

**A CASE STUDY OF THE BALANCEDVIEW COURSE: ADDRESSING WEIGHT
STIGMA AMONG HEALTH CARE PROVIDERS IN BRITISH COLUMBIA**

by

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Abstract

Growing evidence shows weight stigma as a problem in health care settings. However, there remains a lack of conceptual clarity – particularly regarding if and how the medicalization of weight is implicated in weight stigma – and a gap in knowledge about how to successfully reduce weight stigma in health care. The research questions that guided this study were thus:

- What are the different ways that weight stigma in health care can be conceptualized?
- What strategies can be employed to reduce weight stigma among health care providers?

These questions were explored through a mixed methods case study of the development and implementation of an online course on weight stigma for health care providers in British Columbia called *BalancedView*, sponsored by the Provincial Health Services Authority. Using participant observation, document analysis, a focus group and semi-structured interviews, I examined how health care stakeholders who developed the course, and participants who went on to take the course, conceptualized weight stigma. I evaluated the effects of the course on 249 participating health care providers through questionnaires before and after the course. Using interviews with course participants and documentary analysis of qualitative comments made by participants during the course, I also explored what was most helpful about the course and why.

Following a thematic analysis, I show how weight stigma was conceptualized as a process involving biased attitudes and beliefs that lead to discriminatory behaviours and adverse outcomes. It was perceived as a causally complex issue, with a relationship to emotions. The extent to which the medicalization of weight was viewed as part of weight stigma was a divisive topic in the development stage of the course. However, many participants who took the course reflected later that after learning about medicalization they saw harms in medicalized approaches to weight in health care.

This study contributes to the currently limited literature on weight stigma reduction in health care. I demonstrate how an online course on weight stigma that uses multiple stigma reduction techniques had a positive effect in terms of reducing participants' weight bias and discuss what essential elements within such interventions should be.

Lay summary

Growing evidence demonstrates that weight stigma is a problem in health care settings. The aims of this work were: 1) to better understand the concept of weight stigma in health care; and 2) to explore how to reduce it. These aims were investigated through a case study of the development and implementation of an online course on weight stigma for health care providers in British Columbia called BalancedView. I examined how stakeholders who developed the course and participants who took the course conceptualized weight stigma. Among the 249 health care providers who took the course I evaluated its effects and looked at what was most helpful about the course and why. Through this study I was able to build understandings of weight stigma and show how an online course on weight stigma that uses multiple stigma reduction techniques can have a positive effect in terms of reducing participants' weight bias.

Preface

This project was a partnership project undertaken with British Columbia (BC) Mental Health and Substance Use Services, an agency of the Provincial Health Services Authority (PHSA) in BC. Through this partnership, an online course on weight bias and stigma was developed for health care providers called *BalancedView*, as led by the PHSA. I was one of many individuals involved in helping develop this course alongside PHSA staff and other collaborators. Collaborators included members of a committee of health care providers in BC, members of a committee of experts in weight stigma and independent contractors (i.e. a curriculum development consultant, two scoping review consultants and an evaluation consultant). My role in the course development was to participate with the committees in advising on content and format.

The data collection tools used in my study were also developed through collaboration with the PHSA, the committees described above and the evaluation consultant. The evaluation consultant and myself, in partnership with PHSA staff and the committees, developed the questionnaire and focus group guide. I developed the interview guide with input from the above parties.

I conducted participant observation and interviews. I co-facilitated the focus group with the evaluation consultant. Longitudinal follow-up questionnaire data were analyzed in partnership with the evaluation consultant ($n = 74$). I analyzed the qualitative and quantitative data collected through the pre-course and post-course questionnaires for the larger sample ($N = 249$), as well as the interview and focus group data and scripted reflections participants engaged in within the course.

A portion of the findings from chapters four and five has been published: O'Reilly, C. (2016). Considerations in mitigating weight stigma through health professional education. In E. Cameron & C. Russell (Eds.). *The fat pedagogy reader: Challenging weight-based oppression in education*. New York, NY: Peter Lang Publishing. The literature review conducted for my dissertation also informed the following publication: Cameron, E., & O'Reilly, C. (2015). Type 2 diabetes in youth. *Biochemistry and Cell Biology*, 93(5), 430. Dr. Cameron and myself contributed equally to this review article.

This study was reviewed by the Behavioural Research Ethics Board at the University of British Columbia (certificate # H13-02944).

Table of contents

Abstract	ii
Lay summary	iv
Preface	v
Table of contents	vii
List of tables	xiii
List of figures	xiv
List of text boxes	xv
List of abbreviations	xvii
Acknowledgements	xviii
Dedication	xx
Chapter 1: Introduction	1
Chapter 2: Literature review	7
2.1 How is stigma conceptualized in the research literature?	7
2.2 How is weight stigma conceptualized in the research literature?	10
2.2.1 Psychosocial approaches to weight stigma.....	11
2.2.2 Other approaches to weight stigma.....	15
2.3 Prevalence and implications of weight stigma.....	26
2.3.1 Weight stigma in the health sector.....	27
2.4 What does current research say about weight stigma reduction?	31
2.4.1 Attribution theory and weight stigma reduction.....	33
2.4.2 Social consensus theory and weight stigma reduction.....	38

2.4.3	Evoking empathy and weight stigma reduction.....	39
2.4.4	Contact theory approaches to weight stigma reduction	45
2.4.5	Cognitive dissonance or consciousness raising	46
2.4.6	Multi-method interventions	48
2.4.7	Health At Every Size and its potential for stigma reduction	52
2.5	Other insights into weight stigma reduction	53
2.6	Gaps in the literature: What do we need to know more about?	57
Chapter 3: Methodology.....		60
3.1	Research questions.....	60
3.2	A case study research approach.....	61
3.3	Informed by a pragmatic research approach.....	65
3.4	The case of BalancedView.....	67
3.4.1	Development description	68
3.4.2	Pilot test description.....	73
3.4.3	Launch description.....	74
3.4.4	The course content	75
3.5	Data collection methods.....	77
3.5.1	Participant observation, reflexivity and research journal	81
3.5.2	Documents as sources of data.....	82
3.5.3	Questionnaires.....	83
3.5.4	Semi-structured interviews with course participants	90
3.5.5	Group interview and focus group with committee members.....	92
3.6	Recruitment.....	94

3.7	Sample.....	96
3.8	Analysis.....	100
3.8.1	Reflexivity.....	103
3.9	Ethics.....	105
Chapter 4: Findings regarding research question one / Conceptualizing weight stigma....		109
4.1	How was weight stigma conceptualized during the development of BalancedView? ..	109
4.1.1	A story of shifting conceptualizations in BalancedView’s development – an interlude	109
4.1.2	Stigma as process.....	119
4.1.3	Stigma as negative attitude/belief/stereotypes	120
4.1.4	Stigma as discriminatory behaviour or outcome	122
4.1.5	Stigma as causally complex	126
4.1.6	Medicalization as stigmatizing... or not?: A divisive issue.....	130
4.1.7	Stigma as related to emotions: Emotions matter to how weight stigma is conceptualized.....	134
4.2	How was weight stigma conceptualized by participants during the implementation of BalancedView?	138
4.2.1	Weight stigma as a process involving attitudes/beliefs and actions/unfair treatment	139
4.2.2	Controllability beliefs as stigmatizing	140
4.2.3	Disease beliefs: Medicalization as more harmful than helpful?	141
4.2.3.1	Medicalization as harmful and stigmatizing	142
4.2.3.2	Pros and cons to medicalization.....	147

4.2.3.3	Medicalization as positive and needed	150
Chapter 5: Findings regarding research question two / Reducing weight stigma		154
5.1	What was learned about strategies to reduce weight stigma among health care providers during the development phase?.....	154
5.1.1	Complex problems require complex, multi-faceted solutions	155
5.1.1.1	Challenge attributions about weight as personally controllable	156
5.1.1.2	Draw on social consensus to sway opinions	157
5.1.1.3	Awareness raising/self-reflection.....	158
5.1.1.4	Exposure to the challenges of being overweight/obese to evoke empathy.....	160
5.1.1.5	Provide a ‘balanced’ anti-medicalization perspective	161
5.1.1.6	Address behaviours and systemic manifestations of stigma.....	162
5.1.2	A ‘balanced’ approach to medicalization	164
5.1.3	Tailored to emotions – Emotions matter, we need to be prepared for them.....	167
5.2	Effectiveness of BalancedView	169
5.2.1	Impact on explicit attitudes.....	170
5.2.1.1	Changes to specific attitudes.....	174
5.2.2	Impact on implicit attitudes	178
5.2.3	Impact on skills and behaviours.....	181
5.2.3.1	Qualitative examples of changes to skills and behaviours.....	183
5.2.4	What is known about when BalancedView was not effective?	185
5.3	What was learned about strategies to reduce weight stigma among health care providers during the implementation phase?	187
5.3.1.1	Patient stories and appealing to the heart.....	189

5.3.1.2	Appealing to the mind: The influence of evidence	192
5.3.1.3	Exposure to competing ideas on medicalization paired with health-centred education and skill building	194
5.3.1.4	The importance of raising awareness and encouraging self-reflection: But should we use the IAT?.....	198
5.3.1.5	Importance of a multi-prong approach	202
5.3.1.6	Pros and cons of a multi-hour, multi-medium, interactive, online course	209
Chapter 6: Discussion and conclusion		214
6.1	Reflections on research question one.....	214
6.2	Reflections on research question two	221
6.3	Contributions	232
6.4	Methodological reflections	235
6.5	Methodological limitations	240
6.6	Suggestions for future research.....	247
6.7	Summary and conclusions	250
References.....		252
Appendices.....		271
Appendix A Scripted reflections.....		271
Appendix B Questionnaires		272
B.1	Pre-course questionnaire	272
B.2	Post-course questionnaire.....	274
B.3	Follow-up questionnaire.....	279
B.4	Additional questionnaire questions from pilot.....	283

Appendix C Interview guides	283
C.1 Interview guide for course participants.....	283
C.2 Group interview guide.....	285
Appendix D Evaluation report.....	287
Appendix E Data tables	314

List of tables

Table 1 Case study criteria.....	65
Table 2 Research question one and associated data collection methods	78
Table 3 Research question two and associated data collection methods	79
Table 4 Gender, age and region of course participants ($N = 249$)	97
Table 5 Profession of course participants ($N = 249$)	98
Table 6 Interviewee details ($n = 10$).....	99
Table 7 Implicit Association Test (IAT) scores.....	180
Table 8 Agreement rating: Contributed to skills development.....	182
Table 9 Agreement rating: Helped identify ways to avoid weight stigma in practice.....	183
Table 10 Impact rating of course components.....	189
Table 11 Attitudes about Treating Obese Patients & Perceptions of Weight Bias Among Practitioners: Comparison to Puhl et al. (2014).....	238
Table 12 Contrast of pre- and post-course Fat Phobia scores.....	314
Table 13 Contrast of pre- and post-course Attitudes about Treating Obese Patients scores	315

List of figures

Figure 1 Image of methods used in each phase of BalancedView	80
Figure 2 Perceptions of weight and health before versus after ($N = 249$)	175
Figure 3 Perceptions of focusing on weight loss before versus after ($N = 249$).....	175
Figure 4 Perceptions of ‘excess fat’ before versus after ($N = 249$)	176
Figure 5 Perceptions of possibility of permanent weight loss before versus after ($N = 249$).....	177
Figure 6 Total available median and mean IAT scores over time	181

List of text boxes

Studies using attribution theory with youth	34
Teachman et al.'s (2003) attributional intervention.....	34
Lippa and Sanderson's (2012) attributional intervention	35
Khan, Tarrant, Weston, Shah and Farrow's (2017) attributional intervention	35
Crandall's (1994) attributional intervention	36
Diedrichs and Barlow's (2011) attributional intervention	36
Persky and Eccleston's (2011) attributional intervention.....	36
O'Brien, Puhl, Latner, Mir and Hunter's (2010) attributional intervention	37
Puhl, Schwartz and Brownell's (2005) social norms/consensus study.....	38
Zitek and Hebl's (2007) social norm study.....	39
Gumble's (2012) social consensus study	39
Studies using an empathy approach with youth.....	40
Rukavina, Li and Rowell's (2008) empathy intervention with university students	41
Falker and Sledge's (2011) empathy intervention with health professionals	41
Gloor and Puhl's (2016) empathy and perspective taking study with adults	42
Gujral, Tea and Sheridan's (2011) empathy intervention with health professionals.....	42
Cotugna and Mallick's (2010) empathy and attribution intervention.....	43
Roberts et al.'s (2011) contact study.....	46
Ciao and Latner's (2011) cognitive dissonance study	47
Swift et al.'s (2013) multi-method intervention	48
Robinson, Bacon and O'Reilly's (1993) multi-method intervention.....	48
Hague and White's (2005) multi-method intervention.....	48

Gapinski et al.'s (2006) multi-method intervention.....	49
Hilbert's (2016) multi-method intervention.....	49
McVey et al.'s (2013) multi-method intervention for health professionals.....	51
Frick's (2007) use of Health At Every Size concepts in a weight stigma intervention	53
Carla and Herman	163
Tyson and Stephen.....	163
Dr. Moffat, Karoline and Mom.....	163
Applying health-centred strategies/case study video observation exercise	164

List of abbreviations

AFA	Anti-Fat Attitudes Questionnaire
AFAT	Anti-Fat Attitudes Test
BAOP	Beliefs About Obese Persons Scale
BV	The BalancedView course
BC	British Columbia
BCMHSUS	BC Mental Health and Substance Use Services
BMI	Body Mass Index
HAES®	Health At Every Size®*
HCP	Health care provider
IAT	Implicit Association Test
PHSA	The Provincial Health Services Authority
M	Mean (average)
N	Number of participants in the whole study
n	Number of participants in a subset of the study
RQ	Research Question
SD	Standard deviation

* Health At Every Size and HAES are registered trademarks of the Association for Size Diversity and Health and used with permission.

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keep going on the PhD and for all the support crossing the finish line. You have made this difficult journey easier with your wonderful presence. Finally, to my fellow PhD students, both current and recently graduated, thank you for your support as we navigated this difficult journey.

Dedication

This dissertation is for all the people out there who have ever experienced the devastating impacts of weight stigma. It is also for all the social justice warriors and dedicated academics trying to fix this problem. May we change the world so that coming generations do not face weight bias or discrimination.

Chapter 1: Introduction

In the last few decades an increasing body of research has shown that weight stigma is a problem across Western societies. Many studies have examined the prevalence and consequences of this stigma, which is seen to manifest in employment settings, educational sectors, the media, interpersonal relationships and health care (Brownell, Puhl, Schwartz & Rudd, 2005; Puhl & Heuer, 2009). For instance, a self-report survey by Puhl, Andreyeva and Brownell (2008) found the prevalence of weight-based discrimination to be comparable to race-, gender- or age-based discrimination. This study focuses upon the topic of weight stigma in health care. Studies have established that health care providers may view overweight or obese patients as weak-willed, self-indulgent, lazy, unmotivated and non-compliant (Bocquier et al., 2005; Brown & Thompson, 2007; Campbell, Engel, Timperio, Cooper & Crawford, 2000; Epstein & Ogden, 2005; Fogelman et al., 2002). Individuals who are the targets of weight stigma often experience consequences to their wellbeing, such as coping through eating (Puhl & Brownell, 2006), lowered physical activity, body image disturbances, disordered eating (McVey, Tweed & Blackmore, 2004; Puhl & Brownell, 2006; Puhl & Heuer, 2009) or avoidance of health care (Amy, Aalborg, Lyons & Keranen, 2006; Olson, Schumaker & Yawn, 1994). More recently, it was found that felt weight stigma contributes to cortisol reactivity (a stress response) (Schvey, Puhl & Brownell, 2014). Among those that study weight stigma and related issues, there is a general consensus that this social and health issue requires significant attention (Cameron & O'Reilly, 2015; Cameron & Russell, 2016; Daniélsdóttir, O'Brien & Ciao, 2010).

There are a number of critical gaps in the literature, however. One overarching issue is that despite many studies exploring the prevalence and consequences of weight stigma, in health care or otherwise, comparably less attention has been paid to defining and conceptualizing

weight stigma, as I discuss in my literature review. Among the conceptual studies available, the predominant approach to understanding weight stigma is to view it as a problem of negative attitudes about fatness, which are then presumed to result in unfair treatment of overweight and obese people. A less noted perspective from fat activists and some fat studies scholars is that medicalizing weight and viewing overweight and obesity as diseased may be inaccurate, moralizing and harmful, and a key contributor to weight stigma (Wann, 2009).¹ Medicalization is a social process where a condition, behaviour or human variation becomes recognized as diseased (Conrad, 1992; Conrad, 2007). Investigation into the social processes shaping medical understandings of body size and shape is not new (e.g. see Saguy & Riley, 2005; Sobal, 1995; Vertinsky, 2002). However, medicalization as a contributor to weight stigma has only recently been taken up in the weight stigma literature (e.g. Calogero, Tylka & Mensinger, 2016; Cameron & O'Reilly, 2015; McMichael, 2013) and remains an understudied topic. Furthermore, among those who have discussed this issue there is a lack of consensus (see for example Sharma [2012] in contrast to McMichael [2013]). Overall, no one theory has yet adequately explained the existence of weight stigma (UConn Rudd Center, 2017).

Given the lack of understanding around the complexities of weight stigma, it is challenging to formulate effective solutions to the problem. Currently, we know little about how to successfully mitigate weight stigma. Among the studies that have attempted to reduce weight-

¹ I use the terms overweight and obesity without quotes here, despite the tradition adopted among many fat activists and fat studies scholars to put “overweight” and “obesity” in scare quotes in recognition of the socially constructed nature of these terms and the potential harms resulting from them (Wann, 2009). I opted to go without quotes given the current lack of consensus around the least stigmatizing terms to use (Meadows & Daniëlsdóttir, 2016), coupled with the fact that many participants in this study used these terms. However, I believe it remains important to question the social constructions of obesity and, in the words of Meadows and Daniëlsdóttir (2016), to “. . . ask ourselves whether the words we use do indeed affirm the respect and human dignity of the target group” (p 3). Also, at times, I use the term fat in this dissertation. I aim to use this word respectfully; with the understanding that fat is neither inherently bad nor good, merely a neutral descriptor that should be reclaimed as such.

biased attitudes, many have been unsuccessful in their endeavors (Dánielsdóttir et al., 2010; PHSA, 2013a). Furthermore, few studies have broached the subject of weight stigma reduction in health sectors (PHSA, 2013a). As Lee, Ata and Brannick (2014) point out, “progress has been slow and fraught with doubt as to whether interventions can effectively address a deeply engrained problem” (p 252). This is problematic given the potentially negative implications of weight bias for health and wellness.

Research is thus needed to further elucidate the different ways in which weight stigma can be conceptualized and, more importantly, reduced. Scholarship on how to reduce weight stigma remains particularly important in health care, where little stigma reduction work has yet occurred (Alberga et al., 2016). To address these gaps in the literature I developed two research questions. My first question explored ‘what are the different ways that weight stigma in health care can be conceptualized?’ In order to successfully reduce weight stigma in health care, we need to first have a clear understanding of what it is we are trying to address. In this regard, attention is needed to elucidate the relationship between the medicalization of weight and weight stigma, a topic that is both underexplored and about which there is much disagreement among those who venture to discuss it. My second research question examined ‘what strategies can be employed to reduce weight stigma among health care providers?’ I was interested here in looking at the range of strategies that could be used to mitigate weight stigma in health care and the effectiveness of different strategies in reducing weight stigma.

These questions were explored within the context of a participatory case study of weight stigma among health care providers in British Columbia (BC) that was informed by a pragmatic

paradigm. In partnership with the Provincial Health Services Authority (PHSA),² a steering committee of stakeholders with expertise relevant to weight stigma, an advisory committee of health care providers in BC, among others, I helped develop, pilot test, implement and evaluate an online course on weight stigma for health care providers in BC. The focus of the case study was an interactive, five-module course entitled BalancedView (BV) (BC Mental Health and Substance Use Services, 2015).³ The aim of the course, which is still publicly available, is to raise awareness about weight stigma, reduce potential weight-biased attitudes and enhance the competency of health care providers in the province to avoid and reduce weight stigma in their clinical practice. To date the course has been collaboratively developed, pilot tested ($n = 8$) and launched. At the time my data collection ended,⁴ 249 eligible participants⁵ had completed the course.

To address my research questions, in keeping with a case study design, I used a number of mixed methods. During the development phase of BalancedView, which was a participatory process with health care providers across the province, I conducted participant observation at meetings concerned with creating BV (an estimated 60 hours of meetings) and kept field notes (58 entries). I also undertook document analysis of 80 project background documents, including: multiple iterations of an evaluation outcomes measurement framework; terms of reference for the committees; scripts for video scenes filmed for the course; 37 meeting minutes; and a scoping

² Health care in Canada is publicly funded by the federal and provincial government, but provincially delivered. In the Province of British Columbia, the PHSA is a province-wide health authority that works in partnership with the five regional health authorities to promote health, manage chronic disease, prevent and reduce chronic illness and enhance access to evidence-informed health care practice. See www.phsa.ca for more information.

³ See <https://balancedviewbc.ca>.

⁴ I stopped collecting data from the BalancedView course in September, 2016, 17 months after the launch.

⁵ Only individuals who identified as health professionals in BC were included in the study. Students or those outside of BC were excluded.

review. In the development phase I also conducted one group interview and co-facilitated a focus group with health care providers involved in the development. In the pilot test stage, I interviewed three participants who took BalancedView and in the implementation stage I interviewed a further 10 course participants. In the implementation phase I also conducted a qualitative document analysis of scripted online reflections completed by participants during the BalancedView course ($N = 249$) and analyzed pre-course and post-course questionnaires using descriptive statistics ($N = 249$). Questionnaires were also sent online to a smaller cohort of participants ($n = 74$) at three- and six-month follow-up. From this group, 56 completed the three-month follow-up and 46 completed the six-month follow-up.

The remainder of my dissertation is structured as follows. Chapter two reviews the extant literature related to weight stigma and efforts at its mitigation. I begin with literature on stigma theory and conceptualizations of weight stigma, including related gaps and controversies, particularly in regard to the medicalization of weight. I then consider what is known about weight stigma in health care and its health implications. I conclude with a section on current knowledge on weight stigma reduction and a discussion of those areas where further research is seen to be needed. In chapter three I outline my methodology, including my case study approach, my use of a pragmatic paradigm and a description of the BalancedView case itself. In this chapter I also discuss my methods, sample, analytic techniques and ethical issues. Chapters four and five contain my findings. Chapter four focuses specifically on findings pertaining to research question one. I begin this chapter by addressing how weight stigma was conceptualized by the many stakeholders involved in developing BalancedView and conclude by examining how participants who went on to take the course perceived weight stigma. In chapter five I present my findings related to research question two and discuss ways in which weight stigma among health

care providers might be reduced. Chapter five has three main parts. I focus first on the strategies that were considered to reduce weight stigma during the development of BalancedView. Then, I present evidence on the effectiveness of the course in terms of reducing weight bias among course participants. I conclude chapter five by elucidating what elements of the course were perceived as most influential in reducing weight stigma among participants. In my final chapter, chapter six, I provide a broad summary of my findings in relation to the literature, along with my contributions, methodological reflections, limitations, suggestions for future research and concluding remarks.

Chapter 2: Literature review

For context, I begin this chapter with an orientation to the broader stigma and prejudice literature. I then discuss weight stigma more specifically, particularly as it pertains to health care and stigma reduction. Studies were identified through key word searches of academic and non-academic, generalized, medical and social science online databases/search engines⁶, using the terms ‘overweight and obesity’, ‘weight stigma’, ‘weight bias’, ‘obesity and discrimination’, ‘obesity discourse’ and ‘medicalization of weight and obesity’, ‘stigma’ and ‘prejudice’, ‘stigma reduction’ and ‘stigma and labelling’. Searches with additional terms were conducted on an as needed basis to fill gaps in the review.⁷ I reviewed the reference lists for further manuscripts of relevance when the paper in question was pertinent to my research questions or provided a systematic review.

2.1 How is stigma conceptualized in the research literature?

Goffman (1963), in his iconic book *Stigma: Notes on the Management of a Spoiled Identity*, conceptualized stigma as “an attribute that is deeply discrediting” (p 13) that reduces a person from whole and normal to tainted and discounted. He identified three main types of stigma: abominations of the body (devalued physical attributes); tribal stigmas (stigma associated with racism); and character blemishes (socially devalued attributes associated with character). He cautioned, however, that attributes in and of themselves are not stigmatizing, but rather it is the meaning ascribed to particular attributes through social interactions and relationships that creates stigma. Despite this, as I discuss later in this review, prior to the new

⁶ Search engines and databases included PubMed, pubget, the SFU ebrary Library Database, UBC Summons, Google Scholar and Google.

⁷ For example, ‘attribution theory and weight stigma’, ‘social consensus and weight stigma’, ‘empathy’, ‘compassion’, ‘emotions and weight stigma’ and ‘weight stigma and health care’.

millennium, much stigma research did not focus on the social processes or factors that enable stigma. This is an issue that is somewhat mirrored in the weight stigma literature.

While Goffman (1963), a sociologist, is often credited with bringing stigma into the purview of social science, Allport, a social psychologist, is viewed as similarly influential in the study of prejudice. Allport (1954) contended that it is a natural part of human life and social order to develop categories that help us cognitively process the huge amount of information and stimuli in our everyday lives. This process of categorization means that we ‘pre-judge’ or stereotype people according to which category we cognitively identify them with. Although some degree of pre-judgment is normal, he argued, overly generalized pre-judgments, when coupled with antipathy towards a group, lead to unfair prejudice (Dovidio, Glick & Rudman, 2005). Although initially studied as a separate concept from stigma, today prejudice and stigma research have some overlap (as discussed below) and, thus, insights from the prejudice field are important to understand.

In the decades since Goffman (1963) and Allport (1954), two related yet somewhat separate bodies of literature have developed around the issues of stigma and prejudice. Although Goffman (1963) discussed tribal stigma, research on race has been mostly taken up in the prejudice literature, alongside ideas of group domination and exploitation. Stigma research, by contrast, has focused more on the idea of deviance from norms, particularly as it pertains to deviant behaviour (Bos, Pryor, Reeder & Stutterheim, 2013; Phelan, Link & Dovidio, 2008) and on stigmatizing attitudes about socially devalued attributes (Cameron & O’Reilly, 2015; Link & Phelan, 2001). Perspectives are divided concerning the conceptual differences between these two terms, if any. Some authors appear unconcerned by potential conceptual discrepancies, using the terms prejudice and stigma interchangeably in the same texts. Bos et al. (2013) make the

distinction that stigma research tends to be conceptually centered on the idea of deviance and reactions to deviance, whereas prejudice is essentially about *pre-judgment*, irrespective of whether that group is deviant from normative societal expectations. Phelan et al. (2008), in a review of the theoretical literature on stigma and prejudice, argue that prejudice can be best seen as the *attitudinal component* of a broader stigma process that involves power, labelling, prejudicial attitudes, stereotypes and discrimination. While some prejudice scholars seem to agree with this notion of prejudice encapsulating attitudes specifically, others consider prejudice to refer to attitudes *and* behaviour (Danielsdóttir et al., 2010). Stigma scholars similarly sometimes focus exclusively on attitudes, while at other times on both attitudes and behavioural manifestations of attitudes, such as discrimination. What is important, regardless of the approach taken, is that there is clarity of concept (Brownell et al., 2005).

In looking at how stigma has been conceptualized since Goffman (1963), one can detect a notable shift in the literature around the new millennium (Cameron & O'Reilly, 2015). Prior to 2000, a major emphasis in stigma research was on micro-level interactions and on stigmatizing attitudes held by individuals towards others with particular deviant attributes. This work largely focused on cognition and affect and was primarily undertaken by social psychologists (Link & Phelan, 2001). Since 2000, there has been an increased focus on macro-level factors that promote stigma (Yang et al., 2007). In particular, there has been an emphasis on the significance of *labels* and *power* to the stigma process. Regarding labels, Link and Phelan (2001, 2013) contended that it is through the social process of *labelling* that other aspects of stigma such as stereotypical attitudes and discrimination occur. Link and Phelan (2001) and Link, Yang, Phelan and Collins (2004) highlighted that the concept of *labels* is different from that of *attributes*, in that labels allow us to consider the *social construction* of characteristics seen as different or deviant. As

they aptly pointed out, attributes that are considered stigmatizing are not necessarily naturally stigmatizing conditions, as can be seen by the huge variance in what is considered a stigmatizing attribute by time and place, but rather socially constructed as such. Regarding power, Link and Phelan (2001) further discussed that both labelling and stigma are linked to ideas of power. As they showed, it takes power to label groups of people as fundamentally different and lesser than others.

Although the study of stigma and prejudice has developed considerably since the seminal works of Allport (1954) and Goffman (1963), theoretical scholarship on weight stigma or prejudice is in its infancy in comparison (Danielsdóttir et al., 2010). Inquiry into weight stigma began in earnest in the 1990s (Brownell, Puhl, Schwartz & Rudd, 2005), although this was predated by second wave feminist scholarship on ‘the tyranny of slenderness’ and late 1960s and 1970s fat activist work (McMichael, 2013). Today, there is a wide-ranging literature within psychology (Puhl & Heuer, 2009), sociology (Saguy, 2013), fat studies (Murray, 2008), feminist scholarship (Fikkan & Rothblum, 2012), health fields (McVey et al., 2013), rhetorical studies (McMichael, 2013), history of health and physical education (Vertinsky, 2008), critical weight studies (Rich, Monaghan & Aphramor, 2010) and other areas pertinent to weight stigma. While much has been learned about the prevalence and consequences of weight stigma in the last few decades, there are fewer studies focused on generating theory and conceptual clarity about weight stigma specifically. Additionally, the concept itself is theorized in diverse – and sometimes conflicting – ways, as discussed in the next section.

2.2 How is weight stigma conceptualized in the research literature?

What is weight stigma? How is the concept defined? While there is extensive work on the prevalence and consequences of the problem, there has been comparably less attention to

elucidating what is meant by ‘weight stigma’. In some texts the nature of the problem is assumed, with few definitions provided (e.g. Puhl, Moss-Racusin & Schwartz, 2007; Puhl, Peterson & Luedicke, 2013). Overall, the field of weight stigma would benefit from attention to problem definition. As Lee et al. (2014) point out with respect to the field of weight stigma reduction interventions, “A clearer definition of weight bias and establishment of cut off points for clinically significant levels of weight bias . . . would benefit this area of study” (p 258). An article by Alberga, Russell-Mayhew, von Ranson, McLaren, Ramos Salas and Sharma (2016), based on discussions at the 2015 Canadian Weight Bias Summit, highlighted that one priority for ongoing weight stigma research is “. . . to identify the root causes and definitions of weight bias through qualitative and quantitative research” (p 1208). The importance of this conceptual work is particularly integral to stigma reduction efforts, as problem definition is central to problem solving (D’Zurilla, Nezu & Maydeu-Olivares, 2004). At present, among extant studies dedicated to conceptualizing the problem, the predominant trend is to utilize a psychosocial, primarily attitudinal approach, much like stigma research prior to the new millennium. Within this, attribution theory and social consensus theory are common explanations for weight stigma.

2.2.1 Psychosocial approaches to weight stigma

Social psychologists have a long history of studying attitudes, which can be conceptualized as assumptions and reactions, either favourable or unfavourable, that predispose individuals to a particular course of action or behaviour (Fishbein & Ajzen, 1975). Building on this tradition of attitudinal research, scholars working within social psychology often refer to weight stigma as an issue of negative attitudes (or beliefs) about the attribute of obesity (e.g. viewing fat people as lazy, lacking in willpower), which may lead to weight-based discrimination (Puhl & Heuer, 2009). While some weight stigma studies distinguish between

attitudes and beliefs as independent constructs, many do not (Lee et al., 2014). Attitudes can also be conceptualized in two ways, as implicit or explicit. Implicit attitudes are automatic reactions that are emotionally based and do not require conscious thought, thus may be inconsistent with one's belief system. Explicit attitudes are our assumptions and reactions that are consistent with our belief system and require consideration of information and critical thinking, thus are endorsed as 'true' (Watts & Cranney, 2009). Reportedly, implicit weight-biased attitudes are more resistant to change than their explicit counterparts (Teachman et al., 2003). Further, explicit and implicit bias, while related, have been found to be only moderately correlated (Puhl, Phelan, Nadglowski & Kyle, 2016). As is shown by this distinction between implicit and explicit attitudes, the explicit dimension pulls on the construct of beliefs, perhaps explaining why some scholars do not distinguish between attitudes and beliefs. As will be evident later, the approach taken in *BalancedView* and my study is to conceptualize attitudes and beliefs as similar, with beliefs reflecting the more explicit dimension of attitudes. Next, specific theories of weight stigma aligned with the attitudinal literature are discussed.

Attribution theory (Crandall, 1994) is a social psychology theory extensively studied in the context of stigma. Proponents of this theory argue that in cultures where *individualism* is highly valued, stigma results when individuals attribute differences in outcomes to individual choice. The argument is that overweight and obesity are thus stigmatized when individuals attribute higher weights to poor personal choices (Puhl & Brownell, 2003). Social norm approaches to stigma, again based in social psychology, emphasize that stigma may be created or mitigated through social norms which influence attitudes. Social consensus theory builds on social norm theory insofar as it suggests that social norms are particularly likely to be affected

and influenced by ‘in group’ members: those who hold socially influential and respected positions in society (Puhl, Schwartz & Brownell, 2005).

In addition to these psychosocial theories, other attitudinal explanations of weight stigma have also been proposed. For instance, O’Brien, Daníelsdóttir, Ólafsson, Hansdóttir, Fridjónsdóttir and Jónsdóttir (2013) looked at the relationship between appearance concerns, disgust and anti-fat prejudice (measured by the Anti-Fat Attitudes scale). They found that physical appearance worries and disgust were related to anti-fat attitudes for women. It was unclear whether disgust of fatness was a result of pathogen avoidance (an evolutionary explanation for stigma associated with fear of disease) or to do with sociocultural perceptions of fatness as a moral breach. Others have also drawn on the disgust literature, looking at the relationship between disgust sensitivity (individual propensity to react to elicitors of disgust) and weight-biased attitudes, as well as fear of perceived pathogen threats and how this contributes to stigmatizing attitudes (Lieberman, Tybur & Latner, 2011).

As another example of weight stigma theory in the attitudinal tradition, Azétsop and Joy (2011) suggest that weight-biased attitudes result in contexts where individualistic values are paired with a general cultural tendency towards anti-intellectualism (e.g. prioritizing common sense over critical thinking or science). Others have approached weight stigmatizing attitudes via an exploration of determinants of these attitudes in quantitative studies, with potential determinants including Body Mass Index (BMI) and education levels (Davison & Birch, 2004; Hilbert, Rief & Braehler, 2008). A limited amount of studies have looked at implications of the labels ‘overweight’ and ‘obese’ and their relationship to stigma. Vartanian (2010) found that the language of ‘obese people’ evoked stronger negative reactions than the language of ‘fat people’ among a sample of undergraduates ($N = 425$), suggesting that weight stigma may be promoted

through labelling, something that I take up in this study. Hunger and Tomiyama (2014) also found that the label of ‘too fat’ increased the likelihood of being obese by BMI standards close to 10 years later, pointing to a possible connection between labelling and weight gain.

The most prominent example of an attitudinal approach to weight stigma comes from the Rudd Center for Food Policy and Obesity, a research institute formerly located at Yale University that transitioned to the University of Connecticut in 2015. The Rudd Center has a dual mission – they strive to both prevent obesity and reduce weight stigma (Rudd Center, 2013a) – and have produced a huge volume of literature related to these topics.⁸ Rudd Center colleagues claim that we do not know enough about why weight stigma exists (Puhl & Brownell, 2003; UConn Rudd Center, 2017) and they turn primarily to attitudinal psychological theories to explain weight stigma, including attribution theory and social consensus theory (described above) (Puhl & Heuer, 2009). A study by Puhl, Latner, O’Brien, Luedicke, Daniélsdóttir and Forhan (2015) found that across Canada, the United States, Iceland and Australia, attributions of behavioural causes of overweight and obesity predicted higher levels of attitudinal weight bias. Additionally, the Rudd Center has considered how media portrayals of obesity can impact attitudes (McClure, Puhl & Heuer, 2011). The Rudd Center, however, does not limit their work to an attitudinal focus. Rather, they often emphasize the inequitable behaviours (e.g. bullying) and outcomes (e.g. lack of employment opportunities) likely to result from weight-biased attitudes.

⁸ Their website had over 35 publications on the subject between 2007 and 2014 alone (Rudd Center, 2013b). They have written several systematic reviews and conducted experiments and surveys to establish the prevalence of weight stigma and its consequences. Additionally, relative to other scholarship on weight stigma, the Rudd Center is highly visible in the media (Rudd Center 2013c).

Interestingly, while attitudinal frameworks of weight stigma dominate – and there seems to be little disagreement in the literature that we have a problem of weight stigmatizing attitudes in contemporary Western society – it is not always clearly specified what, exactly, is considered to be a weight-biased attitude. One issue is that in the weight stigma literature the construct of attitudes is sometimes taken for granted and not defined. Another issue is that what attitudes are considered to be weight-biased vary from study to study and between attitudinal measures, though there are often commonalities, particularly around willpower (e.g. a commonly cited weight-biased attitude is to view fat people as lazy or lacking in willpower). It is also unclear what the relationship is between weight-biased attitudes and other aspects of weight stigma, such as discriminatory behaviours. The premise is that attitudes may influence behaviour, however the relationship between weight-biased attitudes and behaviours is still underexplored (O’Brien, Latner, Ebner & Hunter, 2013).

Attitudinal work on weight stigma, while immensely valuable in terms of helping us understand the prevalence of weight-biased attitudes, is often aligned with notions of overweight and obesity as health problems. This is exemplified by the Rudd Center’s dual mission to prevent and reduce obesity *and* weight stigma. This is in direct contrast to the contentions of fat activists who believe that the construction of overweight and obesity as health problems is not only inaccurate but moralizing and harmful (Wann, 2009). Below, I discuss other ways that weight stigma can be understood beyond the dominant psychosocial framework, including the claims of fat activists.

2.2.2 Other approaches to weight stigma

Outside of the dominant psychosocial conceptual work on weight stigma, there have been far fewer studies focused *specifically* on conceptualizing ‘weight stigma’. However, there is an

extensive scholarship on related topics, such as critical theory on the social construction of the obesity epidemic (e.g. Boero, 2012; Gard & Wright, 2005; Kwan, 2009) and critical weight studies (Rich, Monaghan & Aphramor, 2010). We have also seen long standing activist efforts focused on ending discrimination against fat people, for example through the decades old *National Association to Advance Fat Acceptance* (NAAFA) (NAAFA Inc., 2016). In recent years we have also seen the emergence of the new field of fat studies (Rothblum & Solovay, 2009). As Wann (2009) argues in the foreword to the *Fat Studies Reader*, fat studies can be defined “...in part by what it is not. For example, if you believe that fat people could (and should) lose weight, then you are not doing fat studies” (p ix). While fat studies allows for a diverse and interdisciplinary study of fatness and weight extending well beyond weight stigma, some scholars in this field like Farrell (2011) and McMichael (2013) have also focused specifically on weight stigma.

Farrell’s (2011) book, *Fat Shame: Stigma and the Fat Body in American Culture*, explores the roots of negative contemporary American ideas about fatness. Using Goffman’s (1963) three-fold typology of stigma, Farrell suggests that fatness is at once an abomination of the body, a character stigma and a tribal stigma used to mark racialized bodies as uncivilized. While she draws briefly on Goffman, her primary analysis centres around the cultural studies concept of ‘citizenship’ as it relates to weight stigma. Her research uses a historical analytical perspective and explores cultural artifacts (e.g. magazines, journals, post cards and propaganda) that have been used to represent the fat body from the mid 1800s onwards. Her thesis is that current stigmatizing American concepts about fat are rooted in historical ideas about race, gender, civilization and citizenship. She argues, for example, that in a pre-industrialization age, with a highly class stratified society, food was scarce and only the elite upper class could afford

to consistently eat well. Thus, fatness was by and large associated with affluence, wealth and health and was idealized to some extent. With industrialization, food and resource availability increased and reportedly more people in the lower classes were able to gain weight. With industrialization came some upward mobility, the emergence of a growing middle class and the development of racial and immigrant tensions with the influx of immigrants from Eastern Europe. The upper class, in an effort to distance themselves from this upwardly mobile, not-as-purely-white middle class, began to look down on fatness. They made the age-old connection between fatness and greed and associated middle and lower class plumpness with an inability to handle the temptations of modern life. In an increasingly capitalist society, fatness began to be framed as indicative of an inability to manage desires of excess and was labelled as uncivilized, with fat people thus constructed as less deserving of citizenship. This was reportedly justified from a scientific perspective through the popularity at the time of social Darwinism and the increasing use of technologies to measure bodies, such as weight scales. Hierarchies of civilization were created and those who were the leanest and thinnest were constructed as the most evolved and 'fittest'.

Farrell's (2011) book reminds us that constructs about fatness are intimately related to how we think about poor people, women and racialized groups. While she also provides a compelling look at historical and 'big picture' factors that have encouraged weight stigma, she does not look in-depth at the ways in which medical ideas about obesity have contributed to weight stigma. The relationship between the medicalization of weight and stigma is an important area of exploration given the articulations by fat activists and fat acceptance community members (McMichael, 2013; Wann, 2009) that framing overweight and obesity as a health crisis leads to the demonization of fat people.

