5</td>
<td>In general, Fat people don’t think about the needs of other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>6</td>
<td>I would not like to have a fat person as a roommate.</td>
<td>Affect</td>
</tr>
<tr>
<td>7</td>
<td>I like Fat people.</td>
<td>Affect</td>
</tr>
<tr>
<td>8</td>
<td>I don’t enjoy having a conversation with a fat person.</td>
<td>Affect</td>
</tr>
<tr>
<td>9</td>
<td>I would be comfortable having a fat person in my group of friends.</td>
<td>Affect</td>
</tr>
<tr>
<td>10</td>
<td>I would like having a fat person at my place of worship or community center.</td>
<td>Affect</td>
</tr>
<tr>
<td>11</td>
<td>I find fat people attractive.</td>
<td>Affect</td>
</tr>
<tr>
<td>12</td>
<td>Fat people make good romantic partners.</td>
<td>Cognition</td>
</tr>
<tr>
<td>13</td>
<td>I find fat people to be sexy.</td>
<td>Affect</td>
</tr>
<tr>
<td>14</td>
<td>Fat people are a turn off.</td>
<td>Affect</td>
</tr>
<tr>
<td>15</td>
<td>I find fat people to be pleasant to look at.</td>
<td>Affect</td>
</tr>
<tr>
<td>16</td>
<td>Special effort should be taken to make sure that fat people have the same rights and privileges as other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>17</td>
<td>Special effort should be taken to make sure that fat people have the same salaries as other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>18</td>
<td>Special effort should be taken to make sure that fat people have the same educational opportunities as other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>19</td>
<td>Special effort should be taken to make sure that fat people have the same housing opportunities as other people.</td>
<td>Cognition</td>
</tr>
<tr>
<td>20</td>
<td>I try to understand the perspective of fat people.</td>
<td>Affect</td>
</tr>
</tbody>
</table>
### APPENDIX G: CHAPTER 7

#### Initial Item Pool

Table G1

Initial Item Pool

Item source: LR = Literature review; DM = Digital media review (Cain, Donaghue & Ditchburn, 2017); RR= Responses to size acceptance messages (Cain & Donaghue, 2018); IR = Weight stigma intervention review; EM = Existing measures; O = Other.

<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Causes of Fatness</strong></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>In many cases obesity is the result of a biological disorder</td>
</tr>
<tr>
<td>DM</td>
<td>There are many medical reasons why people can be overweight.</td>
</tr>
<tr>
<td>DM</td>
<td>Obesity and fatness can be the result of a genetic disorder</td>
</tr>
<tr>
<td>DM</td>
<td>Being fat can be the result of a medical condition</td>
</tr>
<tr>
<td>DM</td>
<td>Rates of obesity have increased too quickly for genetic factors to be considered a primary cause</td>
</tr>
<tr>
<td>DM</td>
<td>Psychological issues such as depression and anxiety can lead to people becoming fat and obese.</td>
</tr>
<tr>
<td>DM</td>
<td>Sometimes emotional eating can lead to obesity</td>
</tr>
<tr>
<td>DM</td>
<td>Emotional eating is a reason why people become fat.</td>
</tr>
<tr>
<td>DM</td>
<td>For some people food can be addictive</td>
</tr>
<tr>
<td>DM</td>
<td>Lack of knowledge about food and nutrition leads to fatness and obesity</td>
</tr>
<tr>
<td>DM</td>
<td>Lack of nutrition education leads to fatness and obesity</td>
</tr>
<tr>
<td>DM</td>
<td>Overeating and under exercising are the primary reasons why people are fat or obese</td>
</tr>
<tr>
<td>DM</td>
<td>Obesity is the result of lifestyle choices</td>
</tr>
<tr>
<td>DM</td>
<td>The pursuit of time saving and convenient food options leads to weight gain</td>
</tr>
<tr>
<td>DM</td>
<td>Society encourages the idea that people are personally responsible for their weight</td>
</tr>
<tr>
<td>DM</td>
<td>People have ultimate control over their body weight</td>
</tr>
<tr>
<td>DM</td>
<td>There are many factors that contribute to higher body weight</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>DM</td>
<td>People are fat due to a variety of factors</td>
</tr>
<tr>
<td>DM</td>
<td>There are many factors outside of personal control that contribute to high body weight</td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>Being sedentary and unfit is worse than being fat</td>
</tr>
<tr>
<td>LR</td>
<td>Being unfit is worse than being fat</td>
</tr>
<tr>
<td>DM</td>
<td>Health is a dynamic state and not predicted solely by body weight</td>
</tr>
<tr>
<td>DM</td>
<td>Body weight isn’t the only marker of health</td>
</tr>
<tr>
<td>LR</td>
<td>Having a little extra weight is probably not bad for your health</td>
</tr>
<tr>
<td>DM</td>
<td>You cannot tell how healthy someone is just from assessing their body size</td>
</tr>
<tr>
<td>RR</td>
<td>Focusing on health rather than body weight would make a positive change.</td>
</tr>
<tr>
<td>LR</td>
<td>Public health messages should focus on improving health rather than losing weight.</td>
</tr>
<tr>
<td>LR</td>
<td>We need to disrupt the conception that “normal” weight equates with “good” health</td>
</tr>
<tr>
<td>LR</td>
<td>We need to disrupt the conception that “normal” equals “good” health</td>
</tr>
<tr>
<td>RR</td>
<td>We need to challenge the idea that “normal weight” means “good health”</td>
</tr>
<tr>
<td>LR</td>
<td>We need to remove the association of poor health with excess weight</td>
</tr>
<tr>
<td>DM</td>
<td>If people could be fat without any health consequences, being fat wouldn’t matter</td>
</tr>
<tr>
<td>DM</td>
<td>The only concern that overweight people should have is how it affects their health, and not their appearance</td>
</tr>
<tr>
<td>DM</td>
<td>A fat person’s health is their concern, not mine</td>
</tr>
<tr>
<td>RR</td>
<td>Being so obese that your mobility is limited, is probably hazardous to your health</td>
</tr>
<tr>
<td>RR</td>
<td>I feel concerned about the health of fat people</td>
</tr>
<tr>
<td>DM</td>
<td>People should be weighed every time they go to the doctor</td>
</tr>
<tr>
<td>RR</td>
<td>No matter what your weight you still need to do your best to be healthy</td>
</tr>
<tr>
<td>RR</td>
<td>No matter what your weight you still need to try your best to be healthy</td>
</tr>
<tr>
<td>LR</td>
<td>Weight stigma and bias should be recognized as contributing to poor health</td>
</tr>
</tbody>
</table>
We should move away from Body Mass Index as a marker of health as it only reflects one dimension of a person.

We should move away from Body Mass Index as a measure as it only reflects one dimension of a person’s health.

We should move away from Body Mass Index as a key health marker as it focuses too much on weight.

**Health/Obesity Crisis**

The medical costs associated with being fat are considerable.

The strategies society has taken to address the obesity health crisis do not seem to have been effective.

The strategies society has taken so far to halt the obesity crisis do not seem to have been effective, perhaps it is time for a different approach.

The strategies society has adopted so far to stop the rising rate of obesity do not seem to have been effective, perhaps it is time to stop focusing on weight.

The weight focused approach to obesity does not seem to have been effective in reducing rates of obesity.

If there aren’t medical consequences of obesity – then we wouldn’t be spending so much money on campaigns to try and reduce it.

Obesity should not be considered a disease.

Classifying obesity as a disease will only lead to more negative perceptions of obese people.

**Health Professionals**

Health professionals should be aware of the negative impact of weight bias and attempt to make fat and obese patients comfortable.

Health professionals should be aware of the negative impact of weight bias and attempt to make fat and obese patients not feel judged.

Health professionals should approach fat and obese patients with an awareness of the negative impact of weight bias and stigma.

Health professionals have a responsibility not to contribute to weight bias and oppression.

The role of a health professional is to offer support and assistance not make people feel bad about themselves and their weight.
<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR</td>
<td>We need to be teaching medical professionals about the harmful effects of weight stigma and discrimination</td>
</tr>
<tr>
<td>LR</td>
<td>Education on the harmful effects of weight stigma and bias should be included in health professional training programs</td>
</tr>
</tbody>
</table>

**Public Health campaigns**

| LR | Public health campaigns stress the need for individual action when it comes to weight and health |
| RR | That the government is promoting the link between body size and health makes it a difficult message to ignore |
| RR | If we are spending money on public health campaigns to combat obesity – then this must come from the fact that obesity is costing our society money |
| RR | The government has a legitimate role in attempting to shape behaviours that are considered detrimental to health |
| LR | Public health messages often depict fat people negatively |
| LR | Public health messages depict fat people as lazy |
| LR | Public health messages depict fat people in negative ways |
| LR | Public health messages depict fat people as making bad choices |
| LR | Public health messages that depict fat people negatively encourage weight discrimination |
| LR | Public health campaigns contribute to negative portrayals of fat and obese people |
| LR | Public health messages promote the achievement of a particular body size as the key to health |
| LR | The depiction of the fat body as diseased sets up an environment where far people can be discriminated against |
| DM | The simplistic messages in public health campaigns underestimate the complexity of weight gain and loss |
| O | We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming |
| LR | Public health campaigns should depict bodies of all sizes, not just fat bodies |
| LR | Public health campaigns do not need to depict fat bodies to get their message across |
Healthism

RR  Health is a responsibility we all share
RR  Health is a shared responsibility
RR  The pursuit of health is both a personal and a shared responsibility
DM  Health is a responsibility and people who do not seem to be pursuing health are being irresponsible citizens
DM  Concern for health is just an excuse to judge and condemn fat and obese people
LR  These days health has become quite a moral virtue
LR  These days being healthy is seen as being quite virtuous
LR  These days being healthy is seen as being quite virtuous and good
LR  Being healthy is associated with self-discipline and self-control
LR  Health has become quite a moral virtue and has led to the condemnation of fat and obese people
LR  While being healthy is no doubt good, in recent times health seems to have become even more of a virtue.
LR  In recent times health seems to have become an important virtue to pursue.

Environment

DM  There is a definite relationship between our food environment and body weight.
DM  Our western environment has contributed to weight gain
DM  Our environment makes it much easier to gain weight than to stay healthy
DM  Unhealthy food is cheaper and more easily available than healthy food
DM  Our environment is making it increasingly hard to live a healthy lifestyle
LR  The role that our food environment plays in weight gain should not be ignored
LR  We need to take into account the role that the environment plays in creating fat and obese bodies.
LR  Not everyone lives within a similar food environment, and this needs to be taken into account when blaming individuals for how much they weigh
DM  Our world has become so rich in temptation that we can be led to consume too much in ways we can’t understand
Our efforts to be healthy seem to be undermined by persistent and persuasive food marketing.

Fatness and obesity are actually natural responses to the current western food environment.

We need to shift responsibility away from individuals and onto the governments and industries that support this environment where weight gain is so easy.

We need to make governments and industries accountable for the unhealthy environment they have created.

We need to find a way to make governments and industries accountable for the unhealthy environment they have created.

The move away from personal responsibility to more environmental explanations for obesity is a positive shift.

Fast food and junk food companies have played a major role in the rise of obesity.

Food companies care about company profits not public health.

We need to modify our environment so that engaging in health behaviour becomes easier.

We need to modify our environment so that making health choices requires less effort.

To reduce the amount of willpower needed to achieve healthy behaviour we need changes to our environment.

To reduce the amount of willpower needed to live a healthy lifestyle we need changes to our environment.

Morality/Ideology

It’s hard to sympathize with the plight of fat people.

Obesity and fatness are forms of self-abuse.

Fat people demonstrate an unwillingness to conform to societies depiction of the ideal body.

Fat people demonstrate an unwillingness to conform to societies ideal body norms.

Social order is important, yet fat and obese people seem to flaunt their unwillingness to conform to current body standards and ideals.

Body weight is a physical matter not a moral matter.
Fat people are not immoral people

We should stop treating fat and obese people as immoral

We should stop treating fat and obese people as though they are immoral

For the benefit of everyone we need to move beyond the association of fatness with ‘sloth and gluttony’

When it comes to other people’s weight we should just mind our own business

Fat people’s unwillingness to conform to social ideals and body norms is not necessarily bad.

Not conforming to the social ideals surrounding body norms is not necessarily bad.

Western societies have more of a negative focus on excess weight

Western societies tend to focus more on the negative aspects of being fat or obese

Western societies tend to focus more negatively on fat and obese individuals

Western ideals value individual responsibility, it is no wonder that fat and obese people are demonised

Western ideas tend to see the individual as central to all actions, it is no wonder that society sees fat and obese people as responsible for causing their weight.

I try hard to keep my food intake in check while other people eat and drink whatever they want and don’t seem bothered, it doesn’t seem fair.

If I devote time and effort to keeping my weight in check, then other people should do the same.

**Promoting weight loss**

Advice given to fat people is often simplistic

Advice given to fat people is often patronizing

Population level interventions are needed in order to reduce the incidence of obesity

If we consider people to be making poor health choices then as a society we need to provide ways of helping people make changes

If we consider people to be making poor health choices, then as a society we need to provide ways of helping people make better ones
Sourcing

DM  Impacting fat people financially in some way is the solution to fatness and obesity

DM  Increasing taxes on specific foods is a good way to combat obesity

DM  Government action is needed to improve our food environment.