McMichael (2013), a self-identified fat activist, fat acceptance community member and fat studies scholar takes this issue up at length. She builds on the contentions of fat activists who have long been arguing that seeing fat as a medical problem is moralizing and harmful. To quote an influential fat activist, Wann (2009) notes that:

“[o]verweight” is inherently anti-fat. It implies an extreme goal: instead of a bell curve distribution of human weights, it calls for a lone, towering, unlikely bar graph with everyone occupying the same (thin) weights. If a word like “overweight” is acceptable and even preferable, then weight stigma becomes accepted and preferred. (Wann, 2009, p xii)

While it is common within fat activist circles to see conversations about medicalization contributing to weight stigma (e.g. within the ‘Fatosphere’⁹) and in a small, but growing number of articles (e.g. Calogero, Tylka & Mensinger, 2016; Goldberg, 2014), McMichael’s (2013) work is one of the few in-depth pieces that I am aware of that focuses on connecting theories of weight stigma and prejudice to ideas about fat as a medical problem.¹⁰ In her book, she develops a theory of weight-based oppression based on bell hooks’ ideology of oppression.

Her argument is that fat prejudice can be understood through the lens of rhetoric and hooks’ notion of domination (hooks, 1989 as cited in McMichael, 2013). McMichael defines rhetoric as any persuasive act of communication: written, verbal, visual or otherwise. She

⁹ A linked community of fat acceptance and activist bloggers.

¹⁰ Of note, many other scholars not focused specifically on stigma have examined the history of the medicalization of weight. Such exploration of the social processes shaping medical understandings of body size and shape is not new (see Saguy & Riley, 2005; Sobal, 1995; Vertinsky, 2002). For instance, Vertinsky (2008) discusses how multiple social processes informed medical understandings of weight, including the insurance industry’s long use of weight scales and height and weight tables to predict population health and illness.

believes that rhetoric is the essential medium through which people both develop and resist prejudice. Hence, she conceptualizes prejudice as a pre-judgment or opinion that is not based on reason or actual experience, much like Allport's (1954) historic conceptualization. She sees these pre-judgments as central to stigma, discrimination and oppression for fat people. To better understand how prejudice develops she relies on hooks' contention that patriarchal and other oppressive forces create systems of oppression and domination, in which the oppressed internalize the values of the dominant. Connecting this to rhetoric, she sees rhetorical language and communication as the vehicle through which dominant values are developed, internalized and reinforced.

McMichael further contends that fat prejudice is perpetuated in Western society due to two persuasive myths: that fat is unhealthy and that anyone can be permanently thin if they eat well and exercise right. She suggests that equating thinness with health and fatness with disease is inherently prejudicial in that by assuming we can judge health status (and health behaviours) simply by someone's size is a pre-judgment. Due to widespread dissemination of these two messages about fat as unhealthy and changeable, via the media, interpersonal relationships and in health care, fat people can be persuaded to internalize the idea that their bodies are sick and that they are that way because they lack willpower. This internalization is reinforced, she articulates, through the historical and continuing influence of religious and moral perceptions of gluttony as sin, and the cultural value we place on restraint and willpower. Thus, fat people come to believe that their bodies and morals are in some way lacking and inferior, and learn to police their bodies in various ways. When and if their bodies stay fat, despite self-policing, fat people further buy into the idea that they are inferior and deserve to be treated badly.

In my study I explored McMichael's (2013) contention that medical beliefs about overweight and obesity lead to fat prejudice. However, rather than utilizing hooks' ideology of oppression, I grounded the idea that medical beliefs may lead to prejudice more within a model of stigma than oppression (or prejudice). 'Weight stigma' is a topic of great social salience at the moment. It is now recognized as a public health issue and governments and academic bodies alike are taking interest. Therefore, it is possible that working within a stigma framework is more likely to have social impact.

In addition to Farrell's (2011) and McMichael's (2013) work specific to weight stigma, there is other critical theoretical scholarship focused, not on conceptualizing weight stigma per se, but on related constructs, including: Gard and Wright (2005); Boero (2012); and Lupton (2013). Saguy's (2013) work is also particularly relevant as, while her main aim is not to conceptualize weight stigma, she connects her work to attitudinal constructs of weight stigma. Each is discussed below.

Gard and Wright (2005) show that 'obesity epidemic' thinking is as much about moral anxieties as it is about science. They illustrate how anxieties about some of the 'scourges of modern life' – such as an increased reliance on technology and the 'couch potato' phenomenon – are connected to ideas about fatness (despite a lack of scientific evidence to support this) and that these anxieties lead to an enhanced sense of panic about obesity. They demonstrate that the science underpinning the 'obesity epidemic' is contradictory and inconsistent, and that there is a considerable amount of uncertainty about obesity as a legitimate public health threat.

Boero (2007) similarly strives to understand the process through which an 'obesity epidemic' was socially constructed. She argues that the public health emphasis on the obesity epidemic is as much about morals and a moral panic as it is about science. She sees moral

entrepreneurs – individuals or groups who advance a particular moral claim – as partially responsible for obesity being designated as a disease and a threat in American public health. Lupton (2013) explains this sense of panic well. She suggests that in a culture where control and containment are highly valued, such as ours, fat bodies are seen as challenging these values and transgressing the culturally normative shape that bodies (especially female bodies) are supposed to take. As with Gard and Wright (2005), she perceives this panic as being largely fuelled through an increased reliance on BMI, as well as through the large volume of experts and news sources reporting on the health crisis of obesity.

Saguy (2013), a sociologist in the social constructionist tradition and an influential fat studies scholar, argues that medical frames about obesity and weight are central to the negative social experiences of fat people in contemporary Western society. Saguy's (2013) analysis, while not centred entirely on weight stigma, aims to elucidate the various frames surrounding fatness, explore how certain frames come to dominate over others and investigate the social implications of these frames, one implication of which is stigma.

Using the notion of framing, Saguy argues that there are two main types of frames: problem frames and blame frames. Problem frames are frames that define something as a social problem (or conversely, as socially unproblematic). Blame frames are used once something is defined as a social problem to explain why the issue exists. She articulates three main trends in problem framing around weight: 1) an immorality frame, in which fatness is constructed as a moral problem; 2) a medical frame, in which fatness is seen as an individual health problem; and 3) a public health crisis frame, in which fatness is framed as a population health problem with economic implications. Through a textual analysis of news reporting on obesity, she locates the power of the three problem frames with historic roots in religious, medical, public health and

scientific authority. In contemporary society, groups promoting problem frames on weight have a higher degree of social, symbolic, economic and bodily capital than those in favour of non-problem frames (e.g. fat acceptance activists). She also points to the oversimplification of weight science in which some findings are emphasized over others by researchers and then uncritically promoted and further dramatized by the news media who accept such science as objective.

Regarding blame frames, Saguy similarly locates three main frames: 1) a personal responsibility lens; 2) a biological perspective; and 3) a sociocultural frame. Each of these blame frames, she contends, take for granted that there is an obesity crisis. Thus, even though an environmental, sociocultural frame should be less stigmatizing than a personal responsibility explanation, by virtue of taking the problem of obesity as a given, all causal discussions of obesity reinforce ideas about fat as problematic. To support the argument that there are negative implications of medical frames, she presents findings from seven controlled experimental studies. Each experiment presented participants with actual news articles on weight, after which they completed attitudinal measures. Control groups were exposed to articles with non-problem frames (e.g. content that suggested that people can be healthy at a range of weights if engaging in healthy eating and activity). The other groups were shown articles with various problem and blame frames. She found that participants exposed to medical or public health problem frames were more likely to be weight-biased than those exposed to non-problem frames.

In my study, I build on Saguy's research investigating the relationship between medical frames and weight stigmatizing attitudes. Through my first research question,¹¹ I consider how Saguy's (2013) work on framing relates to Link and Phelan's (2001) ideas about labelling and

¹¹ Research question one: 'What are the different ways weight stigma in health care can be conceptualized?'

stigma. I believe this is important given that fat studies scholars, fat activists and proponents of a health-centred approach can often be heard arguing for the central role of the pharmaceutical industry in constructing ‘overweight’ and ‘obesity’ as health problems and evidence on the harms of this construction.

Fat studies scholars Bacon (2010) and Saguy (2013), for example, claim that one reason for why we think higher weights are a health problem relates to the influence of the pharmaceutical industry. A key example of this occurred in the late 1990s, when the World Health Organization adjusted the Body Mass Index (BMI) cutoffs for overweight. As Saguy, Gruys and Gong (2010) allege, the International Obesity Task Force (IOTF) “. . . paid for a staffer to draft the World Health Organization (WHO) report that advocated lowering the [overweight BMI] cut-off [from 28 to 25] ” (p 591), a move which caused “. . . 29 million Americans to become ‘overweight’ overnight” (p 591). Notably, the IOTF was an anti-obesity lobbying group funded by the manufacturers of various weight loss drugs. This suggests that the medicalized nature of overweight and obesity is partially related to the influence of the pharmaceutical industry and fuelled by economic interests.

Exploring how medicalization may contribute to weight stigma is particularly important given scholarship that calls into question trustworthiness and accuracy of research finding a relationship between weight and health and the potential harms of weight normative approaches (Tylka et al., 2014). Bacon and Aphramor (2011), for example, interrogated the relationship between weight and health and examined the implications of focusing on weight as a measure of health. They argued that the relationship between weight and health is not as simple as the dominant weight-focused paradigm suggests. Specifically they contended that people in the ‘overweight’ BMI category have longer life expectancies than those in the ‘normal’ category.

They similarly put forward data on the ‘obesity paradox’: in some cases obesity appears to be protective and promote survival in the face of problems like cardiovascular disease or type two diabetes. Thus, they suggest that weight-focused health care mistakenly targets overweight and obese people as requiring intervention. They similarly contend that focusing on weight loss as a means of improving health undermines rather than improves health. They provide evidence illustrating the unlikelihood of long-term weight loss. Most people who lose weight regain the weight and this process of ‘weight cycling’, they contend, is more harmful to health than maintaining a weight that is higher, but stable. Focusing on losing weight also increases the likelihood of disordered eating. Bacon and Aphramor (2011) thus suggest that what is required in health care is an emphasis on diet and fitness rather than on weight, as studies have shown these factors to be important to health outcomes, regardless of weight status (Bacon et al., 2002; Bacon, Stern, Van Loan & Keim, 2005).

Building on Bacon and Aphramor (2011), in my master’s work (O’Reilly & Sixsmith, 2012), I took this argument further and suggested that promoting weight-centred approaches to health within health systems should be considered systemic discrimination. I argued that it is discriminatory to promote weight loss within health sectors given the evidence showing that this focus leads to weight cycling and associated harms and eating disorders. However, while I argued that the medicalization of weight was discriminatory, I provided little clarity on what I meant by stigma and discrimination or how and why medicalization and the weight stigma construct were related.

While I am interested in taking the claims of fat activists seriously and advancing a debate about how medicalization relates to weight stigma, the idea of medicalization as weight stigmatizing is a radical concept to many and remains on the margins of weight stigma discourse.

The Rudd Center and other dominant attitudinal research on weight stigma, for example, do not address this topic. Most weight stigma research actually medicalizes weight, insofar as arguing for the simultaneous need to reduce population weights and reduce weight stigma (Calogero, Tylka & Mensinger, 2016). Some obesity scholars also seemingly disagree with the fat activist perspective. Sharma (2012), a Canadian obesity scholar and medical doctor has argued – in direct contrast to the premise of fat activists, like Wann (2009) and McMichael (2012) – that the medicalization of obesity is *necessary* to avoid weight stigma. He perceives that to view obesity¹² as a *disease* may help shift blame from individuals and provide training for health care providers to assess who with excess fat is diseased versus healthy (Sharma, 2012). A similar perspective is promoted by Blackburn (2011), who acknowledges some shortcomings of medicalizing weight, yet nonetheless advocates for medicalizing obesity as a means of reducing weight discrimination in health sectors. To date, however, such controversy remains sidelined within weight stigma research. Clearly there are competing perspectives on whether and how medical frameworks of weight relate to weight stigma. However, such debate is rarely aired. The lack of attention and debate around this issue is likely because we live in an era where ‘obesity epidemic’ thinking has infiltrated most aspects of our culture, including our medical and academic institutions. This means that the prevalence and implications of weight stigma are not fully understood. To date, what we know about the prevalence and implications of weight stigma primarily relates to concepts of weight stigma as an attitudinal problem with consequences for individuals who are stigmatized. Attitudes or beliefs about weight as a medical problem are not

¹² Sharma (2012) defines obesity as a problem where excess fat impacts or threatens health.

often discussed as part of this. In the next section I discuss what is currently known about the prevalence and consequences of weight stigma, particularly in health care.

2.3 Prevalence and implications of weight stigma

In contrast to the smaller amount of conceptual work on weight stigma, a huge volume of literature looks at the prevalence or consequences of the problem. Most of this work uses attitudinal measures of weight bias and self-report or experimental measures for discrimination. As Puhl and Heuer (2009) demonstrate in a systematic review of weight stigma literature, numerous studies have found that weight stigma is prevalent across society: in employment and educational settings, the media, interpersonal relationships and in health sectors. For instance, one self-report study with 2,449 overweight and obese women found that 54 percent of participants reported experiencing weight stigma from their colleagues and 43 percent reported weight stigma from their managers/employers (Puhl & Brownell, 2006). The authors also found that 32 percent of overweight and obese adult women reported being subject to weight stigma by a professor or teacher. They further found that interpersonal relationships and, more specifically, family members, friends or spouses were significant sources of weight bias. For example, 72 percent of participants reported having experienced weight stigma from family members (Puhl and Brownell, 2006).

Weight stigma may also result in discrimination against heavier people. In a self-report survey conducted by Puhl, Andreyeva and Brownell (2008) it was found that the prevalence of weight-based discrimination is now comparable with race-, gender- or age-based discrimination. In this study, data were analyzed from a survey of 2,290 American adults looking at sources of perceived discrimination, including: age, gender, race, ethnicity or nationality, religion, physical disability, height or weight, sexual orientation or other. The authors found that among women,

height- or weight-based discrimination was the third most prevalent form of discrimination, preceded only by discrimination on the basis of gender and age. Among men and women, height or weight discrimination was the fourth most prevalent form of discrimination, with discrimination based on age, gender and race occurring more often. In this study, among those with a Body Mass Index (BMI) of 35 or higher, 40 percent reported weight-based discrimination. Consequences of felt weight stigma that are often cited include emotional eating, lowered physical activity (Puhl, Moss-Racusin & Schwartz, 2007) and body image disturbances (Friedman et al., 2005). Additionally, positive correlations have recently been found between exposure to weight stigma and greater cortisol reactivity – a biological indicator of chronic stress (Schvey, Puhl, & Brownell, 2014).

2.3.1 Weight stigma in the health sector

Along with the exploration of weight stigma in relation to employment, education, the media and interpersonal relationships, the issue has also often been investigated among health professionals (Fruh, Nadglowski, Hall, Davis, Crook & Zlomke, 2016; Puhl, Phelan, Nadglowski & Kyle, 2016). Numerous studies, including qualitative studies (Brown & Thompson, 2007; Epstein & Ogden, 2005; Kirk et al., 2014), quantitative self-report studies (e.g. Campbell, Engel, Timperio, Cooper & Crawford, 2000; Fogelman et al., 2002) and experimental studies (e.g. Hebl & Xu, 2001), have explored health care providers' (e.g. nurses or doctors) perceptions of fat patients and suggested that they hold stigmatizing attitudes towards obese patients, viewing them as weak-willed, lacking in discipline or lazy. As one questionnaire-based study of 620 primary health care doctors found, over 50 percent of physicians perceived obese patients as unattractive, ugly and non-compliant and another third viewed them as weak-willed and lazy (Foster et al., 2003). A semi-structured, interview-based study with 15 nurses found that although participants

attempted to avoid weight-based stereotypes and recognize the complexity of obesity, they nonetheless associated obesity with non-compliance by patients (Brown & Thompson, 2007). In another interview study with 21 primary health care physicians, doctors perceived obesity to be a personal responsibility of the patient and viewed obese clients as non-compliant and unwilling to engage in healthier lifestyles (Epstein & Ogden, 2005). Sabin, Marini and Nosek (2012) found that among a sample of 2,284 physicians, weight bias was as problematic and prevalent as among the broader public.

Overall, research has suggested that many doctors may view overweight and obesity as the result of laziness, not enough physical activity and too much food (Bocquier et al., 2005; Foster et al., 2003). They may also consider obese patients to be weak-willed, sloppy, unattractive (Foster et al., 2003), self-indulgent (Bocquier et al., 2005) and non-compliant (Thuan & Avignon 2005). Such attitudes have also been found among nurses (Pervez & Ramonaledi, 2017). For instance, one study found 69 percent of nurses believed that food and exercise decisions cause obesity and one third of nurses attributed this to poor willpower (Brown, Stride, Psarou, Brewins & Thompson, 2007).

A recent study by Kuehl, Kirk, Dumas and Kyle (2017) using online surveys found that only 28.7% of health care professionals in Canada ($n = 576$) and 29.2% ($n = 676$) in the US perceived obesity as a problem of bad personal choices. These results suggest that weight-biased attitudes about fatness as a personal choice may be shifting. However, other recent research comparing levels of weight bias among health care and obesity professionals found comparable levels of bias between 2001 and 2013, although implicit weight bias appeared slightly lower, while explicit weight bias seemed higher in the more recent sample (Tomiyama et al., 2015). Recent research also shows that weight-biased attitudes may also exist among some eating

disorder practitioners (Puhl, Latner, King & Luedicke, 2014), a group often assumed to have enhanced sensitivity to issues around weight. While the primary purpose of my study is not to analyze the scope of weight-biased attitudes among health care providers, my study does add to what is known about this topic in BC, Canada through the use of questionnaires to measure weight-biased attitudes among health care providers enrolled in BalancedView, the course of focus in my case study.

Unfortunately, weight stigmatizing attitudes among health care practitioners may have implications for how fat people are treated in and able to access the health care system. One study found that 31 percent of nurses would prefer not to care for obese patients (Maroney & Golub, 1992).¹³ Another study found that eating disorders are underdiagnosed and undertreated among obese youth, as practitioners are less likely to recognize heavier youth as having disordered eating (Sim, Lebow & Billings, 2013). Because of perceived actual or potential weight stigma in health arenas, fat people may avoid or delay seeking medical attention for fear of how they will be treated (Drury & Louis, 2002; Olson et al., 1994; Puhl & Heuer, 2009). For instance, Amy et al. (2006) found that obese women who experienced disrespectful treatment from doctors due to their weight or received unsolicited weight loss advice during health care encounters were more likely to delay or avoid cancer screening tests. Perceived weight bias in health care may also result in patients being less likely to trust their primary health care providers (Gudzune, Bennett, Cooper & Bleich, 2014). An interview study ($N = 24$) with women in

¹³ Preferences among health care providers to not provide care for heavier patients may be a direct result of weight stigmatizing attitudes or may stem from environmental stigma, such as a lack of medical equipment that can accommodate people of size and enable health care providers to safely and easily care for larger people.

reproductive health care found that health care providers sometimes refuse to provide care to patients on the basis of weight (Bombak, McPhail & Ward, 2016).

Other consequences for individuals who perceive weight stigma, as discussed, include emotional eating, lowered physical activity (Puhl, Moss-Racusin & Schwartz, 2007), body image disturbances (Friedman et al., 2005) and greater cortisol reactivity (Schvey, Puhl, & Brownell, 2014). Feelings of shame may also arise as a result of felt stigma in health care encounters. Kirk et al. (2014) used qualitative interviews to explore experiences of individuals that identified as overweight and found that the dominant advice often present in health care to be more active and eat less was associated with feelings of blame and shame among participants.

While such research suggests that weight stigma in health care is undesirable and may have serious consequences, the full scope of the consequences of weight stigma remains underexplored. In particular, there is a lack of consideration in the weight stigma literature to the potential consequences of health care providers medicalizing overweight and obesity. Fat studies scholars provide some insight into this issue, arguing that weight-centred approaches to health may lead to weight cycling and disordered eating (O'Reilly & Sixsmith, 2012). In a qualitative interview-based study, Bombak et al. (2016) also argue that the language used to discuss 'obesity' in (reproductive) health care leads to clients feeling emotionally distressed. Despite this recent work, we still know little about the effects of medicalizing weight in health care. How do patients experience the medicalization of their bodies in health care settings? What are the implications of medicalizing weight on health care providers' practices and behaviours?

Given the increasing recognition of the high prevalence and consequences of weight stigma, researchers have begun to argue that we need to find ways to reduce such stigma, including within health sectors (Dánielsdóttir et al., 2010; Puhl & Heuer, 2009; Puhl & Heuer,

2010). D’Zurilla et al. (2004) identify four central aspects of social problem solving: problem definition and formulation; identifying potential solutions; decision making; and implementation and evaluation of solutions. Given the centrality of problem definition to problem solving, it follows that attempting to mitigate weight stigma in health care requires a thorough understanding of how weight stigma can be conceptualized. As already discussed, however, despite protestations in the literature that weight stigma is an urgent health and social justice issue that requires redressing, there is less conceptual clarity, which is thus a focus of my study. Next, I discuss what is known about reducing weight stigma.

2.4 What does current research say about weight stigma reduction?

Here I focus specifically on what is known about how to reduce weight stigma and, in particular, on what has been learned through weight stigma reduction intervention studies, from which the most parallels can be drawn to my research. While actions, like legislation or policy changes, have been proposed to overcome weight discrimination (Puhl, Neumark-Sztainer, Austin, Suh & Wakefield, 2016; Puhl, Suh & Li, 2016), such considerations were out of scope of my dissertation.¹⁴

Perhaps as a result of limited understandings of what weight stigma is or what causes and perpetuates it, we know little about how to reduce the problem (PHSA, 2013a). Studies specific to weight stigma reduction are limited in number. As Daníelsdóttir et al. (2010) explain in their systematic review of the weight stigma reduction literature, there is surprisingly little research on the subject of weight bias reduction and even less evidence on what might actually work to

¹⁴ Such considerations were out of scope because they did not fit within the boundaries of the case of focus, BalancedView, described later.

address this stigma. In their review of the literature, Daníelsdóttir et al. (2010) found only 16 weight stigma reduction intervention studies. Most of these were either ineffective in reducing weight stigmatizing attitudes or had methodological problems (e.g. utilized post-test only questionnaire designs, in which the effects of the intervention could not be ascertained). A more recent article using a meta-analysis found 30 weight bias intervention studies¹⁵ (including not only published articles but also graduate theses) and, after calculating effect size for each study, concluded that, on average, weight stigma intervention studies had a small but positive effect on weight-biased attitudes and beliefs (Lee et al., 2014). The relative lack of research into how to reduce weight stigma was also noted during this project. A literature review on weight stigma reduction, led by my partners at the PHSA as part of the BalancedView project reiterated this point. As they argue: “The bottom line . . . is that we really don’t know what’s going on, what works to decrease prejudice or why, in part because we still have a relatively poor understanding of prejudice” (PHSA, 2013a, p 28). They also noted that there remains a particular deficiency of research on reducing weight stigma in health care. Alberga et al. (2016) conducted a literature review to assess the state of weight stigma reduction interventions in health care arenas specifically. They located 17 intervention studies, with 15 focused on students in health disciplines and only two studies specific to practicing health care professions, illustrating an ongoing gap in knowledge on reducing weight stigma among practicing health care professionals.

Through reviewing the references of the systematic reviews by Daníelsdóttir et al. (2010), PHSA (2013a), Lee et al. (2014) and Alberga et al. (2016), as well as my own literature review, I

¹⁵ Only included studies with a mean age of 18 years or older.

only found four studies specific to weight stigma reduction among current health care professionals, three of which were published in journals and one of which was a dissertation. Journal articles included: McVey et al. (2013); Gujral, Tea and Sheridan (2011); and Falker and Sledge (2011). Frick's (2007) work was a dissertation that focused on current health care professionals and health students.

From this small body of research on reducing weight stigma in health care, coupled with the more generalized research studies on weight stigma reduction, insights can be gleaned into possible strategies to reduce weight stigma. Both of the primary psychosocial explanations for weight stigma – (1) attribution theory and (2) social consensus theory – have been translated into and tested as weight stigma reduction interventions. Additionally, the concept of (3) using empathy (referred to as ‘evoking empathy’) to try and reduce weight stigma has also been tested (Lee et al., 2014), along with (4) contact theory, (5) consciousness raising and cognitive dissonance, (6) Health At Every Size® (HAES®) information (Health At Every Size and HAES are registered trademarks of the Association for Size Diversity and Health and used with permission) and (7) multi-strategy approaches. Each of these possible strategies and accordant intervention studies are discussed next, with specific attention to when the study pertains to health care providers.

2.4.1 Attribution theory and weight stigma reduction

Researchers examining attribution theory suggest that a possibly useful stigma reduction technique might be to raise awareness of the well-evidenced complexity of causal factors leading to obesity via information provision – pointing to factors such as the obesogenic environment or genetics – rather than allowing the focus to remain on lifestyle choices as the primary explanation. The hope is that if people learn that weight is much less within an individual's

control than is often thought, stigmatizing attitudes will be lessened (Puhl & Brownell, 2003).

The text boxes below summarize the extant studies using this approach. I begin with studies using this approach with youth.

Studies using attribution theory with youth

Anesbury and Tiggemann (2005), Bell and Morgan (2000) and DeJong (1980) have all explored whether providing information on the difficulties of controlling weight to children or youth reduces weight-biased attitudes. The results of these studies are mixed. Anesbury and Tiggemann's (2005) study was *ineffective* at reducing negative stereotyping, despite modifying controllability beliefs. Bell and Morgan (2000) also had *mixed* findings, with older children who learned about genetic explanations for obesity rating 'obese targets' more negatively, whereas younger children learning the same information rated 'obese targets' more positively. DeJong's (1980) study, divided youth into groups, with some provided with behavioural explanations for obesity and others provided with a medical explanation. The results were *positive*, those who learned about medical explanations scored as less biased.

Attribution theory has also been tested with adults in the general population, as per the studies described in the below text boxes.

Teachman et al.'s (2003) attributional intervention

Teachman, Gapinski, Brownell, Rawlins and Jeyaram (2003) utilized a *post-test only* design to explore both implicit *and* explicit attitudes¹⁶ among 144 adult pedestrians at a beach. Participants answered a questionnaire based on either no prime, after reading an article on genetic causes of obesity or after reading an article on behavioural causes. Participants took an Implicit Association Test (IAT) and the Fat Phobia Scale. Results were *negative*: those who read the article on genetics did not score any more positively on either implicit or explicit attitudinal measures.

¹⁶ Implicit attitudes are more automatic and affective than explicit attitudes. Explicit attitudes are those aligned with our belief system that require consideration of the evidence.

Lippa and Sanderson's (2012) attributional intervention

In this study, individuals over age 18 from the general population ($N = 396$) read brief vignettes about obesity, after which they took the short form of the Fat Phobia Scale. There were three experimental conditions: a genetic article, a genetic and environmental article and an environmental article. *The study was ineffective.* In conditions one and two, beliefs about the causes of obesity changed, but not weight bias. However, half of participants in all conditions read about the impact of diet and exercise on obesity. Those results were not the focus of the current paper, although they did say there was no difference in stigma between groups who read behavioural information versus those who did not. The interpretability of this study is limited by no measurement before the intervention, the use of a short text-based vignette and minimal differences between conditions.

Khan, Tarrant, Weston, Shah and Farrow's (2017) attributional intervention

Participants ($N = 463$) from a general US adult population were divided into three groups. Participants were shown a photo of a man with obesity and were provided with one of three different accounts of the cause of his obesity: genetic, psychological or behavioural. After seeing the photo and receiving the explanation for his obesity, participants completed measures including an adapted version of the Fat Phobia Scale and a stereotypes checklist. While the Fat Phobia Scale normally assesses bias towards obese people in general, in this case it was reframed so that participants completed it based on their feelings about the male subject in the intervention. They also evaluated empathy towards the male subject. Further, to assess generalized weight bias in addition to weight bias specific to the male subject, they also used the Beliefs About Obese Persons Scale and the Anti-Fat Attitudes Scale. *The results were mixed.* The positive results were that those exposed to the information on genetic causes held the least subject specific bias towards the obese man, while those exposed to information on behavioural causes had the most bias towards the subject. Those exposed to genetic etiology information were also more likely to empathize with the obese individual. In contrast, however, they found no significant differences between groups on the measures of generalized weight bias. These result suggests that while brief information provision about obesity being out of an individual's control may help decrease person specific bias, this alone will not help reduce more generalized weight bias towards about the broader population. Of note, this study also did not employ baseline measurement, making it difficult to assess if group differences were attributable to the intervention or other factors.

In addition to studies examining the effects of attribution theory on adults in the general population, attribution theory has also been explored as a means of reducing weight bias among university students, as per the studies highlighted in the below text boxes.

Crandall's (1994) attributional intervention

Crandall (1994) divided psychology students ($N = 42$) into two groups. One received a message about genetic causes of obesity, the other a message about the effects of stress on illness. They utilized a *post-test* research design, with the Anti-Fat Attitudes (AFA) Questionnaire.¹⁷ The results were *positive*. Participants who were informed of a genetic cause of obesity scored as less biased on two of the three subscales (willpower and dislike, but not fear of fat). However, the AFA has been critiqued due to the inclusion of the statement “I don’t have many friends that are fat” in the dislike subscale. This may be a measure of proximity (i.e. not having many fat people around), more so than dislike (Morrison & O’Connor, 1999).

Diedrichs and Barlow's (2011) attributional intervention

Undergraduate psychology students ($N = 85$) were divided into three groups: 1) an intervention condition with a lecture that emphasized the multiple determinants of weight and discussed weight bias and size acceptance; 2) a comparison condition with a lecture on behavioural determinants of obesity; or 3) control with no lecture. Measurement occurred before and after the lectures and at three-week follow-up via the Anti-Fat Attitudes Test (AFAT).¹⁸ Results were *mixed*. After the intervention and at follow-up, the intervention group showed positive changes in the attractiveness and controllability subscales of the AFAT, but not the disparageability subscale. This may provide evidence in favour of attribution interventions, however, since the intervention condition also received information about weight bias and size acceptance it is questionable which (combination) of these factors the effect can be attributed to.

Persky and Eccleston's (2011) attributional intervention

In this study, medical students ($N = 110$) were randomly assigned to either read a short scientific article about genetic causes of obesity, behavioural causes or about another topic altogether (headaches). They then participated in a simulated online virtual primary health care interaction with an ‘obese patient’¹⁹ in which the patient described having a rash, knee pain and intermittent shortness of breath, which students were told to react to. After the simulated interaction, participants took a questionnaire with the Obese Persons Trait Survey.²⁰ No measures were used before the intervention. Relative to participants in the other conditions, those in the group that emphasized multiple causes of obesity scored as less biased on most (but not all) attitudinal questions.

¹⁷ An often used, 13 question questionnaire with 3 subscales: dislike, fear of fat and willpower.

¹⁸ A questionnaire with three subscales that is different than the AFA.

¹⁹ They show an image of the obese patient simulated in the article, however, the patient, to my eyes, does not appear obese. The patient is an attractive, young, white female who is perhaps ‘curvy’, but not visually appearing obese.

²⁰ This survey has 10 questions regarding traits, including laziness.

O'Brien, Puhl, Latner, Mir and Hunter's (2010) attributional intervention

O'Brien et al. (2010) conducted similar attributional work with pre-service health students ($N = 159$). Students were divided into one of three tutorials: 1) a tutorial that emphasized the controllable causes of obesity (diet and exercise); 2) a tutorial that emphasized the uncontrollable causes of obesity (genetics and environment); or 3) a control tutorial focused on alcohol use. They measured explicit attitudes at baseline and after the intervention through the AFA. Implicit attitudes were measured through the IAT before and after the intervention.²¹ Results were *mixed*. The results were *favourable* on the implicit measures²² and *mixed* (negative on some dimensions and positive on others) on the explicit measures. Analysis of the explicit measures showed that although there were no significant differences across groups, there was a significant decrease on the dislike subscale scores in group two after the intervention. That said, scores from the willpower dimension of the AFA were rated as more stigmatizing in group two at the post-intervention measurement point relative to their pre-intervention scores.

Overall, attribution approaches when used alone are not the most promising. Some studies presented above were ineffective in mitigating biased attitudes or had mixed results. Of the studies that have found this strategy effective, there were often methodological problems calling into question the interpretability of the results, for instance not employing measures both before and after the intervention to assess for changes or direct effects. Perhaps attribution approaches to stigma reduction are not entirely successful due to the inherent complexity of the weight stigma issue. Deeply embedded social problems often have complex roots – as Farrell (2011) illustrated with respect to weight stigma – and solutions not responsive to this complexity are unlikely to be effective. Also of note, many of the interventions described above were brief in nature. It is possible that information provided during a brief intervention may be insufficient to leverage change.

²¹ They also used a scale regarding beliefs about obese people to further assess whether perceptions of controllability changed.

²² The implicit attitudinal analysis showed a more favourable rating of fat people among those in group two in the post-test on two dimensions of the IAT ('good/bad' and 'motivated/lazy') relative to the other groups and to the pre-test.

2.4.2 Social consensus theory and weight stigma reduction

In addition to the above attribution approaches to stigma reduction, social norms/consensus theory has also been examined as a weight stigma reduction strategy, albeit in fewer studies. Stigma reduction, according to social norm/consensus theory, may be achieved through exposing people to the positive attitudes of others, especially if those others are influential members of society. Studies using this approach are described in the text boxes below.

Puhl, Schwartz and Brownell's (2005) social norms/consensus study

Puhl et al. (2005) conducted three experiments that explored social norms/consensus theories with American university students with *positive* outcomes. In experiment one, students ($N = 60$) took a pre-test questionnaire about their explicit beliefs and attitudes about obese people. One week after this, students returned to take a post-test. Prior to beginning the post-test, however, students were presented with (manufactured) data about how their peers had rated obese people in the pre-test. Students were either told that others rated obesity more or less favourably than them. Learning about the positive 'norms' among their peers improved attitudes at the post-test. In the second study, 55 students similarly took a pre-test and a week later returned for a post-test. Before the post-test they were informed of their (manufactured) peers' responses. Half the group received information about peer norms from a community college and half from an Ivy League university. The results showed that the in-group norms – the Ivy League norms – were more influential on participants than community college norms. In the third experiment ($N = 200$), a social norm approach was compared with other means of mitigating weight stigmatizing attitudes. Following the pre-test and prior to the post-test students were presented with one of the following: 1) manufactured Ivy League norms; 2) favourable information about obese people framed as 'scientific truth'; 3) a vignette on the challenges of controlling obesity; 4) a vignette about obesity as within personal control; or 5) no additional information. Participant associations of obese people with positive traits increased and associations with negative traits decreased in groups one and two in the post-test. Negative associations decreased in group three. The intervention for group two – presentation of information framed as 'factual' and 'scientific' – was most influential. A potential issue with this study relates to response bias. If participants believe their peers view obesity more favourably than them they may be inclined to change their responses, but the extent to which this represents a true shift in beliefs or attitudes is unknown.

Zitek and Hebl's (2007) social norm study

Zitek and Hebl (2007) also used a social norm approach with 270 women at an American University. They listened to statements about prejudice towards five groups (one of which was people with obesity²³), in which the speaker either condoned prejudice, condemned prejudice or did not provide verbal information on whether they condoned/condemned discrimination (control). There was a post-test and follow-up questionnaire (no pre-test measures). Results were *positive*. At both post-test and follow-up, students who listened to the speaker either condemn or condone discrimination were more likely to respond similarly, compared to the control, as based on questions about whether they agreed or disagreed with statements about prejudice and discrimination being appropriate or inappropriate.

Gumble's (2012) social consensus study

This study was a dissertation that tested the effect of a social consensus intervention on 110 American university students. Individuals filled in a questionnaire with explicit bias measures (the Obese Persons Trait Survey) as well as the Implicit Association Test. A week later they returned and were provided with fabricated results from other individuals (with weight status manipulated) who supposedly filled in the same measures. They then repeated the questionnaires. The author found that social consensus impacted levels of explicit bias. Decreases to implicit bias were also seen when the fabricated information was from in-group members (based on weight status).

As the above text boxes shows, the results from these studies are promising with respect to mitigating weight-biased attitudes. However, more research is required to develop further insights about the effectiveness of social consensus approaches to weight stigma reduction.

2.4.3 Evoking empathy and weight stigma reduction

In addition to interventions designed around attribution or social norm/consensus theories, other approaches have also been proposed to reduce weight stigma. One such strategy is that of 'evoking empathy' – a strategy that has reportedly had some success in stigma reduction relating to other persons, such as those living with AIDS (Gapinski, Schwartz & Brownell, 2006). This strategy suggests that through promoting an understanding of the challenges of living with a stigmatized condition, compassion and empathy will be fostered and stigma decreased.

²³ The others were black people, gay people, racist people and ex-convicts.

Regarding weight stigma, Thomas (2016) has suggested that social empathy is the remedy to stigma and that the two cannot exist simultaneously. To date, studies using this approach have had mixed results, as shown in the text boxes below, beginning with interventions specific to youth.

Studies using an empathy approach with youth

Hennings, Hilbert, Thomas, Siegfried and Rief (as cited in Danielsdóttir et al., 2010)

Hennings et al. (as cited in Danielsdóttir et al., 2010)²⁴ provided a 20-minute video of overweight youth to high school students ($N = 602$). The video described experiences with weight-based discrimination. A 13-item researcher-developed questionnaire was utilized and administered pre- and post-test. The outcomes were reportedly *negative*. Anti-fat prejudice *increased* following the intervention, although there was an enhanced understanding of the challenges of being obese.

Irving (2000)

Irving (2000) also used an empathy approach. Irving aimed to educate elementary school youth ($N = 45$) that bodies come in a variety of shapes and that teasing about weight hurts people's feelings. This was done through a puppet show with a size acceptance, anti-diet, no teasing theme. For measurement, some participants took a pre-test questionnaire only. The rest took a post-test questionnaire only.²⁵ The questionnaire asked students to rate different body shapes (heavy, average and thin) on six dimensions. Results were *mixed*. Students in the pre-test rated heavy people as worse than average weight people on all six dimensions. Students in the post-test rated heavy people as worse than average people on three of six dimensions (lazy, sad and stupid), but the same on the other dimensions (friends, teased and cute). Given that different participants took the pre-test than the post-test the interpretability of the results is limited.

²⁴ I could not access this 2007 article, as it was not in English. I report on it based on the summary in Danielsdóttir et al. (2010).

²⁵ Images/drawings of large, medium and thin size children were each rated on six bipolar adjectives (cute/ugly, lazy/works hard, teased/not teased, friends/no friends, stupid/not stupid and happy/sad), as adapted from the Figure Rating Scale.

Rukavina, Li and Rowell's (2008) empathy intervention with university students

Rukavina et al. (2008) developed a six-week intervention for undergraduate kinesiology students that utilized an empathy approach ($N = 95$). Students participated in lectures designed to raise awareness of the challenges of being obese and also participated in experiential learning through conducting physical fitness tests with elementary youth. Pre- and post-test measures of explicit biased attitudes were collected via the AFAT and two semantic differential scales (stupid/smart, lazy/motivated). The results were *mostly negative*. There was no change in the semantic differentiation scales. There was improvement on the weight control/blame subscale of AFAT, but no statistically significant change on the other two subscales.

Falker and Sledge's (2011) empathy intervention with health professionals

This study focused on evaluating the effectiveness of a web-based bariatric sensitivity training educational module *with health care staff*. Methods included a survey on attitudes towards bariatric patients before the module and another survey one month after completing the module. The text-based sensitivity training aimed to educate about the many causes of obesity and to increase sensitivity through enhancing knowledge/understandings of obesity. The underlying theory of the course was that education and knowledge would increase empathy and decrease stigma. A total of 600 individuals were exposed to recruitment information. Only 101 individuals completed the pre-module surveys and 30 staff completed both the pre-module survey and post-module survey. Eighty percent were nurses, with the rest comprising health care technicians and unit secretaries. Eighty seven percent were female. The primary measure was the Care of the Bariatric Patient Nursing Survey, which was created to measure stereotypical attitudes before and after the course. The survey had eight statements and a 4-point likert agreement scale. Statements were focused around things like sensitivity to the needs of patients and awareness of how attitudes can impact care. The mean scores lowered at the post-module measurement point, indicating an improvement in sensitivity and a *positive effect*. A limitation to this study is that the construct of attitudes was not well measured through the survey created. Thus, while sensitivity may have improved, we know less about the effects of the intervention on attitudes (or for that matter, behavioural manifestations of weight bias). There was also a low completion rate (approximately 30 percent) and a primarily nursing-based, female demographic.

Gloor and Puhl's (2016) empathy and perspective taking study with adults

Gloor and Puhl (2016) tested the effects of four different stigma reduction interventions with American adults ($N = 650$). Participants were assigned to either a control condition or one of four experimental conditions: 1) empathy; 2) perspective taking; 3) causal information; or 4) a hybrid of empathy and causal information. In the empathy intervention participants read a first person narrative about a man with obesity and the challenges he faced trying to lose weight. The narrative emphasized contributors to his obesity including personal decisions and factors outside his control. In the perspective taking condition participants had to write about what they imagined a day in the life would look like for a heavier individual. Participants in the causal group read information about the complex causes of obesity, including those outside a person's control. Those in the hybrid condition read condensed text from the empathy and causal interventions. Measures were taken after the intervention and included the short version of the Fat Phobia Scale, six empathy questions and six affective reaction questions (including negative affect and sympathy or concern), among other measures. The results were *mixed* (improved empathy but no impact on fat phobia relative to control). Those in the empathy or perspective taking conditions had more empathy and improved emotional responses to people with obesity than those in the other groups. However, no experimental group had decreased fat phobia compared to the control. The direct effects of the empathy and perspective taking experiments on weight bias itself are difficult to ascertain due to no measurement occurring before the experiments. The experiments in this study were also all very brief. It is possible that a more in-depth intervention would have had an effect on weight-biased attitudes.