DM  Interventions designed to reduce obesity need to be targeted at food companies not individuals

LR  Increasing taxes on ‘fast food’ oversimplifies consumer behaviour

DM  Increasing taxes on ‘fast food’ penalizes people on low incomes

DM  Increasing taxes on ‘fast food’ is not going to result in wide scale weight loss

DM  Increasing taxes on ‘fast food’ is not going to result in population level weight loss

DM  Programs like the “biggest loser” are a good idea

RR  Programs like “the biggest loser” motivate people to change

RR  Programs like “the biggest loser” are effective in encouraging population change

O  Weight loss surgery is a good idea

LR  Long term weight loss is extremely hard to achieve

LR  Weight loss diets are not sustainable long term

LR  Dieting and regaining weight can actually be detrimental to health and well-being

DM  The weight loss industry is big business

DM  We need to stop promoting weight loss diets as a healthy solution to obesity

DM  We need to stop using weight loss diets as a way of promoting health

LR  As a society, we need to stop trying to change other people’s bodies

LR  The prevalence and impact of weight stigma needs to be taken into account when recommending obesity treatment and prevention

Solutions

LR  Weight loss diets rarely result in sustained weight loss

LR  We need to do better when it comes to food and nutrition education
<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
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<tbody>
<tr>
<td><strong>Children</strong></td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>Fat children are at the mercy of their parents</td>
</tr>
<tr>
<td>DM</td>
<td>Childhood obesity is child abuse</td>
</tr>
<tr>
<td>O</td>
<td>We need to intervene in the school environment in order to control access to certain foods</td>
</tr>
<tr>
<td>DM</td>
<td>Parents have a hard time controlling their children’s food choices in the face of intense marketing campaigns</td>
</tr>
<tr>
<td>DM</td>
<td>Media campaigns targeting ‘fast food’ at children should be restricted.</td>
</tr>
<tr>
<td>DM</td>
<td>Children’s activities should not be sponsored by ‘fast food’ companies</td>
</tr>
<tr>
<td>DM</td>
<td>Lots of factors go into childhood obesity</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>Being fat is worse for women</td>
</tr>
<tr>
<td>LR</td>
<td>Women face more criticism for their weight than men do</td>
</tr>
<tr>
<td>LR</td>
<td>Women experience more weight based discrimination than men</td>
</tr>
<tr>
<td>DM</td>
<td>Women are more likely to endorse the messages of size acceptance</td>
</tr>
<tr>
<td>RR</td>
<td>Society makes it hard for women to embrace size acceptance</td>
</tr>
<tr>
<td>DM</td>
<td>Fat acceptance tends to be a response from women who do not want to lose weight</td>
</tr>
<tr>
<td>O</td>
<td>Fat activism is another way of pushing a feminist agenda</td>
</tr>
<tr>
<td>O</td>
<td>Fat activists tend to be predominantly women with a feminist agenda</td>
</tr>
<tr>
<td>O</td>
<td>Fat Activists tend to have a feminist agenda</td>
</tr>
<tr>
<td><strong>Critical Biomedical</strong></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>The current approaches to controlling population weight does not seem to be having the desired effect</td>
</tr>
<tr>
<td>LR</td>
<td>A population level focus on weight does not necessarily result in weight loss</td>
</tr>
<tr>
<td>LR</td>
<td>An individual level focus on weight does not necessarily result in weight loss</td>
</tr>
<tr>
<td>DM</td>
<td>Health and body weight are the result of multiple factors</td>
</tr>
<tr>
<td>LR</td>
<td>It is important to challenge our assumptions around health and weight</td>
</tr>
<tr>
<td>LR</td>
<td>The negative health consequences of excess weight are likely exaggerated</td>
</tr>
</tbody>
</table>
Considering life expectancy continues to rise, the negative health consequences associated with excess weight have possibly been exaggerated.

**Consumer Freedom**

Just because some food is considered “politically incorrect” doesn’t mean that there should be limited accessibility to such food.

Everyone should have the right to make their own choices around food.

The government tries to exercise too much control over people’s bodies.

The shift from individual to environmental explanations for obesity will actually give the government more power to intervene when it comes to food advertising and taxes.

The shift from individual to environmental explanations for obesity will actually give the government more power to regulate our food environment.

Reducing consumer choice is not the solution to the obesity crisis.

Reducing consumer choice will not have an impact on population weight.

Reducing consumer choice will not lead to weight reduction.

**Discrimination**

Fat oppression is different to other types of social oppression because being fat is something people can change.

Weight based discrimination is different because it is about something people can control and change.

Fat people are discriminated against because they are blamed for their weight.

Fat people are discriminated against because they are considered responsible for their weight.

The negative treatment of fat people is not surprising considering the way society depicts fat bodies.

Fat people are treated badly as a result of the way society depicts fat bodies.

Weight based discrimination is the last acceptable form of discrimination.

Weight based discrimination is the last socially acceptable form of discrimination.

Fat people seem to be the only group of people left in society where it is generally considered ok to humiliate, discriminate against, and bully.
<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>DM</td>
<td>Fat people should not need to defend themselves as being worthy of existence</td>
</tr>
<tr>
<td>LR</td>
<td>All people, regardless of body size, deserve respect, equity, and dignity, and to live without stigma and discrimination.</td>
</tr>
<tr>
<td>DM</td>
<td>You don’t have to find fat people attractive, just don’t bully or shame them</td>
</tr>
<tr>
<td>LR</td>
<td>Negative beliefs about body weight lead to negative assumptions about the abilities of fat people</td>
</tr>
<tr>
<td>RR</td>
<td>The messages around fat people being a drain on public health money are inciting hatred and discrimination</td>
</tr>
<tr>
<td>IR</td>
<td>As a society we need to eradicate all types of discrimination and oppression, including weight based oppression.</td>
</tr>
<tr>
<td>IR</td>
<td>We need to be just as concerned about the effects of weight stigma and discrimination as we are about the physical consequences of weight</td>
</tr>
<tr>
<td>IR</td>
<td>The impact of weight stigma and discrimination should be just as concerning as the health implications of weight</td>
</tr>
<tr>
<td>EM</td>
<td>It makes me angry to hear someone being insulted because they are fat</td>
</tr>
<tr>
<td>DM</td>
<td>If people don’t like being discriminated against because of their weight, they should lose weight</td>
</tr>
<tr>
<td>IR</td>
<td>Weight based discrimination is not a serious issue.</td>
</tr>
<tr>
<td>RR</td>
<td>The health issues associated with weight make weight based discrimination difficult to challenge</td>
</tr>
<tr>
<td>RR</td>
<td>The health issues associated with weight make weight bias a tricky issue</td>
</tr>
<tr>
<td>RR</td>
<td>The health issues associated with weight make weight bias a complex issue to tackle.</td>
</tr>
<tr>
<td>RR</td>
<td>The health issues associated with weight create somewhat of a dilemma when it comes to reducing weight related bias</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people face discrimination in many areas of life</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people face unfair discrimination in many areas of life</td>
</tr>
<tr>
<td>LR</td>
<td>The consequences of weight discrimination can severely limit people’s lives and potential.</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people face unfair discrimination from healthcare providers</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people face employment based discrimination</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people face unfair discrimination in employment settings</td>
</tr>
<tr>
<td>O</td>
<td>Fat people should not have to pay more for goods or services</td>
</tr>
<tr>
<td>LR</td>
<td>Weight based discrimination negatively impacts on people’s emotional well-being</td>
</tr>
<tr>
<td></td>
<td>Weight based discrimination can seriously impede peoples abilities to lead happy and successful lives</td>
</tr>
<tr>
<td>LR</td>
<td>Weight based discrimination can reduce fat people’s quality of life</td>
</tr>
<tr>
<td>LR</td>
<td>Weight based discrimination means that the potential of many fat people goes unrecognized</td>
</tr>
<tr>
<td>LR</td>
<td>Weight based discrimination is not a motivator for change</td>
</tr>
<tr>
<td>LR</td>
<td>Weight based discrimination does not motivate fat and obese people to change</td>
</tr>
</tbody>
</table>

**Disability**

| O      | Being extremely obese should be considered a disability |
| LR     | People who are extremely obese should be protected by disability legislation |
|        | Extreme obesity that interferes with personal mobility should be considered a disability |
| LR     | Considering obese people to be disabled would stigmatize fat people even further |
| LR     | Extending disability protection to people who are extremely obese would only encourage society to view obese people in even more limited ways |
| O      | Being obese is not the same as being disabled |
| O      | Being obese is not the same as being disabled, a disability is something that can’t be helped, while obesity is preventable |
| O      | Obesity is not the same a s a disability, a disability is something that can’t be helped, while obesity is preventable |

**Fat Shaming**

| LR     | Shaming people for being fat does not encourage them to lose weight |
| LR     | Shaming people because of their weight is not a motivator for change |
| LR     | Shaming people for being fat actually reduces their ability to adopt healthy habits |
LR  Making fat people feel ashamed of themselves does not encourage healthy behaviours
LR  Making fat people feel bad about themselves does not encourage weight loss
DM  Something needs to be done to stop fat shaming
DM  We should do more to make fat shaming unacceptable
DM  Fat shaming is not a solution to growing rates of obesity
DM  It is wrong that people feel it is ok to attack others because of their body size
DM  We need to stop being so judgemental toward fat people
DM  It is not ok to comment on another person’s weight
DM  It is not ok to pass judgement on another person’s weight
DM  I don’t understand why people have such strong and angry reactions to fat people, there are more important things to get angry about
DM  Shaming fat people is socially acceptable
DM  Shaming fat people is unfortunately socially acceptable
LR  Weight stigma can discourage people from exercise
LR  Fat shaming can discourage people from exercising

**Internalized Stigma**

O  Feeling bad about oneself and one’s body is a likely response to the practice of fat shaming and discrimination.

**Social Justice**

RR  Everyone deserves equal rights
RR  Every body deserves equal rights
LR  Bodies of all shapes and sizes deserve equal rights
O  It should be illegal to discriminate against someone because of their weight
O  Everybody is worthy of being given a chance – without being prejudged for their weight
O  Being fat does not make people unworthy of inclusion or opportunity
O  Every body should be considered equally valuable in society
Weight based discrimination leads to a denial of equality and basic human rights.

Approaches to health that focus on weight result in bias and discrimination against fat and obese people.

Fat and obese people need to be recognized as equally valuable.

Fat and obese people need to be recognized as valuable.

It is important to see fat people represented positively in the media.

The media should stop portraying fat people in negative ways.

The media should stop portraying fat people according to negative stereotypes.

Film and television programs should stop portraying fat people according to negative stereotypes.

It is important to see fat people portrayed positively in different roles.

Society needs to change the way they respond to fat bodies.

We need to make allowances in social spaces for all bodies, including fat bodies.

Public spaces should accommodate all body shapes and sizes, including fat bodies.

The existence of organizations to lobby for the rights of fat and obese people is a good idea.

We need to take weight based discrimination as seriously as other types of discrimination.

Discussions and programs recognizing diversity need to include a focus on body weight.

We need to take weight based discrimination as seriously as racial or gendered discrimination.

When it comes to health and fitness we need to acknowledge that not everyone has the same access to resources, so not everyone will have the same outcomes.

Different social groups have different access to resources, and this may reflect in higher body weight for some people.

**Health At Every Size**

It is possible to be fit and fat

It is possible to be healthy and fat
The idea that you can be healthy at any size is a positive one to promote. If we focused more on attaining health rather than losing weight, we would be a happier and healthier society. If we focused more on attaining health rather than losing weight, we would all be better off. If we focused more on attaining health rather than losing weight, we would be better off both physically and emotionally. When the government is promoting the link between body size and health it becomes a difficult message to challenge. I really doubt the ability for someone to be healthy and extremely overweight. I’m sceptical about someone’s ability to be really health and really overweight.

Size Acceptance

Plus size models are a good idea. I like the inclusion of plus size models in advertising campaigns. Feeling good about yourself and your weight is extremely difficult. Feeling good about yourself and your weight is extremely difficult given societies focus on thin body ideals. Promoting size acceptance is a necessary step in tackling fatness and obesity. Size acceptance should be encouraged. The message of size acceptance should apply to all weights even the more extreme. Our self-esteem shouldn’t change just because our bodies do. Messages portrayed in the media make it very difficult to achieve body acceptance if your body deviates from what is considered normal. Self-acceptance is the first step to making positive choices in life. Self-acceptance is the first step to making positive choices with regard to health and well-being. When you don’t like your body, it is very difficult to consider making healthy changes and choices. Size acceptance should not be encouraged as it will only encourage obesity.
<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
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<tbody>
<tr>
<td>DM</td>
<td>Size acceptance should only be encouraged for fit and healthy people.</td>
</tr>
<tr>
<td></td>
<td><strong>Fat Acceptance</strong></td>
</tr>
<tr>
<td>RR</td>
<td>It is possible to be fat or obese and feel good about yourself</td>
</tr>
<tr>
<td>RR</td>
<td>It is possible to be fat and happy</td>
</tr>
<tr>
<td>RR</td>
<td>It is possible to be fat and sexy</td>
</tr>
<tr>
<td>LR</td>
<td>There is a need for the Fat Acceptance movement because fat shaming is so widespread</td>
</tr>
<tr>
<td>LR</td>
<td>We need more positive images in the media that challenge negative fat stereotypes</td>
</tr>
<tr>
<td>O</td>
<td>We need to stop using the word fat as an insult</td>
</tr>
<tr>
<td>LR</td>
<td>Rather than fat people changing their bodies, society needs to change the way they respond to fat bodies</td>
</tr>
<tr>
<td>LR</td>
<td>Fat people should be encouraged to accept their bodies, it’s society that needs to change the way it responds to fatness</td>
</tr>
<tr>
<td>DM</td>
<td>Fat positivity is an excuse for people not to look after themselves</td>
</tr>
<tr>
<td>DM</td>
<td>Fat positivity is an excuse for people to justify their fatness</td>
</tr>
<tr>
<td>DM</td>
<td>If people accept themselves as fat – that’s fine – but that doesn’t mean society has to follow and see fatness as acceptable</td>
</tr>
<tr>
<td>DM</td>
<td>Fat acceptance is an attempt to normalize an unhealthy lifestyle</td>
</tr>
<tr>
<td>DM</td>
<td>Fat acceptance represents quite an irresponsible approach to health</td>
</tr>
<tr>
<td></td>
<td><strong>Fat Activism</strong></td>
</tr>
<tr>
<td>LR</td>
<td>There is a need for Fat Activism because fat shaming is so widespread</td>
</tr>
<tr>
<td>LR</td>
<td>Fat activism is needed in order to reduce the negativity associated with fat bodies</td>
</tr>
<tr>
<td>O</td>
<td>Fat activism is needed because no one is looking out for the rights of fat and obese people</td>
</tr>
<tr>
<td>LR</td>
<td>Activism is necessary because the rights of fat people are being overlooked</td>
</tr>
<tr>
<td>LR</td>
<td>Activism is necessary because discrimination against fat people is being overlooked</td>
</tr>
<tr>
<td>O</td>
<td>Fat activism is necessary because discrimination against fat people is not being taken seriously</td>
</tr>
<tr>
<td>Source</td>
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<tr>
<td><strong>Empathy</strong></td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td>The experience of being weight shamed by a health professional must be very upsetting</td>
</tr>
<tr>
<td>IR</td>
<td>Knowing that society is making negative assumptions because of your weight must make everyday life very hard</td>
</tr>
<tr>
<td>IR</td>
<td>Knowing that society is judging you because of your weight must make everyday life very difficult</td>
</tr>
<tr>
<td>IR</td>
<td>Knowing that society is making negative assumptions because of your weight must make it hard to feel good about yourself</td>
</tr>
<tr>
<td>IR</td>
<td>Knowing that society is judging you because of your weight must be very stressful</td>
</tr>
<tr>
<td>IR</td>
<td>Having to contend with weight stigma and discrimination must be very difficult</td>
</tr>
<tr>
<td>IR</td>
<td>Fat and obese people need compassion not expressions of contempt</td>
</tr>
<tr>
<td>IR</td>
<td>Having to contend with weight shaming must be very discouraging when exercising</td>
</tr>
<tr>
<td>IR</td>
<td>The prevalence of fat shaming through social media must be difficult to contend with</td>
</tr>
<tr>
<td><strong>Personal Embodiment/self-beliefs</strong></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>My self-esteem goes down if my body weight goes up</td>
</tr>
<tr>
<td>EM</td>
<td>I feel bad about myself when I gain weight</td>
</tr>
<tr>
<td>EM</td>
<td>I worry about becoming fat</td>
</tr>
<tr>
<td>EM</td>
<td>I think my friends and family will judge me negatively if I gain weight</td>
</tr>
<tr>
<td>EM</td>
<td>Gaining a substantial amount of weight would likely limit my opportunities in life</td>
</tr>
<tr>
<td>O</td>
<td>I feel current body norms and ideals just don’t match with the body I feel happy in</td>
</tr>
<tr>
<td>O</td>
<td>I feel my body does not match current body norms and ideals, and I’m alright with that</td>
</tr>
<tr>
<td>O</td>
<td>I feel my body does not match current body norms and ideals, and that’s fine with me</td>
</tr>
<tr>
<td>O</td>
<td>Striving to achieve body norms and ideals is just not something I see as important</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
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<tr>
<td>--------</td>
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</tr>
<tr>
<td>O</td>
<td>For me a healthy body weight is one I feel comfortable with, regardless of the number on the scale</td>
</tr>
<tr>
<td>O</td>
<td>There are more important things in my life than how much I weigh</td>
</tr>
<tr>
<td>O</td>
<td>I feel a sense of obligation when it comes to pursuing health and fitness goals</td>
</tr>
<tr>
<td>O</td>
<td>I feel a sense of obligation when it comes to following the government recommendations around health and fitness</td>
</tr>
</tbody>
</table>
APPENDIX H: CHAPTER 7

Item Pool for Subject Matter Expert Review

Item pool for the Fat Attitudes, Beliefs, and Discourse Assessment Kit (working title)

Based on the pervasive and problematic levels of weight bias and discrimination, recent years have seen an expansion in intervention based research aimed at reducing weight stigma. Such interventions declare a range of purposes, they employ different change strategies, engage participants with a variety of materials and take place with a range of participants, including undergraduate students as well as health professionals and the general public. With the valuable and necessary expansion in this field, I am recommending and developing an expanded approach to measuring the attitudes, beliefs, and social discourses around fatness and fat people that these interventions are designed to challenge. An approach that will have the flexibility to reflect the broader impacts of different interventions and support a multidimensional approach to quantification.

Current measures have a primary objective of assessing negative attitudes and beliefs. Widely used instruments include the Antifat Attitudes Questionnaire (Crandall, 1994), Antifat Attitudes Test (Lewis, Cash, Jacobi, & Bubb-Lewis, 1995) and, the Fat Phobia Scale (Bacon, Scheltema & Robinson, 2001). These instruments while undeniably useful in assessing negative responses to fatness, are in my opinion only offering us part of the picture when it comes to the ways in which we can quantify attitudes and beliefs around fatness as well as establishing the effectiveness of various interventions. Going forward, a broader range of perspectives need to be captured by our measurement tools, in order to reflect the growing diversity of weight stigma scholarship and activism, and align with the goals and values of researchers aiming to reduce this social injustice.

To achieve this outcome, I am creating a set of measures – an assessment kit -- that will:

- Reflect the diverse landscape that is fat and obesity discourse - incorporating a range of critical as well as mainstream perspectives
- Shift the focus from assessing solely negative responses (assuming the only shift can be in the degree of negativity expressed)
- Include a range of potential focal points, for example; empathic responses to fat people, the perceived impact of weight stigma, endorsement of Size Acceptance, support for Health At Every Size®.
The items presented here have been generated from a wide variety of sources; reviews of current anti-fat attitude measures, literature reviews of fat and “obesity” perspectives (including critical perspectives), analysis of digital news media – including reader commentary, and analysis of focus group engagement with Fat Acceptance and Health At Every Size® messages. I am now seeking feedback from experts in various domains of Fat Studies as to the suitability of these items before embarking on the next stages of psychometric development of the assessment kit.

To follow is the extensive list of potential items grouped according to category – choosing to complete only the sections that you feel relevant is welcomed – all feedback is valuable. Simply indicate whether you think an item is worthy of inclusion by checking (Y/N). There are some items that are essentially similar yet offer alternate wording, where this occurs and you have a preference please indicate this, again by checking (Y/N).

Lastly, please include any additional comments as you feel appropriate.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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</table>

I will be recognizing everyone providing feedback in the acknowledgment section of my thesis and in any publications arising from this work (specific comments will not be linked to individuals).

If you would prefer not to be publicly acknowledged in this project please let me know.
Item pool for the Fat Attitudes, Beliefs, and Discourse Assessment Kit

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Causes of Fatness</strong></td>
<td></td>
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<tr>
<td>In many cases obesity is the result of a biological disorder</td>
<td></td>
<td></td>
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<tr>
<td>There are many medical reasons why people can be overweight.</td>
<td></td>
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<tr>
<td>Obesity and fatness can be the result of a genetic disorder</td>
<td></td>
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<tr>
<td>Being fat can be the result of a medical condition</td>
<td></td>
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<tr>
<td>Rates of obesity have increased too quickly for genetic factors to be considered a primary cause</td>
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<tr>
<td>Psychological issues such as depression and anxiety can lead to people becoming fat and obese.</td>
<td></td>
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<tr>
<td>Sometimes emotional eating can lead to obesity</td>
<td></td>
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<tr>
<td>Emotional eating is a reason why people become fat.</td>
<td></td>
<td></td>
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<tr>
<td>For some people food can be addictive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of knowledge about food and nutrition leads to fatness and obesity</td>
<td></td>
<td></td>
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<tr>
<td>Lack of nutrition education leads to fatness and obesity</td>
<td></td>
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<tr>
<td>Overeating and under exercising are the primary reasons why people are fat or obese</td>
<td></td>
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<tr>
<td>Item</td>
<td>Y/N</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Obesity is the result of lifestyle choices</td>
<td></td>
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<tr>
<td>The pursuit of time saving and convenient food options leads to weight gain</td>
<td></td>
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<tr>
<td>People are personally responsible for their weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People have ultimate control over their body weight</td>
<td></td>
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<tr>
<td>There are many factors that contribute to higher body weight</td>
<td></td>
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<tr>
<td>People are fat due to a variety of factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are many factors outside of personal control that contribute to high body weight</td>
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</tbody>
</table>

**Health**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Being sedentary and unfit is unhealthier than being fat</td>
<td></td>
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<tr>
<td>Being unfit is unhealthier than being fat</td>
<td></td>
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<tr>
<td>Health is a dynamic state and not predicted solely by body weight</td>
<td></td>
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<tr>
<td>Body weight isn’t the only marker of health</td>
<td></td>
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<tr>
<td>Having a little extra weight is probably not bad for your health</td>
<td></td>
<td></td>
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<tr>
<td>You cannot tell how healthy someone is just from assessing their body size</td>
<td></td>
<td></td>
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<tr>
<td>Focusing on health rather than body weight would make a positive change.</td>
<td></td>
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<tr>
<td>Public health messages should focus on improving health rather than losing weight.</td>
<td></td>
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<tr>
<td>The belief that “normal” weight equates with “good” health is unhelpful</td>
<td></td>
<td></td>
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<tr>
<td>Item</td>
<td>Y/N</td>
<td>Comment</td>
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<tr>
<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>The association of poor health with excess weight is harmful</td>
<td></td>
<td></td>
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<tr>
<td>If people could be fat without any health consequences, being fat wouldn’t matter</td>
<td></td>
<td></td>
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<tr>
<td>The only concern that overweight people should have is how it affects their health, and not their appearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A fat person’s health is their concern, not mine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being so obese that your mobility is limited is probably hazardous to your health</td>
<td></td>
<td></td>
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<tr>
<td>I feel concerned about the health of fat people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People should be weighed every time they go to the doctor</td>
<td></td>
<td></td>
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<tr>
<td>Fat people are a financial drain on the public health system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat people are a financial drain on society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No matter what your weight you still need to do your best to be healthy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No matter what your weight you still need to try your best to be healthy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight stigma and bias contribute to poor health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Mass Index is a poor marker of health as it only reflects one dimension of a person</td>
<td></td>
<td></td>
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<tr>
<td>Body Mass Index as a measure as it only reflects one dimension of a person’s health</td>
<td></td>
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<tr>
<td>Body Mass Index as a key health marker as it focuses too much on weight</td>
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</tbody>
</table>
Health/Obesity Crisis

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>The medical costs associated with being fat are considerable</td>
<td></td>
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<tr>
<td>The strategies society has taken to address the obesity health crisis do not seem to have been effective</td>
<td></td>
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<tr>
<td>The strategies society has taken so far to halt the obesity crisis do not seem to have been effective; it is time for a different approach</td>
<td></td>
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<tr>
<td>The strategies society has adopted so far to stop the rising rate of obesity do not seem to have been effective, perhaps it is time to stop focussing on weight</td>
<td></td>
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<tr>
<td>The weight focused approach to obesity does not seem to have been effective in reducing rates of obesity</td>
<td></td>
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</tr>
<tr>
<td>Obesity must be a health risk or the government wouldn’t be spending so much money on campaigns to try and reduce it.</td>
<td></td>
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<tr>
<td>If we are spending money on public health campaigns to combat obesity – then this must come from the fact that obesity is costing our society money</td>
<td></td>
<td></td>
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<tr>
<td>Obesity should not be considered a disease</td>
<td></td>
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<tr>
<td>Classifying obesity as a disease will only lead to more negative perceptions of obese people</td>
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</tbody>
</table>

Health Professionals

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Health professionals should be aware of the negative impact of weight bias and attempt to make fat and obese patients comfortable</td>
<td></td>
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<tr>
<td>Item</td>
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<td>Comment</td>
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</tr>
<tr>
<td>Health professionals should be aware of the negative impact of weight bias and attempt to make fat and obese patients not feel judged</td>
<td></td>
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<tr>
<td>Health professionals should approach fat and obese patients with an awareness of the negative impact of weigh bias and stigma</td>
<td></td>
<td></td>
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<tr>
<td>Health professionals have a responsibility not to contribute to weight bias and oppression</td>
<td></td>
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<tr>
<td>The role of a health professional is to offer support and assistance not make people feel bad about themselves and their weight</td>
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<tr>
<td>We need to be teaching medical professionals about the harmful effects of weight stigma and discrimination</td>
<td></td>
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<tr>
<td>Education on the harmful effects of weight stigma and bias should be included in health professional training programs</td>
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</tbody>
</table>

**Public Health campaigns**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Public health campaigns stress the need for individual action when it comes to weight and health</td>
<td></td>
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<tr>
<td>That the government is promoting the link between body size and health makes it a difficult message to ignore</td>
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<tr>
<td>The government has a legitimate role in attempting to shape behaviours that are considered detrimental to health</td>
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<tr>
<td>Public health messages often depict fat people negatively</td>
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<tr>
<td>Public health messages depict fat people as lazy</td>
<td></td>
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<tr>
<td>Item</td>
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<td>Comment</td>
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</tr>
<tr>
<td>Public health messages depict fat people as making bad choices</td>
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<td></td>
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<tr>
<td>Public health messages that depict fat people negatively encourage weight discrimination</td>
<td></td>
<td></td>
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<tr>
<td>Public health campaigns contribute to negative portrayals of fat and obese people</td>
<td></td>
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<tr>
<td>Public health messages promote the achievement of a particular body size as the key to health</td>
<td></td>
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<tr>
<td>The depiction of the fat body as diseased contributes to an environment where far people can be discriminated against</td>
<td></td>
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<tr>
<td>The simplistic messages in public health campaigns underestimate the complexity of weight gain and loss</td>
<td></td>
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<tr>
<td>We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming</td>
<td></td>
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<tr>
<td>Public health campaigns should depict bodies of all sizes, not just fat bodies</td>
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<tr>
<td>Public health campaigns do not need to depict fat bodies to get their message across</td>
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</tbody>
</table>

**Healthism**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Health is a responsibility we all share</td>
<td></td>
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<tr>
<td>Health is a shared responsibility</td>
<td></td>
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</tr>
<tr>
<td>The pursuit of health is both a personal and a shared responsibility</td>
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<tr>
<td>Health is a responsibility and people who are not pursuing health are being irresponsible citizens</td>
<td></td>
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</tr>
</tbody>
</table>
Concern for health is just an excuse to judge and condemn fat and obese people

These days health has become quite a moral virtue

These days being healthy is seen as being quite virtuous

These days being healthy is seen as being quite virtuous and good

Being healthy is a sign of self-discipline and self-control

Health has become quite a moral virtue and has led to the condemnation of fat and obese people

While being healthy is no doubt desirable, in recent times health seems to have become even more of a virtue.

In recent times health seems to have become an important virtue to pursue.

<table>
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**Environment**

There is a definite relationship between our food environment and body weight.