Gujral, Tea and Sheridan's (2011) empathy intervention with health professionals

Gujral et al. (2011) conducted an online survey ($N = 332$) of nurses' attitudes (measured by ATOP) and beliefs (measured by BAOP) from two different hospitals. One hospital provided annual bariatric sensitivity training and one did not. No statistically significant differences were found between hospitals, however the authors note that the study lacked power. The ATOP scores were slightly better among those who received sensitivity training, but the BAOP scores were similar across conditions. The authors concluded that sensitivity training may slightly improve attitudes, but not beliefs. These results held regardless of participant BMI. This study was limited as the sensitivity training was not well described and its content largely unknown, thus it is difficult to draw any theoretical insights from the study with respect to what strategies may or may not improve weight bias. All they said about the training was that it was web-based, overviews obesity, stigma and discrimination, and relevant equipment and resources. It was unclear what the guiding stigma reduction principles were. I have put this study with the empathy interventions as it claimed to be a sensitivity training, however, a more accurate depiction may be that the stigma reduction mechanism underpinning this study was unclear.

Cotugna and Mallick's (2010) empathy and attribution intervention

Cotugna and Mallick (2010) put dietetics and health promotion students on a diet for one week (1200 calories for females, 1500 for males). During the week, students had to journal about their experiences. While the ethics of this methodology and type of intervention can be called into question, the study was *effective*. They found significant reductions in explicit fat phobic attitudes as measured by the Fat Phobia Scale taken before and after the intervention. The journal entries also showed that students had a newfound empathy for the challenges of dieting and weight loss. Perhaps this study was more effective because it promoted *empathy* more so than *sympathy*, per se, and addressed the challenges of controllability through experiential learning. Regardless, given that this study was to do with pre-service health care providers, it is relevant to my study.

In addition to these intervention studies, Meadows et al. (2017) explored the relationship between medical school experiences (including perspective taking or 'empathy' training) and weight-biased attitudes towards patients with higher weights. Using a large data set of 3,576 students in 49 different US medical schools they found that, based on one question that asked students to rate the number of hours they spent in medical school participating in training on seeing things from a patient's perspective, perspective-taking training was associated with only small decreases in biased attitudes towards heavier patients.

Overall, empathy interventions and approaches have shown mixed results in terms of reducing stigma. When used as a stand-alone strategy, empathic interventions may lead to the paradoxical effect of increasing rather than reducing weight stigma (Dánielsdóttir et al., 2010). Perhaps this is because increasing awareness of the difficulties of living in a fat body, without simultaneously addressing blaming attitudes that fatness is controllable, worsens antipathy towards heavier people. Regardless, one important consideration is to clarify as much as is possible, what is meant by 'empathy', something that has had little attention in the weight stigma literature so far given that this is a new area of inquiry. How empathy has been defined within the weight stigma literature is discussed next.

Gloor and Puhl (2016), in an article on weight stigma reduction, defined empathy as the reactions a person has to the observed experiences of another person. They state that the ability to take the perspective of another is often conceptualized as central to empathy. Gapinski et al. (2006) also perceive perspective taking as key to empathy. Gloor and Puhl (2016) further note that there may be cognitive and emotional elements to empathy. This is also taken up by Meadows et al. (2017) who operationalize empathy as having a cognitive component (i.e. ‘perspective taking’) and an affective component (i.e. ‘emotional empathy’).

Other literature also provides some insight into the empathy concept, discussed next, before continuing to discuss what is known about weight stigma reduction specifically. Rogers (1957) defined empathy as: “the capability to sense the client's private world as if it were your own” (p 99). Richardson, Percy and Hughes (2015), in a discursive review of health education literature articulate that empathy is often poorly defined in scientific studies. They also suggest that empathy, caring, kindness, sensitivity and compassion are interrelated concepts that make it challenging to ensure we are referring to the same thing. In distinguishing between these ideas they state, “Unlike caring and compassion, empathy is mostly designated as a cognitive or emotional concept and is less likely to be described in terms of behaviours” (p 2). Further they argue, “Despite the complications arising from the vagueness of the definitions of caring, compassion and empathy, it is clear that health service users can detect these and other related qualities in nurses’ behaviours and attitudes” (p 2). This suggests that empathy is something emotionally understood more so than understood in a traditionally scientific sense. Their articulations also raise the question of whether empathy is what needs to be generated among health care providers to reduce stigma or whether concepts like compassion are also needed. In

distinguishing between the concepts of compassion and empathy, Singer and Klimecki (2014) in a neuroscience article conceptualize empathy as feeling the emotions of others, including distress, and compassion as a related notion of wanting to care for others. As such, they see empathy as likely to lead to a ‘pulling away’ effect due to empathic distress and compassion as more pro-social, again raising the question of what should be the target of emotion related interventions: compassion or empathy? Overall, it is clear that empathy (and/or compassion) and weight stigma reduction require further study, as so far this is a new and emergent area. Contact theory approaches to stigma reduction are discussed next.

2.4.4 Contact theory approaches to weight stigma reduction

Proponents of contact theory suggest that stigma can be reduced through exposure to or contact with stigmatized groups. The hypothesis is that contact with stigmatized people allows the non-stigmatized an opportunity to counter their stereotypical beliefs about those with a particular stigmatized attribute. In other words, contact may result in a disintegration of their prejudicial categorizations about particular groups. Contact theory has been used to successfully reduce stigma in other areas. For example, see Couture and Penn (2003), regarding mental illness.

While not an intervention study, Meadows et al. (2017) explored the relationship between medical school experiences (including favourable contact with obese people) and weight-biased attitudes towards patients with higher weight. Based upon the responses of 3,576 students in 49 different US medical schools they found that favourable contact or interactions with heavier patients were significantly associated with less biased attitudes. However, only intervention study I know of utilized a contact-based intervention to try and reduce weight stigma, as described in the below text box.

Roberts et al.'s (2011) contact study

Roberts et al. (2011) paired third year medical students ($N = 4$) with patients with obesity who were undergoing evaluation for bariatric surgery for a one-year period. Students took what seemed to be a researcher-developed pre- and post-test attitudinal questionnaire²⁶ and wrote regularly in a journal about their own stereotypes. Their attitudes were compared to several peers who did not participate. Results were *mixed*. The questionnaire showed that some measures improved (e.g. empathy), while others stayed the same (e.g. perceptions of willpower). Depending on interpretations, some measures could also be considered to have worsened (e.g. students were more likely to see obesity as a chronic disease for which they would recommend weight loss surgery). The journals showed that students were able to challenge their stereotypes as a result of extended interactions and relationships with the patients. This study had a very small sample size that limits its generalizability.

Regardless of how the results of the above Roberts et al. (2011) study can be interpreted, a critical issue with contact theories of stigma reduction is that such theories cannot account for why weight stigma is an increasing problem in a culture where rates of overweight and obesity have also seemingly increased. Another challenge with this strategy, as used in the above study, is that the mechanisms within it that may reduce stigma are unclear (PHSA, 2013a). Contact could have been effective because participants were exposed to counter-stereotypical information, or could it have been for some other reason, perhaps because contact promotes relationship building and, thus, empathy and compassion?

2.4.5 Cognitive dissonance or consciousness raising

Consciousness raising is another strategy that has been suggested to attempt to reduce stigma. This strategy is based on encouraging critical reflection about one's values, attitudes or behaviours. The idea is that critical reflection may work to reduce stigma as it provides an opportunity to create cognitive dissonance insofar as individuals may experience discomfort when they realize their attitudes or behaviours might not be consistent with their overarching

²⁶ Only limited details on the questionnaire were provided.

values. This discomfort is thought to increase the likelihood that individuals will modify their attitudes and behaviours to suit their value systems (PHSA, 2013a). Ciao and Latner (2011) tested this approach for its utility to weight stigma reduction and compared it to social consensus. Their study is summarized below.

Ciao and Latner's (2011) cognitive dissonance study

Ciao and Latner (2011) compared cognitive dissonance to social consensus means of weight stigma reduction. Participants were college undergraduates in psychology ($N = 64$). A pre- and post-test questionnaire design was used. One week after taking the pre-test (based on the AFAT), participants in the cognitive dissonance group ($n = 21$) were informed that their AFAT scores were not consistent with values of equality and fairness and were asked to immediately take the post-test. The results were *positive*. The cognitive dissonance group scored more positively in comparison to pre-test and to the social consensus group (the social consensus intervention, which entailed providing information about how peers had responded, failed).

While the Ciao and Latner (2011) study suggests cognitive dissonance may be helpful to weave into weight stigma reduction interventions, this approach is only just beginning to be explored as a weight stigma reduction strategy, which makes commenting on its potential effectiveness challenging. Also, while the above study was successful in improving weight stigma attitudinal scores, it is not clear that attitudinal change necessarily relates to behaviour change. An overall shortcoming with most of the extant weight stigma reduction research is the use of attitudinal measures of weight stigma without a corresponding behavioural measure. My study addresses this gap and measures not only weight-biased attitudes before and after the BalancedView intervention, but also self-reported behaviour and practice changes among participating health care providers.

2.4.6 Multi-method interventions

Some studies on mitigating weight bias have tested a multi-strategy approach based on some combination of the above strategies, sometimes with other components woven in. As the below intervention studies highlight, multi-prong strategies show promise.

Swift et al.'s (2013) multi-method intervention

Swift et al. (2013) tested a multi-strategy approach to stigma reduction with 19 graduate nutrition students and 24 third year medical science students. Students were shown two 17-minute videos on weight stigma. The video included an empathy component, an attribution component and counter-stereotype information. Explicit *and* implicit measures of attitudes were taken pre- and post-test and at follow-up.²⁷ Results were *mostly positive*: explicit attitudes improved, however implicit attitudes were more resistant to change.

Robinson, Bacon and O'Reilly's (1993) multi-method intervention

This study utilized a three-prong information provision strategy that emphasized attribution theory, the inherent beauty in all body sizes and provided information on weight prejudice with a convenience sample of 40 white American adult women. The intervention involved group sessions and individual sessions. Pre- and post-test measurement occurred using the long version of the Fat Phobia Scale. The study was *effective*: attitudes improved after the intervention.

Hague and White's (2005) multi-method intervention

This study focused on teachers and student teachers ($N = 258$). Participants participated in an Internet module that presented information on weight stigma and the multiple causes of obesity and emphasized a non-diet, health-centred approach to weight. Although all information provided was the same, it was provided in different ways to test social consensus. Some participants received the information with no image or credentials attached, others with presenter credentials (PhD and Registered Dietitian) but no image and others with an image of a non-obese presenter with credentials or an obese presenter with credentials. Measurement occurred via a questionnaire at pre- and post-test and follow-up.²⁸ Reductions in weight-biased attitudes occurred and were sustained at follow-up. Those exposed to the 'credible' obese presenter showed the greatest improvement.

²⁷ Via the Fat Phobia Scale, Beliefs About Obese People Scale and the dislike and willpower subscales of the AFA Questionnaire. The IAT was used to measure implicit attitudes.

²⁸ They used the AFAT and questions assessing trustworthiness of information at pre-test, post-test and 6-week follow-up.

Gapinski et al.'s (2006) multi-method intervention

Gapinski et al. (2006) is the exception to the success found in above three multi-strategy approaches. The authors utilized a twofold-approach ($N = 108$): evoking empathy and countering stereotypes in a controlled experiment. American female university students in the experimental group watched a set of two short videos portraying an overweight individual. The first video was about the challenges of being overweight, the cruel treatment often faced and subsequent feelings of hopelessness (the control group watched an unrelated video). The second video was a clip with stereotypical or counter-stereotypical information about obese people (e.g. motivated/unmotivated, smart/not smart, professional/unprofessional). The research used a *post-test only* questionnaire design. Measures included the IAT, several questionnaire-based measures of explicit attitudes and an empathy scale.²⁹ The results were *negative*: there were no differences between groups on implicit or explicit measures.

Hilbert's (2016) multi-method intervention

This article focused on a multi-component intervention used in two studies that drew largely on attribution theory and included other components. Each study tested the effects of a brief, interactive, computerized, multi-component intervention with adults. The intervention was a 60-minute computerized course that provided an opportunity to reflect on beliefs, led participants through guided imagery and provided information challenging controllability beliefs (e.g. genetic and environmental contributors to body weight). It also discussed cultural pressures to be slim, how beauty norms differ across cultures and research on weight prejudice and its consequences. Study one ($N = 128$) was with *university students*. Half the participants were in an intervention group and the other half in a control group. For the intervention group measures were taken at baseline and *10 to 16 days after the course*. Measures included the Anti-Fat Attitudes Test (AFAT), Beliefs About Obese Persons Scale (BAOP) and an online IAT. The results included significant improvements (medium effect) on the AFAT right after the course for the intervention group compared to control. Controllability beliefs (as measured through BAOP) decreased significantly (large effect). There was no difference between the control and intervention group on implicit attitudes. Study two ($N = 128$) was conducted with the *general population, not students* (63 in the experiment group and 65 in the control). Measures included the Anti-Fat Attitudes Test, BAOP and the IAT, among other measures at baseline and follow-up (*four weeks later*). While study one had a positive effect, the second study did not show any significant effect on explicit attitudes or controllability beliefs, except for among those with higher education levels. The author concludes that the intervention was useful in the short-term (study one, university sample) and in the long-term for those with higher education.

²⁹ Measures of explicit bias included: semantic differential scales regarding thin and fat people (motivated, unmotivated, etc.); a feelings thermometer to assess feelings towards thin, average weight or obese persons; a preferences questionnaire; and resume ratings.

Overall, as the studies in the text boxes above illustrate, the evidence is encouraging, albeit modest, for interventions that employ multiple strategies (Danielsdóttir et al., 2010; PHSA, 2013a). While the Gapinski et al. (2006) study was not effective, it is worth noting that this study did not include any form of measurement before the intervention, thus, it is challenging to ascertain the effects of the intervention. The other studies, which did employ measurement both before and after the intervention, were promising, although the intervention by Hilbert (2016) was not effective in the longer term for those with lower education levels.

Given multi-component interventions are more likely to be responsive to the multiple and complex contributing factors to stigma (Link & Phelan, 2001) they thus may be useful to incorporate into weight stigma reduction. Multi-method approaches also lend well to longer, more in-depth interventions, which may be more helpful in mitigating stigma than very brief interventions. Most of the interventions described above are only several minutes in length. Moving beyond very brief information provision was identified as helpful in producing longer term positive effects on weight-biased attitudes in one study (Swift et al., 2013). Currently, however, it is unknown what components of multi-strategy interventions are most effective. For example, Hilbert (2016) concludes that their study provides some evidence in favour of attribution approaches with educated populations, both in the short-term and longer term. However, the intervention had multiple components and the authors were unable to assess for the effects of the different components, thus it is unknown what aspects were most useful.

Another effective, multi-method intervention study, not discussed in the above table, was conducted by McVey et al. (2013). This study is worth discussing in its own right since it was specific to public health professionals in Ontario and was one of the four studies with health professionals that I found. The study is summarized below.

McVey et al.'s (2013) multi-method intervention for health professionals

McVey et al. (2013) held a daylong forum for public health professionals in Ontario ($N = 342$) to reduce weight stigma. The forum aimed to raise awareness of: weight stigma and its health consequences; ways to balance weight and health messages to avoid triggering disordered eating and body image concerns; and incorporating mental health promotion language into healthy weight messaging (i.e. focusing on mental health in addition to physical). A questionnaire was administered before and after the intervention and at six-week follow-up.³⁰ A total of 42 participants took part in semi-structured, follow-up interviews aimed at understanding changes made since the intervention. Anti-fat attitudes were reduced after the forum and at follow-up, though the effect lessened over time. Similar findings were present for self-efficacy to address weight-related norms and internalization of media stereotypes about weight and appearance. Despite the promise of this study, the authors acknowledge it had limitations, including no control group.

What is particularly interesting about the study by McVey et al. (2013) is their unique emphasis on balancing weight and health messages to avoid triggering disordered eating and body image concerns. With this, the authors specifically strove to provide information on the harms of focusing on weight loss as a measure of health and emphasized disordered eating as likely consequence of focusing on weight. I suspect that a key aspect of the success McVey has had, both in this study and politically in Canada as a champion of the need to reduce weight stigma in health care, is due to her unique positioning on messages about weight and health. Health professionals are very focused on health as a desirable outcome. Thus, McVey et al.'s (2013) discussion of eating disorders as a consequence of weight-centred approaches to health may have been a viable way of creating buy-in among health professional participants for the notion that overly focusing on weight in health sectors is not always helpful.

³⁰ Measures included: the 13-item AFA Questionnaire; the Sociocultural Attitudes Towards Appearance Questionnaire (a measure of internalization of weight and appearance norms); a version of the Body Satisfaction Scale; and Self-Efficacy to Change weight-related social norms.

2.4.7 Health At Every Size and its potential for stigma reduction

The notion that focusing on weight may be stigmatizing and that taking the emphasis off weight may thus help reduce weight stigma was an important focus of my study. I discuss this idea below in relation to Health At Every Size (HAES) principles. Promoting HAES has been suggested by fat studies scholars as a way to help reduce weight stigma (McMichael, 2013; O'Reilly & Sixsmith, 2012). HAES is a wellness-centred approach to health that advocates taking the focus off weight and instead concentrating on enjoyable physical activity and healthy eating for all bodies (Association for Size Diversity and Health, 2014). It can be adopted at the individual level or promoted in health sectors. A HAES-oriented approach has been tested and compared to weight-centred, diet-focused approaches in randomized control trials and found to be more effective at improving individual psychological and physical health outcomes than weight loss-focused approaches (Bacon & Aphramor, 2011). Two important aspects of HAES are that weight does not necessarily relate to health, and that focusing on weight is harmful to health. Unlike the above mentioned stigma reduction strategies, with the exception of McVey et al. (2013) who loosely draw on ideas about HAES in their weight stigma reduction intervention, I only located one stigma reduction intervention that formally drew on Health At Every Size.³¹ This study is described below.

³¹ This study occurred prior to HAES becoming a registered trademark of the Association for Size Diversity and Health.

Frick's (2007) use of Health At Every Size concepts in a weight stigma intervention

As part of a dissertation, a one-hour in-service ($N = 37$) was provided for current health care providers or pre-service (nursing) health students that drew on concepts related to Health At Every Size and the trans theoretical model (TTM) of change. The TTM is based on the idea that change is a process that occurs over time and is fluid; change does not occur all at once. Stages of change include pre-contemplation, contemplation, preparation, action and maintenance. Measures included the Anti-Fat Attitudes Test and the Implicit Association Test. Measures were taken before and after the in-service and at four-week follow-up. Positive changes were seen after the intervention and sustained, though somewhat decreased, at follow-up.

The above dissertation by Frick (2007) suggests that incorporating HAES-related elements into a weight bias reduction intervention for health care providers and/or health students may be effective. The Hague and White (2005) study described above also is suggestive of this. Hague and White's (2005) study drew on the related ideas of a non-diet, health-centred approach and was effective.

2.5 Other insights into weight stigma reduction

Beyond the theories tested in the stigma reduction intervention studies described above, insights concerning how to potentially reduce weight stigma can also be gleaned from the work of those in fat studies and critical weight studies, as well as from those engaged in applied approaches to weight stigma reduction. For instance, Norman and Petherick (2016) discuss how, in attempting to disrupt the dominant obesity discourse in a kinesiology classroom setting, it is useful to encourage students to think critically and evaluate the validity of dominant obesity messaging. To do this they purposefully introduce learners to the contradictions and inconsistencies underpinning the obesity epidemic discourse. Upon realizing the competing knowledge claims about obesity, students are forced into a position of critically grappling with the evidence. Bhagat and Jette (2016) similarly argue that for kinesiology students it is important to promote critical thinking by showing the contradictory research on obesity and its relation to

health and the evidence on the harms of the weight-based paradigm. The contention that interrupting dominant, medicalized understandings about obesity can be undertaken through encouraging critical thinking and exposure to multiple knowledge claims is taken up in this study.

Further insight can also be gleaned through Saguy (2013), who via a series of experiments shows that medical frames about weight relate to weight-biased attitudes, which suggests that targeting medical frames may be useful to weight stigma reduction. But what can we do with this information that the medicalization of weight may contribute to the problem? Beyond the possible use of HAES principles, how do we translate Saguy's (2013) contention into a viable and testable intervention? I have taken this issue up in my study.

The use of drama has also been suggested as a strategy for addressing weight stigma (Lea & O'Reilly, 2016), including among health professionals. For instance, Kirk et al. (2014) discuss how, following a multilevel qualitative study on obesity management, they created a dramatic presentation of the relationship between a heavier individual and a health professional. The presentation is being used as an educational tool and preliminary pilot data show it has benefit in raising awareness among health care providers of tensions that may exist in such encounters (Kirk et al., 2014).³² Although investigating the role of drama to weight stigma reduction is not an explicit aim of this study, I do draw on and explore the utility of filmed re-enactments of health care encounters created for BalancedView as part of unlearning weight stigma.

³² A video of the dramatic adaptation is available at on YouTube, see (Kirk, Price, Aston & Vallis, 2013).

Recently, building upon the dramatic work mentioned above, Kirk (2015a) released a time-limited online course on weight bias through the Canvas Network (2015).³³ The course was free and publicly accessible for a limited time. The course:

. . . [p]rovide[s] an overview of the causes and consequences of obesity, with a focus on promoting a balanced understanding of the complex factors that have led to a rise in obesity rates globally and their implications for obesity management and prevention. As participants move through the content, they will be challenged to reflect on their own attitudes towards obesity and to critically appraise how these are shaped by broader societal attitudes. After completing the course, participants will have gained an appreciation of the causes and consequences of obesity and better insight into how to approach individuals experiencing obesity in a respectful and non-judgmental manner. (Canvas Network, 2015)

The course aimed to provide participants with a better understanding of the complex causes of obesity and to learn how to approach people with obesity in a non-stigmatizing, respectful way (Kirk, 2015b). This latter aim is something that is also taken up in my study in that I explore how to not only reduce weight-biased attitudes – as the majority of intervention studies have done – but also how to encourage health care providers to ensure their practices are not biased.

Other pertinent weight stigma reduction resources have become available in recent years that also aim to address weight stigma in health care. For instance, The Binge Eating Disorder

³³ The course had five modules: one on exploring one’s own biases; a second on understanding the complexity of obesity as a health and social issue; a third on understanding weight stigma and where it comes from; a fourth on how to address weight bias and stigma; and a final module on best practices (Canvas Network, 2015).

Association (BEDA) has developed PDFs for various health care providers that provide basic information on weight bias.³⁴ One of the strategies suggested in the guide to reduce weight stigma is using a health-focused rather than weight-centred approach to treatment. This approach is explored in my study for its utility in assisting weight stigma reduction. In addition to BEDA resources, another free online weight stigma course was developed in 2015. In November of 2015, the Rudd Center launched a publicly available course of weight bias and stigma.³⁵ The Rudd Center's University of Connecticut page stated the following of the course:

The course equips clinicians with strategies to improve provider-patient communication, make positive changes in the medical office environment, and increase awareness of personal biases that could unintentionally compromise patient care. (University of Connecticut, 2015)

As with the course described above by Kirk (2015a, 2015b), this course strove to help participants learn to approach heavier people in a non-stigmatizing way. Learning objectives for this course were quoted as follows:

- 1) Recognize the sources of weight bias and stigmatization in health care settings.
- 2) Describe the adverse consequences of weight stigma on patients' emotional and physical health.
- 3) Identify personal assumptions about obesity and body weight, and how these views can influence patient care.

³⁴ As an example, BEDA has a guide available titled, "weight stigma in the nutritional counseling setting: Guidance for professionals." The purpose of the guide is to ". . . identify how weight stigma can impact your perception as a clinician, and provide concrete strategies to help you combat weight stigma in your nutrition counseling work" (BEDA, nd, p 1).

³⁵ Available at improveobesitycare.org or <http://ruddcentercme.org> (UConn Rudd Center, 2015).

- 4) Improve communication skills to facilitate productive discussions with patients about weight-related health.
- 5) Implement clinical strategies to help patients with obesity set appropriate goals for lifestyle behavior change.
- 6) Identify strategies to improve accessibility and comfort for patients with obesity in the medical office environment.
- 7) Educate medical students about weight bias and provide resources for further training on this topic. (University of Connecticut, 2015)

Of benefit, the above course appears to draw on more than one stigma reduction approach. It focuses on improving communication with patients, for example, as well as raising awareness of personal assumptions, both of which I explore in this study.³⁶

2.6 Gaps in the literature: What do we need to know more about?

While it has often been argued that weight stigma is a problem among health care providers, as I have shown in the preceding discussion, there has been less attention in the literature to efforts to conceptualize precisely what the problem is that we are trying to reduce. While studies over the last few decades have revealed much about weight-biased attitudes, knowledge on what constitutes weight stigma, in health care or otherwise, remains incomplete. More research is needed to build knowledge on what attitudes are considered weight-biased among health care providers. We similarly need to build knowledge on what practices are considered stigmatizing. We also need to debate further how the medicalization of weight relates

³⁶ Evaluation results from this course are unknown at this time, as far as I am aware.

to weight stigma in health care – from the perspectives of patients, providers and academics – as this is an area where there has been inadequate attention and extensive disagreement. Attention is also needed to understand how the concept of weight stigma relates to other emergent stigma theories, including, for example Link and colleagues’ (2004) notion of stigma as it relates to emotions. The importance of this problem definition work cannot be understated. As D’Zurilla et al. (2004) argue, problem identification and conceptualization are central to the social problem solving process. It follows that mitigating weight stigma in health care necessitates a simultaneous reflection on different theoretical perspectives that help to understand the problem. We also need to consider the perspectives of health care providers themselves. Understanding how health care providers think about and define weight stigma is an essential prerequisite to learning how to mitigate stigma among this population. More information is urgently needed about how to reduce weight stigma in health care, given the health and ethical implications of this stigma. Currently, we are lacking in both studies and knowledge on how to successfully reduce weight stigma in health settings. Further, few weight bias interventions have focused on changing the behavioural manifestation of weight bias (Lee et al., 2014), another area where attention is needed.

Relatedly, while recent studies have begun to test different approaches to try and reduce weight stigma, as articulated within this literature review, more attention is needed to the process of delivering weight stigma interventions. Is there a particular length of intervention necessary? Is text-based material sufficient, or would verbal or some other medium be preferable? What about the difference between online and in-person strategies to reduce weight stigma? Although web-based training for health care providers has been found to be effective in a general sense,

when compared to in-person learning (Doorenbos et al., 2010), we know little about the applicability of online interventions specific to health care providers and weight stigma.

Given these gaps, I aimed to build theory on how weight stigma can be conceptualized and show what might be done to reduce it (both attitudinally and behaviourally), in the context of health care. This aim was explored through a case study of BalancedView, an online intervention on weight stigma for health care providers in BC that was developed through a multi-year, collaborative, in-person process. As I describe more fully in the methodology chapter that follows, I used this case to explore the following research questions (RQs):

- RQ1: What are the different ways that weight stigma in health care can be conceptualized?
- RQ2: What strategies can be employed to reduce weight stigma among health care providers in BC?

The rationale for these questions, the case of focus and other methodological details are described next.

Chapter 3: Methodology

In this chapter I discuss my methodology. First, I remind readers of my research questions, articulate my case study research approach and describe the principles of a pragmatic paradigm that informed my work. I then describe the case of focus, BalancedView, which is an online course for health care providers in BC that aims to reduce weight stigma. I discuss the BalancedView case before my data collection methods in order to provide a frame of reference for the different methods employed at the various stages of the case study. I then discuss my methods, recruitment strategies, analytic techniques and, finally, ethical issues associated with my study.

3.1 Research questions

As discussed at the end of the literature review, the two research questions (RQs) that guided this study were as follows:

- RQ1: What are the different ways that weight stigma in health care can be conceptualized?
- RQ2: What strategies can be employed to reduce weight stigma among health care providers in BC?

These questions were developed through an examination of gaps in the literature and were investigated through the lens of a case study of BalancedView. Through research question one, I aimed to enhance understandings of weight stigma in health care. In particular, I explored perspectives among participants in this case study on what weight stigma is and what it looks like in health care. For example, I was interested in how health care providers involved in developing or taking the BalancedView course viewed weight stigma and how other stakeholders involved in curriculum development conceptualized weight stigma in health care (e.g. patients

and experts interviewed as part of course development or directly involved in developing the course). I also looked at what the areas of agreement and disagreement were.

Through research question two, I reflected on the range of ways considered within the case study to address weight stigma within health care in BC and on the effectiveness of the various strategies used within BalancedView to reduce weight stigma among participants. To guide my inquiry around question two, I explored what strategies were identified as possibilities to reduce weight stigma. I also looked at what strategies were considered politically acceptable and feasible. Based on the implementation of BalancedView, I additionally investigated what strategies were most influential in reducing weight stigma among participating health care providers. Next, I describe my research approach, which was based on a case study and drew on a pragmatic paradigm.

3.2 A case study research approach

My research questions were explored within the context of a case study on weight stigma reduction among health care providers in BC and the case of BalancedView. I aligned my case study with the methodological traditions of a ‘pragmatic approach’ (or ‘paradigm’) (Morgan, 2007). According to Merriam (1998), while case studies are common, there is less clarity or consensus on what a case study is or how it should be done. Yin (2003, 2014) similarly notes that case studies are regularly used, though often criticized. He further argues that many of the criticisms of case study research stem from a lack of clarity about what a case study is. In this study, a case study was defined as:

. . . a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence. (Robson, 2002, p 178)

As the above quote suggests, case studies are an *approach* to research – rather than a data collection method – that are characterized by investigation of *real life occurrences, within a particular and specified context* (Baxter & Jack, 2008). A case study design is considered for selection when you cannot manipulate or control the behaviour of those involved in the study or when contextual conditions are believed to be pertinent to the topic at hand (Pearson, Albon & Hubball, 2015; Yin, 2014). In my proposed study, I was one of many stakeholders³⁷ involved in developing the BalancedView course to address weight stigma and examining what works to mitigate it in health care, hence I had only a limited degree of control over the course and research design.

As Harland (2014) states, case studies are beneficial when learning from specific cases may help better understandings of complex, real life phenomena. Weight stigma is a complex, real life issue in health care. Looking at applied attempts to reduce it in a real world setting was an invaluable opportunity for advancing knowledge.

Further, a case study approach was relevant as my research was specific to weight stigma among health care professionals in BC. I did not presume to generalize my findings to all health care professionals. Rather, I aimed to explore the issue of weight stigma in the health sector

³⁷ Three committees were involved in developing BalancedView: A steering committee of experts, an advisory committee of health care providers and, to a lesser extent, the Promoting Healthy Weights Working Group. These committees are described later in this chapter.

within the BC context and, more specifically, within the boundaries of the development and implementation of BalancedView. However, as Harland (2014) points out, while replicability – something that is often thought to be important in weight stigma reduction intervention research – cannot occur through case studies, lessons can nonetheless be gleaned that are relevant to professionals and academics in the same area. My hope is that the lessons discussed in this dissertation, while bound up in the context of BalancedView, are useful to other professionals or researchers wanting to undertake similar initiatives to reduce weight stigma in health care.

In addition to the emphasis within case studies on phenomena in real life contexts, another central feature of case studies is the use of a variety of data sources or multiple methods (Baxter & Jack, 2008; Harland, 2014). Use of multiple data sources and methods, as Baxter and Jack (2008) argue, “[e]nsures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood” (p 544). This aligns well with the mixed methods I used in my study.

I primarily drew on Yin’s (2014) understanding of case study research. While others, such as Merriam (1998) and Stake (1995) have also discussed the case study methodology, I gravitated towards Yin’s (2003, 2014) work as he argues that the philosophical beliefs between quantitative and qualitative research are reconcilable and there is a “strong and essential common ground between the two” (Yin, 2003, p 15). This fits with my mixed methods, pragmatic approach to this study. Yin also provides helpful insight into how to design and practically conduct a case study, as well as criteria through which to evaluate case studies.

The type of case study I used to explore the problem of weight stigma in health care was an exploratory-explanatory study, merging two of the forms of case studies described by Yin

(2003). Exploratory case studies are helpful when the phenomenon under investigation is relatively underexplored and about which not enough is known to develop formal hypotheses. This type of case study is also useful for exploring ‘what’ questions and can be used as a precursor to more formal explanatory studies. In an exploratory design, the researcher need not have pre-determined theoretical propositions before beginning research (Streb, 2010). In my case, the exploratory part of the study was around problem definition and conceptualizing weight stigma. Explanatory case studies, by contrast, are about theory testing and building (Yin, 2014). The explanatory part of my study aimed to explore how to reduce weight stigma among health care professionals, based on the case of BalancedView.

An important element of case study design is the idea of case boundaries (Yin, 2014). The researcher must determine what fits within the scope of the case study and what does not. My case study focused exclusively on data collected through the development, pilot testing and implementation of BalancedView. As such, I used a single case study design, insofar as I examined the issue of weight stigma in health care through the case of one intervention project rather than multiple projects. Within my single case study design, I drew on multiple units of analysis (Yin, 2014).³⁸ The units of analysis included health professionals participating in the course, stakeholders involved in developing the course, as well as the course itself and all

³⁸ Yin (2014) outlines that regardless of what type of case study is selected, the case study can be either single (i.e. focused on one case) or multiple (i.e. focused on more than one case) and that the researcher should decide on this during the design phase. He articulates that single cases are most helpful for understanding the peculiarities of a specific case, while multiple cases are helpful for building theory. Within either subtype, the approach can be holistic or embedded. Holistic case studies refer to when the case(s) at hand are studied from a general perspective, as a whole. Embedded case studies are when there are multiple units of analysis (e.g. multiple people of interest who are studied in their own right within the broader case). The benefit of having multiple units of analysis, particularly within a single case study, is that it allows room for theory generation across the units despite the focus on a single case.

associated materials. My own reflexivity also informed the analysis, which I discuss later in this chapter.

In order to maximize the reliability of case study analyses and findings, researchers should specify early on what criteria will be used to determine the trustworthiness of the interpretations (Yin, 2003). The below table summarizes the criteria I used for interpreting findings.

Table 1 Case study criteria

<i>Criterion</i>	<i>Description</i>
Member checking	Were interpretations checked with members? What alternate interpretations or points of contention existed, if any?
Reflexivity	Have I considered and been explicit about how my personal experiences, thoughts and biases influenced my interpretations?

With this case study approach in mind, I next discuss my research paradigm.

3.3 Informed by a pragmatic research approach

I used a pragmatic research approach – or pragmatic paradigm – for this case study. The word ‘paradigm’ is used often in the social science literature, although there is not necessarily agreement on how to conceptualize it. Morgan (2007) outlines three main trends in how paradigms are considered in the research literature. One trend is to broadly consider a paradigm as a ‘worldview’, another to consider a paradigm as a philosophy of knowledge related to one’s

epistemological and ontological stance.³⁹ A third is to consider a paradigm as a set of “shared beliefs within a community of researchers who share a consensus about which questions are most meaningful and which procedures are most appropriate for answering those questions” (Morgan, 2007, p 53). Morgan (2007) argues that the first of these definitions is overly generalist and that the second is divisive in that if we conceptualize a paradigm as an epistemological stance that can have little cross over with other ways of knowing, we create disciplinary silos and ignore potentially valuable ways of knowing. He advocates that instead we adopt the third conceptualization of a paradigm and connect that with ‘pragmatism’ (Hookway, 2013). I located my work within Morgan’s notion of a paradigm as a set of shared beliefs about what questions are important to study and how to go about exploring those questions. I did this because I did not want to limit my work to one ontological or epistemological position. I was interested in treating all stakeholders’ perspectives and various knowledge sources as valid in order to further our shared goal of better understanding and reducing weight stigma. In the words of Russell and Cameron (2016) “. . . different disciplines offer useful insights that become even more powerful when brought together, fat pedagogy is, and must be an interdisciplinary, multidisciplinary, and transdisciplinary endeavour” (p 254).

I also connected my work to Morgan’s notion of a pragmatic paradigm. Morgan conceptualizes a pragmatic paradigm of research as being focused on *action* – much like this study – rather than epistemology. Key foci of this research paradigm, according to Morgan (2007) are action and the beliefs behind these actions. The emphasis is on both shared meaning

³⁹ The notion of a paradigm as an epistemological stance was promoted largely through the qualitative revolution beginning in the late 1970s and continued into the early 2000s, with researchers like Guba and Lincoln (1994, 2005) at the helm. In that era, we saw a (re)emergence of qualitative research and a recognition of the validity of such research within social science.

and joint action. This approach was beneficial to me as it is inherently collaborative. It focuses on mutual understanding where possible. Despite the focus on mutual understanding and action, a pragmatic paradigm of research does not necessarily abandon issues of epistemology. Rather, it is consistent with a focus on epistemology *when practical or helpful*. This means that the focus is not on the philosophy of knowledge in its own right. This is better left to philosophers, Morgan (2007) argues. Instead, in a pragmatic framework researchers should consider how beliefs about different ways of knowing constrain or enable us in understanding and solving problems. Thus, within my analysis, I considered how the various epistemological stances of stakeholders involved in this project influenced the discourse around weight stigma. In the spirit of pragmatism, however, I was not interested in prioritizing one way of thinking over another, as the study of a complex social issue like weight stigma is best understood through multiple perspectives.

3.4 The case of BalancedView

In response to the problem of weight stigma in health care and the need to develop knowledge on how to reduce this bias, the Provincial Health Services Authority (PHSA) funded, developed, pilot tested, implemented and evaluated an online anti-weight stigma course for health care providers in BC, in partnership with an array of stakeholders (described below). The course, which is still publicly available, is entitled BalancedView (BV).

BalancedView is a multi-module course that aims to reduce weight stigmatizing attitudes among participants, enhance knowledge about weight stigma and build competency to address weight stigma in clinical practice. The target population are health care professionals in BC who self-identify as belonging to one of the following groups: 1) medical professionals (e.g.

paediatricians, general practitioners); 2) mental health professionals (e.g. psychiatrists, psychologists, social workers, counsellors, child and youth care workers, mental health clinicians); or 3) allied health care professionals (e.g. occupational therapists, recreation therapists, dietitians, nurses, other).

The development of BalancedView and its implementation and evaluation was funded by the Provincial Health Services Authority's (PHSA) Population and Public Health Program. The contract to undertake this work was housed with the Health Literacy team at BC Mental Health and Substance Use Service (BCMHSUS), an agency of the PHSA.⁴⁰ After extensive work developing the course, it was then piloted and launched. Each phase is then described in detail in its own right, beginning with the development.

3.4.1 Development description

The BalancedView project began in fiscal year 2012/2013 with PHSA funding to develop, pilot test and implement a three-year educational resource for health care providers in BC. Given the limited amount of information about how to reduce weight bias in health care, the team decided to utilize a participatory approach to developing the resource, such that the wisdom of an interdisciplinary team could be incorporated. Three committees were actively involved in developing the project: 1) a steering committee of professionals and researchers with expertise in weight stigma and related topics (e.g. eating disorders prevention) (membership fluctuated from 11 to 17 people); 2) an advisory committee of diverse health care providers across the province

⁴⁰ BCMHSUS is no longer the project lead for BalancedView. Due to larger organizational shifts within the PHSA, BalancedView is now the purview of the Health Literacy team at BC Children's Hospital. The Health Literacy team formerly existed within BCMHSUS, but as of this writing the team falls within BC Children's Hospital, which is also an agency of the PHSA.

(membership fluctuated from 10 to 13 people); and 3) a pre-existing BC committee with a mission to prevent weight stigma and eating disorders, entitled the Promoting Healthy Weights Working Group (PHWWG), with an open membership and fluctuating numbers that met monthly, that I previously sat on.⁴¹ An estimated 60 hours was spent consulting with these groups over the course of development. Meeting schedules varied over the course of the project, sometimes occurring with the committees monthly, especially in the earlier days, and then moving to every few months as needed.

A single evaluator consultant was initially hired to evaluate the project, a role which I was later invited to share given my research interest in the topic and intent to make this my PhD project. The evaluator and I worked with the team to establish desired outcomes from the project and a plan for measuring success.

It was decided through a collaborative process at the committee meetings that, building on the funding proposal from BCMHSUS, the overarching activities of the project would be:

- 1) Perform a needs assessment (literature review, environmental scan and gap analysis) to understand the needs of health professionals, patients and families in British Columbia (BC) with regard to weight bias and stigma.
- 2) Develop an evidence-informed resource to address weight bias and stigma among health professionals in BC.
- 3) Disseminate the weight bias and stigma resource to health professionals in BC.

⁴¹ The PHWWG was less involved in the development of BalancedView and decision-making about the course than the other committees.

4) Evaluate the weight bias and stigma resource. (PHSA, 2013, January)⁴²

Corresponding to these objectives, the committees worked with the evaluation and project management team, including myself, to develop a set of desired outcomes as set out within an outcomes measurement framework. These outcomes were: “Health care professionals have increased knowledge, enhanced attitudes and competencies regarding weight bias and stigma” and “[h]ealth professionals implement changes in their care of patients” (PHSA, 2015, April).

While discussion took place about the merits of online learning versus in-person forums, due to budgetary constraints and a desire for sustainability, a decision was made early on by the project management team to utilize an online format for the course. Two contractors – with little professional or academic involvement on the subject of weight stigma, but with extensive research backgrounds – were then hired to conduct a ‘scoping review’ that explored why weight stigma exists and what could be done to address it in health care. This scoping review included a systematic literature review and 22 interviews (three with patients and the other 19 with individuals with subject matter expertise). These contractors worked with the three committees and project managers to collaboratively develop a final report from the scoping review. The scoping review⁴³ acknowledged that weight stigma was a complex problem that would likely be best solved through a multi-method approach to stigma reduction. It also articulated a relationship between the medicalization of weight and weight stigma.

⁴² Quote as per the Project Charter.