Our western environment has contributed to weight gain

Our environment makes it much easier to gain weight than to stay healthy

Unhealthy food is cheaper and more easily available than healthy food

Our environment is making it increasingly hard to live a healthy lifestyle

The role that our food environment plays in weight gain should not be ignored
<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
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</thead>
<tbody>
<tr>
<td>We need to take into account the role that the environment plays in creating fat and obese bodies.</td>
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<tr>
<td>Not everyone lives within a similar food environment, and this needs to be taken into account when blaming individuals for how much they weigh</td>
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<tr>
<td>Our world has become so rich in temptation that we can be led to consume too much without realising</td>
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<tr>
<td>Our efforts to be healthy seem to be undermined by persistent and persuasive food marketing</td>
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<tr>
<td>Fatness and obesity are natural responses to the current Western food environment</td>
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<tr>
<td>We need to shift responsibility away from individuals and onto the governments and industries that create an environment where weight gain is so easy.</td>
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<tr>
<td>Governments should be accountable for the unhealthy environment they have created</td>
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<tr>
<td>Food and beverage industries should be accountable for the unhealthy environment they have created</td>
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<tr>
<td>We need to find a way to make governments and industries accountable for the unhealthy environment they have created</td>
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<tr>
<td>The move away from personal responsibility to more environmental explanations for obesity is a positive shift</td>
<td></td>
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<tr>
<td>Fast food and junk food companies have played a major role in the rise of obesity</td>
<td></td>
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<tr>
<td>Food companies care about company profits not public health</td>
<td></td>
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<tr>
<td>The environment should be modified so that engaging in healthy behaviour becomes easier</td>
<td></td>
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<td>Item</td>
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<td>Comment</td>
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<tr>
<td>The environment should be modified so that making healthy choices requires less effort</td>
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<tr>
<td>To reduce the amount of willpower needed to engage in healthy behaviour we need changes to our environment.</td>
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<tr>
<td>To reduce the amount of willpower needed to live a healthy lifestyle we need changes to our environment.</td>
<td></td>
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<tr>
<td>Blaming the environment is just a way to avoid taking personal responsibility for health</td>
<td></td>
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<tr>
<td>Blaming the environment is a way to avoid taking personal responsibility for being fat</td>
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</table>

**Morality/Ideology**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>It’s hard to sympathize with the plight of fat people</td>
<td></td>
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<tr>
<td>Obesity and fatness are forms of self-abuse</td>
<td></td>
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<tr>
<td>Fat people demonstrate an unwillingness to conform to society’s body norms and standards</td>
<td></td>
<td></td>
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<tr>
<td>Social order is important, yet fat and obese people seem to flaunt their unwillingness to conform to body norms and standards</td>
<td></td>
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<tr>
<td>Body weight is a physical matter not a moral matter</td>
<td></td>
<td></td>
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<tr>
<td>Fat people are not immoral people</td>
<td></td>
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<tr>
<td>We should stop treating fat and obese people as though they are immoral</td>
<td></td>
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<tr>
<td>For the benefit of everyone we need to move beyond the association of fatness with ‘sloth and gluttony’</td>
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<td>Item</td>
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</tr>
<tr>
<td>When it comes to other people’s weight we should just mind our own business</td>
<td></td>
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<tr>
<td>Fat people’s unwillingness to conform to social ideals and body norms is not necessarily bad.</td>
<td></td>
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<tr>
<td>Not conforming to the social ideals surrounding body norms is not necessarily bad.</td>
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</tr>
<tr>
<td>Western societies tend to focus on the negative aspects of being fat or obese</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western societies tend to focus negatively on fat and obese individuals</td>
<td></td>
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<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The experience of being weight shamed by a health professional must be very upsetting</td>
<td></td>
<td></td>
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<tr>
<td>Knowing that society is making negative assumptions because of your weight must make everyday life very hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowing that society is judging you because of your weight must make everyday life very difficult</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowing that society is making negative assumptions because of your weight must make it hard to feel good about yourself</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowing that society is judging you because of your weight must be very stressful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having to contend with weight stigma and discrimination must be very difficult</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat and obese people need compassion not expressions of contempt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having to contend with weight shaming must be very discouraging when exercising</td>
<td></td>
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<tr>
<td>Item</td>
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<td>Comment</td>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>The prevalence of fat shaming through social media must be difficult to contend with</td>
<td></td>
<td></td>
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<tr>
<td><strong>Interventions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advice given to fat people is often simplistic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advice given to fat people is often patronizing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If we consider people to be making poor health choices then as a society we need to provide ways of helping people make changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If we consider people to be making poor health choices, then as a society we need to provide ways of helping people make better ones</td>
<td></td>
<td></td>
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<tr>
<td>Impacting fat people financially in some way is the solution to fatness and obesity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increasing taxes on specific foods is a good way to combat obesity</td>
<td></td>
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<tr>
<td>Government action is needed to improve our food environment.</td>
<td></td>
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<tr>
<td>Interventions designed to reduce obesity need to be targeted at food companies not individuals</td>
<td></td>
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<tr>
<td>Increasing taxes on ‘fast food’ oversimplifies consumer behaviour</td>
<td></td>
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<tr>
<td>Increasing taxes on ‘fast food’ penalizes people on low incomes</td>
<td></td>
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<tr>
<td>Increasing taxes on ‘fast food’ is not going to result in wide scale weight loss</td>
<td></td>
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<tr>
<td>Increasing taxes on ‘fast food’ is not going to increase health in the general population</td>
<td></td>
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<tr>
<td>Programs like the “biggest loser” are a good idea</td>
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<tr>
<td>Item</td>
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<td>Comment</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Programs like “the biggest loser” motivate people to change</td>
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<tr>
<td>Programs like “the biggest loser” are effective in encouraging</td>
<td></td>
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<tr>
<td>population change</td>
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<tr>
<td>Weight loss surgery is a good idea for many obese people</td>
<td></td>
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<tr>
<td>Long term weight loss is extremely hard to achieve</td>
<td></td>
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<tr>
<td>Weight loss diets are not sustainable long term</td>
<td></td>
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<tr>
<td>Dieting and regaining weight can be detrimental to health and</td>
<td></td>
<td></td>
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<tr>
<td>well-being</td>
<td></td>
<td></td>
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<tr>
<td>The weight loss industry is big business</td>
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<td></td>
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<tr>
<td>We need to stop promoting weight loss diets as a healthy solution to</td>
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<tr>
<td>obesity</td>
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<tr>
<td>We need to stop using weight loss diets as a way of promoting health</td>
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<tr>
<td>As a society, we need to stop trying to change other people’s bodies</td>
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<tr>
<td>The prevalence and impact of weight stigma needs to be taken into</td>
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<tr>
<td>account when recommending obesity treatment and prevention</td>
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<td></td>
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<tr>
<td>The impact of weight stigma must be addressed when attempting obesity</td>
<td></td>
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<tr>
<td>treatment</td>
<td></td>
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<tr>
<td>Weight loss diets rarely result in sustained weight loss</td>
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</tr>
<tr>
<td>We need to do better when it comes to food and nutrition education</td>
<td></td>
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<tr>
<td><strong>Children</strong></td>
<td></td>
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<tr>
<td>Fat children are at the mercy of their parents</td>
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<td>Item</td>
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<tr>
<td>Childhood obesity is child abuse</td>
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<tr>
<td>We need to intervene in the school environment in order to control access to certain foods</td>
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<tr>
<td>Parents have a hard time controlling their children’s food choices in the face of intense marketing campaigns</td>
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<tr>
<td>Media campaigns targeting ‘fast food’ at children should be restricted.</td>
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<tr>
<td>Children’s activities should not be sponsored by ‘fast food’ companies</td>
<td></td>
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<tr>
<td>Lots of factors contribute to childhood obesity</td>
<td></td>
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<tr>
<td>Children, like adults, come in all shapes and sizes; higher body fat is not necessarily a result of lifestyle</td>
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</table>

**Gender**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being fat is worse for women</td>
<td></td>
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<tr>
<td>Women face more criticism for their weight than men do</td>
<td></td>
<td></td>
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<tr>
<td>Women experience more weight based discrimination than men</td>
<td></td>
<td></td>
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<tr>
<td>Women are more likely to endorse the messages of size acceptance</td>
<td></td>
<td></td>
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<tr>
<td>Men experience as much weight based discrimination as women</td>
<td></td>
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<tr>
<td>Society makes it hard for women to embrace size acceptance</td>
<td></td>
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<tr>
<td>Fat acceptance is a response from women who do not want to lose weight</td>
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<tr>
<td>Item</td>
<td>Y/N</td>
<td>Comment</td>
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<tr>
<td>Women tend to be fat because they engage in emotional eating</td>
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<tr>
<td>Men tend to be fat because they lack education on nutrition</td>
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**Critical Biomedical**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>The current approach to controlling population weight does not seem to be having the desired effect</td>
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<tr>
<td>Focusing on weight does not necessarily result in weight loss</td>
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<tr>
<td>Health and body weight are the result of multiple factors</td>
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<tr>
<td>It is important to challenge assumptions around the relationship between health and weight</td>
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<tr>
<td>Losing and gaining weight can be unhealthy</td>
<td></td>
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<tr>
<td>The negative health consequences of excess weight are likely exaggerated</td>
<td></td>
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<tr>
<td>Considering life expectancy continues to rise, the negative health consequences associated with excess weight have likely been exaggerated</td>
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</table>

**Consumer Freedom**

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<tbody>
<tr>
<td>Everyone should have the right to make their own choices around food</td>
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<tr>
<td>The government tries to exercise too much control over people’s bodies.</td>
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<tr>
<td>The shift from individual to environmental explanations for obesity will give the government more power to intervene when it comes to food advertising and taxes.</td>
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<tr>
<td>The shift from individual to environmental explanations for obesity will give the</td>
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<td>Comment</td>
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<tr>
<td>government more power to regulate our food environment.</td>
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<tr>
<td>Reducing consumer choice is not the solution to the obesity crisis</td>
<td></td>
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<tr>
<td>Reducing consumer choice will not have an impact on population weight.</td>
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<tr>
<td>Reducing consumer choice will not lead to weight reduction.</td>
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</table>

### Discrimination

| Fat oppression is different to other types of social oppression because being fat is something people can change |     |         |
| Weight based discrimination is different because it is about something people can control and change            |     |         |
| Fat people are discriminated against because they are blamed for their weight                                    |     |         |
| Fat people are discriminated against because they are considered responsible for their weight                     |     |         |
| The negative treatment of fat people is not surprising considering the way society depicts fat bodies              |     |         |
| Fat people are treated badly as a result of the way society depicts fat bodies                                    |     |         |
| Weight based discrimination is the last acceptable form of discrimination                                        |     |         |
| Weight based discrimination is the last socially acceptable form of discrimination                                |     |         |
| Fat people seem to be the only group of people left in society where it is generally                            |     |         |
considered ok to humiliate, discriminate against, and bully

Fat people should not need to defend themselves as being worthy of existence

All people, regardless of body size, deserve respect, equity, and dignity, and to live without stigma and discrimination.

You don’t have to find fat people attractive, just don’t bully or shame them

Negative beliefs about body weight lead to negative assumptions about the abilities of fat people

The messages around fat people being a drain on public health money are inciting hatred and discrimination

As a society we need to eradicate all types of discrimination and oppression, including weight based oppression.

We need to be just as concerned about the effects of weight stigma and discrimination as we are about the physical consequences of weight

The impact of weight stigma and discrimination should be just as concerning as the health implications of weight

It makes me angry to hear someone being insulted because they are fat

If people don’t like being discriminated against because of their weight, they should lose weight

Weight based discrimination is not a serious issue.

The health issues associated with weight make weight based discrimination difficult to challenge
The health issues associated with weight make weight bias a tricky issue

The health issues associated with weight make weight bias a complex issue to tackle.

The health issues associated with weight create somewhat of a dilemma when it comes to reducing weight related bias

Fat people face discrimination in many areas of life

Fat people face unfair discrimination in many areas of life

The consequences of weight discrimination can severely limit people’s lives and potential.

Fat people face unfair discrimination from health care providers

Fat people face employment based discrimination

Fat people face unfair discrimination in employment settings

Fat people should not have to pay more for health insurance

Weight based discrimination negatively impacts on people’s emotional well-being

Weight based discrimination can impede peoples abilities to lead happy and successful lives

Weight based discrimination can reduce fat people’s quality of life

Weight based discrimination can encourage fat people to lose weight

Weight based discrimination is not a motivator for change

Weight based discrimination does not motivate fat and obese people to change
<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
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<tbody>
<tr>
<td>Feeling bad about oneself and one’s body can be a response to the practice of fat shaming and discrimination.</td>
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<tr>
<td><strong>Disability</strong></td>
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<tr>
<td>Being extremely obese should be considered a disability</td>
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<tr>
<td>People who are extremely obese should be protected by disability legislation</td>
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<tr>
<td>Extreme obesity that interferes with personal mobility should be considered a disability</td>
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<tr>
<td>Considering obese people to be disabled would stigmatize fat people even further</td>
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<tr>
<td>Extending disability protection to people who are extremely obese would only encourage society to view obese people in even more limited ways</td>
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<tr>
<td>Being obese is not the same as being disabled</td>
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<tr>
<td>Obesity is not the same as disability; a disability is something that can’t be helped, while obesity is preventable</td>
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<tr>
<td><strong>Fat Shaming</strong></td>
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<tr>
<td>Shaming people for being fat does not encourage them to lose weight</td>
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<tr>
<td>Shaming people because of their weight is not a motivator for change</td>
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<tr>
<td>Shaming people for being fat reduces their ability to adopt healthy habits</td>
<td></td>
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<tr>
<td>Making fat people feel ashamed of themselves does not encourage healthy behaviours</td>
<td></td>
<td></td>
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<tr>
<td>Making fat people feel bad about themselves can encourage weight loss</td>
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<tr>
<td><strong>Item</strong></td>
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<td><strong>Comment</strong></td>
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<td>-------------------------------------------------------------------------</td>
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<tr>
<td>Something needs to be done to stop fat shaming</td>
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<tr>
<td>We should do more to make fat shaming unacceptable</td>
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<tr>
<td>Fat shaming is not a solution to growing rates of obesity</td>
<td></td>
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<tr>
<td>It is wrong that people feel it is ok to attack others because of their body size</td>
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<tr>
<td>We need to stop being so judgemental toward fat people</td>
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<tr>
<td>It is not ok to comment on another person’s weight</td>
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<tr>
<td>It is not ok to pass judgement on another person’s weight</td>
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<tr>
<td>I don’t understand why people have such strong and angry reactions to fat people, there are more important things to get angry about</td>
<td></td>
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<tr>
<td>Shaming fat people is socially acceptable</td>
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<tr>
<td>Weight stigma can discourage people from exercise</td>
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<td></td>
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<tr>
<td>Fat shaming can discourage people from exercising</td>
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<tr>
<td><strong>Social Justice</strong></td>
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<tr>
<td>Everyone deserves equal rights</td>
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<tr>
<td>Everybody deserves equal rights</td>
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<tr>
<td>Bodies of all shapes and sizes deserve equal rights</td>
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<tr>
<td>It should be illegal to discriminate against someone because of their weight</td>
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<td>Item</td>
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<td>Comment</td>
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<tr>
<td>Everybody is worthy of being given a chance – without being prejudged for their weight</td>
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<tr>
<td>Being fat does not make people unworthy of inclusion or opportunity</td>
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<tr>
<td>Everybody should be considered equally valuable in society</td>
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<tr>
<td>Weight based discrimination leads to a denial of basic human rights</td>
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<tr>
<td>Approaches to health that focus on weight result in bias and discrimination against fat and obese people</td>
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<tr>
<td>Fat and obese people need to be treated with the same respect as anyone else</td>
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<tr>
<td>It is important to see fat people represented positively in the media</td>
<td></td>
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<tr>
<td>The media should stop portraying fat people in negative ways</td>
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<tr>
<td>The media should stop portraying fat people according to negative stereotypes</td>
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<tr>
<td>Film and television programs should stop portraying fat people according to negative stereotypes</td>
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<tr>
<td>It is important to see fat people portrayed positively in different roles.</td>
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<tr>
<td>Society needs to change the way they respond to fat bodies</td>
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<tr>
<td>We need to make allowances in social spaces for all bodies, including fat bodies</td>
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<tr>
<td>Public spaces should accommodate all body shapes and sizes, including fat bodies</td>
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<tr>
<td>The existence of organizations to lobby for the rights of fat and obese people is a good thing</td>
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</tbody>
</table>
We need to take weight based discrimination as seriously as other types of discrimination

Discussions and programs recognizing diversity need to include a focus on body weight.