⁴³ The search strategy involved MEDLINE, CINAHL, PubMed, SocINDEX, PsycINFO, Social Services Abstracts and Social Work Abstracts. The search was based around themes of health care professionals, health care delivery, overweight, obesity, stigma and bias, and reducing stigma and bias. For more information see PHSA (2013a).

Based on this report, another contractor was hired to work with the committees and project managers to develop a Word document with the desired content that would ultimately be translated into the online course. The contractor who was hired to do this was an academic who was a proponent of Health At Every Size principles and had a background in dietetics and education. Over several months this content contractor worked with the committees, project managers and myself to draft the content, which included information on medicalization and a strong emphasis on a community of practice that aimed to facilitate user engagement beyond the course ending. After this, it was collaboratively determined that the content was ready to be sent to the IT company to translate it into an online format. Months later, in December 2013, a daylong meeting with both the steering and advisory committee was held to review the preliminary translation of the content to the online format. At this meeting, the IT company presented a condensed version of the content document to the committees structured into a format that made sense visually. The modules included in the content map they presented were as follows:

- Module 1: Understanding weight stigma (a basic overview of weight stigma)
- Module 2: Patient voices (video recordings of patient stories)
- Module 3: Weight science, alternative paradigms and ethics (information contesting common ‘myths’ about overweight and obesity, like overweight and obesity leading to disease and early death)
- Module 4: Professional voices (medical professionals on film sharing their stories of change)
- Module 5: Applying alternative paradigms (e.g. HAES) (how to apply a health-centred, de-medicalized approach to working with heavier patients)
- Module 6: Realities of practice

- Module 7: Community of practice (a discussion forum to encourage engagement and ongoing learning)

The intention at this point was to solicit input into the *look and feel* of the proposed online format of the tool from the committees. However, feedback from some committee members focused more on content, despite the seeming consensus on content that had previously been achieved. At the December 2013 meeting, several committee members expressed discomfort at the sections that contested the common belief that overweight and obesity led to health problems. Given this disagreement, over the next several months, the content around medicalization was revisited. Ultimately, it was decided that the content focusing on medicalization would take a more neutral perspective and would present both sides of the argument on medicalization, including its possible benefits and consequences.

After the revision process, the course was finalized at *five modules* and the contentious content on medicalization was de-emphasized to a large extent.⁴⁴ The community of practice was also excluded, as the resource was lengthy. These five modules take about 2.5 hours to work through. The course itself is interactive and multi-medium, using text and audio-visual. There is an audio-visual host (e.g. a hired actor) who guides participants through the training. There are learning activities and assessments at the end of each module (e.g. quizzes, shared scripted reflections) and videos (including an interactive video where participants pause to make comments).

During the development phase of BalancedView, the other evaluator and myself worked with the committees to develop pre-course and post-course questionnaires for users to take

⁴⁴ A reflexive analysis that addresses my feelings about this occurs later.

immediately before and after the course. Once both the questionnaires and modules had consensus, we moved to the pilot test phase.

3.4.2 Pilot test description

Early in the development of BalancedView, a plan was formulated to pilot the course with health care providers prior to officially launching it. Initially it was hoped that the pilot would be an opportunity to test the strategies employed in BalancedView in terms of their effectiveness in reducing weight bias and to make revisions accordingly. However, due to the significant financial and time resources that went into the creation of BalancedView, including filming hired actors at union rates and producing videos, it was determined that to make substantive changes to the resource based on pilot feedback was not economically or technically feasible. It was decided instead that the aim of the pilot would be to work out any glitches in the online platform and to allow for feedback on the questionnaires and any text-based parts of the course that could be simple and cost effective to change.

The five BalancedView modules and the questionnaires were pilot tested in late 2014 after the above-mentioned extensive process of development and revisions by the committees. The pilot recruitment strategy was collaboratively decided through discussions in various committee meetings and included recruiting five people from each health authority (for a total of 25 pilot participants), with the aim of having diverse professional representation. Monetary incentives were offered for completion of the course and questionnaires. Twenty three of the 25 initial recruits registered for the pilot test. Due to many technical problems, few people completed it and another round of pilot recruitment occurred, with an additional seven people

recruited. Of the two rounds, only eight completed the course, largely due to technical issues with the platform. These technical issues were mostly resolved post pilot.

Although based on a small number of participants, the pilot test results suggested the resource was effective in decreasing weight-biased attitudes and possibly helpful in changing behaviours in the future, although no participants had yet implemented any changes to their practice immediately after the pilot. Participants found the course content useful and important and had few suggestions for how to improve it. The minor suggestions for content change included having more patient stories and more information on the medicalization of weight. The main area for improvement suggested by participants related to technological issues, which were significant. As a result of the pilot, additional months were spent ironing out technical glitches. Participants also suggested shortening the questionnaires.⁴⁵

3.4.3 Launch description

On March 31, 2015, the last day of the official three-year funding package from PHSA, the course was publicly launched. As of September 2016, at which point I stopped actively collecting data, BalancedView had been widely disseminated and implemented. A total of 925 registrants had signed up for BalancedView by September 6, 2016 (including pilot participants). Of the larger group, some were excluded from the case study, for reasons including: location outside of BC or Canada (thus out of scope); incomplete registration profiles leading to inability to assess for study eligibility; registrants with administrative roles in the BalancedView development; or registrants who were students and not yet health care providers. After excluding

⁴⁵ Several questions were removed from the questionnaires after the pilot, discussed shortly. See Appendix B, part four to view questions that were removed.

these participants, as well as the pilot participants, 654 eligible participants enrolled in BalancedView. A total of 249 participants from this larger cohort completed the course (38.07% completion rate) and were included in the present analysis. From this group, 74 participants were given monetary incentives to also participate in three and six-month follow-up.⁴⁶ Fifty-six people completed the three-month follow-up and 46 completed the six-month follow-up.

3.4.4 The course content

The final course, still accessible at the time of this writing at balancedviewbc.ca (BC Mental Health and Substance Use Services, 2015), involves several main subsections, as follows:

- Module 1: Understanding Weight Stigma
 - Implicit Association Test (IAT)
 - Introduction to weight stigma
- Module 2: Patient Voices
 - Videos of real patients sharing stories
- Module 3: Introduction to Health-Centred Approaches
 - Medicalization pros and cons Prezi
 - Video with medicalization debate
 - Introduction to health-centred approaches
- Module 4: Professional Voices
 - BC health care providers sharing stories of change
 - Rudd Center video
- Module 5: Applying Health-Centred Strategies in Practice
 - Video scenarios with one interactive video to practice applying health-centred strategies

⁴⁶ These 74 participants were provided with \$50 for completing the pre-course and post-course questionnaires, \$25 for participating in the three-month follow-up and another \$25 for participating in the six-month follow-up.

Module one seeks to raise awareness of weight stigma and its harms, including critical reflection of one's own beliefs (and perhaps thus cultivate self-awareness and cognitive dissonance). The Implicit Association Test (IAT), the first activity in module one, is intended as a tool for participants to reflect on their own, perhaps implicit, weight bias. Module two strives to evoke an empathic response among learners through viewing and listening to the stories of several real patients in BC talking honestly about their experiences of weight stigma in health care. Module three aims to introduce the concept of medicalization and challenge learners to think critically about weight-centred approaches to health, the possible harms of medicalizing weight and the benefits of adopting a health-centred approach. In doing so, this module presents both the harms and possible benefits of medicalizing weight, such that viewers are presented with more than one perspective on the topic and encouraged to think critically. This module also aims to challenge common assumptions about weight, particularly the notion that weight is easily controllable, as per attribution theory. Module four uses videos of professionals sharing their stories of shifting their own beliefs and practices around weight and is aligned with social consensus theory. Module five has interactive activities designed to help health care providers practice being unbiased with fabricated video scenarios intended to resemble actual practice scenarios. Each module has learning activities, including quizzes or scripted reflections. Various videos were filmed for the project in addition to the patient and professional voices videos to maximize learning. Videos are described in a table in the first findings chapter (see p 163). With this contextual information about the case in mind, I now discuss my data collection methods.

3.5 Data collection methods

In keeping with a case study and pragmatic approach, my study drew on mixed methods. Mixed methods involve using more than one method, often drawing from both the qualitative and quantitative tradition and are helpful in order to provide more than one way of looking at a particular issue (Stockman, 2015). In the weight stigma intervention field, studies with a pre- and post-test methodology and validated quantitative measures are advocated (Dánielsdóttir et al., 2010). However, as Link et al. (2004) discuss, qualitative research can help us deepen understandings of the intricacies of stigma. My study thus brings together qualitative and quantitative methods, with an emphasis on the former. My data collection tools and their relationship to my research questions are highlighted in the below tables and subsequent image.

Table 2 Research question one and associated data collection methods

RQ1: What are the different ways that weight stigma in health care can be conceptualized?

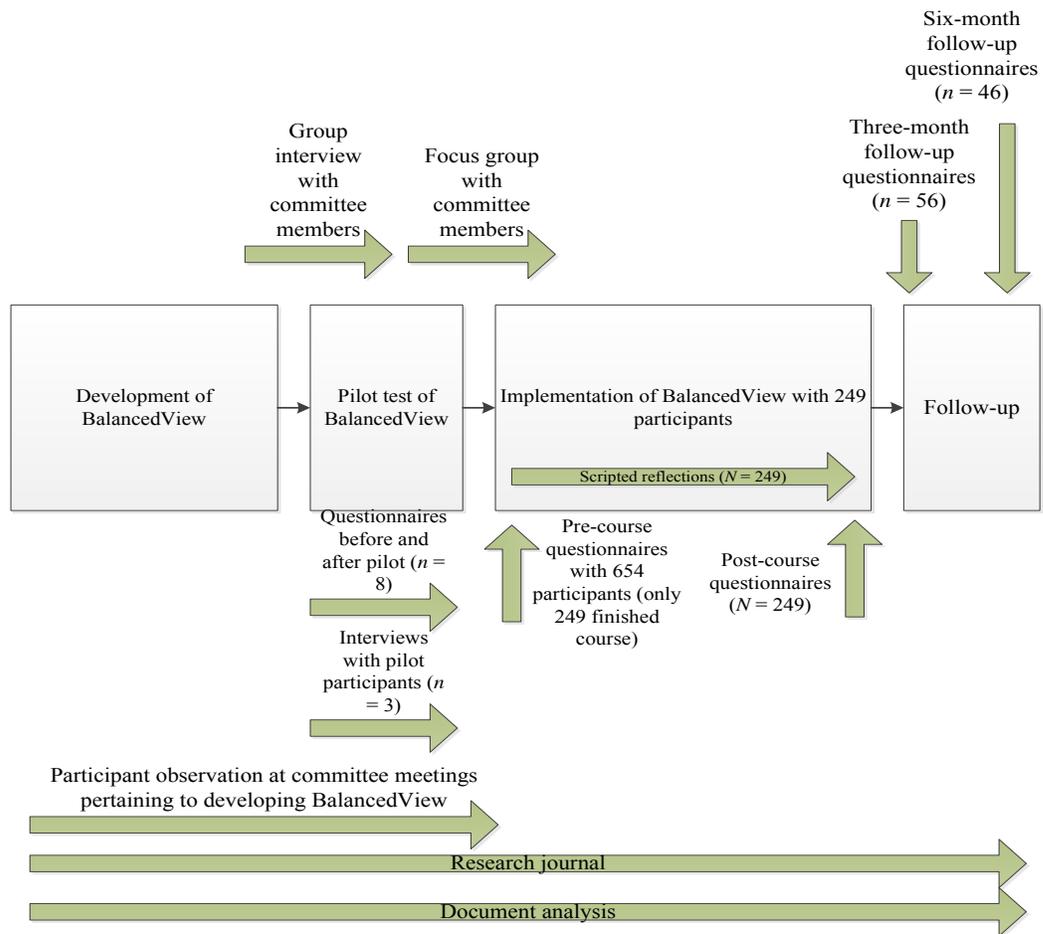
<i>Method</i>	<i>Description</i>
Participant observation	Participant observation occurred during the development phase of BalancedView of steering and advisory committee and external reference group meetings and interactions. This helped to examine how health care providers and experts involved in developing BalancedView conceptualized weight stigma.
Document analysis	Document analysis was undertaken of documents associated with BalancedView (e.g. course text, meeting minutes, content document, scoping review, qualitative questionnaire data, scripted reflections on BalancedView) to further assess how various stakeholders and course participants conceptualized weight stigma.
Research journal	A research journal was kept in which I took field notes following meetings with the project team or committees. My research journal incorporated a reflexive component. I documented how I saw weight stigma being spoken about and how my feelings influenced my interpretations.
Group interview	One group interview occurred with two members of the committees who were actively involved in course development. Data from the interview informed my analysis of how the committees conceptualized weight stigma.
Focus group	A focus group with steering and advisory committee members helped explore their perceptions of weight stigma.
Semi-structured interviews with course participants	Interviews with course participants were conducted through which their perspectives of weight stigma were explored (pilot $n = 3$; post pilot $n = 10$).

Table 3 Research question two and associated data collection methods

RQ 2 What strategies can be employed to reduce weight stigma among health care providers?

<i>Method</i>	<i>Description</i>
Document analysis	A document analysis was conducted of documents including the scoping review and committee meeting minutes to understand strategies considered to reduce weight stigma during development of BalancedView. After the implementation of BalancedView, the document analysis also included the scripted reflections in BalancedView and qualitative questionnaire responses in order to explore course participants' experiences with the different stigma reduction strategies.
Participant observation	Participant observation was conducted at the various committee meetings. I took reflexive field notes in my research journal to document and analyze strategies considered during the development of the course to address weight stigma.
Questionnaires	Online questionnaires were administered to course participants right before and right after BalancedView (249 participants completed both pre-course and post-course questionnaires). Online questionnaires were also administered at three-month ($n = 56$) and six-month ($n = 46$) follow-up. The questionnaires helped explore the effectiveness of BalancedView and understand participants' perceptions of most useful aspects of course.
Interviews	Interviews with participants who took the course were conducted to understand their experiences with the different stigma reduction strategies in the course (pilot $n = 3$; post pilot $n = 10$).
Focus group and group interview	A focus group and group interview with committee members were conducted regarding stakeholder perceptions of what helps to reduce weight stigma among health care providers.

Figure 1 Image of methods used in each phase of BalancedView



Each method described in the above table and featured in the image is elaborated upon below.

3.5.1 Participant observation, reflexivity and research journal

An integral aspect of my research was participant observation of those involved in the development of BalancedView. Participant observation is a method that involves observing behaviour and interactions, listening to conversations and, oftentimes, asking questions. It can be undertaken covertly, overtly, in public settings or in environments that are private and more challenging to access (Bryman, 2008). Participant observation helped inform my findings of how weight stigma was conceptualized during the development phase of BalancedView and the range of possible ways weight stigma could be addressed in health care in BC that were discussed by the committees.

I regularly attended and participated in meetings with the project management team and the often-held advisory and steering committee meetings and undertook participant observation. The frequency of committee meetings varied depending on need, ranging from monthly to every few months. In total, the project management team estimated 60 hours of committee meetings over the course of the project. Five of the meetings were recorded with permission and I had access to the audio files to review at a later date to supplement my analysis. It was at these meetings that integral decisions were made about the project⁴⁷ and important discussions took place about weight stigma. I documented my observations in a research journal and kept notes of what happened at meetings, what I learned and what my thoughts and emotions were and why. My research journal was also infused with a reflexive component (discussed more in the analysis section of this chapter) where I tracked thoughts, feelings and interpretations. Within this I strove

⁴⁷ Decision-making was a collaborative process with committee members, however, final decision-making authority rested with the PHSA, who had representation at all committee meetings.

to consider the ways in which my opinions were influenced by my past experiences and social location. As I show in my findings later, weight stigma appears to be intertwined with emotions. Given the emotional nature of the subject matter as well as my need to capture my own feelings throughout the process, I found myself at times using elements of arts-based research in my research journal, despite not intending this at the outset. Arts-based research draws on the medium of art, such as poems, visual art, theatre or otherwise to explore information that more traditional qualitative or quantitative methods cannot (Leavy, 2009). In my case, writing poems in my research journal helped me to capture my emotionally laden experiences in a way that my other methods did not.

3.5.2 Documents as sources of data

Bowen (2009) defines document analysis as a systematic procedure for collecting, reviewing and interpreting data. It is particularly useful in combination with other research methods as a form of triangulation (Bowen, 2009). I included all types of documents accessible to me⁴⁸ that were part of the development and implementation of BalancedView, for example: meeting minutes; background project documents; research journal entries; online scripted reflections by participants during BalancedView; and the qualitative sections from questionnaires (described as a method in their own right shortly). The project team developed the scripted reflection questions, with input from the steering and advisory committees.⁴⁹ The reflections asked BalancedView course participants to reflect on aspects of the course, such as how they felt learning their Implicit Association Test scores, their perceptions of the ways that the

⁴⁸ Documents were included if they fit within the scope of the case boundaries and related in some way to the research questions.

⁴⁹ I provided input on the scripted reflections but did not take the lead.

medicalization of obesity has impacted their patients, either negatively or positively, and to comment on the videos. For a complete snapshot of the scripted reflection questions see Appendix A.

A huge amount of qualitative data was collected for document analysis: 37 official meeting minutes from the advisory and steering committees and working group meetings; 80 project background documents (including: multiple iterations of the evaluation outcomes measurement framework, terms of reference for the committees, scripts for audio scenes in the course and the scoping review); 58 journal entries; over 90,000 words of online scripted reflections from participants who took the course; over 50,000 words of qualitative text from participants responses to the pre-course questionnaire, over 60,000 words in the post-course questionnaire; and over 7,000 words of qualitative text from follow-up questionnaires.

3.5.3 Questionnaires

The question of ‘what works to reduce weight stigma?’ has primarily been taken up by social psychologists in experimental studies that use quantitative methods and questionnaires with attitudinal measures (Dánielsdóttir et al., 2010). The current study used pre-course and post-course questionnaires to explore the effects of the course on participants. The pre-course questionnaires were taken by participating health care providers right before starting the course and the post-course questionnaires were completed immediately after the course. Using pre- and post-test measurement is important given the critique by Dánielsdóttir et al. (2010) that studies failing to use some form of pre-test measurement have limited interpretability. The questionnaires were developed through a review of measures in the weight stigma literature and through collaborative conversations at committee meetings. The types of questions asked in the

questionnaires were based around how the BalancedView team conceptualized weight stigma, which is articulated in the first findings subsection. This was important as “. . . the validity and reliability of a measure cannot be assessed unless the concept being measured is defined in a clear unambiguous fashion” (Charles & White, 2008, p 78).

The questionnaires were tested during the pilot phase with eight participants. Pilot participants had no substantive comments on the questionnaires other than the rather lengthy nature. Questionnaires were shortened following the pilot.⁵⁰ The final versions of the questionnaires were administered online to course participants immediately before and after taking the course. In total, 654 eligible participants took the pre-course questionnaire, however, only 249 completed the course and the post-course questionnaire. These 249 participants are the main focus of the analysis. This study did not use a matched sample. Three and six months after the course, follow-up questionnaires were sent to a smaller sample ($n = 74$) recruited by the project managers for long-term follow-up. Among this group, 56 completed the three-month follow-up and 46 completed the six-month follow-up.⁵¹ The full questionnaires are available in the Appendix B. Next, I discuss the content of the questionnaires, beginning with demographics.

Demographic questions

Prior to taking the course, participants were asked for demographic information including: whether they work for a health authority; which health authority they work for (if applicable); organization employed by (if not employed by health authority); location;

⁵⁰ As a result of the feedback we removed one 9-point scale we had created with respect to medicalized practices in health care (see Appendix B, part four). We also removed the pilot-specific questions asking participants about their experiences with the questionnaires, learning assessments and scripted reflections.

⁵¹ Selection criteria for participation in follow-up are discussed shortly.

profession; role; length of employment as a health professional; age groups worked with; whether they work regularly (i.e. at least 50% of work time) in any of the following areas – eating disorders, obesity, cardiac, diabetes, weight loss or bariatric surgery;⁵² size of population area worked in (e.g. small population centre [population 1,000 to 29,999] to large population centre [100,000+]); gender; and age.

Attitudinal questionnaire measures

Implicit and explicit attitudes were measured through the questionnaires. In the post-course questionnaire, participants were also asked to rate their agreement with the following statement on a five-point agreement scale: “Participating in BalancedView has contributed to decreasing my weight-biased attitudes” (response options from 1 = strongly disagree to 5 = strongly agree). The team also drew on measures from the literature to measure explicit attitudes, including the short form of the Fat Phobia Scale and the Attitudes about Treating Obese Patients scale.

The 14-item Fat Phobia Scale (Bacon, Scheltema & Robinson, 2001) is a measure in the literature that has been found to have good to excellent reliability with a Cronbach’s Alpha of .87 from a 1984 to 1991 sample and a Cronbach’s of .91 from a 1999 sample. The Fat Phobia Scale has 14 bipolar adjectives (e.g. lazy / industrious; attractive / unattractive), each along a five-point line. Participants indicate the point along that five-point line that best describes their feelings and beliefs about fat people. Items following a positive to negative trait code are scored as 1 to 5; items following a negative to positive trait code are reverse coded. Reportedly, scores of 2.5 or

⁵² The questionnaires did not explore whether participants had personally experienced any of these issues. However, the post-course questionnaire did include one question on self-reported height and weight and one question on whether they had ever been teased for their weight.

higher are considered weight-biased (Bacon et al., 2001). We used this measure in the questionnaires administered right before and right after BalancedView and at three- and six-month follow-up. In addition to drawing on this 14-item measure, based on the specific weight-biased attitudes we wanted to address through our intervention, we added two additional questions (intelligent / unintelligent; healthy / unhealthy) to the scale. Results are presented for both the 14- and 16-item measures used. Although we adapted the scale, the Cronbach's Alpha for the 16-item was excellent in the pre-course measurement (.90) and good at the post-course measurement (.88). The Cronbach's alpha for the 14-item also showed good reliability at the pre-course measurement point (.89) and at the post-course measurement point (.89).

We also adapted and used five questions from the Attitudes about Treating Obese Patients scale for use in the pre-course questionnaire, post-course questionnaire and the three- and six-month follow-up questionnaires. This is a more recently developed 18-item tool to explore views health care practitioners have about obese patients (Puhl, Latner, King & Luedicke, 2014).⁵³ In this scale, each item is framed as a statement about patients with obesity and participants are asked to rate the extent to which they agree with the statement on a 5-point likert scale (from 1 = strongly disagree to 5 = strongly agree) with statements about obese patients (e.g. "I feel that obese patients are often non-compliant with treatment recommendations"). The benefit of this tool is it is health care specific. However, given our already lengthy questionnaire, we utilized only a portion of this scale, as there were concerns that if the pre-course questionnaire was too long then attrition might increase. Five questions were

⁵³ There are two subscales, one on negative attitudes about patients with obesity (12 items, Cronbach's Alpha .89) and the other on frustrations with treating patients with obesity (6 items, Cronbach's Alpha .80) (Puhl et al., 2014).

used from this scale. The five questions were slightly modified from the original measure in that the term ‘obese patients’ was rephrased to ‘patients with obesity’, at the request of some committee members who preferred to use person first language. The five items used were as follows: 1) I feel that patients with obesity are often non-compliant with treatment recommendations; 2) I feel that patients with obesity lack motivation to make lifestyle changes; 3) Treating a patient with obesity is more frustrating than treating a non-obese patient; 4) It is difficult to feel empathy for a patient with obesity; and 5) I would rather treat a non-obese patient than a patient with obesity. Despite the modifications described above and only using five of the items as a measure of participants’ weight bias, we found that these five items had a Cronbach’s alpha of .78 at the pre-course questionnaire measurement point, suggesting an acceptable level of internal consistency as a measure of reliability (Tavakol & Dennick, 2011). From the post-course questionnaires the Cronbach’s Alpha was .86.

In addition to these five items, we also asked participants two questions about perceptions of their colleagues’ weight bias, also drawn from the same study by Puhl et al. (2014). Puhl et al. (2014) asked participants to rate their peers’ weight bias alongside the Attitudes about Treating Obese Patients scale. The two questions we used, which were adapted from Puhl et al. (2014), were: 1) Other health providers in my field often have negative stereotypes toward patients with obesity;⁵⁴ and 2) I have heard/witnessed other professionals in my field make negative comments about patients with obesity. These questions were seen as relevant to get a sense of the difference between one’s own self-reported bias versus perceptions of colleagues’ bias. Of note, these

⁵⁴ In the Puhl et al. (2014) study this question was specific to eating disorder professionals and read: “Other practitioners who treat eating disorders often have negative stereotypes about obese patients” (p 4). Both questions were modified to be person first (e.g. ‘patient with obesity’ not ‘obese patient’).

questions were only asked in the pre-course questionnaires since the responses were unlikely to change after the course.

A measure of implicit attitudes was also used in this study in at *baseline*, in the post-course questionnaire and in the three- and six-month follow-up questionnaires. In response to the criticism that explicit measures of weight stigma are subject to response bias (Dánielsdóttir et al., 2010), Schwartz, Chambliss, Brownell, Blair and Billington (2003) and O'Brien et al. (2010) utilized the Implicit Association Test (IAT) – a form of pattern matching – as a measure of implicit weight-biased attitudes. The IAT is a timed word association test (words and images have to be sorted) that has a paper and online version and has been tested extensively (Greenwald, Nosek & Sriram, 2006). After taking the test participants receive a bias rating of one of the following: strong automatic preference for thin vs. fat; moderate automatic preference for thin vs. fat; slight automatic preference for thin vs. fat; little to no automatic preference for thin vs. fat; slight automatic preference for fat vs. thin; moderate automatic preference for fat vs. thin; or strong automatic preference for fat vs. thin. If participants have too many errors or are slow in their response time a score may not be able to be computed.

In the context of an online course we wanted to utilize the online version of this test. An American company provides access to the online IAT for individual use at no cost and reports scores back to individuals. However, to access raw group data we were informed it would cost us an amount that was outside of the BalancedView budget allocation. Utilizing an American company also raised privacy issues: no personal information can be collected or stored in the United States as per PHSA privacy legislation. To get around this we decided that participants would link to the online IAT (on the Project Implicit® website) in the first module and again in

the post-course questionnaire and that based on their company-reported individual scores, they would self-report their result back onto the BalancedView platform. Response options and accordant bias scores used in this study were: strong automatic preference for thin vs. fat (bias score = 3); moderate automatic preference for thin vs. fat (bias score = 2); slight automatic preference for thin vs. fat (bias score = 1); little to no automatic preference for thin vs. fat (bias score = 0); slight automatic preference for fat vs. thin (bias score = -1); moderate automatic preference for fat vs. thin (bias score = -2); or strong automatic preference for fat vs. thin (bias score = -3). Of note, participants completed the baseline IAT as the first activity in module one rather than in the pre-course questionnaire. This was chosen in order to reduce the time burden of the pre-course questionnaire and decrease the likelihood of attrition.

Other questionnaire measures

In addition to attitudes, the project team also wanted to assess competency in addressing weight stigma in clinical practice. Competency, a construct which was defined with the committees as including knowledge, skills, behaviours and reflexivity, was measured via self-report questions and via questions on how providers interact with patients of various weights. The inclusion of questions around competency helped avoid the common pitfall in weight stigma research in which attitudes are presumed to lead to behaviours, though not measured as such. The questionnaires also ask questions about the course content and delivery method in order to explore which aspects of the course were most influential and why. For instance, participants rated components of the course with a drop-down list to provide information on what aspects were most influential to their learning.

In addition to these measures, the post-course questionnaire also contained some opportunities for the participants to provide qualitative responses. For instance, regarding the statement “After taking this course, I am able to identify ways to avoid weight stigma in my practice”, participants responded based on an agreement scale and were asked to explain their response. Another question pertained to whether they had yet made changes to their practice (“Have you yet implemented any changes in your practice as a result of this course. If so, please describe”). Yet another question related to what they intended to do differently in their practice (“Please describe what you will do differently in your practice, if anything, after taking this course”). Questions were also asked about the course itself, including: “What did you find most useful about this course?”; “Please describe any factor or situation that impeded your learning in this course”; and “How could BalancedView improved?”

3.5.4 Semi-structured interviews with course participants

Semi-structured interviews with BalancedView course participants were conducted to explore participant conceptualizations of weight stigma and to examine what they did and did not find influential or helpful within the course. Semi-structured interviews, with a topic-based interview guide were chosen, as such a flexible approach is useful in exploring phenomena about which little is known (Tolich & Davidson, 1999).

The interview guide was developed based on the literature review, preliminary findings from the development phase of BalancedView and collaborative discussions with the BalancedView project management team and my doctoral committee. The interview guide was tested in the pilot phase. Participants had favourable comments about the guide and no suggested changes. The interview guide is attached in Appendix C. The main topics on the guide were: contextual information about participant; reasons for participating; overall perceptions of the

course; changes as a result of the course; perceptions of course process and format; and perceptions of various stigma reduction strategies.

Three interviews were conducted with participants in the pilot phase. The three interviewees in the pilot stage were all women. Ten more interviews occurred following implementation of BalancedView (two men and eight women).⁵⁵ The results from the pilot interviews are not focused on in my findings here.

Knowing how many interviews was enough was a challenge in this study. As Thomson (2011) has stated, on average, theoretical saturation occurs with approximately 25 interviews, although may occur with as few as 10 or require as many as 30. In the case of BalancedView, I had the benefit of data triangulation and found that fewer interviews were necessary than initially thought to achieve theoretical saturation. I found that with the women in particular, I reached a point where I was not getting new information from the interviews and I surmised that it was time to stop. I wanted to continue to interview men, however, as I discuss later, there were so few men who had taken BalancedView ($n = 8$) that I was not able to recruit further men. Of the limited males who took the course, few responded to recruitment emails. One simply stated he was too busy to participate.

Due to geographic barriers associated with this being a provincial project, many participants were interviewed over the phone. Of the 10 interviews in the implementation phase, five interviews were over the phone, one occurred by email and four were in-person. Email, phone and in-person interviews each have benefits and drawbacks. Email interviews are convenient and provide an opportunity for the interviewer to craft well thought out questions and

⁵⁵ Details about the professions of interviewees are provided in the sample subsection of this chapter (section 3.7).

the interviewee to reflect on how to thoughtfully reply (Hamilton & Bowers, 2006). However, the interviews may also suffer from a loss of spontaneity and lack of verbal (or visual) cues (Hamilton & Bowers, 2006). Telephone interviews have the benefit of being cost efficient and a timely way to collect otherwise difficult to access data, as well as of allowing the interviewer to take notes unobtrusively (Novick, 2008). Above and beyond the email interview, telephone interviews also provide verbal social cues. However, as with the email interview, visual cues are not present (Opdenakker, 2006). A primary benefit of the in-person interview then is that visual social cues, such as body language, can provide the researcher with extra details. However, the tradeoff is that in-person interviewing suffers from challenges with access and cost. For instance, participants living in a different geographic area might be missed or, if accessed, this can be more costly and time consuming (Opdenakker, 2006). It is also important to note that whether an interview is more advantageous on the phone or in-person depends on the interviewee's (and the interviewer's) interaction preferences and styles (Gubrium & Holstein, 2001), which can unfortunately be difficult to know in advance of the interview.

3.5.5 Group interview and focus group with committee members

In addition to interviews with course participants, I also wanted to understand committee member perceptions concerning the ways in which weight stigma could be conceptualized. Although I had data on this from participant observation and document analysis, I wanted to corroborate and potentially expand on my interpretations of the former data set through additional qualitative work. With this in mind, I conducted one small group interview with two (female) committee members who were very involved from the outset (see interview guide in Appendix C). Through this, I solicited their perceptions of how weight stigma can be conceptualized and how to best address it. These two participants were selected as a result of

their regular and active involvement from the beginning of the study. I initially intended to conduct further interviews of this sort, but due to time constraints and the intention of the project team to use a focus group with committee members in 2015 as part of the evaluation, I decided to use the data from this focus group instead. I co-facilitated this focus group⁵⁶ with the other contracted evaluator as part of the project evaluation. A benefit of a focus group (or group interview) is the opportunity for the researcher to witness participants react to one another, through which both diversity in perceptions and consensus can be highlighted. Focus groups are also a cost effective way of conducting research (Belzile & Öberg, 2012). A disadvantage of the focus group is that the emphasis is on group knowledge, rather than individual knowledge and not all individuals may feel comfortable expressing opinions that differ from the majority (Acocella, 2012).

The following questions, which were developed by myself and the other project evaluator, with input from the project managers, were used to guide the focus group:

- **Process Evaluation Questions:**

- Did you feel engaged in the process (of developing BalancedView)?
- What were the engagement strategies (e.g. meetings, email, document review, etc.) that work best for you? Why?
- What would have contributed to more (better?) engagement?
- We want to take a step back now and look at the whole project taking a collaborative approach. You have dedicated many hours to review materials, provide feedback and participate in meetings. How do you think the product is different (better?) because of that approach?
- What makes the approach preferable (if it does) to a cheaper and faster strategy of

⁵⁶ The focus group lasted 70 minutes.

having a contractor do all the work?

- Was any specific group or stakeholder missing from the conversations? What would they do differently?

- **Outcome Evaluation Questions:**

- How do you conceptualize weight stigma?
- How has your understanding about weight stigma evolved as a result of participating in this process, if at all?
- What did you learn about weight stigma as a result of participating in this process?

3.6 Recruitment

For the pilot we aimed to recruit 25 health care providers to test the training and the pre-course and post-course questionnaires. Monetary incentives (\$50 each) were offered. The team sent out one email that resulted in over 300 replies of interest. From this large group the project managers selected people to participate, based on an equal number of people from each health authority region, with an emphasis on diversity of type of health care job. Due to technical issues with the online platform during the pilot phase, only eight people were able to complete, despite two rounds of recruitment. To recruit among this pilot group for interviews, a member of the PHSA project team sent out an email invitation on my behalf. Though this method I completed three interviews.

After the pilot, once BalancedView was ready to be implemented, the project team provided incentives for a further 74 people to take the pre-course and post-course questionnaires, the course itself and the three- and six-month follow-up surveys. Participants for this cohort were selected in two ways. Firstly, we recruited from the formerly acquired list of interested pilot participants. Secondly, we recruited through the project managers who sent emails to their

networks asking individuals to fill out a fluid survey indicating their interest in participating in the longitudinal study and providing some basic demographic information. Out of all those interested, individuals were divided according to health authority region, with an aim of equal representation from each region. If there was not enough interest to achieve regional representation, the extra spots were equally distributed among the rest of the health authorities in BC. Previously interested individuals from the pilot stage were prioritized over those that filled out the fluid survey. In addition, these previously interested individuals were prioritized based on response time. Furthermore, individuals who filled out the fluid survey were prioritized based on occupation or regions that are typically under-represented among interested individuals (e.g. physicians, individuals in the North or individuals working with the First Nations Health Authority).

The other recruitment strategy beyond the longitudinal cohort was to develop a convenience sample (e.g. to target participants who were easy to reach). The course was publicly launched in Spring 2015 (after already being soft launched among the longitudinal evaluation cohort ($n = 74$) and potential participants were notified about it through online postings, emails sent through committee members and word of mouth. Anyone who identified as a health care provider was able to register and access the course.

To recruit for course interviewees I initially relied on the project management team to send out an invitation email to the longitudinal cohort on my behalf. A second recruitment email was later sent to the larger cohort on my behalf. This strategy yielded only women and no physicians, however, after which I targeted my recruitment towards these participants by email

with individually addressed invitations, to attempt to have a more varied sample. Next, the details about the course participants who met the inclusion criteria for this study are presented.

3.7 Sample

This subsection provides details on the sample included in this study, including course participants and interviewees. As of September 2016, when data collection for this dissertation ended, BalancedView had been widely disseminated and implemented. A total of 925 registrants had signed up for BalancedView, including pilot participants. Of the larger group, some were excluded from the case study analysis. Exclusion criteria included: location outside of BC or Canada (thus out of scope); incomplete registration profiles leading to inability to assess for study eligibility; registrants with administrative roles in the BalancedView development; or registrants who identified as students (and thus not yet in practice). After excluding these participants, 654 participants remained, not including pilot participants. From this larger cohort, 249 participants completed the course in the implementation phase (38.01% completion rate). These 249 participants are the main focus of this study. From this group, 74 individuals participated in the longitudinal evaluation, described above, that was undertaken by the other evaluator and myself. A total of 56 participants from this sub-sample completed the three-month follow-up questionnaires and 46 completed the six-month follow-up questionnaires. Demographics for the participants who completed BalancedView ($N = 249$) are highlighted in the below tables. For additional details on the demographics of the longitudinal evaluation, please see Appendix D. As Appendix D shows, demographics were very similar for those who participated in follow-up.

Table 4 Gender, age and region of course participants (N = 249)

Demographics	<u>n</u>	<u>%</u>
<i>Gender (completers)⁵⁷</i>		
Female/woman	240	96.39%
Male/man	8	3.21%
Other (i.e. 'both')	1	0.40%
<i>Age (completers)⁵⁸</i>		
18 - 24	8	3.2%
25 - 34	75	30.1%
35 - 44	61	24.5%
45 - 54	52	20.9%
55 - 64	31	12.4%
65 or above	6	2.4%
Prefer not to answer	16	6.4%
<i>Region in BC</i>		
Fraser region	24	9.64%
Interior region	16	6.43%
Vancouver Island region	19	7.63%
Vancouver coastal region	174	69.88%
Northern region	14	5.62%
Unknown BC location	2	0.80%

⁵⁷ For inclusivity and social justice reasons, rather than have a drop-down list for gender with limited response options, we had an open field for text-based responses to allow for participants who may wish to identify outside the gender binary. Gender had a similar breakdown for all registrants, including those who did not complete. Among the 654 registrants, 93.27% identified as female or woman, 5.35% as male or man and 1.38% other (e.g. transman, queer, prefer not to answer).

⁵⁸ Age distribution among all 654 registrants was similar: 3.5% age 18-24, 25.1% age 25-34, 26.8% age 35-44, 22.3% age 45-54, 15.9% age 55-64, 2.0% age 65+, 4.4% prefer not to answer.

Table 5 Profession of course participants (N = 249)

<i>Profession</i>	<i>n</i>	<i>%</i>
Registered nurse	132	53.01%
Dietitian	39	15.66%
Counsellor	13	5.22%
Administrative role	10	4.02%
Other ⁵⁹	9	3.61%
Dental profession (e.g. dentist or hygienist)	8	3.21%
Mental health worker	7	2.81%
Social worker	6	2.41%
Registered psychiatric nurse	5	2.01%
Occupational therapist	5	2.01%
Speech and hearing health professional	5	2.01%
Physical therapist	2	0.80%
Physician	2	0.80%
Public health	2	0.80%
Recreational therapist	2	0.80%
Audiometric technician	2	0.80%

As the first table above shows, the majority of participants who took BalancedView identified as ‘female’ or as ‘women’. One substantial limitation is that very few men ($n = 8$) completed the BalancedView course. The results are thus not theoretically generalizable to men. Only one person completed the course who identified as being outside of the gender binary (they identified as ‘both’). The results therefore do not speak to the utility of this course among those who identify as a gender other than man or woman. While very few men signed up for the course the problem was not an issue of completion among men, as much as an issue of registration. For a number of somewhat unknown reasons it was women who signed up for BalancedView. One

⁵⁹ ‘Other’ includes professions that were only mentioned one time each, like hearing and vision screener, sonographer and psychologist.

possible reason for this is that women may have been drawn to this topic because weight stigma is often considered a gendered issue (Fikkan & Rothblum, 2012). When examining the professional breakdown of BalancedView participants, over half were nurses, which is a female dominated profession, perhaps explaining in part why the gender breakdown is skewed towards women. The second most common profession was dietetics. Only two physicians completed the course. The results thus also do not speak to the utility of this course among physicians.⁶⁰ Next, I provide details about the interviewee sample.

The interview sample included the following participants shown in the below table. The details provided here are also used to identify interviewee quotes throughout the thesis.⁶¹

Table 6 Interviewee details (n = 10)

<i>Gender</i>	<i>Job details</i>	<i>Interview medium</i>
Female	Social worker, eating disorders	In-person
Female	Dietitian, chronic disease	Phone
Female	Administrative role, weight management	Phone
Female	Registered nurse, eating disorders	Phone
Female	Registered psychiatric nurse, community mental health	Email
Female	Community nurse	In-person
Female	Dietitian, chronic disease	In-person
Female	Social worker, community mental health	Phone
Male	Technician and supervisor, diagnostic imaging	Phone
Male	Dietitian and food policy	In-person

⁶⁰ It is unknown why few physicians signed up for the course. Possible reasons include, but are not limited to: busy schedules or preferences for learning modalities that are shorter and/or in person. This is followed up on in the discussion chapter (chapter six).

⁶¹ In addition to these ten interviewees, the pilot interview sample comprised of the following: female, healthy living coordinator and counsellor, phone interviewee; female, dental hygienist in public health, phone interviewee; female, dietitian weight management and eating disorders, phone interviewee.

3.8 Analysis

The analytic techniques for case studies that Yin (2003) overviews are primarily related to ‘pattern matching’, where researchers strive to compare their predicted theories or, ‘patterns’ with empirical data. Since I began this study with an exploratory lens, moving to the explanatory stage later, I began with ‘pattern identification’, or identifying empirical patterns, rather than matching predicted theories to patterns in the data, although as the study progressed the analysis increasingly became an iterative back and forth (abductive) approach between data-driven and theory-driven analysis. Pattern matching and pattern identification cohere with the qualitative analytic techniques of thematic analysis (Braun & Clarke, 2006; Clarke & Braun, 2013) and document analysis, which also involves organizing data into themes (Bowen, 2009).