We need to take weight based discrimination as seriously as racial or gendered discrimination

When it comes to health and fitness we need to acknowledge that not everyone has the same access to resources, so not everyone will have the same outcomes

Different social groups have different access to resources, and this may reflect in higher body weight for some people

### Health At Every Size®

- It is possible to be fit and fat
- It is possible to be healthy and fat
- The idea that you can be healthy at any size is a positive one to promote
- If we focused more on attaining health rather than losing weight, we would be a happier and healthier society
- If we focused more on attaining health rather than losing weight, we would all be better off
- If we focused more on attaining health rather than losing weight, we would be better off both physically and emotionally
- When the government promotes the link between body size and health, it becomes a difficult message to challenge
<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
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<tbody>
<tr>
<td>I really doubt that someone can be healthy and extremely overweight</td>
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<tr>
<td>I’m sceptical about someone’s ability to be really health and really overweight</td>
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<tr>
<td><strong>Fat/Size Acceptance</strong></td>
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<tr>
<td>Plus size models are a good idea</td>
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<tr>
<td>I like the inclusion of plus size models in advertising campaigns</td>
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<tr>
<td>Feeling good about oneself and one’s weight is extremely difficult in today’s society</td>
<td></td>
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<tr>
<td>Feeling good about yourself and your weight is extremely difficult given societies focus on thin body ideals</td>
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<tr>
<td>Promoting size acceptance is a necessary step in tackling fatness and obesity</td>
<td></td>
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<tr>
<td>Size acceptance should be encouraged</td>
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<tr>
<td>The message of size acceptance should apply to all weights, even the more extreme.</td>
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<tr>
<td>Our self-esteem shouldn’t change just because our bodies do</td>
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<tr>
<td>Messages portrayed in the media make it very difficult to achieve body acceptance if your body deviates from what is considered normal</td>
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<tr>
<td>Self-acceptance is the first step to making positive choices in life</td>
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<tr>
<td>Self-acceptance is the first step to making positive choices with regard to health and well-being</td>
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</tr>
<tr>
<td>When you don’t like your body, it is very difficult to consider making healthy changes and</td>
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</tbody>
</table>
Size acceptance should not be encouraged as it will only encourage obesity
Size acceptance should only be encouraged for fit and healthy people.
It is possible to be fat or obese and feel good about yourself
It is possible to be fat and happy
It is possible to be fat and sexy
There is a need for the Fat Acceptance movement because fat shaming is so widespread
We need more positive images in the media that challenge negative fat stereotypes
We need to stop using the word fat as an insult
Rather than fat people changing their bodies; society needs to change the way they respond to fat bodies
Fat people should be encouraged to accept their bodies, it’s society that needs to change the way it responds to fatness
Fat positivity is an excuse for people not to look after themselves
Fat positivity is an excuse for people to justify their fatness
If people accept themselves as fat – that’s fine – but that doesn’t mean society has to follow and see fatness as acceptable
Fat acceptance is an attempt to normalize an unhealthy lifestyle

<table>
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<th>Item</th>
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<tbody>
<tr>
<td>choices.</td>
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<tr>
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<tr>
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<td>It is possible to be fat or obese and feel good about yourself</td>
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<td></td>
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<td></td>
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<tr>
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<tr>
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<td>Fat positivity is an excuse for people not to look after themselves</td>
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<td>Fat acceptance is an attempt to normalize an unhealthy lifestyle</td>
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<tr>
<td>Fat acceptance represents quite an irresponsible approach to health</td>
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<tr>
<td>There is a need for Fat Activism because fat shaming is so widespread</td>
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<tr>
<td>Fat activism is needed in order to reduce the negativity associated with fat bodies</td>
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<tr>
<td>Fat activism is needed because no one is looking out for the rights of fat and obese people</td>
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<tr>
<td>Activism is necessary because the rights of fat people are being overlooked</td>
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<tr>
<td>Activism is necessary because discrimination against fat people is being overlooked</td>
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<td></td>
</tr>
<tr>
<td>Fat activism is necessary because discrimination against fat people is not being taken seriously</td>
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<tr>
<td>Fat activism is another way of pushing a feminist agenda</td>
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<tr>
<td>Fat activists tend to be predominantly women with a feminist agenda</td>
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<tr>
<td>Fat Activists tend to have a feminist agenda</td>
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**Personal Embodiment/self-beliefs**

<table>
<thead>
<tr>
<th>Item</th>
<th>Y/N</th>
<th>Comment</th>
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<tbody>
<tr>
<td>My self-esteem goes down if my body weight goes up</td>
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<tr>
<td>I feel bad about myself when I gain weight</td>
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<tr>
<td>I worry about becoming fat</td>
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<td></td>
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<tr>
<td>I think my friends and family will judge me negatively if I gain weight</td>
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<tr>
<td>Gaining a substantial amount of weight would likely limit my opportunities in life</td>
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<td>Comment</td>
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<tr>
<td>Striving to achieve body norms and ideals is not something I see as important</td>
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</tr>
<tr>
<td>For me a healthy body weight is one I feel comfortable with, regardless of the number on the scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel happy about my body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are more important things in my life than how much I weigh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel a sense of obligation when it comes to pursuing health and fitness goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel a sense of obligation when it comes to following the government recommendations around health and fitness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

Thank you for your feedback!

This research is supported by an Australian Government Research Training Program (RTP) Scholarship.
### APPENDIX I: CHAPTER 7

**Subject Matter Experts**

Table II

Subject matter expert reviewers

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification/Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esther Rothblum</td>
<td>Editor <em>Fat Studies Journal</em></td>
</tr>
<tr>
<td>Deb Burgard</td>
<td>Psychologist, Author</td>
</tr>
<tr>
<td>Linda Bacon</td>
<td>Researcher, Author (Health At Every Size)</td>
</tr>
<tr>
<td>Jason Whitesel</td>
<td>Fat Studies Editorial Board</td>
</tr>
<tr>
<td>Lucy Aphramor</td>
<td>Radical Dietician, Author</td>
</tr>
<tr>
<td>Natalie Ingram</td>
<td>Fat Studies Editorial Board</td>
</tr>
<tr>
<td>Maureen McHugh</td>
<td>Fat Studies Editorial Board</td>
</tr>
<tr>
<td>Darliene Howell</td>
<td>NAAFA board chair</td>
</tr>
<tr>
<td>Peggy Howell</td>
<td>NAAFA board member</td>
</tr>
<tr>
<td>Kerry Beake</td>
<td>HAES dietician</td>
</tr>
<tr>
<td>Caitlin O’Rielly</td>
<td>PhD Candidate (Weight Stigma)</td>
</tr>
<tr>
<td>Olivia Monson</td>
<td>PhD Candidate (Fat Discourse)</td>
</tr>
</tbody>
</table>
APPENDIX J: CHAPTER 7

Pilot Study: Attitudes Toward Fatness, Weight Stigma and Size Acceptance

A little background on the project

Please note: I frequently use the term Fat to refer to high body weight in preference to the term obesity – which is a medicalized term and one not typically used in my field of research. I use the term fat simply as a descriptive term (as it was once intended). If you find this term offensive please do not feel obliged to continue.

The ultimate goal of my research is to find ways of reducing weight based stigma and discrimination.

People of high body weight experience shaming, prejudice, and discrimination in many areas of life with significant negative consequences. These actions are quite acceptable practice in our society – some perpetrators justify their actions by claiming they are motivating people to lose weight – and this of course is not the outcome.

So, in order to reduce weight stigma – we need a way of measuring and monitoring it. We also need ways of testing whether the strategies or experiments researchers trial actually have the desired effect. We also need ways of demonstrating when the opposite occurs – for example, when public health messages designed to promote health – actually inadvertently promote shaming and negativity.

A major part of my PhD is to create a way of measuring all of this. I am developing a set of measures to assess people’s perceptions and responses to the causes and consequences of fatness and obesity, as well as responses to weight shaming and discrimination, and size acceptance. These measures will be used by myself and other researchers around the world who are committed to reducing weight based stigma.

The measures will take a statement and response type format – where people respond in terms of agreement or disagreement. It is important that the statements used are clear and concise and fit together with the response options available, and this is where I need your feedback

Thank you very much for volunteering to contribute to this project.

This research is supported by an Australian Government Research Training Program Scholarship.
Murdoch University, School of Psychology and Exercise Science

**Instructions**

Please read the following lists of statements and indicate if there are any statements you find confusing or difficult to respond to.

Also, please consider if there are terms you feel are ambiguous or are unfamiliar with.

Lastly, please indicate if you would find responding to any of these statements difficult – given the response options available.

There is space for responding and any additional comments at the end of each page.

**Please do not complete responses to the items**
<table>
<thead>
<tr>
<th></th>
<th>Beliefs about Fatness (Part A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There are biological factors that result in people being fat.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>2.</td>
<td>There are medical reasons for people being fat.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>3.</td>
<td>Fatness can be the result of genetic factors</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>4.</td>
<td>Psychological factors can lead people to become fat.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>5.</td>
<td>Sometimes emotional eating leads to fatness.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>6.</td>
<td>Lack of knowledge about food and nutrition can lead to fatness.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>7.</td>
<td>Overeating and under exercising are the main reason people are fat.</td>
</tr>
<tr>
<td></td>
<td>Strongly -</td>
</tr>
<tr>
<td>8.</td>
<td>Fatness is the result of lifestyle choices</td>
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<tr>
<td></td>
<td>Strongly -</td>
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</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing? 
Are there any terms you find ambiguous or are unfamiliar with? 
Given the response options available – are there any items you would find it difficult to respond to?
<table>
<thead>
<tr>
<th>Beliefs about Fatness (Part A) Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9. Fatness is the result of lifestyle choices</strong></td>
</tr>
<tr>
<td>Strongly disagree</td>
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<tr>
<td><strong>10. People are responsible for their weight</strong></td>
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<tr>
<td>Strongly disagree</td>
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<tr>
<td><strong>11. People can control their body weight</strong></td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td><strong>12. There are many factors that contribute to body weight.</strong></td>
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<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td><strong>13. There are factors outside of personal control that contribute to body weight</strong></td>
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<tr>
<td>Strongly disagree</td>
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<tr>
<td><strong>14. Weight gain can be a side effect of taking particular medications.</strong></td>
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<tr>
<td>Strongly disagree</td>
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<tr>
<td><strong>15. Weight is influenced by metabolism.</strong></td>
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<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td><strong>16. People today are the offspring of earlier generations who survived famine and drought</strong></td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing? Are there any terms you find ambiguous or are unfamiliar with? Given the response options available – are there any items you would find it difficult to respond to?
### Beliefs about Fatness (Part A) Continued

<table>
<thead>
<tr>
<th>17. Our environment makes it easy to gain weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</table>

<table>
<thead>
<tr>
<th>18. Unhealthy food is cheaper than healthy food.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>19. Unhealthy food is more easily available than healthy food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>20. The food we eat plays a small role in maintaining our body weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</tbody>
</table>

### Beliefs about Fatness (Part B)

<table>
<thead>
<tr>
<th>1. Health is not predicted solely by body weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Body weight isn’t a reliable indicator of health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</table>

<table>
<thead>
<tr>
<th>3. You cannot tell how healthy someone is from their body size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</table>

<table>
<thead>
<tr>
<th>4. ‘Obesity’ should not be considered a disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree or disagree - Mildly agree - Moderately agree - Strongly agree</td>
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</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing?

Are there any terms you find ambiguous or are unfamiliar with?

Given the response options available – are there any items you would find it difficult to respond to?
Beliefs about fatness (Part B) Continued

<p>| | | | | | | | | |</p>
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</thead>
<tbody>
<tr>
<td>5.</td>
<td>Fat people are a drain on the health system</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
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<tr>
<td>6.</td>
<td>The medical costs associated with being fat are considerable</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
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<tr>
<td>7.</td>
<td>Body Mass Index (BMI) is a poor indicator of health</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
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<tr>
<td>8.</td>
<td>The negative health consequences of high weight are exaggerated</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
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<tr>
<td>9.</td>
<td>Being fat should not be considered a disability</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
<td></td>
<td></td>
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<tr>
<td>10.</td>
<td>For any weight, there are people who are healthy and people who are not.</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
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</tr>
<tr>
<td>11.</td>
<td>Healthy bodies come in all shapes and sizes</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
<td></td>
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</tr>
<tr>
<td>12.</td>
<td>Fat people are less likely to die of cancer than thin people</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree or disagree - Neither agree - Mlidy agree - Moderately agree - Strongly agree</td>
<td></td>
<td></td>
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</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing?
Are there any terms you find ambiguous or are unfamiliar with?
Given the response options available – are there any items you would find it difficult to respond to?
### Evaluations of Fatness (Part C)

**13. Fat people can live longer than thin people**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**14. Bodies come in all sizes, fat bodies are an aspect of normal human diversity.**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**15. Fat people are not immoral**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**16. Fat people are attractive**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**17. Fat people are sexy**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**18. Being fat does not make a person unworthy of opportunity**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**19. Being fat does not make a person unworthy of inclusion**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**20. Being fat does not make a person unworthy**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**21. All people, regardless of body size deserve respect, equity, and dignity.**

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

Are there any statements where their meaning is unclear or you find confusing? Are there any terms you find ambiguous or are unfamiliar with? Given the response options available – are there any items you would find it difficult to respond to?
22. It is possible to be fit and fat

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

23. It is possible to be healthy and fat

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

24. There is nothing wrong with being fat

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

Attitudes toward weight stigma (Part D)

1. I sympathize with fat people facing discrimination

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

2. Knowing that society is making negative assumptions because of your weight would make it hard to feel good about yourself

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

3. Knowing that society is judging you because of your weight would be very stressful

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
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</thead>
</table>

4. Having to contend with weight stigma and discrimination would be very difficult

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
<th>MILDLY disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
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</thead>
</table>

Are there any statements where their meaning is unclear or you find confusing?
Are there any terms you find ambiguous or are unfamiliar with?
Given the response options available – are there any items you would find it difficult to respond to?
### Attitudes toward weight stigma (Part D) Continued

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree or disagree</th>
<th>Neither agree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Fat people need acceptance not expressions of contempt</td>
<td></td>
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<td></td>
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<td>6. Weight stigma contributes to poor health</td>
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<tr>
<td>7. Fat people are discriminated against because they are considered responsible for their weight</td>
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<tr>
<td>8. Fat people are treated badly because of the way society depicts fat bodies</td>
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<tr>
<td>9. Fat people should not need to defend themselves as being worthy of existence</td>
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<td></td>
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<tr>
<td>10. Negative beliefs about body weight lead to negative assumptions about fat people</td>
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<tr>
<td>11. As a society we need to eradicate weight based discrimination</td>
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<td></td>
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<tr>
<td>12. It makes me angry to hear someone being insulted for being fat</td>
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</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing?
Are there any terms you find ambiguous or are unfamiliar with?
Given the response options available – are there any items you would find it difficult to respond to?
<table>
<thead>
<tr>
<th>Attitudes toward weight stigma (Part D) Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. If fat people don't like being discriminated against, they should lose weight</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>14. Fat people face discrimination in many areas of life</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>15. Weight based discrimination can severely limit quality of life.</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>16. Fat people face employment based discrimination</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>17. Weight based discrimination negatively impacts on well-being.</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>18. Weight based discrimination does not motivate people to change</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>19. Feeling bad about one’s body can be a response to being fat shamed.</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>20. Health professionals should be aware of the negative impact of weight stigma</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
<tr>
<td>21. Health professionals should make fat patients feel comfortable</td>
</tr>
<tr>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Are there any statements where their meaning is unclear or you find confusing?
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Given the response options available – are there any items you would find it difficult to respond to?
### Attitudes toward weight stigma (Part D) Continued

<table>
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<th>Statement</th>
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<th>Moderately agree</th>
<th>Strongly agree</th>
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<tbody>
<tr>
<td>22. Health professionals have a responsibility not to contribute to weight stigma</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
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<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>23. Shaming people for being fat does not encourage them to lose weight</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>24. Fat shaming is unacceptable</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>25. It is wrong to attack others because of their body size</td>
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<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>26. It is not ok to comment on another person’s weight</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>27. Shaming fat people is socially acceptable</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>28. Bodies of all sizes deserve equal rights</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>29. It should be illegal to discriminate against someone because they are fat</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
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Are there any terms you find ambiguous or are unfamiliar with?
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</thead>
<tbody>
<tr>
<td>30. Every body should be considered equally valuable</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>31. Discrimination due to fatness leads to a denial of human rights</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>32. Fat people need to be treated with respect</td>
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<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>33. It is important to see fat people represented positively in the media</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>34. The media should stop portraying fat people negatively</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>35. Film and television programs should stop portraying fat people negatively</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>36. Public spaces should accommodate all body sizes</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>37. The existence of organizations to lobby for the rights of fat people is a good thing</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
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Are there any statements where their meaning is unclear or you find confusing? Are there any terms you find ambiguous or are unfamiliar with? Given the response options available – are there any items you would find it difficult to respond to?
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<th>Agree</th>
<th>Strongly agree</th>
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<tbody>
<tr>
<td>38. We need to take weight based discrimination as seriously as other forms of discrimination</td>
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<td></td>
<td></td>
<td>Strongly agree</td>
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<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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<tr>
<td>39. Discussions and programs recognizing diversity need to include body weight.</td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
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<td>Agree</td>
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<tr>
<td>40. We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming</td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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</tr>
<tr>
<td>41. Concern for health is an excuse to judge fat people</td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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**Attitudes Toward Size Acceptance (Part E)**

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<th>Agree</th>
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</thead>
<tbody>
<tr>
<td>1. Weight loss advice given to fat people is simplistic</td>
<td></td>
<td></td>
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<td>Strongly agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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<tr>
<td>2. Weight loss advice given to fat people is patronizing</td>
<td></td>
<td></td>
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<td>Strongly agree</td>
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<td>Agree</td>
<td>Agree</td>
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<td></td>
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<tr>
<td>3. Long term weight loss is hard to achieve</td>
<td></td>
<td></td>
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<td>Strongly agree</td>
<td>Agree</td>
<td>Agree</td>
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Are there any terms you find ambiguous or are unfamiliar with?
Given the response options available – are there any items you would find it difficult to respond to?
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<tbody>
<tr>
<td>4. Weight loss diets are not sustainable long term</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>5. The cycle of dieting and regaining weight is detrimental to health</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>6. We need to stop promoting weight loss diets as healthy</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>7. Campaigns aimed at reducing population weight do not seem to have been effective</td>
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<tr>
<td>8. Public health messages should focus on improving health rather than losing weight.</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>9. The idea that you can be healthy at any size is a positive one to promote</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>10. We should focus less on losing weight and more on achieving health</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<tr>
<td>11. For any weight, there are people who are healthy and people who are not.</td>
<td>Strongly disagree - Moderately disagree - Mildly disagree - Neither agree - Mildly agree - Moderately agree - Strongly agree</td>
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<th>Mildly agree</th>
<th>Moderately agree</th>
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<tr>
<td>12. Successful and lasting weight loss is rarely achieved</td>
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<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>13. Approaches to health that focus on weight result in discrimination against fat people</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>14. When it comes to other people’s weight we should mind our own business</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>15. A fat person’s health is their concern, not mine</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>16. I like the inclusion of larger bodied models in advertising campaigns</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>17. Feeling good about one’s weight is difficult in today’s society</td>
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<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
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<td>Strongly agree</td>
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<td>18. Size acceptance should be encouraged</td>
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<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>19. Self-esteem shouldn’t change just because our bodies do</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree or disagree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
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<th>Strongly agree</th>
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<tbody>
<tr>
<td>20. It is hard to accept your body if it differs from what the media represents as normal</td>
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<td>21. The media portrays only a few body types as desirable</td>
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<td>22. Size acceptance is important for making healthy lifestyle choices</td>
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<td>23. Size acceptance encourages obesity</td>
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<td>24. You can be fat and feel good about yourself</td>
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<td>25. You can be fat and happy</td>
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<td>26. You can be fat and sexy</td>
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<td>27. We need more positive images of fat people in the media</td>
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<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
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<tbody>
<tr>
<td>28. We need to stop using the word fat as an insult</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>29. Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>30. Fat acceptance is an attempt to promote an unhealthy lifestyle</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>31. There is a need for Fat Activism because fat shaming is widespread</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>32. Activism is necessary because of the discrimination fat people experience</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>33. As a society, we need to stop trying to change people’s bodies</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
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<tr>
<td>34. Everyone should have the right to make their own choices around food</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Mildly disagree</td>
<td>Neither agree</td>
<td>Mildly agree</td>
<td>Moderately agree</td>
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### Personal embodiment/self-beliefs (Part F)

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<tbody>
<tr>
<td>1. My self-esteem goes down if my body weight goes up</td>
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<td>disagree</td>
<td>agree</td>
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<tr>
<td>2. I think I will be judged negatively if I gain weight</td>
<td>disagree</td>
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<td>disagree</td>
<td>agree</td>
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<td>agree</td>
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<tr>
<td>3. I think it’s important to try to achieve body norms and ideals</td>
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<td>disagree</td>
<td>disagree</td>
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<tr>
<td>4. A healthy body weight is one I feel comfortable with, regardless of the number on the scale</td>
<td>disagree</td>
<td>disagree</td>
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<td>5. I feel happy about my body</td>
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<td>disagree</td>
<td>agree</td>
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<td>agree</td>
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<tr>
<td>6. I feel like I should pursue health and fitness goals</td>
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Are there any statements where their meaning is unclear or you find confusing? Are there any terms you find ambiguous or are unfamiliar with? Given the response options available – are there any items you would find it difficult to respond to?

THANK YOU VERY MUCH!
APPENDIX K: CHAPTER 7
Item Pool and Survey Format for Exploratory Factor Analysis

The study was advertised as: Attitudes, beliefs, and evaluations of fatness, weight stigma, and size acceptance.

Introduction and consent information

Dear Participant,

In this study you are asked to complete a survey containing 148 statements relating to beliefs and evaluations toward fatness as well as statements relating to weight based discrimination and size acceptance. You will also be asked to respond to some statements relating to your feelings toward your own body. Responses will be made on a scale ranging from Strongly Agree to Strongly Disagree.

Please note the term Fat will be used throughout this survey. This term is now often used as a descriptive term in preference to the term obesity - a medical term, and the term overweight - which implies a comparison to a preferred standard. If you find this term offensive please do not feel obliged to continue.

To participate in this study all you need to do is to complete the questionnaire on the subsequent electronic pages. Your completion of the questionnaire will be taken as consent to participate in the research.

Your privacy is very important, therefore the data collected from you will be completely anonymous. Your survey responses will not record your IP address. Additionally, you will not be identified in any publication arising out of this study or in any data that is shared with other researchers.

If you have any questions about this project, you can contact me, Patricia Cain (P.Cain@murdoch.edu.au). Alternatively, the chief investigator, Dr Graeme Ditchburn (Graeme.Ditchburn@murdoch.edu.au), is happy to discuss any questions you might have.

Results of this study will be made available in 2018, online through the Murdoch University School of Psychology and Exercise Science website: http://www.murdoch.edu.au/School-of-Psychology-and-Exercise-Science/Research/Psychology-Research/Research-results/

Finally, if you do elect to participate in this study please note that you may discontinue the questionnaire at any time, however, your questionnaire, once completed cannot be removed from the data set as your name will not be stored with your data in a way that would allow identification and removal of your data.

Please be aware that the data obtained from this study may be used in future research.

Your completion of the survey will be taken as consent for the use of the data in future. If you are happy to consent to participate in this study, please click the button below to continue to the questionnaire.
Sincerely
Patricia Cain

This study has been approved by the Murdoch University (Western Australia) Human Research Ethics Committee (Approval 2017/231). If you have any reservation or complaint about the ethical conduct of this research, and wish to talk with an independent person, you may contact Murdoch University’s Research Ethics Office (for overseas studies, +61 8 9360 6677) or e-mail ethics@murdoch.edu.au). Any issues you raise will be treated in confidence and investigated in full.
Section One. Beliefs about Fatness

Response option

Strongly -  Moderately -  Mildly -  Neither agree -  Mildly -  Moderately -  Strongly disagree disagree disagree or disagree agree agree

There are many factors that cause people to be fat
There are biological factors that result in people being fat
Lack of knowledge about food and nutrition can lead to fatness
People are responsible for their weight
Weight gain can be a side effect of taking particular medications
Our environment has contributed to population weight gain
There are genetic factors that cause people to be fat
Sometimes emotional eating leads to fatness
Fatness is the result of lifestyle choices
The low price of ‘fast food’ has contributed to population weight gain
There are medical factors that cause people to be fat
Overeating and under exercising are the main reason people are fat
There are factors outside of personal control that contribute to high body weight
Weight is influenced by metabolism
The availability of high calorie food makes it easy to gain weight
Psychological factors can lead people to become fat
People can control their body weight
The food we eat plays a small role in maintaining our body weight
Busy lifestyles have contributed to population weight gain
People today are the descendants of generations who survived famine and drought
Health is not predicted solely by body weight
The medical costs associated with being fat are considerable
Obesity should not be considered a disease
Healthy bodies come in all shapes and sizes
Fat people are a burden on the health system
Being fat should not be considered a disability
Section One. Beliefs about Fatness

Response option

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Mildly agree</th>
<th>Neither agree</th>
<th>Mildly disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
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</thead>
</table>

The actual change in average population weight has been exaggerated
Fat people are not necessarily unhealthy
Body weight isn’t a reliable indicator of health
Fat people can live longer than thin people
You cannot tell how healthy someone is from their body size
The negative health consequences of high weight are exaggerated
Bodies come in all sizes, fat bodies are a part of normal human diversity
Fat people are less likely to die of cancer than thin people
Body Mass Index (BMI) is a poor indicator of health
For any weight, there are people who are healthy and people who are not
That “obesity” is classified as a disease leads to more negative perceptions of obese people
Fat people can be healthy
Fat people are attractive
Fat people are not immoral
All people, regardless of body size deserve respect, equity, and dignity
Being fat does not make a person unworthy of inclusion
Fat people can be fit
Being fat does not make a person unworthy of opportunity
Fat people are sexy
Fat people are not lazy
Being fat does not make a person unworthy
There is nothing wrong with being fat
Western societies tend to focus negatively on fat people
Fat people do not need to explain why they are fat
Fat bodies are not bad bodies
Fat bodies are capable bodies
Section Two. Evaluations of weight stigma and Size Acceptance

Response option

| Strongly disagree | Moderately disagree | Mildly disagree | Neither agree or disagree | Mildly agree | Moderately agree | Strongly agree |

I sympathize with fat people who face discrimination
Knowing that society is judging you because of your weight would be stressful
Fat people need acceptance not expressions of contempt
Weight stigma contributes to poor health
Fat shaming is unacceptable
Fat people are discriminated against because they are considered responsible for their weight
Fat people should not need to defend themselves as being worthy of existence
Negative beliefs about body weight lead to negative assumptions about fat people
As a society, we need to eradicate weight-based discrimination
It makes me angry to hear someone being insulted for being fat
Being fat is worse for women
Fat people are treated badly because of the way society depicts fat bodies
If fat people don’t like being discriminated against, they should lose weight
Weight-based discrimination can severely limit quality of life
Knowing that society is making negative assumptions because of your weight would make it hard to feel good about yourself
Health professionals should be aware of the negative impact of weight stigma
Weight-based discrimination does not motivate people to lose weight
Feeling bad about one’s body can be a response to being fat shamed
Film and television programs should not portray fat people negatively
Health professionals have a responsibility not to contribute to weight stigma
Shaming people for being fat does not encourage them to lose weight
Being fat is worse for men
Fat people face discrimination in many areas of life
It is wrong to attack people because they are fat
It is not ok to comment on another person’s weight
Shaming fat people is socially acceptable
Bodies of all sizes deserve equal rights
Section Two. Evaluations of weight stigma and Size Acceptance

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<th>Response option</th>
<th>Strongly agree</th>
<th>Moderately agree</th>
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<th>Neither agree</th>
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Similar to other types of discrimination, it should be illegal to discriminate against someone because they are fat

Discrimination due to fatness leads to a denial of human rights

Fat people should be treated with respect

It is important to see fat people represented positively in the media

Weight-based discrimination negatively impacts on well-being.