For my interview and focus group data I drew on the steps of thematic analysis outlined by Braun and Clarke (2006) and Clarke and Braun (2013), as follows: 1) read or review transcripts/other data sources and think about preliminary codes; 2) tag data with preliminary codes; 3) combine codes into preliminary themes and think about how to describe each theme; 4) theorize how themes explain data and revisit data if themes are incomplete; 5) formally define themes, which should be more than simply re-occurring patterns and should in some way answer the research questions; and 6) write report and ‘member check’ to see if themes have consensus among participants. This specific analytic strategy was chosen for analysing my transcripts as it lays out a clear process in which analysis can unfold, thus promoting the trustworthiness of the research. It also has the benefit of being theoretically flexible and relevant to multiple research paradigms (Clarke & Braun, 2013).

For my document analysis I grounded my work in Bowen's (2009) conceptualization of the analytic process in document analysis:

The analytic procedure entails finding, selecting, appraising (making sense of), and synthesizing data contained in documents. Document analysis yields data – excerpts, quotations or entire passages – that are then organized into major themes. (Bowen, 2009, p 28)

In conducting this document analysis, I again drew on Braun and Clarke's (2006) stepwise approach. For, as noted by Bowen (2009), the latter part of document analysis involves thematic analysis. However, as Bowen (2009) suggested, unlike in thematic analysis, the first stage of document analysis is to conduct a “. . . first-pass document review” to ascertain which portions of the text are relevant to the research questions and should be analyzed thematically. Thus, for my document analysis, I combined steps one and two from Braun and Clarke (2006), in that reading and initial coding were done at once and then coded portions were re-read and analyzed further. This was necessary as many of the background documents from this study that were used in the document analysis included extra information that was above and beyond the research questions.

To code the transcripts and other documents I relied on a combination of coding manually in Microsoft Word (used for documents from the development phase and for transcript data) and coding in NVivo for qualitative data exported from the online platform of BalancedView for the implementation phase (i.e. scripted reflections and qualitative questionnaire comments). The reason for this two fold technique was to retain the benefits of being ‘close’ rather than ‘distant’ from the data that is associated with manual coding, while also

benefitting from the speed and simplicity of computer assisted software (Welsh, 2002), which was especially helpful for the lengthy 450 page qualitative export from the BalancedView course and questionnaires.

Quantitative data from the pre-course and post-course questionnaires were analyzed using SPSS Version 20.⁶² I checked for normality of variables using quantile-quantile (Q-Q) plots, histograms, skewness, kurtosis statistics and statistical tests for normality. I ran a Cronbach's Alpha reliability analysis on any scales used at both the pre-course and post-course measurement points that had mean scores in order to assess for how closely related given items in a scale were. Descriptive statistics such as frequencies and mean are presented. I performed a paired sample *t*-test on attitudinal scales used in the pre-course questionnaire and post-course questionnaire. Quantitative data from the three- and six-month follow-up questionnaires were analyzed as part of the BalancedView evaluation. In this study I present descriptive statistics for the main outcome variables of interest from three- and six-month follow-up. More details on long-term changes are available in Appendix D, which contains the evaluation report undertaken by myself and the other evaluation consultant.

As mentioned, one case study criterion I used was member checking. Thus, in the analysis phase, steering and advisory committee members participated in a meeting where I presented an overview interim results in Spring 2016. Committee members had an opportunity to ask questions or comment. No issues were raised concerning the preliminary interpretations.

⁶² As part of data cleaning, data were screened for extreme scores outside of reference ranges and missing variables. Data were also screened to ensure only eligible participants were included. Data were originally exported in three separate Excel files and transferred to SPSS. Once this transfer was complete, data in SPSS were cross-referenced to the Excel files as a double-checking measure to ensure no errors had been made.

However, it is also important to note that the level of participation from BalancedView stakeholders was much greater in the development phase of the course and when deciding on what methods to use than in the analysis phase. As such, the findings presented should be understood primarily as my interpretation of the data.

3.8.1 Reflexivity

Bourdieu (1992) noted that social science is inherently prone to ‘bias’ and that researchers should thus strive to be reflective of their preconceptions and assumptions and how these influence interpretations of data. Reflexivity requires researchers to position and locate themselves within texts and is part of the reflective turn within social science (Lea, 2013). It is an iterative process where researchers seek to understand the influence of their own assumptions, experiences and social locations on the research process and outcomes (Harris & White, 2013). For Bourdieu, reflexivity was intended to increase objectivity (Knafo, 2016). However, it could be argued that social science will never be objective and, perhaps, nor should it need to strive to be. Instead, however, engaging in a reflexive analysis of one’s own influence on the work may be used to “. . . enhance the trustworthiness, transparency and accountability” of the research (Finlay, 2002, p 211). Through reflexivity, researchers and authors address how they came to write the text and how their subjectivity informed the work. In doing so, they demonstrate self-awareness so that readers can make judgements about the author’s perspective (Richardson, 2000). In my study, reflexive consideration of the influence I had on my research was thus important.

I came to this research with a pre-existing opinion on weight stigma. Initially, I aligned myself strongly with the perspectives of fat acceptance advocates arguing that medical frames on

weight were harmful, hence I was committed to advancing this argument in relation to weight stigma. As I progressed through the study, I increasingly realized the value of being more open minded, as coupling my insights with those of others can only strengthen our understanding of how to address weight stigma and responses to it. I also came to reflect on how my own past experiences and embodiment had impacted how I related to weight stigma and this project.

As a teenager, like many young girls in current society, I experienced weight bias. As a dancer who physically matured early, I was occasionally bullied for my weight in my earlier teen years. This experience shaped how I related to issues of weight as a teen and young adult. There was a period of time when I, like many young women, struggled with body image. I spent a great deal of time feeling that my body was too large, trying to change it and blaming myself for not being able to achieve (for any length of time) the thin ideal I had internalized and set as a goal. As I moved into adulthood I was able to learn to let go of these ideals and to accept my natural body size and shape. My process of accepting my body was a multi-faceted journey, however, it was in part fuelled by learning that one's weight was not as personally malleable as I had been led to believe and that ideas of fat as bad and unhealthy were based on social constructions. I learned to no longer blame myself (or others) for weight gain and let go of my internalized stigmatizing beliefs. In turn I felt an amazing sense of freedom and improved wellness.

This personal journey has informed my perspective on weight stigma. I believe that because I agonized over my body so much as a teen and young adult and have experienced some of the things I write about that I have some insight into weight stigma. I aimed to use this insight to help me interpret the data gathered, while also unpacking the personal from other perspectives.

That said, I also recognize that I have thin privilege,⁶³ which also affects how I relate to weight stigma. My body is relatively culturally normative and others most likely perceive it as both ‘healthy’ and ‘normal’. The result of this is that, despite my best intentions, I realize I may sometimes find myself able to look the other way in the face of weight stigma, rather than challenge it. During my study I attempted to keep in mind how my thin privilege affected my ideas and the actions. Of note, reflexivity was more deeply embedded into the first stage of my study during the development of BalancedView. This is because the development stage was an embodied experience where I was often physically present with participants and subjectivity played a large part in the analysis, particularly around the role of emotions. After the implementation of BalancedView, however, I was mostly working with text and numeric data. I felt more removed from the research process and participants and, given the emphasis on quantitative analysis during this stage, more required to adopt analytic techniques with a greater level of objectivity. Next ethics are discussed.

3.9 Ethics

This study has been reviewed and approved by the University of British Columbia (UBC) Behavioural Research Ethics Board (BREB) as minimal risk. In accordance with UBC BREB ethics policies, the following were approved as part of this study: recruitment scripts for the pilot test, course and interviews; interview schedules/guides; questionnaires; and informed consent forms for the pilot test, course and questionnaires and interviews. A waiver of consent was

⁶³ Thin privilege refers to “. . . the unearned advantages conferred to thinner people. It is a key pathway through which fat oppression is maintained” (Bacon, O’Reilly & Aphramor, p 42). It also is something that, much like white privilege, remains largely invisible to those with this privilege and it is “. . . common for privilege to remain below our radar” Bacon, O’Reilly & Aphramor, p 45). This, thin privilege may affect how people who are thin relate to the topics of weight, fatness and weight stigma.

acquired from UBC ethics for the focus group, as it was initially intended as part of the evaluation (and thus verbally consented to) and posed minimal risk to participants (no identifying details were used in the research). Below I discuss ethical issues that I grappled with in this study.

From an ethical perspective, the principle of ongoing, informed, signed consent is the gold standard.⁶⁴ There were a few deviations in this study from standard consent processes, in addition to the waiver of focus group consent mentioned above. For the interviews, I solicited signed informed consent. Since the course itself was online, consent was an online process. If participants did not want to participate in the research they did not need to participate in the course. Ethically, this did not initially present any issues, since the course was not required to be taken and was intended to be voluntary. However, later on, in the analysis stage, I discovered that some organizations had mandated that their employees take the course – as per participant self-report – which raised ethical issues around voluntary participation in research and freedom to withdraw. This is mitigated by the instructions in the consent form where participants could withdraw from the study by contacting the research team. I did not receive any withdrawals. However, should this have been the case, the participants would still have been able to access the course content, but would have had their data excluded from the research study.

Another deviation from signed informed consent concerned participant observation. For my participant observation with the committees, rather than solicit signed consent, I solicited verbal consent on multiple occasions through the project and conceptualized consent as a

⁶⁴ As per the *Tri-council policy statement: Ethical conduct for research involving humans* (Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, Canadian Institutes of Health Research, Canadian Institutes of Health Research, & desLibris – Documents, 2010).

process. Wiles, Heath, Crow and Charles (2005) suggest that one potential alternative to signed consent at the initiation of an observation project is to conceptualize consent as a *process* where researchers balance participant needs and rights (e.g. adequate information provided to participants or protection from harm) with important research objectives (e.g. access to normally difficult to access data). Consent then becomes something that occurs over time rather than at the outset. Consent as a process can be helpful particularly in ethnographic types of observatory research where it is not always known at the outset exactly what consent is needed for or what the focus of the observation will be (Wiles et al., 2005), as was the case in my observation. As part of this process I verbally provided committee participants with my intention to collect data on process through my attendance in meetings and encouraged them to contact me or the project managers if they had questions or concerns. Committee participants were also provided with written information regarding the process of data collection. I additionally received a written letter of approval from the PHSA to conduct my process-related research and conduct observation, which was enclosed with my ethics application.

Within this ‘consent as process’ conceptualization, I remained alert to any ethical issues that would necessitate signed consent for observation. I took Moore and Savage’s (2002) recommendation on observation and consent and, rather than try to pre-determine what consent would look like, was instead responsive to ethical issues that arose as the project unfolded. In the end, avoiding signed consent for observation was possible because I solicited regular verbal consent, was committed to fully protecting the privacy and confidentiality of anything particular individuals said or did and the study was low risk, with no foreseeable harm to participants with the level of anonymity I was providing.

In the next two chapters I summarize my findings. The first chapter focuses on research question one and the second on research question two. In each findings chapter, the findings from the development phase are discussed first, followed by findings from the implementation of BalancedView. This is because, despite many commonalities, the findings for each question varied between these two phases of the case study.

Chapter 4: Findings regarding research question one / Conceptualizing weight stigma

This chapter focuses on findings from my first research question (‘what are the different ways that weight stigma in health care can be conceptualized?’). I first reflect on how weight stigma was conceptualized in the development stage of BalancedView. I then discuss how participants who took BalancedView perceived weight stigma.

4.1 How was weight stigma conceptualized during the development of BalancedView?

As discussed in the methodology chapter, I conducted a thematic and document analysis of the data collected in the development phase of BalancedView to explore how stakeholders involved in developing the course conceptualized weight stigma. In due course, I present these thematic findings. However, first I encourage readers to delve deeper into the story of the development of BalancedView. This story is a prerequisite to understanding the themes that follow, as the development of BalancedView spanned two years and over that time there were great shifts in how weight stigma was conceptualized.

4.1.1 A story of shifting conceptualizations in BalancedView’s development – an interlude

Before and after

Related, I did.

Her pain became my crusade.

Contested I was. (Research journal, 2015)

The development phase of BalancedView was a complicated and lengthy process during which emotions ran high and the essence of weight stigma was debated, often hotly. As the above poem from my research journal suggests, my perspective on weight stigma was challenged during the development of BalancedView by other stakeholders involved. I began my

involvement in BalancedView with an interest in advancing the social justice agenda on behalf of people who experienced weight stigma and challenging the medicalization of weight. However, this (radical) perspective, largely learned through fat acceptance circles, was not well accepted by some individuals involved in developing the course. From the inception of BalancedView through to the start of the pilot test there were notable shifts in how I and others involved in the project related to the notion of weight stigma.

The story of this project began long before funding was secured. In 2010, the Province of BC was actively working to develop an ‘obesity reduction strategy’. Simultaneously, and in the years following, several health care leaders in BC began to advocate for a shift away from weight-centred approaches to health and instead focus on healthy behaviours irrespective of body weight (Provincial Health Services Authority, 2011). The rationale for this was that a focus on weight and weight loss as a measure of health were shown to cause harms such as disordered eating, weight cycling and stigma. In 2011, I was invited to sit on a newly formed committee sponsored by BC Mental Health and Substance Use Services. This committee – the Promoting Healthy Weights Working Group (PHWWG) – consisted of a group of interdisciplinary health professionals with a mission to prevent disordered eating and reduce weight stigma. In its early days, there was an emphasis on shifting the focus from weight to ‘health for all,’ regardless of size. These efforts were aligned with a Health At Every Size agenda. The work of this committee and health care leaders in BC and elsewhere in Canada with similar perspectives, among other factors, ultimately led to the PHSA commissioning a review of the evidence on weight, health and weight stigma. In their final report from this review, the PHSA (2013b) argued that it was time for a ‘paradigm shift’ away from weight-focused health promotion and towards health promotion emphasizing wellbeing. One rationale for this was that weight-centred health care

may contribute to rather than reduce weight stigma. Notably, this approach was a radical shift from the previous obesity reduction strategy led also by the PHSA. The political climate around the topics of weight and health, while charged, was shifting. Shortly after this report was released, in fiscal year 2012/2013, BC Mental Health and Substance Use Services secured funding for BalancedView.

This emergent way of thinking about weight, health and weight stigma informed BalancedView's initial development. For my part, I entered this project with a very strong opinion of what caused weight stigma and what should be done to address it. Like some others involved, I was convinced that medicalizing weight was a central contributing factor to weight stigma and that dismantling the medicalization of obesity was needed. My emotions about the issue ran high and I saw the current weight centric focus in health care as a social justice issue. I (mostly) believed the dominant research on weight and health to be 'factually incorrect' and contested the notion that weight-centred approaches to health were helpful and, in fact, saw these approaches as both harmful and discriminatory (O'Reilly & Sixsmith, 2012). I believed that a shift towards Health At Every Size (HAES) and the contestation of the common belief that fat equates to unhealthy and weight loss to healthy would be a step in resolving weight stigma.

One of the early activities of the BalancedView team was to undertake a scoping review to explore the problem of weight stigma and how to address it. This involved a systematic literature review and interviews conducted by two consultants/contractors, with input from the committees. Daniélsdóttir et al. (2010) had already reported that there was surprisingly little research on the subject of weight bias reduction or evidence on what might actually work to address this stigma. The systematic literature review in 2013 led by the two contractors reiterated

this point: “The bottom line . . . is that we really don’t know what’s going on, what works to decrease prejudice or why, in part because we still have a relatively poor understanding of prejudice” (PHSA, 2013a, p 28). Despite this lack of clarity, ‘labelling’ (Link and Phelan, 2001) higher weights as a health issue was identified as a component of the stigma process.

The scoping review also involved 22 interviews with an international group of researchers and professionals who worked in areas related to weight stigma ($n = 19$) as well as patients who identified themselves as heavy and had experienced weight stigma within the BC health care system ($n = 3$). The findings were summarized in a lengthy report (see PHSA, 2013a) that was collaboratively developed by the two contractors, with input from members of the committees (including myself and the project managers).

The report strove to understand why weight-related bias exists and how it could be addressed (PHSA, 2013a). It thus provided me with valuable insight into how weight stigma was conceptualized in the early days of developing the course, particularly since the process of developing the report involved regular meetings with the committees to get feedback. The contractors noted that potential causal theories of weight stigma included attribution theory and social consensus. They suggested that interventions to reduce weight stigma should draw from these theories and more, particularly since the evidence suggested that multi-prong approaches to weight stigma reduction were most effective (PHSA, 2013a). Notably, the final scoping review also laid out the presumed relationship between medicalization and weight stigma:

Another contributing but relatively underexplored factor may be the medicalization of overweight and obesity in Western society – that is, the “labeling of all fat people with the medical labels of ‘overweight’ and ‘obesity’ and presuming that all people falling

within these categories are inherently unhealthy” (personal communication, C. O’Reilly, February, 2013). In this line of thinking, if people with overweight or obesity need to be cured, then something is wrong with them. Or, as Beausoleil and Ward (2009) observe, “The association of fat with poor health has translated into a fear of fat within the population and subsequent disdain for those who are different, who do not fit the desired norm” (p 1). This process may indeed be one in which a powerful group (medicine/health) in society plays a role in determining who is “different” and thus subject to discrimination. (PHSA, 2013a, p 18)

Given the potential link between medicalizing weight and weight stigma, the contractors proposed that weight bias reduction in health care should include a section on “Myth Busters - Providing evidence about weight, weight bias and health” (PHSA, 2013a, p 5). They also argued for the importance of other components to the course, including providing an opportunity for self-reflection, exposure to the experience of being heavy and using opinion leaders to influence thinking.

These recommendations were agreed upon by members of the committees and further developed by the content contractor. This content contractor, as discussed in the methodology case description, worked with the committees, the project managers and I to develop a lengthy Word document with the proposed curriculum content. Over several months this document – which contained multiple modules, including one on medicalization – was finalized and again consensus among committee members was seemingly reached. The interview quote below illustrates the process of working together to achieve consensus within the development phase:

But just, yeah, making sure that people felt heard and that they felt like their feedback was being incorporated into the resource, right. Like, if people feel like they're giving . . . feedback and voicing things but there not being any change as a result, then that's frustrating. And so we really have to make sure that-- yeah, and I think that was probably the most work . . . like, all that process of taking in all of that feedback . . . and making sure that we incorporated it in a way that people were going to feel happy with it. And I think we got there, but it definitely took a lot of effort, a lot of time, more meetings than we anticipated . . . (Committee interviewee, female)

The initial intent for the 3-year project was to develop the course within the first half of the funding stage and to spend the rest of the time pilot testing and implementing the course across BC. Ultimately, the development phase was much more drawn out than anticipated, due in part to the contentious nature of the topic matter.

Between December 2013 and the spring of 2014, it became clear to all on the committees that the initial consensus that we must challenge the medicalization of weight to reduce weight stigma in health care was not actually a consensus. Some people involved in the project rejected these ideas and had emotional reactions to them. Consider the following quote from a committee interviewee:

One of the challenges was really getting to a place where everyone could agree with the approach that we were taking. I think that took a lot of conversation, a lot of dialogue, as you know. And we've talked about earlier-- so that was a significant challenge, I think, and just in terms of process, I think that the reason that conversation happened so late is because we started out with a content that was a lot... And I feel like people didn't really

read it at first. So when it became something like a script that people actually could go through and digest, that's when the feedback started coming out. So I think that delayed us a little bit just because we had to do so many revisions late in the game. But they were necessary, so I think the outcome was really good. So that was probably one of the major challenges. (Committee interviewee, female)

In December 2013, a daylong meeting was held to discuss the proposed draft content of the course, which had been previously agreed upon and translated into a mock-up of what it would look like online. The intent of the meeting was to review the visual presentation of the material from a technical perspective. However, hours of the meeting were instead devoted to discussing *content*, specifically pertaining to the medicalization module. This was the first time that divergent opinions really emerged about the extent to which fatness should be seen as a health issue and whether assuming it is a health issue is stigmatizing or not. Specifically, some committee members perceived some of the language around medicalization to be too strong, off-putting and inflammatory, with one public health professional going on to argue that the proposed framing was 'offensive' and that obesity was a serious health issue.

The project leads attempted to redirect the conversation, arguing that this meeting was about the technical and visual flow of information for the online resource and not about content, and that we could play with 'language' later. In the next few months, however, despite some 'toning down' of language, the conflicts over the medicalization issue continued and it became increasingly clear that a few committee members, as well as some external stakeholders, were so opposed to an anti-medicalization agenda that they would potentially attempt to stop the course from proceeding if it continued as intended. It seemed that some of the health care stakeholders

involved in this project were not ready, after all, for a ‘paradigm shift’. As one committee member shared, they thought that all the positive work being pursued by the BalancedView team would be undone if the project tried to deny the relationship between overweight and obesity and mortality and morbidity. This committee member felt that it was incorrect to contend, as module three initially did, that there was only questionable or weak evidence to support that “[m]ortality rates increase with increasing degrees of overweight, as measured by BMI”.⁶⁵ In their perspective, the literature is very clear that overweight and obesity are both significant risk factors for early death and increased morbidity. Further, this participant felt that attempting to deny this risk would render pointless any efforts to address the obesogenic environment.

Behind the scenes, the situation became more difficult, with project managers and sponsors receiving more and more complaints about the seemingly too radical and ‘factually incorrect’ approach that was being taken with respect to challenging beliefs about fatness as unhealthy. As one particularly oppositional individual decreed – who also happened to hold a leadership position within health care in BC – “I will die on this hill”, implying that they would go to great lengths to defend the perspective that obesity is bad for your health and prevent the course from articulating anything to the contrary.

Ultimately, a political decision was made. In order to move forward with implementation we had to revise the content more significantly. Through a series of smaller meetings and several more committee meetings, we revised the material. Much like the name of the resource, we opted to present a ‘balanced view’ on the medicalization issue. In the module where the ‘myths’ about

⁶⁵ BC Mental Health and Substance Use Services (2013, December).

body weight were initially challenged, we instead presented the two sides of the debate on medicalization, with the aim of giving learners enough information to make the decision themselves.

Although I was angry and upset by the initial conversations about the need for this shift, by the time of the pilot I was able to accept this strategy and could see some potential benefits. In reflecting on my position on weight, health and weight stigma at the time of the development of BalancedView I was able to see how my feelings connected to my own past struggles with my body image and weight. This is shown in the below text from my research journal:

Given my struggles with my own weight and body image, when I learned about HAES, fat acceptance and weight stigma, I instinctively gravitated towards what some might characterize as a more “radical” perspective on these topic. I aligned myself with fat acceptance activists and fat studies scholars with a HAES orientation. I eagerly accepted the messages of writers like Bacon and Aphramor (2011) who argued that weight focused approaches to health are based on flawed science and cause harm. After all, I had experienced the inaccuracies and harms from such assumptions myself. I contested the notion that fat equates to unhealthy and weight loss is healthy or sustainable. I became an avid reader of fat acceptance blogs, where it was common to hear fat activists write about their own experiences with dieting, weight loss and disordered eating. An oft-heard refrain on these blogs was that focusing on weight is harmful and moralizing. I valued these personal stories and readily identified with them. As someone with a keen social justice interest, the moralizing nature of weight-centred health became a crusade to me. All of this culminated in my master’s thesis, in which I was . . . passionately committed

to radically changing the public health climate on weight and health in BC. In BalancedView, this was manifested by strongly advocating during the committee meetings for an anti-medicalization agenda. (Research journal)

Looking back, I see that my position on weight, health and weight stigma was affected by my own emotional experiences. The fact that I had personally experienced the emotional repercussions from living in a weight-centred culture helped me understand the harms of said culture. As well, the process of recognizing how my own emotions and experiences influenced my thinking led me to develop a curiosity about how others' emotions and experiences might influence how they thought about weight and weight bias. Specifically, I wondered how might the perspectives of those who supported medicalizing obesity be influenced by their own emotions? It was notable that the people in this project who were strongly opposed to challenging the 'myths' about weight and health were those whose careers were invested in maintaining those strongly held cultural beliefs. Thus, perhaps a sense of defensiveness contributed to some of the reactions of committee members. Those opposed to the staunch anti-medicalization perspective initially taken seemed to be, more often than not, male and/or educated as physicians. Privilege, both male privilege and educational privilege were thus also dynamics that I was curious about.

With this background in mind, I now delve into the themes from the development of BalancedView pertaining to how weight stigma was conceptualized. Themes were as follows:

- 1) Stigma as process
- 2) Stigma as attitude/belief/stereotype
- 3) Stigma as discriminatory behaviour or outcome
- 4) Stigma as causally complex

- 5) Stigma as related to medicalization... or not?: A divisive issue
- 6) Stigma as related to emotions

Each is discussed in turn. I begin with stigma as process.

4.1.2 Stigma as process

The first theme from the development phase pertains to the essence of weight stigma in health care as conceptualized by those of us involved in the development of BalancedView. The various individuals involved in developing BalancedView characterized weight stigma as a problem beginning with biased attitudes and/or beliefs that lead to discriminatory behaviours (or actions or inactions) and resultant consequences for those who are the subjects of weight stigma; in other words, *as a process*, with multiple interrelated components. Extensive discussion was held at the committee meetings to clarify that while weight stigma can be a problem for people across the weight spectrum, it disproportionately affects individuals classified as overweight or obese or who visually appear heavy. A focus group participant (male) also pointed out how weight stigma intersects with other social issues like racism and misogyny:

So my conceptualization of weight stigma is just another in-- you know, homophobia or racism, misogyny. It's just like-- and the interactions and complexity with all of those things, right . . . But it's just another one of those things, another one of those reasons to treat people badly, and there's intersections with a whole bunch of other reasons to treat people badly.

Much like in the broader literature, the terms weight bias, prejudice and stigma were often used interchangeably by those involved in this project. However, despite the terminology used, there was agreement that the problem was a process encapsulating one or more of the following: negative attitudes and beliefs about weight, that often lead to discriminatory treatment

of heavier people and adverse outcomes for those who experience weight stigma. All participants in the development phase saw the problem as beginning with attitudes or judgments about heavier people and this was linked to varying extents with the other components. Those actively involved in the course development tended to conceptualize the problem as a closely coupled issue of attitudes/stereotypes that result in negative outcomes for the stigmatized. For example, consider the following quote from an interview with a committee member:

Well, I would define weight stigma as the devaluing of a person based on their weight, whether they're overweight or underweight. And in terms of the issues that it presents, I think another, you know, link that we have into this piece is the mental health piece. And so the mental health concerns that can come along with being weight stigmatized are really important to us. And also just, you know, inequitable care. I think that people who are of a certain size can experience inequitable healthcare, and that can lead to health problems like difficulties with health seeking . . . (Committee interviewee, female)

The course itself reflected a similar perspective and positioned weight stigma as a process involving an intersection of several components: attitudes/beliefs/stereotypes and discriminatory behaviour or outcome. Each of these related components is discussed as follows as a theme in its own right.

4.1.3 Stigma as negative attitude/belief/stereotypes

In the scoping review phase of the course development, PHSA (2013a) described the attitudinal component of this process as follows:

Weight bias - negative weight-related attitudes, beliefs, assumptions and judgments toward individuals who are overweight and obese . . . These attitudes are often

manifested by false and negative stereotypes which cast overweight and/or obese individuals as being physically unattractive, incompetent, lazy, unmotivated, less competent, non-compliant, lacking self-discipline, and sloppy (Puhl & Heuer, 2009; Rukavina & Li, 2008). (p 14)

An interviewee involved in the committees spoke similarly of this aspect of the process, connecting it again to inequitable outcomes:

Weight bias [involves] the assumptions that people are making based on a person's appearance, right. And so-- and the fact that when that person happens to be a bigger person, then those assumptions tend to be negative, right. And so from the literature we know that there's a lot of negative characteristics that healthcare professionals and the general population-- but healthcare professionals as well are not excluded from that in making those assumptions about people. And that, that in itself is problematic because it does affect the way that they approach that person, things that they've already kind of made up in their mind about who this person is and what their story is, without even having asked those questions. And so I think that-- yeah, I think that that can contribute to . . . the inequitable care that they might receive, in terms of the fact that they might experience, you know, more mental health concerns. Or might be less likely to-- or other types of concerns as well because they might be less likely to access care and that that's extremely problematic. (Committee interviewee, female)

While it was readily apparent that negative attitudes about overweight and obesity were seen as a key part of weight stigma by participants in this project, it was less immediately obvious what 'counted' as a weight-biased attitude. Early on in the development phase of BalancedView, the

project team noted that one of their key objectives from the project was to create “Improved attitudes towards weight” (PHSA, 2013, August, p 3). The conversation then turned to defining what was meant by attitudes about weight. In the process of developing the project’s outcomes measurement framework (OMF), the other evaluator and I were tasked with reviewing the literature on weight stigmatizing attitudes and their measurement and bringing this information back to the committees. In doing so we conceptualized weight-biased attitudes in the OMF as follows: “. . . assumptions and reactions, implicit and explicit . . . Including attitudes and beliefs about: i) fatness as invariably unhealthy,⁶⁶ ii) fatness as within personal control, iii) non-compliance with health care recommendations, iv) attitudes about treating obese patients” (PHSA, 2015, April, p 4). The above definition reflects the current literature on attitudes as involving an implicit (automatic and emotive) component, as well as an explicit (well thought out, aligned with beliefs) component (Watts & Cranney, 2009).

4.1.4 Stigma as discriminatory behaviour or outcome

It was generally agreed that the negative attitudes and assumptions held by health care providers about heavier people often led to discrimination and negative outcomes for overweight and obese patients. In the scoping review, PHSA (2013a) conceptualized the discrimination or behavioural component as:

Weight discrimination – “unequal, or unfair treatment of people because of their weight” (Puhl, n.d., pg.1). Thus, discrimination extends beyond beliefs and attitudes to unjust or unfair actions and behaviours toward people who are overweight or obese (Ciao & Latner

⁶⁶ While the team agreed to an OMF that articulated that one of the project aims was to reduce medicalized attitudes and beliefs about fatness as invariably unhealthy, the extent to which medicalization was seen as stigmatizing or necessary was an area where there was extensive debate, as discussed more shortly.

2011). Discrimination can take many forms, from verbal comments and derogatory remarks to excluding, avoiding, ignoring or rejecting, to cyber-bullying, physical aggression and victimization (Puhl, 2011). (PHSA, 2013a, p 14)

In the context of health care, discrimination was understood to include a refusal to assess or treat patients who are heavier, along with declarations by health care providers that health problems experienced by overweight or obese people must be attributable to their weight. One of the patients who was video recorded on film for the BalancedView course described this experience:

I would define weight bias as, you know, when you meet a person, whether they are big or small, presuming that their body size can tell you about their lifestyle, about their history, about their priorities, about how they spend their days and nights, when in fact you really can't . . . For me the stigma could be defined as the negative ways you get treated based on those presumptions that people have.

Discrimination was also seen to occur when health care equipment was unable to accommodate the needs of fat patients. One patient interviewed on film as part of BalancedView discussed this problem poignantly:

Several months ago I broke my ankle and I ended up in the hospital, I needed to have surgery on it. And in advance of that I had been to the doctor, to my family doctor a few times and I had asked to – I was interested in knowing what my blood pressure was because I knew that being a bit heavier meant that I might have some risk associated with high blood pressure and they weren't able to find a high blood pressure cuff that could get a reading of my blood pressure. Then I went into the hospital and, um, they tried to take my blood pressure, but no one could really seem to figure out how to take it or

where there could be a cuff that they could use and so I ended up in surgery and I had like this extreme like crisis high blood pressure which, um, professionally upset the anesthesiologist and the surgeon, um, and they felt that I shouldn't have even been brought to surgery with blood pressure that high. No one had . . . taken any ownership of taking care of the fact that I needed to have my blood pressure taken just as a patient who's going into surgery. I think what I got out of that health care encounter if you will is that it wasn't just a matter of one person saying, "Oh it doesn't matter to me whether you have your blood pressure taken" it was that the hospital, whoever orders the blood pressure cuffs doesn't have a sense that they need to get any for someone who's got a really big arm. Um, that at all these different levels of decision making they're not taking into account this kind of patient who they presume and, in fact, probably really believe needs and deserves the best treatment that they can provide. But the way that that comes out in practice . . . is that you are not receiving the same care as someone else as someone who is smaller.

Participants involved in course development also described weight stigma as a process culminating in negative health outcomes for heavier people, including poor mental health, barriers to accessing health care and disordered eating. As one interviewee involved in the committees shared:

And so the mental health concerns that can come along with being weight stigmatized are really important to us. And also just, you know, inequitable care. I think that people who are of a certain size can experience inequitable healthcare, and that can lead to health problems like difficulties with health seeking. (Committee interviewee, female)

As was articulated through the scoping review:

. . . poor body image, low self-esteem, low self-confidence, loneliness, sense of self-worthlessness, depression, anxiety and other psychological disorders, suicidal thoughts and acts, maladaptive eating patterns and eating disorders, avoidance of physical activity, and stress-induced pathophysiology. (PHSA, 2013a, p 2)

The emphasis on these consequences was also reflected in the course itself, which provided evidence on how weight stigma may lead to unhealthy eating, doctors spending less time with patients or heavier patients delaying or forgoing medical care. One of the patients interviewed on film for BalancedView also described avoiding health care as a result of felt stigma:

Once when the swine flu was going around my- my friend had it and I had been feeling quite sick so I umm went to the doctor, a doctor that I didn't know and I walked in and the doctor . . . kind of scoffed . . . [and] said, "Well I hope you've been tested for diabetes". And, you know I had just had all my levels checked let's say a couple months previous and when I told him that he persist[ed], wanting to talk about my body size in a really disrespectful way and as you know at clinics and ERs time is really of the essence and he kind of pushed my actual needs out of the schedule in order to talk about my body size. What that means for someone, or how that impacts you, is that like I think we think the issue is "Oh fat people you can't take the tough love from any doctor" and actually it's "Well I don't want to go back because I'm not getting my needs met, like you did not address the reason I was there".

In addition to conceptualizing weight stigma as a process of judgment and, ultimately, consequences, individuals involved in the development phase also talked about weight stigma as

a complex social issue with multiple social factors contributing to its existence. The contributing factors presumed to lead to weight stigma varied from person to person and were less well understood than the attitudinal or discrimination components. This is discussed in the below theme.

4.1.5 Stigma as causally complex

Those involved in the course development viewed weight-biased attitudes as resulting in part from the belief that fatness is controllable (attribution theory) and from the influence of pervasive cultural and social norms (social norms and consensus theory). While these were seen as part and parcel of weight bias, it was also emphasized that there was a lot about the complex problem of weight stigma that we simply do not understand:

Yeah. I think it's difficult to get to the root. For sure. Because, you know, if you think about all the characteristics that are attached to someone who has a larger body size, like, where do those come from? The fact that-- if you think people who are bigger are unhealthy and that's under your personal individual control, then-- yeah, where does that belief come from in terms of health? . . . So what contributes to that and what-- and, you know, how-- I don't know. I feel like there can be so many reasons that that has happened. And part of them are cultural, part of them may be biological, I don't know.

(Committee interviewee, female)

Despite many unknowns about the origins of weight stigma – for example, the potential role of biology in contributing to bias – attempting to understand what causes weight stigma was seen as important during the development phase of the course. As stated in the PHSA (2013a) scoping review: “Any approach to change must address the fundamental causes of stigma” (p 12). With

this in mind, consideration of causal explanations for weight stigma occurred during the early stages of developing the course content. Explanations that were considered particularly plausible and that had ready agreement were based on attribution theory and social norms/consensus theory.

Attribution theory, as discussed in the literature review, is a common causal explanation for weight stigma (Puhl & Brownell, 2003). Data from the development phase supported the notion that perceptions of fatness as something controllable that fat people should be blamed for contribute to weight bias. As laid out by the content contractor in the content document:

Consistent with Link and Phelan's (2001) principle of getting at the root causes of stigma, Crandall and colleagues have argued that attributions about fatness come from a connected set of convictions, beliefs and values that form a belief system or ideology.

Many different values and beliefs are correlated with weight bias, including right-wing authoritarianism, the Protestant work Ethic (strong emphasis on self control, and the view that hard work and determination yield success), and conservative political ideology, for example. All of these have in common the notion that people are responsible for what happens and that they deserve what they get (Crandall & Reser, 2005). This emphasis on personal responsibility is the foundation of Western individualism, which gets to the core of weight bias. (BC Mental Health and Substance Use Services, 2013, May, p 6).

Committee discussions at the table echoed this sentiment, without delving as deeply into the connection between individualistic values and the meritocracy. As I captured in a journal entry "people at the table seemed to think it was due in part to misinformation . . . not being aware that weight is not as controllable as we think". From the above we can see that attribution theory

provides two insights into why weight stigma exists: one being the (misguided) perception that weight is entirely controllable; and the other being a sense of righteousness deriving from the Western values of individualism and merit.

Social norms around weight were also seen as part of contributing to weight stigma amongst health care providers. We live in a society where thinness is constructed as the most attractive and socially desirable and fatness as less desirable aesthetically and socially. Health care providers, as discussed by committee members, are not immune to the influence of these social norms. As one committee interviewee discussed: “I think part of it has to do with our ideals of beauty and what is attractive and what’s not attractive”. Weight bias is also something that health care providers, like most members of society, are likely to internalize at a young age due to how older members of the population talk about fatness:

But today, I just think it’s perpetuated because we do, like, adults do have those ideas.

And very quickly kids pick that up, and internalize those same ideals. But, again, I don’t - I’m not really sure how it’s so internalized. (Committee interviewee, female)

The content document also stipulated the same thoughts:

In Western society, the cultural norm for female beauty and attractiveness includes extreme slenderness, and from an early age, children are aware of the negative connotations of being overweight. It is likely, therefore, that by the time individuals reach adulthood, they have developed well-rehearsed and complex associative networks in memory between the concepts, “fatness” and “thinness” and negative and positive affective modes respectively. (BC Mental Health and Substance Use Services, 2013, May, p 6)

The above evidence illustrates the importance of social beauty norms about weight. But what about social consensus? Social consensus theory, as discussed in the literature review, builds on theories of social norms, adding that socially influential people are particularly likely to be able to influence the attitudes of others (Puhl, Schwartz & Brownell, 2005).

Social consensus was mostly discussed in the context of BalancedView's development as a strategy for bias reduction. However, I also observed social consensus theory to play out in the group dynamics at the committee meetings insofar as the presence of influential health care leaders who were more mainstream obesity thinkers in respected professional roles shifted the tone of the conversation towards one that was arguably more biased. For instance, once one prominent obesity professional expressed their perspective that fatness was unhealthy, this seemed to give license for others to express similar beliefs, in a way that was metaphorically like the opening of floodgates. After this, more people spoke up with this same perspective and it appeared there was a risk of the funding not continuing if the course took a strong anti-medicalization stance. Social consensus also operated to silence the voices of those with opposing perspectives. On more than one occasion, a committee member came up to me after a meeting and thanked me for standing up for the 'unbiased perspective'. They said that they did not feel safe speaking up once others expressed their pro-medicalization agenda.⁶⁷ Thus, we see how some professionals involved in BalancedView had an active role in enabling some to express their views, while silencing others, thereby shaping group norms.

⁶⁷ To ensure people had an opportunity to express themselves if they did not feel comfortable speaking up at meetings, the project leads invited committee members to provide more feedback by email, if desired.

Interestingly, the power of social consensus within the group seemed to impact the expression of explicit attitudes but have less impact on changing implicit attitudes. When observing group dynamics in the committee meetings, when influential leaders at the table verbally advocated for HAES or an anti-medicalization agenda, this created a sense of consensus and ‘silenced’ those who perhaps were not entirely in agreement with this perspective. However, as became clear when other influential leaders opposed the medicalization perspective, the extent to which others’ attitudes had truly changed seemed limited, as the presence of a pro-medicalization, ‘obesity as unhealthy’ voice in essence gave permission to those who held similar beliefs to be more vocal about them. One committee interviewee described how social consensus influenced what was said, but not necessarily thought, during committee meetings. She described how “. . . sometimes there are people who do feel particularly strongly or who are a bit more dominant in conversations . . . it tends to be taken over by, you know, those few voices that are the strongest”. She concluded by saying that after meetings, however, people would privately express different perspectives and speculated that people “. . . maybe didn’t feel comfortable” expressing their opinions openly (Committee interviewee, female).

4.1.6 Medicalization as stigmatizing... or not?: A divisive issue

This theme pertains to the extent to which medicalization was seen as contributing to weight stigma during the development phase. As I show, there were diverse perspectives. Is medicalization stigmatizing or is it not? Those involved in the development of this project simply could not agree. There were three different ways that the medicalization debate was framed. Firstly, at the start of the project, there was a strong push to label medicalization as inaccurate and stigmatizing. For instance, in text prepared for the course in October of 2013, module three

planned to contest the following claims about obesity, based on the work of Campos, Saguy, Ernsberger, Oliver & Gaesser (2006). To quote the initial iteration of module three:

Claim #1: 'Almost all countries (high-income and low-income alike) are experiencing an obesity epidemic' . . .

Claim #2: 'Mortality rates increase with increasing degrees of overweight, as measured by BMI' . . .

Claim #3: 'The data linking overweight and obesity to adverse health outcomes are well established and undeniable' . . .

Claim #4: 'Significant long-term weight loss is a practical goal (is achievable), and will improve health' . . . (BC Mental Health and Substance Use Services, 2013, October, p 33).⁶⁸

Each claim was individually contested with evidence disputing it and references to other studies. Within this push to label medicalization as part of stigma the role of social consensus was discussed as contributing to why these claims persist despite evidence to the contrary.

Consider an excerpt from the draft scripts for the course:

. . . If there truly is very little compelling evidence that losing weight is a positive health choice, why do weight-centred approaches prevail? Recent research on this very question turned up some fascinating answers to this question. In a study where the language that weight experts and policy makers typically use and rely upon was thoroughly examined, it was found that claims by health experts were taken as evidence even though those

⁶⁸ This is an excerpt from draft scripts for the course that drew on Campos et al. (2006).

experts did not substantiate the claims. (BC Mental Health and Substance Use Services, 2013, October, p 38)

As this quote shows, people with ‘expert’ status may have power to influence the beliefs of other about weight, even if their beliefs are not backed up with evidence.

The second perspective taken by some in the group was to see the medicalization of weight as helpful, necessary and accurate, while also wanting to see weight bias decreased. For example, as one committee member argued, weight bias is a pervasive problem that needs to be corrected. However, this participant felt that efforts to address overweight and obesity are also required as overweight and obesity were seen to contribute to increasing morbidity and premature mortality.

The third point of view, and the one which many, if not most, committee members could compromise on, was that medicalizing weight has its pros and cons and that while weight may at times be related to health, an overemphasis on weight can also lead to more stigma, weight cycling, disordered eating and so on. This was the approach ultimately taken in the course, in which both the benefits and consequences of medicalization were presented. An interviewee from the committees also shared:

I feel like . . . it was important . . . that we present a balanced perspective. And I don’t know that I’m necessarily really radically on one side or the other. Like, I am kind of in that space of understanding both sides of the argument, but wanting to learn more.

(Committee interviewee, female)

When examining why committee members either agreed with or rejected medicalization as contributing to weight stigma, personal and professional experiences appeared to come into

play. I observed that sometimes those in favour of medicalizing obesity were male or doctors, steeped in a particular way of thinking and epistemic tradition, while those with a more open perspective about the topic tended to be women with experience professionally in eating disorders. One committee member described the professional dynamics at play in how weight stigma was conceptualized, as shown in the following interview quote:

I think, you know, the culture that we're working within is a medicalized culture but, you know . . . health professionals-- a lot of them are coming from that model and so . . . it's just really difficult to question something that is so engrained in how you've been trained and how you just sort of practiced. And I think also physicians being kind of at the top of the hierarchy and being, you know, within a medicalized culture, that also comes to play, I think, in terms of their sort of dominance, in a way. (Committee interviewee, female)

I believe those of us who felt an anti-medicalization perspective was the correct one were also influenced by their/our personal and professional experiences. Several worked in eating disorder treatment and thus – while I cannot claim cause and effect – had what I feel to be an enlightened perspective on the topic. At least two of us had past body image struggles. Regardless of why we believed what we did, in the pragmatic tradition, we agreed that we needed to stop fighting over what was true and instead focus on what we could do, in practical terms, with what we know to reduce weight stigma. The debate then becomes less about ‘truth’ and more about action. Next, the relation of emotions to weight stigma is discussed.

4.1.7 Stigma as related to emotions: Emotions matter to how weight stigma is conceptualized

As Lea (2013) discusses, in qualitative research, exploration often leads to more questions than answers. This has very much been the case here concerning the examination of emotions and weight stigma. I was surprised to observe that emotions were so central to the ways in which weight stigma was thought about and talked about by different people involved in BalancedView's development. The development data show that emotions matter to how weight stigma was conceptualized. However, further investigation is required to understand this relationship well. A limitation of the development data and my subsequent analysis is that since I did not set out to collect data on this, I do not have enough data focused specifically around the topic of emotions. In my analysis, I noticed myself frequently tagging data with the code "emotions!". While I had read about the relationship between emotions and stigma in the work of Link and colleagues (2004), I was initially not particularly convinced of its relevance and was more interested in the centrality of labelling and medicalization. Now, however, I perceive that further exploration of the subject of emotions and its relationship to weight bias is needed due to the clear emergence of this within the data. While emotions played a central part of how weight stigma was understood by those of us involved in the development of BalancedView, this was not obvious early on in the development phase and instead emerged in the latter stages of this portion of data collection. Below, I discuss the various ways I observed emotions exerting their influence in the early stages of my case study.

Firstly, in this study I noticed that the language used to discuss weight was seen to evoke an emotional reaction among health care professionals. Drawing on insights from discourse analysis (Jacobs, 2006), in framing social problems, the language that is used has implications

for our feelings and understandings of the issue. This is especially the case when language involves metaphors, as metaphors help to construct and shape how we think and feel about situations being discussed (O'Halloran, 2006). For example, in the content document originally created by the contractor it was discussed how terms like 'combat', 'epidemic', or 'crisis' tend to evoke a sense of panic about obesity. How obesity is talked about matters, some committee members articulated. When the common cultural discourse is one of an *epidemic that costs* taxpayers, it makes sense that experiences of fear at the former and unfairness at the latter could arise.

Secondly, among health care providers, where a common recommendation is for heavier patients to lose weight, another emotion that can arise is a sense of frustration if the client does not lose weight over time. Again, in the initial content document it was articulated that health care providers may experience feelings of frustration as a result of the perhaps mistaken perception that their patients are not following their directions. This sense of frustration connects directly back to attribution theory and the perception that body weight is personally controllable with appropriate effort.

Thirdly, weight is something that in today's society, many people have strong, deeply entrenched beliefs about, as the following interview quote suggests. Emotional reactions arose in the development of BalancedView when such beliefs were challenged.

Yeah, I think that-- well, I think that part of the reason that that has been so contentious is because of some of those really strong engrained beliefs as well, right. I think that that makes it harder to be really open to accepting some of this kind of new, not new, but like to them maybe-- or to most people it's new literature-- . . . that people honestly can't really believe is true because they've been told the opposite for so long for, you know, by

so many different-- from so many different perspectives, both personally and in their, you know, professional careers. And I think that that's just a really difficult step for people to take, to make that leap to just being really open to that. (Committee interviewee, female)

In the case of BalancedView, the deeply entrenched nature of the belief about fat as unhealthy was seen through sentiments such as, "I will die on this hill" (committee member). Some believe that getting fat people to lose at least some weight is imperative and are unwilling to compromise on this. Health care providers may be particularly invested in some of these beliefs about weight and health, due to the type of science they are exposed to in their education, coupled with a desire to promote health.

In my observations, when beliefs about weight, health and weight loss were discussed at committee meetings, emotions often ran high among health care providers, including those for and against medicalizing obesity. Others also noticed this emotional response, as this interview quote shows:

Just 'cause we were getting-- we were having these discussions in meetings where we, again, were having these emotional reactions between people that were on one side or the other of feeling this way. (Committee interviewee, female)

Some other committee members also told me or told the group about the emotional reactions they were having during these challenging discussions. For example, one individual provided written feedback that hearing that weight loss interventions were stigmatizing felt shaming and dismissive of the genuine care of individuals like her involved in obesity management. In this case, when her professional choices were challenged and labelled as

stigmatizing, she experienced an emotional reaction. This emotional reaction then shaped how she conceptualized weight stigma.

It was common to witness heightened and palpable emotional states among committee members when debating over the supposedly true relationship between weight and health. This was seen through things like quickened speech, tone and use of terms like ‘offensive’ in response to perspectives different from one’s own. As an example, at one point in time my early position – that medicalization was harmful and discriminatory – was labelled as offensive by some committee members with divergent opinions. In hearing rebuttals to my opinion, I also felt upset at the perceived injustice, as I wrote in my research journal in 2013:

Recently I was told that my master’s thesis in which I criticized the prevailing weight science and policy of the day as being inflammatory and based on biased, as opposed to legitimate “science” or “expertise” was “offensive”. I was told that my calling out weight science and policy as inflammatory or questioning the expertise of professionals in this field was in and of itself inflammatory . . . Maybe they were right. In fact, they are definitely right. I DID offend them. They, like all others, are entitled to feel and label their emotions. And yes, it WAS inflammatory, insofar as it challenged deeply held and internalized norms of the time. But does this make it bad? Does this mean I should stop speaking on the subject? No. Because if science, coupled with the prevailing norms of the time, is being used to . . . enforce an inequitable social order that has very real consequences for people, I intend to call that [out].

In concluding this subsection, given the elusive nature of writing about emotions, particularly those of other people, coupled with the fact that I did not intend to collect data on

emotions, many questions remain about emotions and weight stigma. What emotions relate to weight bias and why? Disgust, for example, has previously been hypothesized to be part of weight bias (O'Brien, Daníelsdóttir, Ólafsson, Hansdóttir, Fridjónsdóttir & Jónsdóttir, 2013). Other issues at play may include: righteousness, healthism, negative feelings about one's own body and defensiveness and a need to protect one's professional identity. Regarding this last point, it is notable that individuals on the committees who at times expressed beliefs about fat being unhealthy or controllable, also tended to be people who were professionally invested in some way in such viewpoints (e.g. had careers where obesity management was a focus). One potential reason for this (of many) could be a sense of defensiveness about one's professional choices and a need for self-protection of sorts. These are issues for future consideration. Next, how weight stigma was conceptualized by those who took the course in the implementation phase is discussed.

4.2 How was weight stigma conceptualized by participants during the implementation of BalancedView?

Next, I build on understandings of weight stigma and its conceptualizations from the development phase and explore how health care providers who took the course viewed weight stigma and, when relevant, highlight areas of agreement and disagreement. Based on a thematic analysis of the qualitative data collected from participants who took the course and their perceptions of weight stigma, I discuss the following themes:

- 1) Weight stigma as a process involving attitudes/beliefs and actions/unfair treatment
- 2) Controllability beliefs as stigmatizing
- 3) Medicalization: More harmful than helpful?

Each is discussed below.

4.2.1 Weight stigma as a process involving attitudes/beliefs and actions/unfair treatment

In the implementation phase, the previous conceptualization of stigma as a process involving attitudes/beliefs/stereotypes leading to unfair treatment based on weight was once again present. I present evidence of this only briefly here as it coheres with the already well-articulated theme of the same described in the prior subsection. As one interview participant articulated, weight stigma involves both treatment (or an action component) and thoughts or judgements:

. . . treating somebody differently because of their weight that you maybe wouldn't treat other people. So whether that [means] judging them based on their weight or thinking that they can or can't do things because of their weight. Making serious judgments about their health because of their weight. All of that would be [inaudible] weight stigma.

(Female, administrative role, weight management, phone interviewee)

Ultimately, data from the implementation phase underscored the previously discussed notion that weight stigma is about prejudgments we make about people based on implicit and explicit attitudes and beliefs that lead us to treat people in a prejudicial or discriminatory way, whether intentional or not. For example, as another interviewee discussed, it involves both the judgements and assumptions and the subsequent way you interact with people, based on weight:

I personally define weight stigma as when you judge a person based on how they look and by look I mean being fat or skinny, so to speak, the layman's terms. And then it's like it's how you interact with them. It's what you think about them. It's things that you

say. And-- yeah, making assumptions about who they are based on their weight. (Female, social worker, eating disorders, in-person interviewee)

Next, I return to the question of what attitudes and beliefs were conceptualized as part of weight stigma. When looking at what attitudes and beliefs were viewed as connected to weight stigma in the implementation phase, the main patterns were around beliefs about fatness as controllable as contributing to stigma and also beliefs about fatness as a disease as being potentially stigmatizing. A small number of participants also discussed biased attitudes as extending beyond these two dimensions, including, for example, beliefs around attractiveness that are deeply culturally engrained. However, these were emphasized less often and were less salient to the health care context. The controllability and disease dimensions of weight stigmatizing attitudes are discussed next as themes, based on perceptions of course participants.

4.2.2 Controllability beliefs as stigmatizing

As is consistent with attribution theory, health care providers who took BalancedView articulated a relationship between a belief in the controllability of weight and weight bias. As one participant shared in a course reflection: “By thinking about weight as a product of choices, it allows some people to feel very self-righteous” (ID 442, course reflection). One interviewee, for instance when discussing how she conceptualized weight stigma referred to judgements about the controllability of weight and the subsequent moral implications people derive from these assumptions:

It’s when people make judgments right away based on someone’s weight, and usually those are negative judgments. Obese people are less [inaudible]. Obese people are lazy, they’re gluttonous. They eat too much. They can’t control their weight. Those ideas of

blaming the victim . . . It [inaudible] sort of equate[s] fat with the moralistic idea of being a bad person. (Female, dietitian, chronic disease, phone interviewee)

While the data from the implementation phase suggested health care providers were able to acknowledge that controllability beliefs were a part of weight stigma in health care, it is also worth noting that this was a less evident pattern in the qualitative data from the BalancedView course than the potential stigmatizing nature of medicalizing obesity, insofar as it was brought up markedly less often.⁶⁹ However, this discrepancy is likely explained by the fact that participants were directly asked after watching the medicalization debate and viewing the medicalization Prezi to provide their comments in a scripted reflection, thus prompting them to reflect on and share their thoughts on medicalization more deeply.

4.2.3 Disease beliefs: Medicalization as more harmful than helpful?

Much as in the development phase of data collection, not all participants who took BalancedView perceived the medicalization of obesity to be part of weight stigma. However, a majority of participants, after exposure to the course content on the pros and cons of medicalization, either: 1) articulated significant stigma arising from medicalization (approximately 42%); or 2) were able to see some potential harms of medicalization, yet also some possible benefits (approximately 41%) (e.g. they could appreciate both sides of the ‘debate’). Far fewer participants were entirely in favour of medicalizing obesity or saw only

⁶⁹ There were approximately 10 pages of coded text regarding controllability beliefs, in comparison to 34 pages of coded text regarding medicalization.

positives in it (approximately 17%).⁷⁰ Evidence of each of these different perspectives is shown below.

4.2.3.1 Medicalization as harmful and stigmatizing

One common position taken in the scripted reflections after the medicalization module was to view the medicalization of obesity as problematic, leading to some combination of the following: shame for those whose bodies are pathologized; eating disorders and mental health issues; an overly simplistic view of weight and health; reinforcing or creating stigma; and as distracting for health care providers from other health problems that may be affecting the patient, among other potential issues. There were so many interesting and noteworthy quotes on this that it was difficult to choose what to highlight. I provide some brief glimpses into the richness of this data below.

Regarding the potentially shaming nature of labelling obesity as a disease, one participant shared in a scripted reflection:

My patients have expressed to me that they have experienced a lot of shame, depression, feelings of wanting to give up and, after receiving a diagnosis of overweight or obesity, [that] they are often not supported with the tools to address the diagnosis, but are told a weight range they must strive for. (ID 239, course reflection)

Others talked about the negative impacts of medicalization on patients in other terms, commenting on this pathologization negatively impacting emotional state and sense of self, for example:

⁷⁰ These percentages represent the proportion of the time each of these perspectives was coded in the implementation data.

. . . I have a friend who was recently told she was morbidly obese. She exercises regularly, all her blood work and other health indicators are within “normal” limits. This label has deeply saddened her - she already feels the stigma from her peer and professional group and now she feels it from her own family doctor [with] whom she has a great connection . . . This has had a[n] overall negative impact on her sense of self and her positive outlook on life has changed. (ID 753, course reflection)

The perceived negative impacts of medicalization also extended to disordered eating and related mental health issues. For example, as one participant shared in a course reflection: “I fear that there are some serious ramifications if we medicalize obesity. In my opinion this leads to disordered eating and mental health concerns” (ID 986, course reflection). Others talked about how medicalizing weight leads to overly simplistic thinking along with consequences like patients feeling ‘othered’ and ashamed, which in turn can lead to poor health habits and distress:

I would fall on the side of the debate that sees medicalization as contributing to weight bias and stigmatization. Any time something is deemed “normal” or “outside of the normal range” we are falling into dichotomous thinking, or black and white thinking. The consequence of this is that people who don’t fall within the “normal” range are made to feel other-ed, which I think brings shame and a downward spiral into being less healthy, both physically and emotionally. We need to question where the “normal” category came from. Who deemed it so? What research was done to back it up? (ID 225, course reflection)

The consequences of assuming that obesity is defacto a disease, simply based on BMI, are too simplistic, some argued, creating ideas about the need to ‘fix’ the so-called problem, when there may not be a problem in the first place:

I think that obesity, defined as a BMI of 30 or greater, is such a simplistic idea (simply a factor related to height and weight), that I cannot seriously see it as a disease. What is the definition of “disease?” It must be the opposite of “100% well” and must include some challenges to living a full life. I think there are so many examples of people with high BMI who are well and leading full lives that the idea of them having a disease is hard to take seriously. So, even if a patient is referred because of “obesity” I may not have viewed them as having a problem, aside from the obvious problem that is being created with the label. But because they are labelled as having a problem, then it must have a fix, and knowing that weight loss is often not realistic, how to productively move forward?
(ID 203, course reflection)

Much like the position taken in the early iteration of the BalancedView curriculum, some participants also discussed the process of labelling fatness as a medical concern and how those labels themselves were creating or reinforcing stigma. As one participant stated:

Placing a label [on] something will only reinforce the stigma and I think that we still have a long way to go to shift the focus from treating obesity as a disease and having ideal goals or “normal” for people to achieve without first taking into account all of the other factors that are going on. (ID 688, course reflection)

Other participants saw these labels as problematic specifically because of the assumptions embedded within them, for example, that there is a ‘normal’ range that everyone should strive for and that all heavier people are unhealthy.

I have to agree that if you medicalize the terms “overweight ” and “obese” you are left with the assumption that there is a “normal” and that everyone should attempt to achieve this. I agree that using the BMI alone is ineffective in determining “good” health . . . Someone in the high range of the BMI may be in perfect health while a person in the “normal” BMI range may have a host of health problems. (ID 220, course reflection)

A few participants went so far as to argue that medicalizing obesity was misguided in a similar way to the medicalization of breastfeeding or was akin to the historical tendency to consider certain races or homosexuality as diseased. Regarding this latter point, one participant stated:

[D]eclaring obesity a disease is contradictory. We say that many medical issues are higher in people of certain races, yet we do not classify those races as a disease (we once did) - and yet for some people weight may contribute negatively to their health and so we classify it as a disease? It is as she [the expert opposed to medicalization referenced in module three] said in regards to homosexuality once being considered a mental health condition. It does not make sense. (ID 215, course reflection)

It was also common for participants to discuss how they thought that medicalizing weight could distract or prevent health care providers from focusing on other important health concerns. For example, one participant discussed how she experienced a neurologist not treating a patient’s back pain because of the assumption that the pain was weight related:

The [medicalization] of obesity causes health care professionals to look at the weight before the person. I heard a neurologist tell a patient that he would not even discuss her back pain because she was overweight. The assumption that weight is the cause of a problem is a dangerous one. It is seen as a preventable problem and therefore the patient needs to take ownership. (ID 202, course reflection)

Put in other words, medicalizing weight can lead health care providers to miss other important factors influencing someone's health, such as mental health issues, or underlying medical problems that health care providers assume can be explained by weight.

Participants also discussed other consequences of medicalizing obesity within the health care context. For instance, it was felt that the medicalization of obesity may lead to health care avoidance among those who experience felt stigma. Participants discussed how medicalizing obesity may lead to patients avoiding their health care providers out of fear of being told the same message about the importance of weight loss over and over. A further consequence mentioned was that medicalizing obesity may lead some health care providers to refuse certain treatments: "I can see that there can be some serious drawbacks to medicalizing obesity. I have a client who has been refused surgery because of her weight" (ID 388, course reflection).

Although the positioning of medicalization as harmful and stigmatizing was mostly seen through the scripted reflections and in the post-course questionnaires, some interviewees also perceived medicalization as predominantly harmful. For instance, one interviewee articulated that medicalization may result in health care providers "... being side-tracked [by weight] and missing things that are really going to impact people's health and mortality" (female, social worker in community mental health, phone interviewee). While a substantial portion of course

participants conceptualized medicalization as harmful and stigmatizing, some were more mixed in their perspectives, as discussed next.

4.2.3.2 Pros and cons to medicalization

The next pattern in terms of perspectives on the medicalization of weight was to see both the pros and cons of medicalizing obesity and fatness. Within this way of seeing things, some individuals could see an equal balance of pros and cons, while others tended to see medicalization as more harmful or helpful, whilst still being able to see both sides. Still others were able to appreciate both sides of the argument but wanted more information in order to make a decision about where they stood.

For instance, some participants appreciated both perspectives and wanted a balanced approach where medicalization could be applied to clients who needed it but not to others whose higher weights were not indicative of health problems:

I had never thought about this concept before - very thought provoking. Seems like there should be somewhere in the middle where the two sides can meet. Those who are obese and unhealthy need to have help to address their concerns. Those who are healthy don't need the aggravation of being told to lose weight. (ID 571, course reflection)

Others described also feeling like medicalization may be helpful for some patients due to decreasing self-blame, yet increasing blame in other instances:

[I] think medicalization can be beneficial for some clients but not others. [F]or some, it may empower them to see obesity as a medical condition and give them permission to not blame themselves for their weight. [F]or others, [I] can see how this approach may have the opposite effect. (ID 742, course reflection)

This quote highlights how differently individual patients may internalize the medicalization of weight. For certain clients, medicalizing weight may have helpful aspects, for others, it may be stigmatizing and unhelpful. Perhaps, within a health care context, whether medicalization is stigmatizing depends on the approach of the health care provider in combination with the needs and wants of the client. One interviewee, for instance, discussed that she was “. . . on the fence about medicalization. I think it really depends on the language and approach used by the professional, and their relationship to the patient” (Female, registered psychiatric nurse community mental health, email interviewee). Another interviewee (female, dietitian, chronic disease, in person interviewee) discussed that she felt that often medicalizing weight may be stigmatizing and harmful when, for instance, a patient has for their entire life tracked at a high weight percentile with no discernible health problems. Yet she also discussed how BalancedView helped her understand that at other times, if a person suddenly goes from a lower to higher weight percentile, a medicalized approach may be useful. In essence, some felt that whether medicalization was helpful or harmful depended on the needs of the patient.

Other course participants were able to see both sides of the debate for reasons outside of the benefits to the patients. For instance, one participant discussed how medicalizing weight may stigmatize, but may also lead to helpful research and advocacy:

I agree that medicalization of obesity will lead to formation of new labels which in turn will create “us” and “them” just like any other label. This will defeat the purpose of individuality and that everyone is different. However, medicalization of obesity will also create new platforms for research, principle based practice and provide a push [for] advocacy. (ID 1425, course reflection)

In addition to research and advocacy, another positive of medicalization for those who could see both perspectives was increased training and tools for health care professionals on weight related issues. This position is illustrated through quotes such as the following:

[It's] important to hear the arguments from both sides of the debate. [P]erhaps neither side is right, but somewhere in the middle? I found the arguments for medicalization for appropriate training of health professionals compelling. (ID 647, course reflection)

Within this position, it was thought that medicalization may help equip providers with the language to talk to and help patients with obesity.

Also worth noting, was that some participants were not able to come to a firm conclusion about whether medicalization was preferable or detrimental. As one participant stated:

“I am not sure how I feel about medicalization of obesity. There are valid points made by both sides of this debate. I think I need to research it more to decide where I stand” (ID 584, course reflection). In addition to some participants needing to do more research and thinking before deciding how they felt about medicalization, some were not able to come to a firm conclusion specifically because, as discussed, whether or not medicalizing weight is stigmatizing and harmful or non-stigmatizing and helpful may well depend on the wants and needs of the patient.

As one stated:

I agree with both sides of the argument, but it also depends on how the obese individual view[s] his/her own issues with being overweight. They themselves may choose to medicalize and blame the disease of obesity for their weight, be determined still to change it. So I think professionals should be trained to address both points of views -

patients will only work with professionals they establish rapport with. (ID 210, course reflection)

One interviewee also talked about this with me, articulating that health care providers should approach patients with a ‘platinum standard’ rather than a ‘gold standard’. That is, not how the provider would want to be treated, but how the patient would want to be treated. In some cases, some patients may want to talk about weight, while others may not want to and it is important to align one’s approach with patients’ preferences and needs. As one course participant shared “Both overly focusing on and ignoring weight can be traumatic for people” (ID 1113, course reflection). As this last quote shows it is important to remember that avoiding conversations of weight altogether can also have its consequences in some circumstances. Clearly, the medicalization of weight is a complex subject. Next, the perspective taken by a minority of participants that medicalization is predominantly helpful and/or reduces stigma is addressed.

4.2.3.3 Medicalization as positive and needed

There were far fewer instances where individuals who took BalancedView viewed medicalization as entirely positive, however, there were a number of examples where this was the case. For those who did adopt this position, one rationale seemed to do with the perceived health implications of higher weights. For instance:

Few health care providers have [received] training to distinguish which people with a high BMI are at risk and which aren’t so the safest thing seems to be to assume everyone with a high BMI is unhealthy. (ID 252, course reflection)

As this quote shows, for this participant the health risks of obesity were perceived to be so great that medicalizing higher weights, regardless of actual health status, was seen as important.

Another participant also discussed the need for medicalization as part of reducing obesity rates and decreasing the burden of disease:

I believe the medicalization of obesity is very important in reducing obesity rates for those with unhealthy habits or who do not have the education regarding diet, nutrition, exercise, mental health etc... I don't think it adds to stigmatization if properly addressed and the messaging is not about "being thin" or "dropping weight" but promotion of healthy lifestyle and reducing long[-]term medical conditions and health care costs . . .
(ID 939, course reflection)

As this quote shows, the rationale for medicalizing weight may include the promotion of a healthy lifestyle – which, as previously stated, can occur without a focus on weight – or other factors such as reducing the disease burden or health care costs. Another rationale was the perception that medicalizing weight helps to de-stigmatize, as a disease label may remove the sense of 'blame'. As one participant shared:

By identifying obesity as a health concern/ perhaps even medicalizing it- clients are not made [to] feel poorly by laying blame ("this is your doing"). As well it can also help with providing the support to educate providers so that our care is more holistic and client-centred in order for us to support clients in their health goals (not necessarily [weight] goals). (ID 1358 course reflection)

This benefit was also briefly discussed by a few of the people who were able to see both sides of the argument. A few others discussed the potential of improved health care that may come from medicalizing obesity:

Due to the remote and rural nature of the city where I live and work, we lack many of the required resources to support women with complicated pregnancies. As a result, if a pregnant woman is over a certain BMI, she is told that she cannot deliver here because if there was an emergency requiring a C-section, we do not have the supports in place to be able to safely intubate her or care for her during the surgery. These women are expected to travel to and stay in major urban settings (Vancouver, Edmonton) at their own cost, starting 4 weeks before their due date. In medicalizing obesity, we have created a prenatal care plan to reduce the number of these women expected to travel to other areas for delivery . . . (ID 561, course reflection)

In the above quote, we can see that one perceived benefit of a medicalized approach is additional resources within health care. Another participant relatedly discussed how being assigned a diagnosis may lead to more “. . . effective treatment, counselling and support” (ID 61, course reflection).

As previously discussed, in the development phase, there was no consensus on the extent to which medicalization was part of weight stigma and some participants were strongly in favour of a medicalized approach to obesity. As I have shown above, the data collected on medicalization in this latter stage of the study show that most participating health care providers – after exposure to the different perspectives on medicalization – perceived the medicalization of obesity as harmful and stigmatizing or as something that may have both harms and benefits. Taken together, these data underscore that there is no agreement on the extent to which medicalization is implicated in weight stigma. However, given the proportion of participants in the latter stage of this study who perceived medicalization as having some harms and

contributing to stigma, I believe it is worthwhile to continue to explore the medicalization of obesity as a component of weight stigma and, as such, to investigate strategies to address medicalization as part of stigma reduction. Next, with the above conceptualizations of weight stigma in mind, I turn to research question two and examine what was learned about strategies to reduce weight stigma among participating health care providers.

Chapter 5: Findings regarding research question two / Reducing weight stigma

In this chapter I focus on findings pertaining to my second research question (‘what strategies can be employed to reduce weight stigma among health care providers in BC?’). The chapter is divided into three main sections. I begin by reflecting on this question through the lens of data collected during the development phase of BalancedView. Next, I present an overall analysis of the effectiveness of BalancedView. Finally, based on the successful implementation of the course, I reflect on lessons learned about what strategies were most influential in reducing weight stigma among participating health care providers. I present these findings chronologically as learnings evolved during the different stages of the case study.

5.1 What was learned about strategies to reduce weight stigma among health care providers during the development phase?

In the development phase of BalancedView, a key consideration for the project team was to develop strategies to reduce weight stigma that would likely be effective, as well as *feasible*, *realistic* and *sustainable* within the scope of a time- and resource-limited project. Certain types of potentially helpful interventions, like media campaigns or changing pre-service health professional curricula, were thus out of scope. An in-person intervention was also not considered, due to a lack of sustainability. The team wanted to develop an online course targeted towards changing the weight-biased attitudes and practices of health care providers. The themes that follow pertain to strategies considered to be likely helpful in such an online course. Themes included:

- 1) Complex problems require complex, multi-faceted solutions
- 2) Take a balanced approach to discussions of weight and health

3) Emotions matter; be prepared for them

Each theme is discussed in turn.

5.1.1 Complex problems require complex, multi-faceted solutions

A key finding from the development phase of the course concerned the need for a multi-prong strategy to reduce weight stigma in health care that incorporated attribution theory, social consensus, evoking empathy and awareness raising and reflection, along with other promising strategies. The potential utility of a multi-prong approach was emphasized during discussions at the committee meetings and by experts interviewed as part of the scoping review:

One of the questions we asked the ‘experts in the field’ we spoke with was what components they felt should be considered for inclusion in a stigma reduction resource for health professionals, based on their knowledge of the research conducted to date and their experience. All of these individuals said that multiple strategies are needed, in part because we don’t really know what works or why. (PHSA, 2013a, p 29)

As the authors from the scoping review suggested, the need for a multi-prong approach is driven in part by the fact that we do not have a clear idea of what will work to address weight stigma. A multi-prong strategy can also help respond to the complexity of the problem of weight stigma. It was also thought that strategy should incorporate more than one style of learning in order to be maximally influential. For instance, at one of the steering committee meetings (February 2013), it was discussed that the resource needed to include emotional and experiential learning.

Given the push by those involved in the development phase to develop a multi-faceted strategy, BalancedView ultimately drew on several weight stigma reduction strategies that were

considered to be likely useful, including: attribution theory; social consensus and norms; awareness raising/self-reflection; evoking empathy/exposure to the challenges of being overweight and obese; and a ‘balanced’ perspective on weight and health. Each component of the strategy could be used as a standalone strategy; however, the consensus among the group developing BalancedView was this was less likely to be effective. Each of these components is discussed below. In addition, the team also strove to address not only attitudes, but also biased behaviours and systemic (environmental) manifestations of weight stigma, as discussed following the overview of each component of the multi-prong strategy. This was important given that weight stigma was conceptualized as a problem that goes beyond mere attitudes.

5.1.1.1 Challenge attributions about weight as personally controllable

Using attribution theory as a stigma reduction strategy in the BalancedView course was strongly endorsed by participants involved in its development. There was quick and easy consensus among committee members that this was an important aspect of weight stigma reduction that we should include in the course. However, it was also emphasized that, based on the extant literature, this would not be appropriate as a standalone strategy. As articulated in the scoping review: “While attributions are important, as is sharing information about the uncontrollability of obesity, these approaches are in and of themselves insufficient to change weight-related bias, stigma and discrimination” (PHSA, 2013a, p 19). Unlike the topic of medicalization, this was readily accepted as an important part of weight stigma reduction.⁷¹

⁷¹ It was unclear why this strategy was so much more readily embraced. Perhaps it was because the weight science literature is clearer on the topic of controllability than on the relationship between weight and health. Or, perhaps it was because the weight stigma literature clearly articulates challenging controllability as a stigma reduction strategy, while challenging medicalization remains underexplored.

5.1.1.2 Draw on social consensus to sway opinions

The development data also supported social consensus theory as a means to reduce weight stigma. As articulated in the scoping review, one potentially effective approach to decreasing stigma is to “. . . emphasize the influence of respected and trusted leaders or peers as opinion leaders who can ‘sway’ people to think one way or another” (PHSA, 2013a, p 3). The committees agreed that including well-respected medical professionals’ voices in the course would be influential. This discussion manifested in a professional voices module where health care providers were filmed sharing their stories of change. The module also includes well-respected health care leaders speaking out against weight stigma, as seen in the Rudd Center video incorporated in the course.

The powerful nature of social norms and social consensus in limiting expressions of weight stigma was also demonstrated during some of the committee meetings that I observed. I found that the presence of socially influential individuals at the table in committee meetings swayed the tone of the conversation during the course development. On several occasions, when the conversation would begin to have biased undertones, one of the committee participants – a well-respected professional in the fields of eating disorders and weight bias – was able to successfully change the course of the conversation in a way that had seeming influence over others. One example was during a meeting about developing the video scenarios for *BalancedView*. The video scenario under development was an acted scene with a young female patient at the doctor, who reported eating ice cream as a treat when stressed (and incidentally was at a higher weight percentile for her age). The committee was discussing what the appropriate non-biased health care provider response should be. One individual began to talk about how this little girl should not be eating ice cream, as it was not healthy. Initially no one

challenged this, until an influential and well-established health professional added her perspective to the conversation. She articulated that the little girl, like any child, should be encouraged to listen to her body, eat treats in moderation and have a range of coping skills external to food. Telling her she could not have a treat because of her body size may do more harm than good. The tone of the committee conversation changed after that, back to one that was more health-centred, rather than weight-centred. Whether or not social consensus truly influences attitudes or merely their expression, however, remains a question.

5.1.1.3 Awareness raising/self-reflection

Health care providers are invested in promoting health. As such, evidence that a particular approach detracts from health may be quite compelling to them. One strategy then to reduce stigma, that was discussed during BalancedView's development, was to raise awareness of the prevalence and harms of weight stigma. As shared in the scoping review:

A number of key informants talked about the importance of making physicians and other health professionals aware of the health consequences of weight stigma, with a major one being increased stress which in turn has all kinds of negative impacts on [a] patient's physical and mental health as well as negative social consequences. (PHSA, 2013a, p 32)

Given the presumption among the committees that most health care providers do not have enough background knowledge about weight stigma, a key focus early in the course was to present detailed evidence on the harms of weight stigma. With this, we attempted to not only raise awareness of the associated harms, but also to encourage health care providers to become aware of and reflect on their own implicit – perhaps unnoticed – biases about weight. One committee interviewee talked of the importance of this self-awareness:

It's very automatic. It's very, like, we make-- yeah, we have-- first impressions are so important, because people do judge you just based on the first thing they see when they look at you. And so I think that what we're trying to do with the resource is just raise a bit of awareness about the fact that you're even making those automatic assumptions and think about ways that you can kind of catch yourself doing them. 'Cause I don't know that we can-- I don't know that this is going to make people stop doing that, like you said, it's the way that we're kind of programmed. But if you can catch yourself doing it and change the way that you're reacting, then maybe you can . . . (Committee interviewee, female)

As this quote shows, self-awareness was seen as a key first step to individuals being able to shift their weight-biased attitudes and prevent themselves from doing harm. Key informants involved in the scoping review agreed. They discussed how self-awareness is integral; however, it is important that self-awareness be brought up in a non-blaming way, yet also in a way that somehow captures people's attention:

Providing opportunities for health professionals to gain self-awareness through self-reflection and gaining an understanding of one's own attitudes and biases, as well as its prevalence in our society was described by a number of people as an important component of any resource. It's important to help learners realize how ingrained weight bias is in our society, and not something that's unique to them, as you don't want them to blame themselves for having these attitudes and/or feel that it's unique to them in any way. You do, however, want to get people's attention by engaging them in some kind of activity that helps them to relate to this issue at a personal level. As one individual said:

“I’m in favour of freaking people out”, and having people go through an implicit test is one way of doing that. (PHSA, 2013a, p 29)

To raise this awareness of implicit biases, module one of the course asks participants to link to an external site called Project Implicit® and take the online pattern matching Implicit Association Test (IAT), as described in the methodology chapter. Among committee members and pilot participants, this was perceived as a gentle, non-blaming way of getting health care providers to reflect on their own attitudes. There was consensus among committee members involved in the content development that a gentle approach to encouraging awareness of one’s own biases would be better for learning, compared to a more aggressive approach that might lead to defensiveness:

It was also thought that for some people, being made aware of one’s implicit anti fat attitudes resulted in defensiveness and disengagement from the learning process. As one informant noted, “once learners become defensive, you will lose them”. (PHSAa, 2013, p 29)

The Implicit Association Test activity was perceived initially as a viable way to encourage reflection in a non-blaming manner.

5.1.1.4 Exposure to the challenges of being overweight/obese to evoke empathy

Contact theory is another potential stigma reduction technique, as discussed in the literature review. Contact with heavier people is likely to be ineffective in and of itself as a stigma reduction strategy; overweight people are visible and part of the fabric of our society, yet this has not decreased weight stigma. As also described in the literature review, evoking empathy is another proposed strategy to try and reduce weight stigma. How might one go about ‘evoking empathy’? In the development of BalancedView, it was assumed that exposure to the challenges

of being overweight or obese (drawing loosely on contact theory), could be one way to evoke empathy or, perhaps more aptly, compassion. In other words, learning about the stories and experiences of those who have been stigmatized may have the potential to promote compassion (and possibly empathy) and, thus, possibly reduce weight bias. As described in the scoping review: “One of the benefits of exposure to overweight people is having the opportunity to learn from their experiential expertise [of] what it’s like to be a heavier individual accessing healthcare services and living in a society that values thinness” (PHSA, 2013a, p 34).

To address this within BalancedView, the team decided to have a module dedicated to patient voices, where real patients were filmed sharing their stories of weight bias in health care. The aim was to bring up emotions that could spur change: “We do not want people to feel empathy for overweight people but empathy for living in a society that is not accepting of fatness” (personal communication, February 2013).⁷² Specifically, it was hoped that emotions could be used as a strategy to elicit motivation to change. As described by the contractor about the content writing process: “We use various tactics to elicit this interest, including triggering an emotional response and providing ‘evidence’” (personal communication, April 2013).

5.1.1.5 Provide a ‘balanced’ anti-medicalization perspective

Providing information on the harms of medicalizing weight was a strategy that was proposed in the first version of the curriculum, as discussed previously (see section 4.1.1, p 113). Due to the contentious nature of this approach, this strategy evolved to one where a balanced approach was taken instead. In this balanced approach, participants were exposed to the different perspectives on medicalizing weight through a Prezi embedded within BalancedView and

⁷² As per February 2013 Knowledge Exchange Briefing.

through a video dialogue of Sharma and Gingras debating the topic. This is discussed as a theme in its own right shortly, since it occupied such a major focus of the committees during the development. First, however, I conclude this theme with a discussion of a subtheme: the importance of addressing not only attitudes, but also the manifestations of weight bias in clinical practice.

5.1.1.6 Address behaviours and systemic manifestations of stigma

Attribution theory and social consensus, when used in stigma reduction interventions, primarily address the attitudinal manifestation of stigma. As discussed earlier, in this project stigma was constructed as involving not only attitudes, but also beliefs, emotions, behaviours and resultant consequences. Stigma interventions thus need to be complex enough to respond to the multiple levels at which the problem can manifest. Evoking empathy is a strategy that can potentially modify emotions and, therefore, motivation to think and act in a less biased way. However, the behavioural and structural/environmental manifestations of stigma require further attention. In the course we tried to address this through information provision, experiential learning and skill building. For instance, one part of the course focuses briefly on providing information on how to reduce environmental stigma, for example educating participants on the importance of equipment to accommodate heavier patients.

To build skills and attempt to modify future behaviour the team used an interactive approach. The team filmed and showed a series of videos in which fictional patients (hired actors) were shown during encounters with different fictional health care providers (also actors). The scenarios were developed through discussion at the committee meetings. In each scenario a ‘biased’ scene is shown, followed by comments from the moderator on what went wrong or could have been improved. In a final video, course participants were invited to stop and pause

the video and comment on positive and negative aspects of the encounter. The videos are described in the text boxes below.

Carla and Herman

Herman is characterized as a slightly overweight man (BMI 28) who visits Carla, a dietitian, at the referral of his doctor, in order to eat better. Carla focuses on Herman's weight and weight loss. The moderator then pauses and comments on how despite Herman saying he wanted to talk about his diet, Carla the dietitian instead brought up weight and discussed how weight loss would be good for him. The video then resumes. Herman agrees and says he wants to lose 20 to 30 pounds. Carla says she can help him with that, without acknowledging that weight loss of that magnitude is generally unsustainable. The moderator pauses and comments on this. Then the video ends and it starts over, this time with the Carla the dietitian modeling what a less biased, more health-centred interaction would look like.

Tyson and Stephen

Tyson is a patient at a physiotherapy clinic seeing Stephen, a physiotherapist, for his chronic ankle pain and weakness. Tyson visually appears heavyset. Tyson says he has been exercising it but not resting it, as he is on his feet as a cashier. The physiotherapist responds with a comment about how his weight is hurting his recovery. Tyson says, "Well sorry, but there really isn't a lot I can do". The physiotherapist comments again about his weight holding him back. Like the above scenario, the moderator pauses and suggests to the audience that the physiotherapist could have taken into account the context of his life and focused on creating realistic goals. The video scenario then replays again, this time with a more health-centred approach where the practitioner focuses on what he can do (e.g. sitting at work or ankle exercises).

Dr. Moffat, Karoline and Mom

Karoline, a child aged 6, and her mom visit their family doctor for a routine check up. As part of the visit Karoline is weighed and measured. The doctor states "it's important for a girl like you to keep up your activity level... to help you control your weight". The moderator pauses and comments on how the doctor is focused on her weight, despite a seemingly healthy body image and lifestyle that had been previously described. The doctor then continues to focus on how Karoline is at the 85th percentile for BMI for her age and then inquires about what she eats. Karoline mentions that sometimes she eats ice cream. The moderator pauses and comments on how while BMI is one screening tool, placing too much emphasis on it can create problems like an unhealthy weight preoccupation. She also comments on how screening for healthy behaviours is important, regardless of BMI. The scene is then replayed with a more positive interaction.