The media should not portray fat people negatively

Having to contend with weight stigma and discrimination would be difficult

Public spaces should accommodate all body sizes

The existence of organizations to lobby for the rights of fat people is a good thing

All bodies should be considered equally valuable

Fat people face employment based discrimination

Health professionals should make fat patients feel comfortable

We need to take weight-based discrimination as seriously as other forms of discrimination

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

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

Campaigns aimed at reducing population weight do not seem to have been effective

Long term weight loss is hard to maintain

Feeling good about one’s weight is difficult in today’s society

Weight loss diets are not sustainable long term

We should focus less on losing weight and more on achieving health

The media only portrays a few body types as desirable

We need to stop promoting weight loss diets as healthy

Public health messages should focus on improving health rather than losing weight

As a society, we need to stop trying to change people’s bodies
### Section Two. Evaluations of weight stigma and Size Acceptance

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<th>Response option</th>
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<td>Strongly disagree</td>
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</table>

The idea that you can be healthy at any size is a positive message to promote

Successful and lasting weight loss is rarely achieved

You can be fat and happy

The cycle of dieting and regaining weight is detrimental to health

Weight focused approaches to health contribute to discrimination against fat people

When it comes to other people’s weight we should mind our own business

Weight loss advice given to fat people is patronizing

We need more positive images of fat people in the media

Fat people are happier than thin people

A fat person’s health is their concern, not mine

We need to stop using the word fat as an insult

Fat people do not need to justify their weight

Size acceptance is a foundation for making healthy lifestyle choices

I like the inclusion of larger bodied models in advertising campaigns

Weight loss advice given to fat people is simplistic

Activism is necessary because of the discrimination fat people experience

Size acceptance should be encouraged

Fat people are sexier than thin people

Self-esteem shouldn’t change just because our bodies do

Fat people do not need to apologise for being fat

It is hard to accept your body if it differs from what the media represents as normal

We should celebrate all bodies

Size acceptance does not encourage obesity

You can be fat and feel good about yourself

Size acceptance is an important social movement

You can be fat and sexy

Size acceptance promotes an unhealthy lifestyle

There is a need for Fat Activism because fat shaming is widespread
Section Two. Evaluations of weight stigma and Size Acceptance

Response option

<table>
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<tr>
<th>Strongly disagree</th>
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<th>Neither agree or disagree</th>
<th>Mildly agree</th>
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</table>

Everyone should have the right to make their own choices around food

All bodies are good bodies

Accepting other people’s bodies is important

Section Three. Personal embodiment/self-beliefs

Response option

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<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
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<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
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</table>

My self-esteem is not impacted by my body weight

I think I will be judged negatively if I gain weight

I think it’s important to try to achieve recommended body norms

A healthy body weight is one I feel comfortable with

I feel good about my body

I feel like I should follow government dietary recommendations

I feel like I should pursue health and fitness goals

I think it’s important to try and achieve a socially ideal body

I feel like I should follow government recommendations around health and fitness

I feel happy about my weight

I do not feel defined by my body weight
Section Four. Demographic questions

Please indicate your gender

- Male
- Female
- Other

Please indicate your age

Please indicate your highest level of education achieved

- Less than high school
- High school graduate
- Some college
- 2 year college
- 4 year college
- Professional degree
- Doctorate

This question is OPTIONAL

How would you describe your body weight

This question is OPTIONAL

Do you identify as fat

- Yes
- No

Please enter your Prolific ID
### APPENDIX L: CHAPTER 7

**Exploratory Factor Analysis Component Loadings**

Table L1

Principal Component Analysis: Component loadings for 79 items on 13 factors*

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<th>Component</th>
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</table>
There is a need for Fat Activism because fat shaming is widespread.

We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming.

Discussions and programs recognizing diversity need to include body weight.

Public spaces should accommodate all body sizes.

Size acceptance is an important social movement.

Fat people face discrimination in many areas of life.

We need more positive images of fat people in the media.

Size acceptance is a foundation for making healthy lifestyle choices.

<table>
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A fat person’s health is their concern, not mine  
When it comes to other people’s weight we should mind our own business  
Everyone should have the right to make their own choices around food  
Fat people do not need to justify their weight  
Fat people do not need to explain why they are fat  
Fat people do not need to apologise for being fat  
Fat people are sexy  
Fat people are attractive  
Fat people are sexier than thin people  
You can be fat and sexy  
Fat people are happier than thin people

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<td>All bodies are good bodies</td>
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<td>Shaming fat people is socially acceptable</td>
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<td>A healthy body weight is one I feel comfortable with</td>
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*Loadings =>.30

Extraction method: Principal Axis factoring
Rotation method: Oblimin with Kaiser Normalization
Rotation converged in 62 iterations
Table L2

Principal Component Analysis: Component loadings for 148 items with six factor fixed solution*

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<td>We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming</td>
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<td>Discussions and programs recognizing diversity need to include body weight</td>
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<td>The media should not portray fat people negatively</td>
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<td>The existence of organizations to lobby for the rights of fat people is a good thing</td>
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<td>Film and television programs should not portray fat people negatively</td>
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<td>Activism is necessary because of the discrimination fat people experience</td>
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<td>Public spaces should accommodate all body sizes</td>
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<td>We need more positive images of fat people in the media</td>
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There is a need for Fat Activism because fat shaming is widespread

As a society, we need to eradicate weight-based discrimination

It is important to see fat people represented positively in the media

Similar to other types of discrimination, it should be illegal to discriminate against someone because they are fat

Discrimination due to fatness leads to a denial of human rights

Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies

Size acceptance is a foundation for making healthy lifestyle choices

We need to stop using the word fat as an insult

Size acceptance should be encouraged

We should celebrate all bodies

Health professionals have a responsibility not to contribute to weight stigma

Fat people need acceptance not expressions of contempt

It makes me angry to hear someone being insulted for being fat

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<td>I sympathize with fat people who face discrimination</td>
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<td>Weight stigma contributes to poor health</td>
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<td>All bodies are good bodies</td>
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<td>Shaming people for being fat does not encourage them to lose weight</td>
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<td>Weight-based discrimination can severely limit quality of life</td>
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<td>Size acceptance promotes an unhealthy lifestyle</td>
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<td>Bodies of all sizes deserve equal rights</td>
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<td>Weight loss advice given to fat people is patronizing</td>
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<td>Feeling good about one’s weight is difficult in today’s society</td>
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<td>Public health messages should focus on improving health rather than losing weight</td>
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<td>If fat people don’t like being discriminated against, they should lose weight</td>
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<td>Negative beliefs about body weight lead to negative assumptions about fat people</td>
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<td>It is hard to accept your body if it differs from what the media represents as normal</td>
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<td>When it comes to other people’s weight we should mind our own business</td>
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<td>We should focus less on losing weight and more on achieving health</td>
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<td>Concern for health is used as an excuse to judge fat people</td>
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<td>Fat people are not lazy</td>
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<td>We need to stop promoting weight loss diets as healthy</td>
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<td>The food we eat plays a small role in maintaining our body weight</td>
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Long term weight loss is hard to maintain  .304
There are medical factors that cause people to be fat   - .626
Sometimes emotional eating leads to fatness   - .578
There are genetic factors that cause people to be fat   - .570
Psychological factors can lead people to become fat   - .563
There are biological factors that result in people being fat   - .550
The availability of high calorie food makes it easy to gain weight   - .538
There are factors outside of personal control that contribute to high body weight   - .527
Weight gain can be a side effect of taking particular medications   - .511
Lack of knowledge about food and nutrition can lead to fatness   - .502
Weight is influenced by metabolism   - .499
Our environment has contributed to population weight gain   - .480
The low price of ‘fast food’ has contributed to population weight gain   - .438
There are many factors that cause people to be fat   - .431
Feeling bad about one’s body can be a response to being fat shamed & -.411
The cycle of dieting and regaining weight is detrimental to health & -.358
People today are the descendants of generations who survived famine and drought & -.347
The media only portrays a few body types as desirable & .320
Western societies tend to focus negatively on fat people & -.340
The medical costs associated with being fat are considerable & .325
Busy lifestyles have contributed to population weight gain & -.316
Fat people are discriminated against because they are considered responsible for their weight & -.309
Being fat does not make a person unworthy of opportunity & .677
Being fat does not make a person unworthy & .649
Being fat does not make a person unworthy of inclusion & .643
All people, regardless of body size deserve respect, equity, and dignity & .598
Fat people should not need to defend themselves as being worthy of existence & .514
Fat people do not need to apologise for being fat
You can be fat and feel good about yourself
Fat people should be treated with respect
It is wrong to attack people because they are fat
Everyone should have the right to make their own choices around food
Fat people do not need to explain why they are fat
You can be fat and happy
Fat people do not need to justify their weight
Successful and lasting weight loss is rarely achieved
The negative health consequences of high weight are exaggerated
Fat people are not necessarily unhealthy
Fat people can be healthy
Body weight isn’t a reliable indicator of health
Fat people are sexy
There is nothing wrong with being fat

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<td>Fat people are attractive</td>
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<td>You cannot tell how healthy someone is from their body size</td>
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<td>The actual change in average population weight has been exaggerated</td>
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<td>Fat people are happier than thin people</td>
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<td>Healthy bodies come in all shapes and sizes</td>
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<td>You can be fat and sexy</td>
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<td>For any weight, there are people who are healthy and people who are not</td>
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*Loadings > .30

Extraction method: Principal Axis factoring
Rotation method: Oblimin with Kaiser Normalization
Rotation converged in 23 iterations
### Table L3

Principal Component Analysis: Component loadings for 56 items from Factor one of the six factor fixed solution*

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Weight-based discrimination can severely limit quality of life  .443
Weight-based discrimination negatively impacts on well-being  .421
Long term weight loss is hard to maintain  .371
Concern for health is used as an excuse to judge fat people  .315
Discrimination due to fatness leads to a denial of human rights  -.663
Similar to other types of discrimination, it should be illegal to discriminate against someone because they are fat  -.626
We need to take weight-based discrimination as seriously as other forms of discrimination  -.549
The existence of organizations to lobby for the rights of fat people is a good thing  -.439
Activism is necessary because of the discrimination fat people experience  -.417
Discussions and programs recognizing diversity need to include body weight  -.408
We should have public health campaigns that focus on the }
There is a need for Fat Activism because fat shaming is widespread.

Weight-based discrimination does not motivate people to lose weight.

Shaming people for being fat does not encourage them to lose weight.

If fat people don’t like being discriminated against, they should lose weight.

Public health messages should focus on improving health rather than losing weight.

We should focus less on losing weight and more on achieving health.

We need to stop promoting weight loss diets as healthy.

As a society, we need to stop trying to change people’s bodies.

Size acceptance promotes an unhealthy lifestyle.

Size acceptance does not encourage obesity.

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<tr>
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We should celebrate all bodies
Size acceptance is an important social movement
All bodies are good bodies
Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies
Accepting other people’s bodies is important
The idea that you can be healthy at any size is a positive message to promote
Size acceptance should be encouraged
Accepting your body is important
Size acceptance is a foundation for making healthy lifestyle choices
I like the inclusion of larger bodied models in advertising campaigns
We need more positive images of fat people in the media

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<td>All bodies are good bodies</td>
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<td>Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies</td>
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*Loadings > .30

Extraction method: Principal Axis factoring

Rotation method: Oblimin with Kaiser Normalization

Rotation converged in 30 iterations
APPENDIX M: CHAPTER 7

Item Pool and Survey Format for Confirmatory Factor Analysis

The study was advertised as: Attitudes, beliefs, and evaluations of fatness, weight stigma, and size acceptance.

Introduction and Consent information

Dear Participant,

In this study, I ask you to complete a survey containing 143 statements of beliefs about, and evaluations of, fatness, statements on weight-based discrimination and on size acceptance and statements on your feelings toward your own body. I also ask you to respond to statements relating to social interactions and responses and statements relating to social order. Responses will be made on scales of agreement or true false options.

Please note I use the term “fat” repeatedly throughout this survey. This term is now often used as a descriptive term in preference to the term “obese”—a medical term—and the term “overweight”—which implies a comparison to a preferred standard. If you find the term “fat” offensive, please do not feel obliged to continue.

To participate in this study all you need to do is to complete the questionnaire on the subsequent electronic pages. Your completing the questionnaire will be taken as consent to participate in the research.

Your privacy is very important and, therefore, the data collected from you will be completely anonymous. Your survey responses will not record your IP address. Additionally, you will not be identified in any publication arising out of this study or in any data shared with other researchers.

If you do elect to participate in this study please note that although you are free to discontinue the questionnaire at any time, your completed responses cannot be removed from the data because your name will not be stored with your data in a way that would allow us to remove your data. Please be aware that the data obtained from this study may be used in future research. Your completion of the survey will be taken as consent for using the data in future.

If you have any questions about this project, you can contact me, Patricia Cain (P.Cain@murdoch.edu.au). Alternatively, the chief investigator, Dr Graeme Ditchburn (Graeme.Ditchburn@murdoch.edu.au), is happy to discuss any questions you might have.

Results of this study will be made available in 2018, online through the Murdoch University School of Psychology and Exercise Science website:


If you are happy to consent to participate in this study, please click the button below to continue to the questionnaire.
Sincerely
Patricia Cain

This study has been approved by the Murdoch University (Western Australia) Human Research Ethics Committee (Approval 2017/231). If you have any reservation or complaint about the ethical conduct of this research, and wish to talk with an independent person, you may contact Murdoch University’s Research Ethics Office (Tel. 08 9360 6677 (for overseas studies, +61 8 9360 6677) or e-mail ethics@murdoch.edu.au). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

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<td>There are biological factors that result in people being fat</td>
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<td>There are medical factors that cause people to be fat</td>
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<td>There are factors outside of personal control that contribute to high body weight</td>
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<td>There are many factors that cause people to be fat</td>
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<td>Weight gain can be a side effect of taking particular medications</td>
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<td>The low price of ‘fast food’ has contributed to population weight gain</td>
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<td>The availability of high calorie food makes it easy to gain weight</td>
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<td>Lack of knowledge about food and nutrition can lead to fatness</td>
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<td>Sometimes emotional eating leads to fatness</td>
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<td>Weight is influenced by metabolism</td>
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<td>Psychological factors can lead people to become fat</td>
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Overeating and under exercising are the main reason people are fat

**Response option**

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<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
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</table>

Fatness is the result of lifestyle factors

Fat people lack willpower

Self-control is important for weight control

Fat people eat too much “junk food”

**Fat Bodies**

As a society, we need to eradicate weight-based discrimination

You cannot tell how healthy someone is from their body size

Body weight isn’t a reliable indicator of health

Fat people can live longer than thin people

Health is not predicted solely by body weight

Body Mass Index (BMI) is a poor indicator of health

Fat people are not necessarily unhealthy

For any weight, there are people who are healthy and people who are not

Healthy bodies come in all shapes and sizes

Bodies come in all sizes, fat bodies are a part of normal human diversity

Fat people are less likely to die of cancer than thin people

The negative health consequences of high weight are exaggerated
Section Two: Evaluations of weight stigma and Size Acceptance

**Response option**

<table>
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<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

**Discrimination**

Discrimination due to fatness leads to a denial of human rights

Similar to other types of discrimination, it should be illegal to discriminate against someone because they are fat

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

**Attractiveness**

Fat people are sexy

Fat people can be fit

Fat people are attractive

There is nothing wrong with being fat

Confident fat people are appealing

If I were single, I would go out with a fat person

Fat people should wear whatever they feel happy in

Fat people are physically unattractive

Fat people are sexier than thin people

**Empathy**

Fat people face discrimination in many areas of life
Response option

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

Having to contend with weight stigma and discrimination would be difficult

Fat people face employment based discrimination

Feeling good about one’s weight is difficult in today’s society

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 can severely limit quality of life

Weight-based discrimination negatively impacts on well-being

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

Long term weight loss is hard to maintain

Fat Acceptance

Accepting other people’s bodies is important

We should celebrate all bodies

The idea that you can be healthy at any size is a positive message to promote

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

Size acceptance does not encourage obesity

All bodies are good bodies
Response option

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

I like the inclusion of larger bodied models in advertising campaigns

Fat shaming is unacceptable

It makes me angry to hear someone being insulted for being fat

Fat people need acceptance not expressions of contempt

I sympathize with fat people who face discrimination

Section Three: Personal embodiment/self-beliefs

Response option

<table>
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<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>Mildly agree</th>
<th>Neither agree or disagree</th>
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<th>Disagree</th>
<th>Strongly disagree</th>
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Body Acceptance/satisfaction

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

Section Four: Scales for Construct Validity (Convergent and Discriminant)

Response options

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

Obesity often occurs when eating is used as a form of compensation for lack of love or attention

In many cases, obesity is the result of a biological disorder

Obesity is usually caused by overeating

Most obese people cause their problem by not getting enough exercise

Most obese people eat more than non-obese people

The majority of obese people have poor eating habits that lead to their obesity
Response options

Strongly - Disagree - Mildly - Neither agree - Mildly - Agree - Strongly disagree disagree or disagree agree agree

Obesity is rarely caused by lack of will power

People can be addicted to food, just as others are addicted to drugs, and these people usually become obese

I don’t really like fat people much

I don’t have many friends that are fat

I tend to think that people who are overweight are a little untrustworthy

Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people

I have a hard time taking fat people too seriously

Fat people make me somewhat uncomfortable

If I were an employer looking to hire, I might avoid hiring a fat person

I feel disgusted with myself when I gain weight

One of the worst things that could happen to me would be if I gained 25 pounds

I worry about becoming fat

If I were single, I would date a fat person

Fat people are physically unattractive

Fat people shouldn’t wear revealing clothing in public

I can’t believe someone of average weight would marry a fat person

It’s disgusting to see fat people eating

It’s hard not to stare at fat people because they are so unattractive

I would not want to continue in a romantic relationship if my partner became fat

I don’t understand how someone could be sexually attracted to a fat person

People who are fat have as much physical coordination as anyone
### Section Five: Social Dominance, Empathy and Social Desirability

#### Social Dominance - Response options:

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<th>Strongly</th>
<th>Somewhat</th>
<th>Slightly</th>
<th>Neutral</th>
<th>Somewhat</th>
<th>Slightly</th>
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<tbody>
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An ideal society requires some groups to be on top and others to be on the bottom.