Applying health-centred strategies/case study video observation exercise

A final video is played between a nurse practitioner (NP) and a patient. The difference between this video and the above ones is that this time, the video runs and the moderator, rather than stopping the video to speak, instructs participants before watching it to pause the video if they see something positive or negative happening and to make a comment on what they have just seen. The video is an encounter between a heavier teenage boy (Darren) and his NP. Darren is 16 years old and seeing an NP for the first time. The first thing that happens is he is weighed (120 kg) and then asked why he is there. The boy responds that he has low energy and he sleeps a lot, but is still tired. He also states he does not feel like going out or seeing his friends. The NP jumps immediately to ask if part of the problem is his weight and to query if he has always been that size. The NP then takes his blood pressure, asks if the boy had thought of adjusting his lifestyle and comments on the health and energy benefits of losing a bit of weight. His blood pressure is normal and the NP says that is good news and then asks about his diet and exercise. The boy eats a reasonable diet and plays football. However, the NP comments on how he should increase muscle and reduce fat and that next year when he graduates, he should try to get his weight down quite a bit to avoid future problems. He then finishes the encounter by instructing the boy to come back to get weighed again in a few months.

The latter experiential encounter was designed to get participants to reflect on what could have been done differently, such that they have an opportunity to practice being unbiased in a simulated setting. The aim here is to attempt to modify future behaviours, not just attitudes. Committee members perceived this as a useful experiential activity to practice what an unbiased health care encounter would look like.

5.1.2 A ‘balanced’ approach to medicalization

Fat activists and HAES proponents often contest the medicalization of weight, questioning the validity of the presumed causal relationship between weight and health (Bacon & Aphramor, 2011). Others suggest the medicalization of weight is a central aspect of weight stigma (Cameron & O’Reilly, 2015). In the early days of the resource, a key strategy articulated as likely helpful in reducing weight bias in health care was to “[address] some of the myths related to the ‘obesity epidemic’” (PHSA, 2013a, p 31). It was also generally thought to be

important to challenge common misconceptions about the relationship between weight and health. As the contractors responsible for the scoping review argued:

Another critically important component of a resource is addressing the myths regarding the connections between weight and health . . . many health professionals lack knowledge and skills in this area. For example, there is often not a good understanding of the connection between disordered eating and weight, and an understanding that a lower weight isn't always the healthiest thing – people don't understand that. (PHSA, 2013a, p 31)

Given these contentions, one angle to take on medicalization and weight stigma reduction is to educate and inform health care providers on the so-called myths about weight and health. Indeed, this was the strategy we initially aimed to take within BalancedView. A logical extension of this was to promote Health At Every Size principles as a viable alternative for providers to use with their patients, which could promote health, yet avoid the risks associated with assuming that weight always equates to health.

The strategy to contest the veracity of the presumed relationship between weight and health, however, was not well received by all, as already discussed (see section 4.1.1, p 114). Promoting HAES within our BalancedView curriculum evoked a similar reaction, as the below committee interview excerpt shows:

. . . when I first learned about Health At Every Size, I thought fantastic. These principles make a lot of sense, and I didn't really understand how it was viewed by others in the field until we had conversations about it. And then we learned that it can be polarizing. So I thought it was still important to include because it is the only well described

principles in, like, around accepting health at different sizes. But we did have to be careful with the messaging . . . (Committee interviewee, female)

Given the opposition we faced in challenging common beliefs about weight and health in the curriculum, it eventually became clear that we had to change our messaging. What we opted to go with was a more ‘balanced’ perspective on the topic in which evidence on both sides of the debate about weight and health were presented. As discussed, one major benefit of a balanced approach to this debate is that we avoided any risk of the sponsoring organization being unwilling to continue funding the project due to such opposition. Thus, the question became, not what might be effective, but what is politically feasible *and* likely to have effect? Relatedly, health care providers at the committee meetings also emphasized that a balanced approach would be more likely to lead to ongoing engagement from health care providers. It was discussed that if the information was too contrary to what was perceived as the best available science on weight and health, then people would get upset and disengage.

Another benefit of presenting a balanced perspective is it allows room to highlight an alternative way of thinking about weight and health and to challenge people to think differently, however it avoids the drawback associated with positioning this alternative approach as fact or truth. Positioning one perspective as ‘true’ can, as evidenced during BalancedView’s development, lead to heated debates and distract from the fact that most of us can agree stigma is wrong, harmful and should be changed.

Presenting a balanced approach to medicalization in the case of BalancedView involved discussing the pros and cons of medicalizing weight. One potential positive is that if obesity is seen as a disease, practitioners may be less likely to blame heavier people for higher weights.

One drawback to medicalizing weight that was emphasized was that focusing on weight can lead to harms like eating disorders. Given the interest of health care providers to promote health, discussing the health consequences of medicalized approaches to weight was seen as a way of influencing practitioners to move towards health-centred rather than weight-centred practice. As one committee interviewee discussed:

Um-hum, and again, I think that's 'cause it speaks to medical professionals in terms of, like, harms and health of patients, right. They-- I don't think any medical professional wants to do harm to their patient . . . And so when you talk about some of these potential harms of things that, like, of weight [inaudible] stigma you talk about potential harms like eating disorders and weight cycling and, you know, sort of the mental health effect, that that speaks to healthcare professionals because they get that. (Committee interviewee, female)

5.1.3 Tailored to emotions – Emotions matter, we need to be prepared for them

As I have shown, weight stigma is a subject that can involve strong feelings and emotions. It was often discussed in the committee meetings during the course development that we needed to be careful how information was presented, for if we triggered strong emotions among health care providers this could lead to them not wanting to participate in BalancedView. As one committee member shared, it is important that information on weight stigma be conveyed in a respectful way, that recognizes health care providers' commitment to helping and promotes an openness to new ways of thinking and practicing, rather than dismissing or shaming health care providers for their previous beliefs, practices or attempts to help. This committee member went on to share that the initial way information on medicalization was presented felt shaming to

her and created a negative emotional reaction. As such feedback shows, feeling shamed is one possible reaction to learning about weight bias that needs to be considered. It was also thought to be critical to avoid creating such strong emotions that learners disengage:

Because our worry was that if we do create those reactions where people are feeling offended and are just . . . completely dismissing the resource because this conflicts so much with their existing belief system that they just can't even start to be open to it, then we will have lost that opportunity, right. (Committee interviewee, female)

However, the flip side of the argument is that emotions can help influence change. The contractor involved in the curriculum development was an educator and spoke of the importance of creating emotional arousal for learning and to create motivation to change, *but not to such a great extent that people disengage*. Positioning content strategically thus became important. As one female focus group participant shared, while shame should be avoided, we did want to use emotions to motivate change:

Yeah, no, 'cause I think you're not going to get-- I have a philosophy there, I'm not going to get people to care or change if I shame them obviously for having these beliefs or attitudes or behaviour. And so how can I connect them emotionally to caring to want to change? So that's my framework for where I come from. So that's kind of how I-- not to blame people, but how can I get them to see how damaging this is, I guess. I don't know if any of that makes sense. (Focus group participant, female)

In our case, a balanced view on medicalization was one way of attempting to avoid a negative emotional response from learners. Another strategy was to avoid taking a blaming approach. This non-blaming tactic was fostered through a recognition that weight bias is something deeply

ingrained in our culture that most of us, at various points and to varying extents, internalize. As one committee member shared:

. . . and I think acknowledging that this is something that we all are coping with and dealing with and we are embedded within this culture [and] have common issues. . . so even if, you know, a health care professional feels like ‘Oh my gosh I am being weight stigmatizing’ not to, to encourage them not to feel guilty about that but just to reflect. . . not a blaming approach because . . . I think if someone feels blamed they might turn away and turn off. (Committee interviewee, female)

In the online course we specifically used the Implicit Association Test (IAT) as a way of attempting to encourage people to reflect on their own bias without blaming. As discussed, we also tried to focus the resource content on areas of agreement, rather than on points of contention like the exact relationship between weight and health. This helped minimize emotional intensity at committee meetings. Next, findings from the implementation of BalancedView are discussed in relation to the research aim of building knowledge on how to reduce weight stigma in health care.

5.2 Effectiveness of BalancedView

In this next subsection, I focus on the implementation of BalancedView and, more specifically, on the overall effectiveness of the course for the 249 participants who completed the course,⁷³ the 56 participants in three-month follow-up and the 46 participants in six-month

⁷³ This study did not use a matched sample, as discussed in the methodology chapter.

follow-up.⁷⁴ Understanding the effects of the course on participants' attitudes and behaviours is an integral precursor to reflecting on the benefit of the various strategies within the course to reducing weight bias among participants, as will be discussed subsequently. As I show, the course was generally effective in meeting its aims. I discuss the impact of the course on participants' attitudes first.

5.2.1 Impact on explicit attitudes

Improving negative attitudes about fatness was a key aim of BalancedView. Changes to the following explicit attitudes are discussed below: fat phobic attitudes; attitudes about treating obese patients; and self-reported attitude change.

Fat phobic attitudes

Positive changes were seen to participants' fat phobic attitudes after taking BalancedView. On the Fat Phobia Scale, scores above 2.5 out of five are considered biased (Bacon et al., 2001). On average, immediately after taking BalancedView, participants ($N = 249$) scored as less biased on the 14-item Fat Phobia Scale ($M = 2.82$, $SD = 0.44$) than before taking the course ($M = 3.22$, $SD = 0.48$). This difference, 0.41, 95% CI [.35, .47], was significant $t(248) = 13.02$, $p < .001$ and represented a large-sized Cohen's effect ($d = 0.83$). Similar results were shown on the 16-item version. On average, immediately after taking BalancedView, participants ($N = 249$) scored as less biased on the 16-item Fat Phobia Scale ($M = 2.80$, $SD = 0.45$) than

⁷⁴ More details about sustained changes over time than presented here are available in the enclosed longitudinal evaluation report (Appendix D), authored by an evaluation consultant and myself. This report focuses specifically on the effects of the course on participants who were provided with incentives to complete the course ($n = 74$) and three- ($n = 56$) and six-month ($n = 46$) follow-up questionnaires.

before taking the course ($M = 3.20$, $SD = 0.47$). This difference, 0.41 , 95% CI $[.35, .47]$, was significant $t(248) = 13.16$, $p < .001$ and represented a large-sized Cohen's effect ($d = 0.83$).⁷⁵

At three-month follow-up ($n = 56$), the mean score on the 14-item Fat Phobia Scale was 3.0 ($SD = 0.45$) and at six-month follow-up ($n = 46$) it was 2.98 ($SD = 0.37$). At three-month follow-up ($n = 56$), the mean score on the 16-item Fat Phobia Scale was 2.97 ($SD = 0.45$) and at six-month follow-up ($n = 46$) it was 2.95 ($SD = 0.37$). This indicates that positive changes to fat phobic attitudes were maintained over time for the smaller number participating in the longitudinal cohort, based on group means.

In looking at individual changes in the Fat Phobia Scale average scores from before versus after the course, on the 14-item Fat Phobia Scale, 76.31% showed a positive improvement in their score at the post-course measurement point, 13.65% stayed the same and 10.04% had a slightly worse score, compared to before BalancedView. Similar results were found for the 16-item Fat Phobia Scale: 77.51% improved immediately after taking BalancedView, 12.85% stayed the same and 9.64% had a slightly worse score, compared to before BalancedView. As these results show, based on the fat phobia measure, most participants had decreases in their attitudinal weight bias right after taking BalancedView.

Attitudes about treating obese patients

Positive changes were also seen to participants' attitudes about treating obese patients after taking BalancedView, as per responses to the five adapted questions from the Attitudes about Treating Obese Patients scale. On average, immediately after taking the BalancedView

⁷⁵ The changes from pre-course to post-course for each Fat Phobia Scale item are highlighted in a table in Appendix E.

course, participants scored as less biased on the five items used from the Attitudes about Treating Obese Patients scale ($M = 2.09$, $SD = 0.68$) than at the pre-course measurement point ($M = 2.38$, $SD = 0.66$). This difference, 0.29, 95% CI [0.21, 0.38], was significant $t(248) = 6.94$, $p < .001$ and represented a small- to medium-sized Cohen's effect, ($d = 0.44$).⁷⁶ At the three-month follow-up ($n = 56$), the mean score on the five items used from the Attitudes about Treating Obese Patients scale was 2.06 ($SD = 0.66$) and at six-month follow-up ($n = 46$) it was 2.13 ($SD = 0.54$). This indicates that among those participating in the longitudinal cohort, positive changes to attitudes about treating obese patients were generally (though not entirely) maintained over time.

Self-reported attitudes

Another way explicit attitude changes were measured was through self-report. In the post-course questionnaire completed right after BalancedView, participants were asked to rate their agreement on a five-point scale with the following statement: "Participating in BalancedView has contributed to decreasing my weight-biased attitudes". Response options included strongly disagree, disagree, neutral, agree and strongly agree. Immediately after completing the course ($N = 249$), the majority of participants agreed or strongly agreed that the course contributed to decreasing their weight-biased attitudes (agree = 51.8%, strongly agree = 14.1%), while approximately a quarter were neutral (27.3%) and a small percentage disagreed (4.8%) or strongly disagreed (2.0%). At the three-month follow-up measurement point ($n = 56$), 75% agreed or strongly agreed (agree = 59%, strongly agree = 16%) that the resource helped to reduce their weight-biased attitudes (23% were neutral and 2% disagreed). At the six-month

⁷⁶ For changes by item from this scale see Appendix E.

follow-up measurement point ($n = 46$), 87% agreed or strongly agreed (agree = 63%, strongly agree = 24%) that the resource helped to reduce their weight-biased attitudes. Only 11% were neutral and 2% disagreed.

The qualitative data I collected on attitudes confirmed the descriptive statistics insofar as most participants articulated positive changes to their attitudes and beliefs about weight as a result of the course. For instance, interviewees discussed shifting their explicit attitudes:

Q: Any other changes you want to mention around attitude or behaviour?

A: Well, just the other big one was when I look[ed] at people before, I would look at them and judge how fit they were by how they looked. And so I've totally-- that's changed for me, like, everyone has [a] different body size and shape and it doesn't mean-- like there was the boy video where he's like a football player or something. Very active. And then he goes in and the first thing the doctor talks-- oh, you're overweight and, [the] boy, like, and he's just like-- thanks. And so just because you're big stature doesn't mean that you're not fit and that you're not healthy. (Female, social worker, eating disorders, in-person interviewee)

As this quote shows, this participant was able to challenge her beliefs about the relationships between higher weights and both health and fitness. At the three- and six-month follow-up points, the qualitative questionnaire data showed sustained improvements to attitudes and beliefs, as illustrated by the following quote at six-month follow-up:

I am able to determine when my beliefs or perceptions about patients are not true. I have also gotten better at not letting weight or diet impact the discussions I will have with a patient. I no longer feel certain attributes

are associated with certain weights, which has improved my practice.

(Six-month follow-up survey)

Next, changes to specific dimensions of weight-biased attitudes are articulated.

5.2.1.1 Changes to specific attitudes

As discussed, the desired outcomes of BalancedView included mitigating weight-biased attitudes about: 1) fatness as invariably unhealthy; 2) fatness as within personal control; 3) non-compliance with health care recommendations; and 4) attitudes about treating obese patients.

Scores and changes to each of these components are discussed below.

Attitudes about fatness as invariably unhealthy

Since medicalization was considered to relate to weight stigma by many involved in the development of BalancedView, attitudes and beliefs about weight and health were a key point of measurement in BalancedView. Given medicalization is only beginning to be studied as part of weight stigma, we did not have measures from the literature to draw on. Instead, we developed questions to assess medicalized beliefs that were administered to participants in the post-course questionnaire. Specifically, participants were asked to reflect on questions about weight and health and rate their perspectives from ‘before’ taking BalancedView and ‘after’. Results by question were as follows.

Figure 2 Perceptions of weight and health before versus after ($N = 249$)

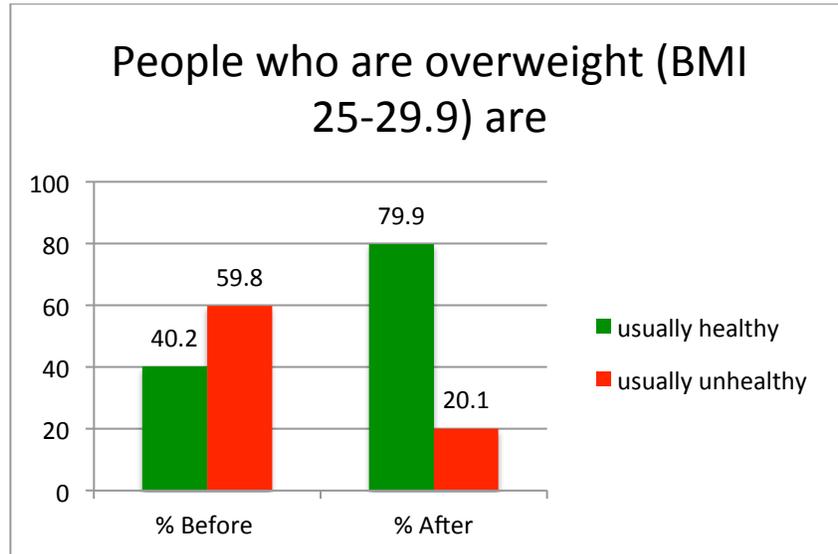
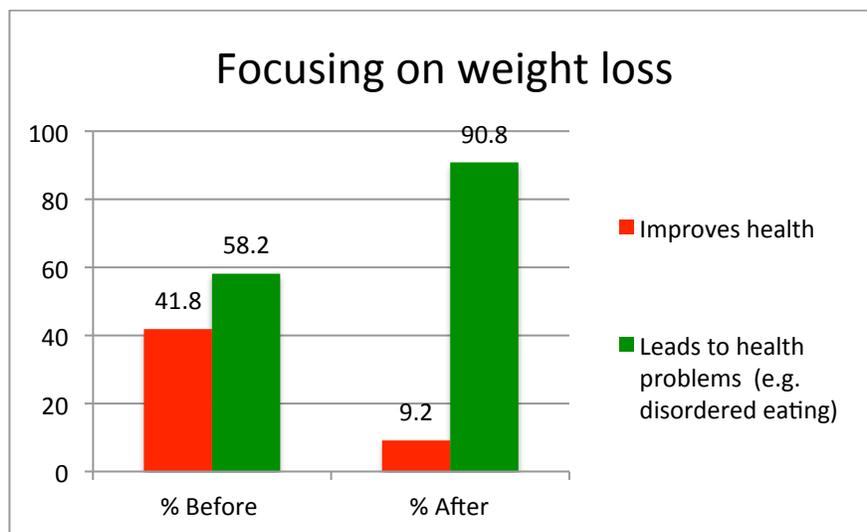


Figure 3 Perceptions of focusing on weight loss before versus after ($N = 249$)



As the above two charts show, after participation in the BalancedView course, participants ($N = 249$) were more likely to perceive overweight as potentially healthy, rather than unhealthy, and were more likely to believe that focusing on weight loss will detract from, rather than improve health. Given these metrics, the desired outcome of a decrease in medicalized beliefs appears to have occurred among many participants. Medicalized attitudes were also derived from a question

we added to the Fat Phobia Scale, where participants were asked to rate whether they perceived obesity as healthy or unhealthy on a five-point response option. On average, at the post-course measurement point, participants ($N = 249$) scored as less biased on the healthy/unhealthy question added to the Fat Phobia Scale ($M = 2.80$, $SD = 0.71$) than at pre-course ($M = 3.51$, $SD = 0.77$). This difference, 0.71 , 95% CI $[.60, .82]$, was significant $t(248) = 12.64$, $p < .001$ and represented a large-sized Cohen's effect ($d = 0.80$).

Attitudes about fatness as under personal control

In the post-course questionnaire administered right after BalancedView, participants were asked to reflect on questions about weight and its controllability and rate their perspective from 'before' taking BalancedView and 'after', similar to the above. Results by question were as follows.

Figure 4 Perceptions of 'excess fat' before versus after ($N = 249$)

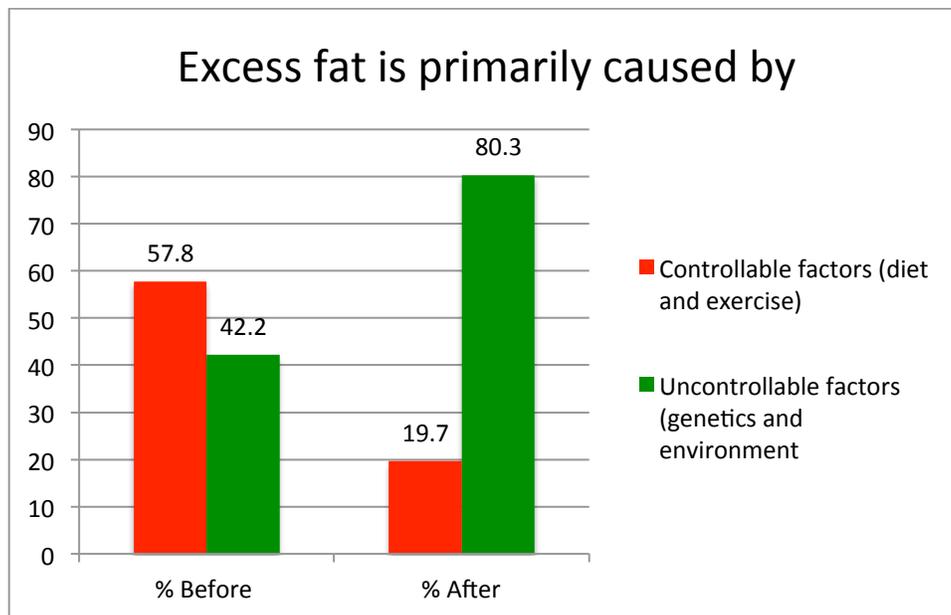
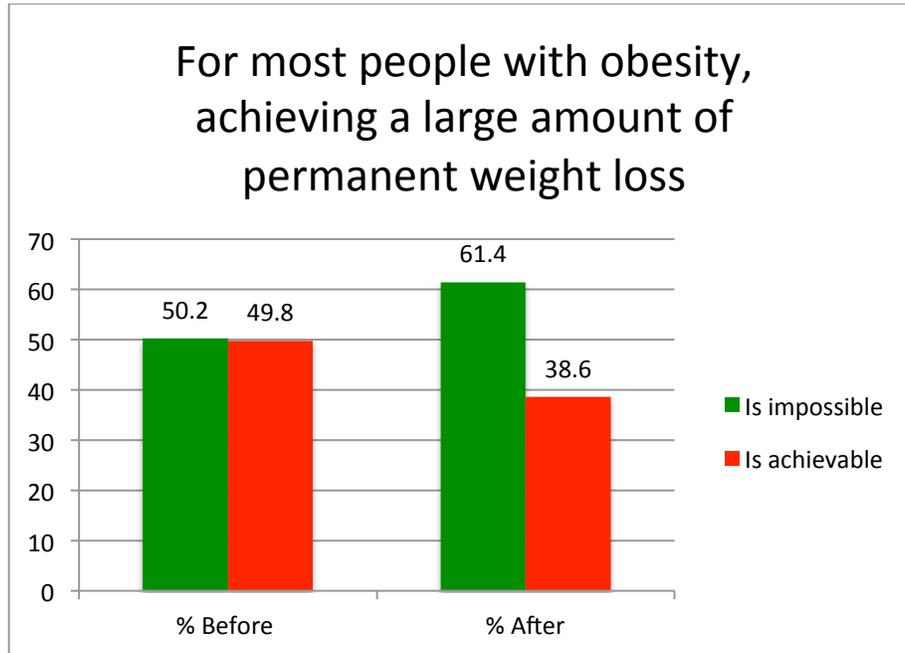


Figure 5 Perceptions of possibility of permanent weight loss before versus after ($N = 249$)



As these figures show, perceptions of controllability decreased following BalancedView (i.e. participants were less likely to see fatness as caused by controllable factors or to see a large amount of permanent weight loss as achievable). The controllability questions from the Fat Phobia Scale show similar results. For instance, on average, participants scored as less biased on the lazy dimension of the Fat Phobia Scale at the post-course measurement point ($M = 2.67$, $SD = 0.67$) than at the pre-course measurement point ($M = 3.03$, $SD = 0.76$). This difference, 0.36, 95% CI [.26, .46], was significant, $t(248) = 6.91$, $p < .001$ and represented a small- to medium-sized Cohen's effect ($d = 0.44$).

Another way changes to controllability beliefs were measured was through one question from the Attitudes Towards Treating Obese Patients scale. This question asked participants to rate their agreement on a five-point scale (1 = strongly disagree, 5 = strongly agree) with the following statement: "I feel that patients with obesity lack motivation to make lifestyle changes".

Lower scores indicate less bias. Although mean bias on this measure was low among participants before taking BalancedView, improvement was nonetheless seen from the pre-course measurement point ($M = 2.60$, $SD = 0.88$) to the post-course measurement point ($M = 2.17$, $SD = 0.83$). This difference, 0.43, 95% CI [.31, .54], was significant, $t(248) = 7.35$, $p < .001$ and represented a small- to medium-sized Cohen's effect, $d = 0.47$. These results indicate that after taking BalancedView, participants had altered controllability beliefs and were less likely to see obesity as a result of poor motivation.

Attitudes about non-compliance with health care recommendations

Health professionals' beliefs about whether patients with obesity are compliant with health care recommendations was also measured, again through a question from the Attitudes Towards Treating Obese Patients scale ("I feel that patients with obesity are often non-compliant with treatment recommendations"). As with the above, the response option was a five-point agreement scale (1 = strongly disagree, 5 = strongly agree). Although mean bias on this compliance measure was also low at the pre-course measurement point, improvement was seen from pre-course ($M = 2.69$, $SD = 0.81$) to post-course ($M = 2.31$, $SD = 0.83$). This difference, 0.38, 95% CI [.27, .49], was significant, $t(248) = 6.69$, $p < .001$ and represented a small to medium-sized Cohen's effect, $d = 0.42$. These results indicate that after taking BalancedView, health care providers were even less likely to perceive obesity as a result of a problem of non-compliance with health care recommendations.

5.2.2 Impact on implicit attitudes

The above attitudinal measures were about explicit attitudes, or those aligned with beliefs. Changing implicit attitudes was also something that the project team strove towards. The

Implicit Association Test (IAT) – as described in the methodology chapter – was used as a measure of implicit attitudes about weight at the start of the course ($n = 236$ valid responses), in the post-course questionnaire ($n = 238$ valid responses) and at follow-up (three month, $n = 56$; six month, $n = 46$). Not all participants reported a valid score on the IAT, which is why the sample size for the IAT is smaller at baseline and at the post-course measurement point.⁷⁷

On average, right after taking BalancedView, participants scored as less biased on the IAT compared to at baseline. This was based on a paired sample t -test of 232 participants who self-reported a valid IAT score (seven response options ranging from -3 to 3, with scores closer to 0 indicating the least bias) at both baseline ($M = 1.34$, $SD = 1.37$) and at the post-course measurement point ($M = 0.87$, $SD = 1.29$). This difference, 0.47, 95% CI [0.25, 0.68] was significant $t(231) = 4.34$, $p < .001$ and represented a small-sized Cohen's effect, $d = 0.29$.

The below table shows the percentage of participants preferring thin to fat people, based on *all available data* at baseline ($n = 236$), compared to right after the course ($n = 238$).

⁷⁷ In some instances, participants took the IAT but a reliable score was not computed for them due to, for example, too many errors in answering or delays in response time when taking the IAT.

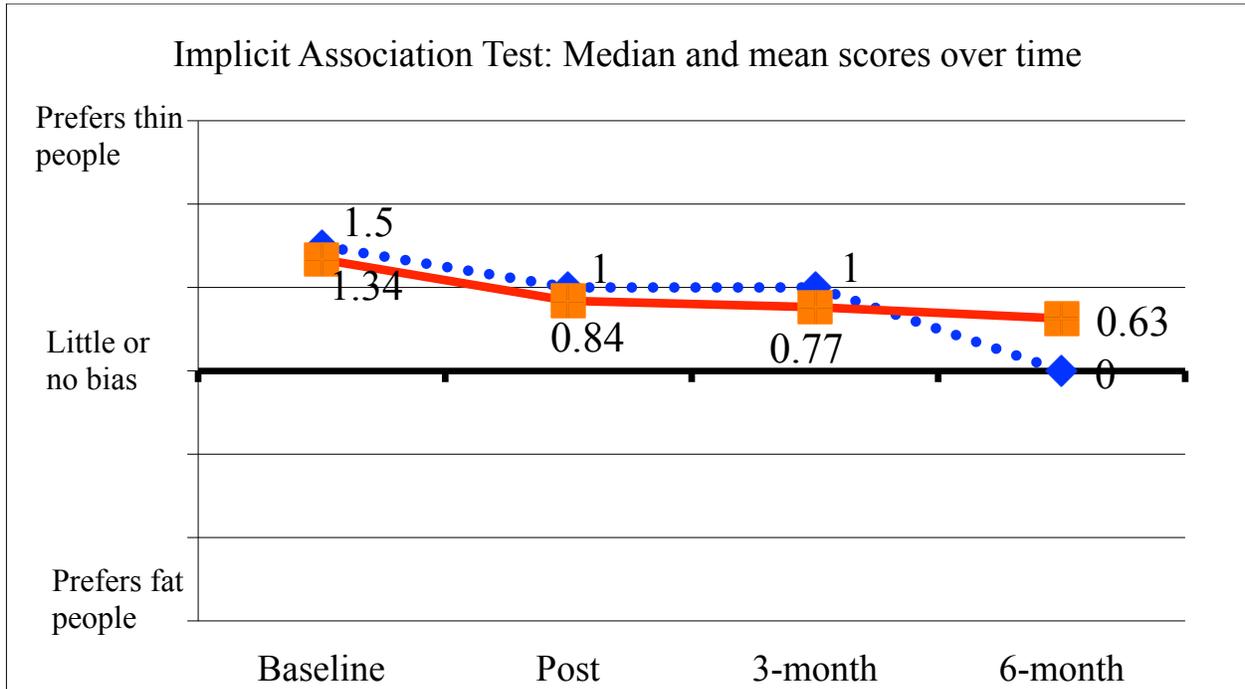
Table 7 Implicit Association Test (IAT) scores

<i>Rating of bias</i>	<i>Baseline</i>		<i>Post</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
-3.00 strong automatic preference for fat vs. thin	3	1.3%	2	0.8%
-2.00 moderate automatic preference for fat vs. thin	5	2.1%	10	4.2%
-1.00 slight automatic preference for fat vs. thin	12	5.1%	16	6.7%
0.00 little to no automatic preference for thin vs. fat	43	18.2%	66	27.7%
1.00 slight automatic preference for thin vs. fat	55	23.3%	74	31.1%
2.00 moderate automatic preference for thin vs. fat	62	26.3%	42	17.6%
3.00 strong automatic preference for thin vs. fat	56	23.7%	28	11.8%
Total	236	100.0%	238	100.0%

As the table shows, at baseline (the first activity in the BalancedView course), 73.30% had some degree of an automatic preference for thin over fat. At the post-course measurement point, however, this decreased to 60.50%. Also of note, the percentage of participants scoring as having little to no automatic preference for thin vs. fat (i.e. no implicit bias towards fat or thin) increased from 18.2% before taking the course to 27.7% right after taking BalancedView. Another way to assess changes is to look at the *total available*⁷⁸ median and mean scores at the different time points, as highlighted in the below chart. As the chart shows, the average scores improved right after taking BalancedView, trending from ‘prefers thin people’ at baseline to ‘little or no bias’ at the post-course measurement point, although median scores stayed the same across the first three time points and decreased at the final measurement point (six-month follow-up).

⁷⁸ The total available mean and median scores here are greater at baseline ($n = 236$) and post-course ($n = 238$) than the number of participants included in the t -test ($n = 232$), as the paired samples analysis excluded participants who did not have a valid score at both baseline and post-course.

Figure 6 Total available median and mean IAT scores over time



Box Plot Legend:				
	— Mean			
	◆ Median			
Time	Baseline	Post	3-month	6-month
<i>N</i> =	236	238	56	46

Based on this analysis, the IAT scores suggest a positive improvement in implicit attitudes, yet this is less than what was seen in relation to the explicit attitudinal measures. Next, changes to skills and behaviours are examined.

5.2.3 Impact on skills and behaviours

Closed- and open-ended questions were asked at the post-course measurement point and at both three- and six-month follow-up, to explore participants' perceptions of changes to their

practice and to their skills to avoid weight-biased care. The quantitative responses are presented first.

In response to the statement, “Participating in the BalancedView course has contributed to my developing skills to address weight stigma in my work”, participants responded to a five-point agreement scale (1 = strongly disagree, 5 = strongly agree). Higher scores imply greater agreement. On average, right after BalancedView and at both follow-up points, participants ‘agreed’ that the course helped them develop skills to address weight bias in their work, as highlighted in the below table.

Table 8 Agreement rating: Contributed to skills development

<i>Measurement point</i>	<i>Average agreement score</i>	<i>SD</i>	<i>Number of respondents</i>
Post-course questionnaire (<i>N</i> = 249)	3.69	0.74	249
Three-month follow-up questionnaire (<i>n</i> = 56)	4.11	0.49	56
Six-month follow-up questionnaire (<i>n</i> = 46)	3.98	0.45	46

At the post-course measurement point and at three and six-month follow-up, participants were similarly asked to rate their agreement with the following statement: “After taking this course, I am able to identify ways to avoid weight stigma in my practice”. As with the above, response options were on a five-point agreement scale (1 = strongly disagree, 5 = strongly agree). As the table below shows, at each measurement point, participants ‘agreed’ (on average) that after taking the course they were able to identify ways to avoid weight stigma in their practice.

Table 9 Agreement rating: Helped identify ways to avoid weight stigma in practice

<i>Measurement point</i>	<i>Average agreement score</i>	<i>SD</i>	<i>Number of respondents</i>
Post-course questionnaire ($N = 249$)	3.89	0.59	249
Three-month follow-up questionnaire ($n = 56$)	4.07	0.63	56
Six-month follow-up questionnaire ($n = 46$)	4.02	0.40	46

Similar to the above questions, at the post-course measurement point, participants were asked to rate their agreement with the following statement: “I will apply what I have learned in this course in my work”. The average response right after the course ($N = 249$) was 4.08 ($SD = 0.74$), or ‘agree’. At three- and six-month follow-up, this question was worded slightly differently, to explore if participants had applied what they learned in the course to their work: “I have applied what I learned in this course in my work”. Participants again ‘agreed’, on average. At three-month follow-up ($n = 56$) up, the average score was 3.48 ($SD = 0.97$) and at six-month follow-up it was 3.98 ($SD = 0.54$). This suggests that right after the course, participants intended to apply learnings from BalancedView and, among those who participated in follow-up, these intentions were generally followed through on later. In the following section, the qualitative comments participants made about changes to their skills and practice are discussed.

5.2.3.1 Qualitative examples of changes to skills and behaviours

Overall, right after taking BalancedView, participants felt that they were able to build their skills in order to make shifts to their practice to avoid weight stigma. As shared by one participant in the post-course questionnaire: “The course has given lots of skills and tools to use in interactions with patients which are practical and possible to implement into practice” (ID

1415, post-course questionnaire). Immediately after the course, few participants had yet had time to implement any changes, however. Nonetheless, participants identified their intentions to make shifts. Focusing on lifestyle changes and other health indicators, rather than weight, was a change participants intended to make:

I can identify changes that will improve our clients' experience, from the comfort of our waiting rooms to the way we greet and interact with them. Focusing on lifestyle changes rather than weight loss is also a key point to make sure we implement. (ID 1212, post-course questionnaire)

Participants also discussed intending to ensure that their work environments were not contributing to weight stigma:

I found the point about the blood pressure cuff very interesting. I have worked in a clinic where the BP cuff . . . does not fit a larger arm. I will make it a point now to address this concern. (ID 693, course reflection)

At three- and six-month follow-up, many participants reported having made positive changes to their practice. However, a small number suggested that they were already weight sensitive or did not have direct patient interactions of relevance, thus had not made changes. One change noted by participants was that they now focus on health rather than weight. Consider the following example:

I don't think I ever was cruel or rude to an obese client, but my focus on their need to "lose weight" likely reinforced negative attitudes and beliefs, and probably wasn't very helpful to them. Now I know to speak about things from a different angle, and that the focus needs to be on overall health, rather than size. (Six-month follow-up survey)

Participants reported bringing up weight less often, not bringing up weight unless clients want to discuss it and no longer requesting that clients step on the scale. In addition to focusing more on health and less on weight in their interactions with clients, at three- and six-month follow-up, participants reported that they had made other changes. Some participants reported speaking up when they saw weight stigma occurring at work. Others discussed environmental changes, such as ordering chairs without arms, or purchasing medical equipment to accommodate larger patients. As an example, one participant commented that they had: “. . . ordered scales with higher weighing capacity for our clinic as well as larger blood pressure cuffs” (Three-month follow-up survey).

Overall, the above subsections provide evidence that the complex and multi-faceted intervention of BalancedView was effective in reducing weight stigma among many, but not all, participating health care providers. The course was more effective on explicit attitudes than implicit, although positive changes were also seen in implicit scores. At three- and six-month follow-up, positive changes to attitudes and beliefs were accompanied by tangible changes to participants’ practices. Next, I discuss what is known about when BalancedView was less effective.

5.2.4 What is known about when BalancedView was not effective?

Although BalancedView was largely effective, this was not the case for everyone. Some people’s attitudinal fat phobia scores did not improve, for example, and some self-reported that they experienced no change in attitudes as a result of BalancedView. In looking at why this might be, it was apparent that some participants who showed no positive effect already had a low score of bias in the pre-course questionnaire. Among this group, they often self-reported having a

high degree of knowledge and awareness of this subject and thus found the content to be too 'basic'. For instance, as one participant noted, "I found the content to be somewhat basic. But again, that is probably because I have already done a lot of reading and thinking about this topic" (ID 225, post-course questionnaire).

Secondly, I noted that some participants appeared to have a low willingness to engage with the subject matter or perceived the course to be irrelevant to their practice. Some of these individuals were asked by their manager to take the course, which led me to think about whether mandating courses like this would be effective. However, many who were required by their employer to take the course did find it helpful and improved on the measures used. Nonetheless, for some, low personal relevance and low interest, coupled with being required to take the course, resulted in them getting little out of it. For instance, one participant who worked in an organization where all staff were recommended to take the course said "I did not learn a lot from the course . . ." and that they did not counsel specifically about weight as part of their role, nor did they have this as a learning need (ID 516, post-course questionnaire). Another participant who was required by their employer stated that they resented "That I 'had' to complete this course, which already put a negative feeling of the course in my head when I was completing it" (ID 962, post-course questionnaire). This participant described weight as relevant to their practice only when weighing babies.

Thirdly, some had issues with the online learning medium, including technical challenges, finding it too lengthy or not liking the online learning activities that seemed to lead to lower levels of effectiveness. Participants' responses to the online nature of the course and its learning activities are discussed later in the findings.

Only on a handful of occasions was the course not effective for participants who wanted to engage and learn (with the exception of those who came in with more advanced knowledge or had challenges with the online medium). Among this small group, there was extremely limited data and, while it is possible to speculate, it was not possible for me to draw conclusions as to why. For instance, one male who was interviewed described not really changing his beliefs as a result of the course. He attributed this partially to conflicting science. He said that initially he was swayed by the course content and statistics but when reading news articles about studies that contradicted the BalancedView content, he decided that his initial beliefs were probably correct. Another woman who was interviewed described making some shifts as a result of the course but struggled to really change her implicit attitudes about weight as controllable. For her, she described these attitudes as deeply engrained from a young age and reflected that her own feelings about her body and weight probably play into how she sees weight more generally. Next, findings from the implementation of BalancedView in relation to research question two ('what strategies can be employed to reduce weight stigma among health care providers in BC') are discussed.

5.3 What was learned about strategies to reduce weight stigma among health care providers during the implementation phase?

Now that I have articulated the general impacts and effects of the BalancedView course, I next discuss findings in relation to what strategies within BalancedView were most influential to participants in reducing weight stigma, based on the implementation data. In particular I reflect on what the key ingredients were to success within BalancedView. Themes identified revolved around:

- 1) Patient stories and appealing to the heart

- 2) Appealing to the mind: The influence of evidence
- 3) Exposure to competing ideas on medicalization paired with health-centred education and skill building
- 4) The importance of raising awareness and encouraging self-reflection: But should we use the IAT?
- 5) The importance of a multi-prong approach
- 6) Pros and cons of a multi-hour, multi-medium, interactive, online course

The ordering of themes as per above does not represent one theme as a priority over another, other than the first theme on patient stories and the influence of that in building empathy was the one that stood out the most and is thus discussed first. This is illustrated through the below table which shows the average participant rating ($N = 249$) of the impact of different course components on a scale of one to eight, with one implying most helpful to learning and eight least helpful.

Table 10 Impact rating of course components

Average rating	Component
3.00	Patient stories with weight bias in health care
3.82	Professionals sharing experiences of change
4.17	Information on the myths about body weight
4.31	Information on the consequences of weight stigma
4.59	Information on health-centred approaches
4.71	Information on the medicalization of weight
5.15	The opportunity to reflect on your beliefs
6.23	The video scenarios

The importance of using patient stories and appealing to people’s emotions was also illustrated by how data driven this theme was. The utility of these patient stories and appealing to the heart through evoking empathy is discussed next.