Some groups of people are simply inferior to other groups.

No one group should dominate in society.

Groups at the bottom are just as deserving as groups at the top.

Group equality should not be our primary goal.

It is unjust to try to make groups equal.

We should do what we can to equalize conditions for different groups.

We should work to give all groups an equal chance to succeed.

#### Empathy - Response options:

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</table>
| When someone else is feeling excited, I tend to get excited too.
| Other people’s misfortunes do not disturb me a great deal.
| It upsets me to see someone being treated disrespectfully.
| I remain unaffected when someone close to me is happy.
| I enjoy making other people feel better.
| I have tender, concerned feelings for people less fortunate than me.
| When a friend starts to talk about his/her problems, I try to steer the conversation towards something else.
| I can tell when others are sad even when they do not say anything.
| I find that I am “in tune” with other people’s moods.
| I do not feel sympathy for people who cause their own serious illness.
| I become irritated when someone cries.
| I am not really interested in how other people feel.
I get a strong urge to help when I see someone is upset
When I see someone being treated unfairly, I do not feel very much pity for them
I find it silly for people to cry out of happiness
When I see someone being taken advantage of, I feel kind of protective toward him/her

**Social desirability - Response options**

True/False

It is sometimes hard for me to go on with my work if I am not encouraged
I sometimes feel resentful when I don’t get my own way
On a few occasions, I have given up doing something because I thought too little of my ability
There have been times when I have felt like rebelling against people in authority even though I knew they were right
No matter who I am talking to, I’m always a good listener
There have been occasions when I took advantage of someone
I’m always willing to admit it when I make a mistake
I sometimes try to get even, rather than forgive and forget
I am always courteous, even to people who are disagreeable
I have never been irked when people expressed ideas very different from my own
There have been times when I was quite jealous of the good fortune of others
I am sometimes irritated by people who ask favours of me
I have never deliberately said something that hurt someone’s feelings

**Social desirability - Response options**

True/False

I sometimes litter
I always admit my mistakes openly and face the potential negative consequences
In traffic I am always polite and considerate of others
I always accept other’s opinions, even when they don’t agree with my own
Social desirability - Response options

True/False

I take out my bad moods on others now and then
There has been an occasion when I took advantage of someone else
In conversations I always listen attentively and let others finish their sentences
I never hesitate to help someone in case of emergency
When I have made a promise, I keep it – no ifs, ands or buts
I occasionally speak badly of others behind their back
I would never live off other people
I always stay friendly and courteous with other people, even when I am stressed out
During arguments I always stay objective and matter-of-fact
There has been at least one occasion when I failed to return an item that I borrowed
I always eat a healthy diet
Sometimes I only help because I expect something in return

Section Six: Predictive Validity

Response option

Strongly – Agree - Mildly - Neither agree - Mildly - Disagree – Strongly disagree
agree agree or disagree disagree disagree

I support universal health care
I support same sex marriage

This question is OPTIONAL

If you exercise regularly, how many times a week do you exercise
Section Seven. Demographics

Please indicate your gender
- Male
- Female
- Other

Please indicate your age

Section Seven. Demographics

Please indicate your highest level of education achieved
- Less than high school
- High school graduate
- Some college
- 2 year college
- 4 year college
- Professional degree
- Doctorate

This question is OPTIONAL

How would you describe your body weight

This question is OPTIONAL

Do you identify as fat
- Yes
- No

Please enter your Prolific ID
**APPENDIX N: CHAPTER 7**

Confirmatory Factor Analysis Component Loadings

Table N1

Principal Component Analysis: Component loadings for 74 items on 13 factors*

<table>
<thead>
<tr>
<th>Component</th>
<th>Component 1</th>
<th>Component 2</th>
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</table>
As a society, we need to eradicate weight-based discrimination 0.571

There is a need for Fat Activism because fat shaming is widespread 0.550

We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming 0.431

Weight-based discrimination can severely limit quality of life 0.412 0.355

Fat people face employment based discrimination 0.317

The low price of ‘fast food’ has contributed to population weight gain 0.691

The availability of high calorie food makes it easy to gain weight 0.666

Lack of knowledge about food and nutrition can lead to fatness 0.378

I feel good about my body 0.828
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<td>Fat people are attractive</td>
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<td>Self-control is important for weight control</td>
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<td>Health is not predicted solely by body weight</td>
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<td>Fat people can live longer than thin people</td>
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</table>
Body Mass Index (BMI) is a poor indicator of health.

You cannot tell how healthy someone is from their body size.

For any weight, there are people who are healthy and people who are not.

Healthy bodies come in all shapes and sizes.

The idea that you can be healthy at any size is a positive message to promote.

We should celebrate all bodies.

Size acceptance is a foundation for making healthy lifestyle choices.

Rather than fat people changing their bodies, society needs to change the way it responds to fat bodies.

Size acceptance should be encouraged.
<table>
<thead>
<tr>
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<td>Size acceptance is an important social movement</td>
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<td>All bodies are good bodies</td>
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<td>Size acceptance does not encourage obesity</td>
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<td>Accepting other people’s bodies is important</td>
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<td>There is nothing wrong with being fat</td>
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<td>Bodies come in all sizes, fat bodies are a part of normal human diversity</td>
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<td>Feeling good about one’s weight is difficult in today’s society</td>
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<td>It is hard to accept your body if it differs from what the media represents as normal</td>
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<tr>
<td>Negative beliefs about body weight lead to negative assumptions about fat people</td>
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<td>.549</td>
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</table>
Weight-based discrimination negatively impacts on well-being

Fat people face discrimination in many areas of life

Fat people are treated badly because of the way society depicts fat bodies

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

Having to contend with weight stigma and discrimination would be difficult

Sometimes emotional eating leads to fatness

Psychological factors can lead people to become fat

Weight is influenced by metabolism

Fat shaming is unacceptable

It makes me angry to hear someone being insulted for being fat
<table>
<thead>
<tr>
<th>Component</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
<th>Component 5</th>
<th>Component 6</th>
<th>Component 7</th>
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<th>Component 11</th>
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<td>Fat people need acceptance not expressions of contempt</td>
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<td>I sympathize with fat people who face discrimination</td>
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<td>Fat people should wear whatever they feel happy in</td>
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<td>The negative health consequences of high weight are exaggerated</td>
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<td>Fat people are physically unattractive</td>
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<td>Fat people are less likely to die of cancer than thin people</td>
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*Loadings >= .30

Extraction method: Principal Axis Factoring
Rotation method: Oblimin with Kaiser Normalization
Rotation converged in 43 iterations
Table N2

Principal Component Analysis: Component loadings for 59 items with nine factor fixed solution*

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<td>Similar to other types of discrimination, it should be illegal to</td>
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<td>discriminate against someone because they are fat</td>
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<td>Activism is necessary because of the discrimination fat people</td>
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<td>Discrimination due to fatness leads to denial of human rights</td>
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<td>Discussions and programs recognizing diversity need to include body</td>
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<td>The existence of organizations to lobby for the rights of fat people is</td>
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<td>a good thing</td>
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<tr>
<td>As a society, we need to eradicate weight-based discrimination</td>
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<tr>
<td>There is a need for Fat Activism because fat shaming is widespread</td>
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<td>We should have public health campaigns that focus on the negative</td>
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<td>impact of weight stigma and fat shaming</td>
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<td>Fatness is the result of lifestyle factors</td>
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<td>Self-control is important for weight control</td>
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<td>Overeating and under exercising are the main reason people are fat</td>
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<td>Fat people eat too much “junk food”</td>
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<td>Fat people lack willpower</td>
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<td>People can control their body weight</td>
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<td>Sometimes emotional eating leads to fatness</td>
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<td>Lack of knowledge about food and nutrition can lead to fatness</td>
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<td>I feel good about my body</td>
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<td>I feel happy about my weight</td>
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<td>My self-esteem is not impacted by my body weight</td>
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<td>I do not feel defined by my body weight</td>
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<td>There are biological factors that result in people being fat</td>
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<td>.914</td>
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<td>There are genetic factors that cause people to be fat</td>
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<td>There are medical factors that cause people to be fat</td>
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<td>.762</td>
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</tbody>
</table>
There are factors outside of personal control that contribute to high body weight
There are many factors that cause people to be fat
Weight gain can be a side effect of taking particular medications
Fat people are sexy
Fat people are attractive
Fat people are sexier than thin people
If I were single I would go out with a fat person
Confident fat people are appealing
Body weight isn’t a reliable indicator of health
Health is not predicted solely by body weight
Fat people are not necessarily unhealthy
Fat people can live longer than thin people
You cannot tell how healthy someone is from their body size
Body Mass Index (BMI) is a poor indicator of health
Healthy bodies come in all shapes and sizes | .478
For any weight, there are people who are healthy and people who are not | .432
The idea that you can be healthy at any size is a positive message to promote | .585
Size acceptance should be encouraged | .580
Size acceptance is a foundation for making healthy lifestyle choices | .560
We should celebrate all bodies | .532
Size acceptance is an important social movement | .529
Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies | .512
We need more positive images of fat people in the media | .447
All bodies are good bodies | .440
Negative beliefs about body weight lead to negative assumptions about fat people | .743
Fat people face discrimination in many areas of life | .676
It is hard to accept your body if it differs from what the media represents | .633
Feeling good about one’s weight is difficult in today’s society  
Weight-based discrimination negatively impacts on well-being  
Fat people are treated badly because of the way society depicts fat bodies  
Having to contend with weight stigma and discrimination would be difficult  
Fat people face employment based discrimination  
Weight-based discrimination can severely limit quality of life  
Health professionals should be aware of the negative impact of weight stigma  
Concern for health is used as an excuse to judge fat people

*Loadings > .4
Extraction method: Principal Axis Factoring
Rotation method: Oblimin with Kaiser Normalization
Rotation converged in 26 iterations
### APPENDIX O: CHAPTER 7

**Fat Attitudes Assessment Toolkit**

Scoring

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Mildly disagree</th>
<th>Neither agree or disagree</th>
<th>Mildly agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
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</tr>
</tbody>
</table>

**Fat Acceptance Scale** ($\alpha = .96$)

Composite score: Empathy, Discrimination, Size Acceptance, Attractiveness and Health.

**Empathy** ($\alpha = .89$)
1. Fat people face discrimination in many areas of life
2. It is hard to accept your body if it differs from what the media represents as normal
3. Negative beliefs about body weight lead to negative assumptions about fat people
4. Health professionals should be aware of the negative impact of weight stigma
5. Fat people are treated badly because of the way society depicts fat bodies
6. Weight-based discrimination negatively impacts on well-being
7. Concern for health is used as an excuse to judge fat people

**Discrimination** ($\alpha = .94$)
1. Discrimination due to fatness leads to a denial of human rights
2. We need to take weight-based discrimination as seriously as other forms of discrimination
3. Activism is necessary because of the discrimination fat people experience
4. The existence of organizations to lobby for the rights of fat people is a good thing
5. Discussions and programs recognizing diversity need to include body weight
6. We should have public health campaigns that focus on the negative impact of weight stigma and fat shaming
7. There is a need for Fat Activism because fat shaming is widespread
Size Acceptance ($\alpha = .94$)

1. We should celebrate all bodies
2. Size acceptance is an important social movement
3. Size acceptance is a foundation for making healthy lifestyle choices
4. We need more positive images of fat people in the media
5. Rather than fat people changing their bodies; society needs to change the way it responds to fat bodies
6. Size acceptance should be encouraged

Attractiveness ($\alpha = .90$)

1. Fat people are sexy
2. If I were single, I would go out with a fat person
3. Fat people are attractive
4. Confident fat people are appealing
5. Fat people are sexier than thin people

Health ($\alpha = .82$)

1. Body weight isn’t a reliable indicator of health
2. Health is not predicted solely by body weight
3. Body Mass Index (BMI) is a poor indicator of health
4. Fat people are not necessarily unhealthy
5. Healthy bodies come in all shapes and sizes
Attribution Complexity ($\alpha = .89$)

Composite score: General Complexity and Social Complexity

**General Complexity** ($\alpha = .86$)

1. There are genetic factors that cause people to be fat
2. There are biological factors that result in people being fat
3. There are medical factors that cause people to be fat
4. There are factors outside of personal control that contribute to high body weight
5. There are many factors that cause people to be fat
6. There are environmental factors that contribute to people being fat

**Socioeconomic Complexity** ($\alpha = .90$)

1. There are factors relating to social disadvantage that result in people being fat
2. There are economic factors that contribute to people being fat
3. There are factors relating to social inequality that cause people to be fat

**Additional scales**

**Responsibility** ($\alpha = .84$) *All items reverse scored*

1. People can control their body weight*
2. Overeating and under exercising are the main reason people are fat*
3. Fatness is the result of lifestyle factors*
4. Fat people lack willpower*
5. Self-control is important for weight control*
6. Fat people eat too much “junk food”*

**Body Acceptance** ($\alpha = .84$)

1. I feel good about my body
2. I feel happy about my weight
3. I do not feel defined by my body weight
4. My self-esteem is not impacted by my body weight