5.3.1.1 Patient stories and appealing to the heart

Patient stories were featured strongly in module two of BalancedView, entitled ‘Patient Voices’, in which several patients were filmed discussing their experiences of weight bias in the health care system in BC. One of the most salient findings from the implementation of BalancedView was regarding the effectiveness of using these real life stories to evoke a greater sense of empathy among viewers, increase awareness of weight bias and create motivation to make changes to address weight stigma. This coheres with the finding in the development phase that emotions can be used to motivate change. Data collected through the interviews, scripted reflections, the post-course questionnaire and follow-up surveys all demonstrated how powerful

and impactful these patient stories were on participants, and how emotional learning can be highly influential as part of reducing weight stigma. Consider the following interviewee quote:

Because it is such an emotional thing, I think that the emotional affects me more. As I say, I can read all the facts and research and scholarly papers, but for years I thought that BMI was done-- research-based whatever. And all those other things-- I don't know. I think that for me to be influenced by something to change, I want to see how it affects people, in this type of a situation, for this type of problem because this is an emotional-- ultimately an emotional problem. It's all emotional. (Female, community nurse, in-person interviewee)

Other interviewees spoke about the influence of people's lived experience and stories in catching their attention and helping them relate:

I thought . . . the people . . . with lived experience . . . did a fabulous job of just being very real and relatable . . . that's a piece that really speaks to people. And maybe it's something for someone who's got the academic knowledge to be talking about it. But for somebody with lived experience to really share that, it grabs people and then you can really get it. (Female, social worker in community mental health, phone interviewee)

With this interviewee I asked her why the personal stories were so impactful for her. In her response she articulated that understanding something for one person helps her relate to "thousands of other people who might have similar experiences" (Female, social worker in community mental health, phone interviewee). With another interviewee who also found the patient stories powerful, I similarly examined why. His response illustrates what others also

discussed in that the stories created a sense of empathy and a deeper understanding of what people who experience weight bias have been through:

It's personal. The personal angle always touches. And sometimes we hear a lot of these things and they're very abstract. And it's hard to kind of put your finger on what exactly it is. And the stories kind of bring that to life and you go, okay. I totally see why you got shitty service there, right. Why you would never go to a doctor again. I can see that now, right. So it makes it kind of clear and crystalized. (Male, dietitian and food policy, in-person interviewee)

Much like the interviewees, participants often commented on the impact of the patient stories in the scripted reflections and questionnaires. Participants discussed being deeply upset or angry to hear of the injustices patients have experienced in the BC health care system due to their weight and a motivation to make sure this does not continue to happen. In the course, participants also articulated how the stories helped them reflect on their own biases:

I think this is an important video – the lived experience is always one aspect that seems to be most profound when learning in these types of courses. The lived experience of the people in the video has made me reflect on some of the biases I may hold. Often, when working with a client who is obese, I often jump straight to the health issues that could arise because of this (in my mind) so that it may cloud my interaction with them to help with the presenting problem or the reason they came in. (ID 753, course reflection)

Interestingly then, the patient stories not only had an effect of creating empathy and evoking emotions useful to transformation, but also helped participants gain insight into their own biases, thus connecting to the other stigma reduction strategy of awareness raising.

Also of note, at follow-up, participants who completed three- and six-month surveys continued to reflect on the impact of the patient stories and how these stories raised their awareness of how heavier patients might be feeling:

To me, the voice of the patient is the most important lasting lesson learned from this course . . . listening to the patients directly really gave me a sense of what they have been experiencing, their frustration, their disappointment, their helplessness. The way these patients are being treated by their doctors is unbearable, and we need to put a stop to it.

(Six-month follow-up survey)

While the emotional stories were the most impactful according to many participants, appealing to the mind through facts, science and information provision was also a critical ingredient to the success of BalancedView.

5.3.1.2 Appealing to the mind: The influence of evidence

This theme pertains to the helpfulness of using scientific messaging to counter the ‘myths about body weight’ to sway people to reconsider their attitudes, beliefs and clinical practices. In the drop-down ranking of most influential components of the course in the post-course questionnaire, the component on the ‘myths about weight’ scored third. While many participants perceived the patient stories to be the most influential, the importance of using science or facts to appeal to participants was also a key finding in terms of how to help reduce weight stigma among health care providers. This theme emerged in particular through the interview conversations. In BalancedView, there is a section challenging beliefs about weight as personally controllable through diet and exercise, challenging myths about heavier people lacking motivation and the myth that weight is the best measure of health. For every myth that was

challenged, evidence was provided in support. This drew on attribution theory, in part. Some participants found this portion of the course that was grounded in the evidence and science to be the most influential:

I thought-- the part that I really liked is, like, the evidence stuff. That stuff I find the most fascinating kind of, because for me, working with-- in the healthcare profession and physicians, they're very evidence based. And if you want to convince them of something you need to show the evidence. So I think that part was the most helpful. (Female, dietitian, chronic disease, in-person interviewee)

As this quote shows, using evidence to appeal to health care providers may be a useful part of reducing weight stigma specifically with health care providers, because this is a population who, by education and training, may be highly influenced by evidence and research. As one interviewee shared: "I'm pretty open-minded. And I'm the type of person where, you know, with good discussion and logical, factual information to back it up, I can be swayed" (Female, social worker, eating disorders, in-person interviewee). Some course participants also argued that education based on science was key to changing bias. As an example, as one participant argued, "Real education stripped of influences from food manufacturing and industry based on actual scientific research is the key" (ID 244, post-course questionnaire).

Of note, while this evidence-informed component of the course was discussed as one of the most influential components by some participants, others discussed the utility of pairing education and scientific information with emotional messaging. For instance, they discussed how the statistics created an initial sense of buy-in, but then the stories were what brought it to life and made the learnings stick. As one discussed:

. . . [I] liked the-- to be honest, I don't remember statistics and that sort of thing from it. But in the moment, that sort of thing really did make it very real for me. It helped me to think, oh, yeah, this is really something we need to pay attention to. So combining kind of that hard data stuff with the stories and-- yeah, could I pull back any of the stats now? No. Do I know it's important? Yes. (Female, social worker in community mental health, phone interviewee)

As this quote shows, the story was complemented with statistics and science. Stories may help create emotional buy-in, but if weight stigma is also about mistaken beliefs about weight and its controllability and health implications, then the strategy to reduce it needs to find ways to also address these beliefs. Above and beyond challenging beliefs, providing evidence was also important to increasing participants' understandings of the legitimate harms of weight bias and the need to address it in health care, particularly for those with little background knowledge on the topic.

5.3.1.3 Exposure to competing ideas on medicalization paired with health-centred education and skill building

This theme pertains to the importance of exposing participants to different ways of thinking about medicalization. Within this finding I also discuss the utility of providing participants with health-centred education and skill building. If medicalization has potential harms and stigma implications, then a new way of practice becomes necessary. This theme is discussed below in two parts. First, I reflect on the impact of exposing participants to competing ways of thinking about the implications of medicalizing weight, as per the balanced approach

taken in BalancedView. Second, I analyze the benefits of the health-centred curriculum used in this case.

Exposure to the BalancedView debate on medicalization raised awareness of the possible benefits and harms of medicalizing weight and encouraged participants to critically reflect on their position on the topic. Many participants left the BalancedView course with an altered perspective on the health implications of higher weights, suggesting that this way of juxtaposing competing ideas had some effect on medicalized beliefs. The below quote from an interviewee is illustrative of this shift in medicalized beliefs:

I think through this program too, like, just-- yeah, realizing that weight is not necessarily a measure of health. That you can have a person who maybe is a higher than what they would consider a normal BMI and their health is great. And you can have someone who's under-- within a normal BMI and their health is really terrible. So that's not a total picture of it. (Female, administrative role, weight management, phone interviewee)

In the BalancedView course reflections participants also described having altered their beliefs about obesity as an illness following exposure to the medicalization content. As one participant shared through a scripted reflection: "So making the assumption that physical illness exists in obesity without a holistic assessment is hogwash. This discussion was very powerful and left a definite impact" (ID 621, course reflection). The impact of the way the medicalization content was presented was also revealed through the decrease in medicalized beliefs from the pre-course measurement point to the post-course questionnaire, as discussed in the effectiveness subsection earlier.

Overall, many health care providers who took the course discussed in their qualitative comments on the BalancedView platform how helpful it was for them to be exposed to the medicalization debate presented within the course, and that they appreciated how the course encouraged critical thinking rather than trying to resolve the debate. Consider, for example, the following quote:

I like that you have included the ‘debate’ on medicalization of obesity as I too believe there are many conflicting views and it is valuable to be armed with these views as I am formulating my own opinions and practices on this topic. (ID 262, course reflection)

As I discussed previously, I initially wanted to see the course present medicalization as unequivocally contributing to weight stigma and as creating harm. However, these positive implementation data have demonstrated to me the benefit of our compromise to present a balanced perspective.

Overall, participants overwhelmingly appreciated this part of the course, describing this portion of the course as interesting, stimulating their thinking, raising awareness and promoting them to examine their deeply held assumptions about weight and health. Very few participants had reactions to the medicalization section that suggested the content had little impact on them or that they did not appreciate it. Only one participant felt like the course did not take a clear enough stance on the issue: “Still a little confused about the debate on medicaliz[ing] obesity. This part wasn’t quite clear as to [where] balanced view falls on this continuum” (ID 688, post-course questionnaire). The only other comment that suggested the content on medicalization was not helpful was from a participant who felt like the way the information was presented within BalancedView was polarizing rather than seeking common

ground:

I don't see this topic of "medicalization of obesity" as having two sides. There are many different and overlapping perspectives (not two mutually exclusive perspectives). I'm afraid that discussing the "medicalization" of obesity can alienate medical practitioners, and it's not necessary because we all can apply health-centred strategies (Module 5) without talking about "medicalization". Health [A]t Every Size and medicalization of obesity are not polar opposites—the[y] are overlapping concepts, and it's better to focus on common goals and areas of agreement than conflict. (ID 29, course reflection)

This participant felt that focusing on medicalization was divisive and that health-centred approaches can be applied without focusing on the medicalization topic. However, one major rationale for a shift to health-centred care is that weight-centred (medicalized) care may have harms and be ineffective. Regardless, despite this critique, on the whole the qualitative data suggest that the information on medicalization and the strategic balanced approach taken was perceived as useful and thought provoking by most participants. Next, the second part of this theme is discussed, which related to providing participants with health-centred education and skill building.

If medicalization may be stigmatizing or comes with possible consequences, then health-centred care becomes an essential component of ensuring that health care practice is not biased or unhelpful to clients. One benefit of a health-centred approach is that it can be adopted regardless of whether or not health care providers perceive obesity as inherently harmful to health. Among those who took BalancedView, the health-centred skill building that was offered in the course helped to address the behavioural manifestation of weight bias among health care

providers. Educating on the importance of a health-centred approach and providing practical suggestions and virtual practice opportunities helped participants build understandings of the importance of a health-centred approach, think about how it may be applied in practice and begin to make initial practice shifts. Participants shared how this part of the course helped them focus on health during conversations with clients, rather than jumping immediately to focusing on weight. In essence, this portion of the course contributed to participants making a shift away from medicalized practices. For example, in the post-course questionnaire, sentiments such as: “I have learned ways to incorporate health . . . centred conversations rather than focusing on problems I believe are caused by weight [or] could be resolved by losing weight”, were often shared (ID 1111, post-course questionnaire). Overall, I found that after exposure to the health-centred content, participants were more likely to focus on helping clients make lifestyle changes rather than on weight loss. Next, learnings about awareness raising and self-reflection as part of stigma reduction are discussed from the implementation of BalancedView.

5.3.1.4 The importance of raising awareness and encouraging self-reflection: But should we use the IAT?

Previously, I demonstrated how participants involved in developing BalancedView thought that it was important to raise awareness of the prevalence and harms of weight stigma and encourage health care providers to become aware of and reflect on their own implicit biases about weight. In the development phase, we felt that one helpful way to get participants to consider their implicit biases was through the Implicit Association Test (IAT). In the implementation phase, the data once again pointed to the importance of raising awareness of weight stigma both generally and about one’s own biases. However, there was mixed feedback

on whether the IAT was useful in helping people be aware of their own attitudes, with more people finding the IAT to be unhelpful to their learning.

Overall, many participants at the different measurement points nonetheless felt that awareness was critical to change. This is illustrated through the following quote from six-month follow-up:

[The most important, lasting lesson learned from this course was that] I was previously naive to weight bias and how it impacted my life, interactions and practices. The more I reflect on the course I recognize it in all different ways in myself and others. The first step in change is being aware of what needs to change and I am now more aware than ever. (Six-month follow-up survey)

Raising awareness in a general sense, such as of the consequences for patients and specific examples of what constitutes weight bias, allowed participants to have the motivation and knowledge necessary to address weight stigma in their practice. Self-reflection or self-awareness allowed them to consider their own potential unintended complicity in weight stigma. As stated by one, “It made me think more about my own beliefs around weight and the possible stigma I may convey to others and while working with clients” (ID 228, post-course questionnaire). Self-awareness was also perceived by many participants as useful to improving non-biased practice. This was exemplified through comments such as: “Awareness helps me to identify and look for weight stigma in my practice and put mitigating strategies in place” (Three-month follow-up survey).

Awareness around weight stigma was increased multiple ways, including through the already-discussed themes of information and evidence (appealing to the mind), stories (appealing

to the heart) and repetition of messages in videos and text-based content. Awareness of one's implicit attitudes was attempted through the Implicit Association Test (IAT). Of note, while the IAT was a very useful method of getting some participants to reflect on their own implicit attitudes, there were notable disadvantages to this strategy. Next, I discuss the benefit of the IAT as a tool to cultivate self-awareness, followed by the downsides of using it, which include its time-consuming nature, participant perceptions of test invalidity and the possibility of offending some users.

In the development phase we predicted that the IAT would be a useful exercise for participants to reflect on their own unconscious biases and that doing so would be a tool to facilitate awareness and create motivation to change. The implementation data showed that while the IAT was a very useful tool for some participants to reflect on and become aware of their bias, more often than not participants did not find the IAT a helpful exercise. Each of these is discussed in turn.

A small portion of participants found the IAT to be useful to their learning and personal growth. In particular, the IAT worked well for people who desired to be unbiased, were not aware of their own level of bias and who also perceived the IAT results as accurate and valid. As one participant in the course platform shared: "In some ways, I was surprised how 'hidden/embedded' our weight biases are. It will make me more conscious in my communication as I challenge myself to be a better communicator" (ID, 207 course reflection). This positive impact from the IAT was maintained for some participants at follow-up:

Found it to be over all a good course. The IAT was an eye opener and a great addition to the course. I can't remember much about the course otherwise as it has been some time since I completed it. (Six-month follow-up survey)

A few of the interviewees also spoke of the benefit of the IAT to their learning. They talked about how it helped them to acknowledge their bias and be more open to the idea that perhaps they have some implicit judgments and thoughts about weight that need challenging.

. . . that jumped out at me that it was much higher than I would've guessed. Like if I had to give myself an estimate of my bias, I would've probably marked myself as having very little bias. I was just shocked, right? And I think I'm a pretty open and reasonable person. And in my arena where I work, I know there's people that are much less-- I've heard them talk so I know-- what would they be, right? And so I just think, "Wow." You know? So it's like I think there's a lot of room to improve. (Female, dental hygienist in public health, phone interviewee)

In contrast to this, I noticed that some participants who were already aware of their biases found the IAT less useful. In the words of one participant, when asked in a scripted reflection if they were surprised at their score, "No. I think we are conditioned in the media/society to prefer thin people" (ID 445, course reflection). The IAT was also not a useful exercise for some who found the methodology of the IAT test to be suspect. Some participants commented that they did not fully understand the instructions and thus their results were not relevant. Others felt like the exercise itself had flaws. In the words of one, "I seriously question the validity of the test. I believe it reflects my muscle memory and has no reflection of my actual thought process!" (ID 648, course reflection).

In addition to this, some participants found the IAT test to be distracting from their learning experience for other reasons, such as it being too long and time consuming (e.g. “I found the IAT test a bit long” [ID 786, post-course questionnaire]) or insulting. Regarding this latter point, one commented “[I] consider myself non judgmental and accepting of individuals for who they are – [I] found [the] test insulting” (ID 516, course reflection). The most common comment about factors that impeded learning for participants – which was one of the questions asked in the post-course questionnaire – was the IAT. As one participant commented: “There are components that [are] very frustrating like the IAT. I don’t think it teaches us much- it’s for you to learn about us” (ID 633, post-course questionnaire). Next, the importance of a multi-prong approach is discussed.

5.3.1.5 Importance of a multi-prong approach

What are the essential ingredients to successful weight stigma reduction in health care? In the focus group, participants highlighted that there is no single ingredient that creates change:

. . . Like, what is the active ingredient that actually makes people now become aware of that [and shift their thinking]? I don’t think it’s just one discussion or one process. It’s kind of a combination of things, which is interesting that your own experiences that you’re talking about come from one to three years of dialogue around this issue. (Focus group participant, female)

In the case of BalancedView, multiple intersecting messages and processes culminated in some degree of change for most course participants. As I have shown so far, some of these essential ingredients are appealing to people’s emotions through real life stories, drawing on evidence to challenge beliefs, exposing participants to different perspectives on the pros and cons

of medicalizing weight and raising awareness. But what else? This finding pertains to the importance of bringing together these stigma reduction strategies and more to leverage change. In particular, what about social consensus or attribution approaches? I discuss these here rather than as themes in their own right as they were not saturated throughout the implementation data set to the same extent as the above themes.

The importance of social consensus was suggested through the fact that professionals sharing their stories was ranked as the second most useful component of the course, on average, based on the drop-down list of components ($N = 249$). On the other hand, however, participants had less to say about the influence of this, in both the interviews and the qualitative exports from the course platform, in comparison to the above themes. However, the influential nature of the professionals sharing their stories and of a reputable organization like the PHSA putting the course content forward both had impact, suggesting that using social influence is one ingredient in a larger mix of essential elements to reduce weight bias. For instance, as one interviewee discussed regarding the professional videos:

So I mean, what I love is seeing these health professionals who are really-- they're not just a random dietitian. Like, he [the video speaker] is well known in our profession. He is sort of-- at Dietitians of Canada basically an honoured member and those are the people who are voicing these shifts. And I think that's powerful. So yeah, so I think it's great when we can show that it's not just anyone, but some of the people who are innovators in the profession that a lot of people consider their sort of quote, unquote, heroes, if you will. And if we have those people saying, hey, look, right, we believe in

this ‘cause it’s what we believe is right. And then I think that’s powerful. (Female, dietitian, weight management and eating disorders, phone interviewee)

Regarding the influence of the course coming from the PHSA, one participant in the course platform said, “I believe a training program that comes from [a] health authority will be a great way to start this conversation and bring awareness to weight stigma” (ID 296, pre-course questionnaire). As another interviewee said that the persuasiveness of the course in general was underscored by the fact that its contentions were being espoused by an influential organization like the PHSA:

But when you feel like you’re going with what-- even though maybe it’s not popular yet, but what is sort of coming down the pipeline through the province, through the provincial health authority and stuff. Definitely you’re-- you feel a bit stronger in stating those kind of things. (Female, dietitian, chronic disease, phone interviewee)

As this quote shows, the power of social consensus was less about changing her own attitudes and more about feeling empowered to express her explicit beliefs about weight. Another said: “I think if professionals address it and they can influence other professionals who might not be influenced by any other means, that’s the most important thing. Yeah, to see that approach is very, very important” (Female, administrative role, weight management, phone interviewee).

Much like social consensus, drawing on attribution theory to challenge controllability beliefs was also a helpful ingredient in the mix of other ingredients, but not one that was discussed in enough depth in the qualitative implementation data to merit it as its own theme. In the course, the utility of attribution theory, along with the other approaches, was tested. One way to examine the utility of challenging controllability beliefs as a stigma reduction strategy is to

assess whether controllability attitudes or beliefs were mitigated through the course. In the case of BalancedView, as I have shown, controllability beliefs did change for many participants. As with medicalization, if perceptions of weight as within personal control are considered part of weight stigma, then challenging these beliefs is essential. In the data from the course platform, participants spoke of an enhanced understanding that weight may not be personally controllable. The effects of learning about the myth that weight is easily personally controllable varied depending on the person's prior level of knowledge. Some interviewees, for example, stated they were already aware that weight was not easily personally malleable.

Q: So when we were talking about, you know, the challenges with controlling weight and how weight isn't something that's entirely within an individual's control [and] there's lots of genetic factors, etcetera. How was that for you receiving that information?

A: Yeah, I totally agree.

Q: Yeah, so you're already aware of that stuff?

A: Yeah, yeah. (Female, social worker, eating disorders, in-person interviewee)

Thus, this section of the course was perhaps not as influential for those with pre-existing knowledge in this area, however this does not preclude that it might be important for others. As one interviewee discussed, it was not new information for her, however she felt that for others with less knowledge it would be "critically important" (Female, social worker in community mental health, phone interviewee). Indeed, some of the interviewees with less pre-existing knowledge reflected on the utility of having their beliefs about the controllability of weight challenged. One individual described learning that a large amount of weight loss may not be as

sustainable as they previously thought as “. . . an ah-ha moment” (Female, healthy living coordinator and counsellor, phone interviewee). Another talked about the benefit that learning this kind of information can have for clients with internalized weight bias:

. . . And I feel like it can empower others. If you can, say, help clients realize that they aren't wrong in their weight, that their weight is not completely within their control, maybe set them free from some of the limitations or ways they've been living. So yeah, so it just-- I guess for me it's [inaudible] could be empowering, I would hope, for most people. (Female, dietitian, chronic disease, phone interviewee)

Two of the individuals interviewed did not feel like they were able to fully challenge their controllability beliefs and thus the impact of this part of the course was less. In the words of one male interviewee: “I dunno, I think I basically just said that I'm not challenging those [controllability] myths” (Male, technician and supervisor diagnostic imaging, phone interviewee). When I dug deeper with him, he discussed that the science was too conflicting for him to be able to believe this. He said that “I was being swayed and then I saw that article⁷⁹ and that kinda kept me”. The article he was referencing was a news article based on a study that he read around the time of BalancedView that countered some of the claims that were made in the course. Of note, he also discussed never struggling with his weight personally. When questioned why he held beliefs about weight being something individuals should strive to lower if they were fat, he endorsed the notion of personal responsibility over health. In his words: “uhh I think I just have this whole almost socialistic idea of society in that we're all in it together and um yeah

⁷⁹ In the interview he discussed believing that the news article was based on scientific fact.

that's my bias. Um we all have a responsibility" (Male, technician and supervisor diagnostic imaging, phone interviewee). Interestingly, he was able to articulate that he was aware that long-term weight loss might be a challenge for people; however, he persisted in feeling like weight loss was something heavier individuals should strive towards, largely because of the health implications and the burden he perceived this put on the health care system. He also described feeling like the resolution to weight bias was for us as a society to come up with a solution (e.g. medical advances) so that everyone can be thin. (As an aside, I found this to be a contradictory statement as when asked if he felt like there were parallels with racism, he was able to discuss how a helpful response to eradicate racism was to increase diversity).

The other individual who was not able to challenge her controllability beliefs had a different experience. For her, she described making intellectual shifts and understanding on a logical level that it may be challenging for people to control or change their weights, but not being able to let go of her implicit assumptions about weight as controllable. In her words: ". . . we're sitting here having this conversation. But deep down in the back of my head, I feel like oh, you probably could have controlled it better. I don't know. I'm being really honest" (Female, community nurse, in-person interviewee). She reiterated how hard it was to accept that weight was something an individual might have little control over, and she understood it on a conscious level, but to really believe it deep down – despite her own personal challenges with controlling her weight – was a different thing:

A: It is hard for me to accept it. I guess I can understand it to a certain extent. There are people, like my friend . . . who could sit and eat potato chips all day and never gain a pound. And there are people who just-- their physiology is different. Their bodies are just different. So I guess to some extent I can say, well--

- Q: How does your own experience relate to that? Like, have you found it easy to control your weight? Or is it something where you're just, like--
- A: No, it's always been challenging, always. Even when I was physically active, very physically active, it's always been really challenging to do that.
- Q: So it's interesting that you found that trying to lower your weight has been hard. But yet you still have a hard time accepting that maybe--
- A: Oh, I know that it's not my fault, absolutely. That's what I'm saying now, but, like, there's a difference between understanding something, understanding a concept and really believing it. And this is--
- Q: Fair enough.
- A: It's-- it all goes back to things that are engrained in you. (Female, community nurse, in-person interviewee)

She went on to discuss how her beliefs about weight were mediated by her own negative relationship with food and her body. In general, among the interviewees, their own experiences with their weight and their perceptions of others' weight struggles mediated how they received the controllability information. For instance, one dietitian who described never struggling with her own weight said that seeing how difficult it was for her clients to lose weight made the statistics on the challenges of long-term weight loss through diet and exercise very believable. Another described being able to accept the evidence presented due to some weight gain in her own life in the past that was not caused by changes to diet or exercise, but rather by hormones. Next, the final theme pertaining to research question two is discussed.

5.3.1.6 Pros and cons of a multi-hour, multi-medium, interactive, online course

In the development phase, for strategic reasons, the team decided to use the funds for BalancedView to develop an online intervention, as an online intervention could be both wide reaching and sustainable, with high one-time costs but low ongoing costs. Because of this, an in-person intervention was not considered. However, that does not preclude reflecting on the utility of the online nature of BalancedView and other process related elements, such as length and the multiple mediums used like text, video and interactive activities and discussions. With this theme I show that while the online, interactive, multi-medium (e.g. text-based and video-based), multi-hour nature of BalancedView was effective and perceived as useful by some, others found the intervention less helpful because of these elements. Each is discussed in turn.

In terms of online learning, I found that this was an effective strategy for some learners, while others would have preferred in-person learning. For instance, one interviewee discussed how the benefits of online learning included an anonymous environment in which they could be honest with their biases and the ability to self-pace based on workload. Others agreed that a benefit of an online course was they could work at their own pace. In contrast, some found that the online nature of the course made it harder to learn as there were competing demands at work:

Also caseload demands are very high so this was stressful to have to complete as a mandatory course with time constraints. [I] feel that [I] rushed through modules as I was trying to multitask and did not get as much as I would have if there were an in house discussion/presentation. (ID 1084, post-course questionnaire)

A few also commented that in-person learning would make it more relatable and put a human face to it. As one said: “. . . make it human, give us a chance to step away from our computers”

(ID 964, post-course questionnaire). As another said: “I think the online format was really great, however I would have preferred more face to face” (ID 296, post-course questionnaire).

Another consequence of online learning that I discovered was that learners may not actually engage with the material if unmotivated. As one user suggested about their co-workers: “I feel like staff approach Balanced Views with a pre-existing negative attitude because they know it is long, and then they click through as quickly as possible and miss all the valuable information” (ID 758, post).

A further drawback to online learning was that not all the participants in this study had the required technology to access the course properly. Some users with older Internet browsers had issues with functionality, for example. Another described struggling to fully engage with course functionality on their iPad: “I did the majority of the course on my iPad and I couldn’t pause and make an observation using my iPad. I had to wait and reopen those slides from an actual computer” (ID 270, post-course questionnaire).

A final drawback to online learning is the content itself will remain the same, regardless of who takes it and what their learning needs may be. This means that the course may not be as appropriate for someone who already has a lot of knowledge about weight stigma since it was targeted towards those with lower pre-existing knowledge. It also means that it may be more appropriate for some health professions than others. As one person said, “I also don’t like being forced to move through a program that does not take my knowledge and learning needs into consideration” (ID 725, post-course questionnaire). Others commented that they wished the course could have been tailored more towards their specific profession.

BalancedView was designed as an interactive course with the hope that this would contribute to learning and skill building. The interactive nature of the course had mixed reviews. For some participants, the mandatory reflections contributed to their learning and self-reflection. As one said: “I liked how the course forced me to write comments, even if I wasn’t going to share them. It definitely helped with the learning and reflection” (ID 456, post-course questionnaire). In the words of another: “I loved the activities and the opportunities for reflection definitely enhanced the learning and prompted you to pause, reflect, and apply the knowledge” (ID 185, post-course questionnaire).

Others, however, did not appreciate being ‘forced’ to write comments and interact: “No[thing] impeded it [my learning] but the interactive nature of the course was annoying. Less interactions forced on people” (ID 703, post-course questionnaire). In these instances, participants either preferred to participate more passively rather than actively, or wanted more time to think things through before having to formulate and type out a response. It was also noted that having a course with mandatory reflections might lead to disengagement among some learners who do not appreciate this learning style – and thus a missed opportunity for stigma reduction. A further drawback to the interactive nature of the course for participants was that it was time consuming to engage in.

In contrast to the mixed opinions on the interactive nature of BalancedView, most participants appreciated the multi-medium nature of the course and perceived it as engaging. In the words of one, “I love the amount of videos it contains, which makes it very interesting and not boring” (ID 247, post-course questionnaire). There was a general sense that the mix of video, reading and other activities was useful. In particular, the videos were seen as helping break up text: “The module is broken up into small and manageable segments. I enjoy the narrated videos

that break up a lot of the reading” (ID 190, course reflection). This change in format was seen as helping participants stay engaged, focused and alert. There were only a few critiques about the multi-medium nature. One individual pointed out that the course, due to its audio and video content, was not accessible for the hearing impaired. Others experienced technical issues which interfered with their ability to engage in the multi-medium format as intended, such as challenges accessing the Prezi content as their computers did not support the requisite Flash technology.

As with the interactive nature of the course, there were benefits and challenges stemming from the length of the course. Some individuals appreciated that the course was long enough to repeat some of the messages in different ways, as this helped reinforce the learning. For example:

A: And so just because you're big stature doesn't mean that you're not fit and that you're not healthy.

Q: So what do you think specifically in the course helped you make that shift? Sort of a combination of things or was it like one sort of ah ha moment?

A: I think it was just, like, 'cause some of the messages are repeated and I think I just, like, it was-- I think the repetition of it helped it sink in and then I think the boy [in the video scenario], the football player and I was, like, yeah. That's true. He's a kid. He's, you know, to be on a football team that's a lot of practice. That's a lot of working out and-- just, yeah, you know, yeah. So I think just hearing the messages over and over and that it kind of all came together at the end of the course. (Female, social worker, eating disorders, in-person interviewee)

This was also noted in the post-course questionnaires: “I appreciated the repetition at the end to drive the learning experience to memory” (ID 269, post-course questionnaire). While some appreciated the length and repetition, others resented this, as exemplified by the following interviewee quote:

Unhelpful? Mm... pfff... I just uh I think overall I kinda just think it was a bit, like you know I got the message initially and then it was kinda reiterated. . . . uh I kinda resented that a bit. It was pounded down so many times. (Male, technician and supervisor diagnostic imaging, phone interviewee)

Many others commented that the length was prohibitive to their learning as they were not able to do it in one sitting or kept getting interrupted by work tasks. As an example: “Too lengthy, difficult to complete due to existing workload. Definitely not created with awareness it would be completed at work sites off the side of employees desk in addition to existing work load” (ID 674, post-course questionnaire). Overall, despite these challenges with the online format of BalancedView, the course nonetheless had a positive impact on most participants. This impact and other contributions are discussed further in the final chapter of my dissertation that follows.

Chapter 6: Discussion and conclusion

In this chapter, I discuss my findings in relation to existing literature on stigma and weight stigma, among other areas, highlighting aspects of my study that cohere with the current state of the literature or are new and novel. Following this, I summarize my contributions to knowledge and practice. I then discuss methodological insights and limitations. I finish with suggestions for future research and concluding statements. I begin below by situating findings from research question one – ‘what are the different ways that weight stigma in health care can be conceptualized?’ – in relation to the literature.

6.1 Reflections on research question one

During the development of BalancedView, health care stakeholders conceptualized weight stigma as a process involving negative attitudes and beliefs that may culminate in discriminatory behaviour against heavier patients or lead to inequitable outcomes. Participants who went on to take the BalancedView course reiterated this conceptualization. While some studies distinguish between attitudes and beliefs as independent constructs, many do not (Lee et al., 2014). In this study, attitudes and beliefs about weight were viewed as related, with implicit attitudes consisting of affective, instinctive and emotional dimensions, and explicit attitudes being more consistent with beliefs. The tendency among participants in this study to see weight stigma in health care as encompassing both attitudes *and* discrimination corresponds with Link and Phelan’s (2001) and Phelan et al.’s (2008) conceptualization of stigma as a process that only has social salience if biased attitudes result in discrimination or status loss. The perspective that biased attitudes and beliefs lead to discriminatory behaviours and inequitable outcomes also aligns with the hypothesis that biased attitudes will result in prejudicial behaviours (O’Brien, Latner, Ebner & Hunter, 2013). In this case study, many participants discussed the perceived

relationship between such attitudes and behaviours. However, the quantitative analysis did not assess for causal relationships between attitudes and self-reported behaviours.⁸⁰ However, as O'Brien, Latner, Ebner and Hunter (2013) point out, the relationship between weight-biased attitudes and behaviours is underexplored. Future studies could thus seek to establish greater clarity about this relationship.

During the development stage of BalancedView it became clear that emotions mattered concerning how weight stigma was conceptualized. Link et al. (2004) have revised their previous view of stigma as a process involving four components (Link & Phelan, 2001) – a label, attitudes and stereotypes, separation of ‘us’ from ‘them’, and discrimination and status loss – to add a fifth component: emotional responses (Link et al., 2004). However, in their formulation, emotions matter to stigma since emotional responses among the general public often contribute to negative treatment of people who are stigmatized. In my study, I found that emotions may also constrain (or enable) how we conceptualize weight stigma. In other words, what is considered stigmatizing, or not, is related to people’s emotional responses and personal experiences with the topics of weight and weight stigma. Defensiveness stemming from professional investment in obesity reduction, for example, may be one of many factors preventing certain people from being able to see that their beliefs about obesity as a disease are perhaps biased. On the other hand, personal experiences with the harms of a medicalized approach or being witness to these harms among one’s clients, tended to lead to feelings of anger and a willingness to embrace the notion that medicalization was stigmatizing or harmful. As another example, fear and anxiety about weight and its health implications may contribute to perceptions of weight stigma. Some

⁸⁰ This is because behaviours were primarily explored qualitatively.

individuals in this study were unable to consider medicalization as stigmatizing since their fear of the health consequences of obesity was so great. This is consistent with Gard and Wright's (2005) contention that 'obesity epidemic' thinking is as much about moral anxieties as it is about science and Boero's (2007) perception of the moral panic surrounding obesity discourse. It also reflects understandings in the literature on emotions and beliefs about how feelings can influence the content of thoughts (Frijda, Manstead & Bem, 2007).

If weight stigma is seen to involve an implicit attitudinal component (Watts & Cranney, 2009) – bearing in mind that implicit attitudes are affective – it is logical that we consider emotions as an important part of weight stigma, not only with regard to its conceptualization, but also its reduction. As I discuss later, triggering emotions and, in particular, empathy – but not to such an extent that people disengage – was a useful stigma reduction strategy in this study.

There was a trend across the two phases of this study to perceive weight stigma as having attitudinal, behavioural and systemic manifestations, and as causally complex. In terms of weight-biased attitudes in health care, perceptions of fatness as controllable were of particular salience. This aligns with the work of Crandall (1994, 2017) and Crandall and Biernat (1990) who suggest that a key aspect of weight stigma is the belief that fat people are to blame for their higher weights. Crandall (1994, 2017) and Crandall and Biernat (1990) further argue that it is not just the perception that fatness is controllable that matters. Rather, it is also the ideological belief in a meritocracy and individualistic values that underpin weight bias. Ideology was not something that was focused on in any depth within the BalancedView case study. One limitation of this study is that there was no formal exploration or measure of ideology or political beliefs, although this did occasionally come up in the interviews, though not to such an extent that it was

coded as a theme. Future studies should consider including measures of ideology so that the relationship between weight bias and ideological beliefs can be further explored.⁸¹

Weight stigma was also conceptualized in the development phase of this study as causally complex – that is ‘difficult to get to the root’ – given so many contributing factors. These contributing factors were seen as important to understand, such that the response to reduce weight stigma could address them. Contributors to weight bias among health care providers (HCPs) included perceptions of weight as personally controllable and a belief in the meritocracy, beauty norms that are pervasive across society (even among HCPs) and social consensus or, in other words, how respected opinion leaders shape how others think and talk about weight. These findings provide modest evidence in support of attribution theory (Pearl & Lebowitz, 2014) and social consensus theory (Puhl, Schwartz & Brownell, 2005) as explanatory theories of weight stigma.

Weight stigma was also conceptualized during the development phase to varying extents as being related to the medicalization of weight and the belief that fatness is invariably unhealthy (McMichael, 2013). Medicalization was perceived by some during the course development as contributing to weight stigma and also as one of the weight-biased attitudes that should be targeted in the intervention. In the words of Calogero, Tylka and Mensinger (2016), “This ‘obesity’ discourse implies the need to wage ‘war on obesity,’ but to do so without simultaneously waging war on obese *people* is simply nonsensical, as well as impossible” (p 13). However, this was a divisive issue in this study. Some individuals involved in the development

⁸¹ Measures of ideology may include, but are not limited to: the Protestant Ethic Scale (Carels et al., 2009), the Belief in a Just World Scale or other measures of political beliefs (e.g. political conservatism) (Crandall and Martinez, 1996).

of BalancedView were strongly in favour of medicalizing weight and were unable to see it as harmful, especially those with a professional investment in obesity reduction. Others saw it as related to the labelling component of stigma discussed by Link and Phelan (2001) that creates the conditions for weight to be stigmatized. This is also discussed by de Leeuw, Kobayashi and Cameron (2011), who consider labelling people as ‘different’ to be a fundamental part of the process of constructing social hierarchies and oppression. The diverse positions on medicalization found in this study are also noted by Nutter et al. (2016). Ultimately, due to conflicting conceptualizations of the extent to which medicalization is implicated in weight stigma, the position formally taken in the BalancedView curriculum was to present both sides of the debate – in other words, a balanced perspective. This aligns with the suggestion of Nutter et al. (2016) who suggest that while there are differences among weight stigma researchers working from a weight-centric versus health-centric perspective, there remains significant common ground from which to work.

Following exposure to these two divergent ways of thinking about weight, health and stigma, participants who completed the BalancedView course fell into three categories in terms of how they conceptualized weight stigma and its relation to the medicalization of obesity. One group saw no benefits to medicalization and perceived it as contributing to weight stigma and as having harms, including shame for patients, increased likelihood of disordered eating and so on, akin to the perspective in McMichael (2013) and O’Reilly and Sixsmith (2012).

Another group, of approximately equal size, perceived both pros and cons to medicalization. This perspective aligns with that articulated by Blackburn (2011), who argues that one positive aspect of medicalization is that it may help physicians realize that obesity may not necessarily be the result of personal choices, but could instead be attributed to underlying

disease, thus removing blame. Contrarily, Blackburn points out that the medicalization of obesity also labels all heavier people as ‘sick’ when they may not be, thus perhaps harming those who are not or do not consider themselves ill and in need of weight loss. The position taken by many participants in this study that medicalizing weight has both benefits and drawbacks is echoed in a recent article by Hoyt, Burnette, Auster-Gussman, Blodorn and Major (2017). Hoyt et al. (2017) conducted three experiments to explore the effects of the recent decision of the American Medical Association to consider obesity as a disease. Their findings show that classifying obesity as a disease decreases attributions of blame and thus decreases part of weight stigma, yet simultaneously increases the belief about obesity as something unchangeable and fundamentally ‘different’ or ‘other’, and therefore has the potential to contribute to greater weight stigma. Kirk et al. (2014) also talk about this tension, pointing out that while the medicalization of obesity could lead to a disease label and further marginalization, it might also “. . . provide the necessary status required by the health system to direct much-needed resources toward supportive and appropriate obesity management” (p 798). In my study, some of the mentioned benefits to medicalization, alongside its noted drawbacks, were increased training for professionals in dealing with weight issues, potentially improved health care, more resources for patients with health issues related to their weight and the possibility of HCPs adopting a less blaming approach. Given the harms that may be associated with medicalizing obesity, however, I would argue that those of us in health sectors need to find ways to secure the benefits perceived as associated with medicalization (e.g. training, resources/adequate care and a non-blaming approach) without medicalizing weight and risking iatrogenic harm or stigma.

In the BalancedView study, a third and much smaller proportion of participants held only positive views of medicalization, perceiving it as important for decreasing health consequences

of obesity, improving health care for heavier patients and as helpful in decreasing stigma too.⁸²

This accords with Sharma (2012) who notes that helping people understand that obesity is a disease will remove the blame discourse surrounding obesity as a result of poor willpower and lifestyle choices. Sharma, of note, would like to see the term ‘obesity’ only apply to people who are indeed both heavy *and* sick, something which he perceives health care providers should be trained to assess. However, due to the current popular categorization of obesity as related to BMI, it is unlikely that people falling into the obese category will be able to escape the disease label, with or without actual underlying disease.

Given that this is a new area of inquiry with much debate, the question remains as to how far medicalization is implicated in weight stigma. Is it, as McMichael (2013) argues, a main reason fat prejudice continues in Western society? Is it, as per theories of labelling and stigma (Link & Phelan, 2001), the label that creates and perpetuates weight stigma? Or could it be but one part of a larger, complex etiology of weight stigma? As Rasmussen (2012) points out, psychiatry in the mid-20th century may not have been a driver of the stigmatizing portrayal of obesity, but was nonetheless likely a reinforcer of popular cultural ideas. Regardless of whether the medicalization of weight causes, reinforces or merely contributes to weight stigma in some way, the proportion of participants in this study who were able to articulate direct harms and stigma arising from the medicalization of weight suggests that medicalization is a critical part of the weight stigma concept that requires further exploration. This is particularly important given the harms that can arise from medicalizing weight (including weight cycling and associated

⁸² While only a small proportion of participants in the BalancedView study were entirely in favour of medicalizing obesity, a larger study found that over 50% of the general adult population ($N = 1,118$) in the US were in favour of classifying obesity as a disease (Puhl & Liu, 2015).

health implications and eating disorders) and that some have argued there is no evidence-based treatment that promotes long-term weight loss (Bacon & Aphramor, 2011; Mann et al., 2007). Further, research shows that health improvements can be seen with improved diet and exercise, regardless of weight loss, which calls into question the utility of a medicalized approach to weight (Mensing, Calogero, Stranges & Tylka, 2016). Next, findings from research question two – ‘what strategies can be employed to reduce weight stigma among health care providers in BC?’ – are discussed in relation to the literature.

6.2 Reflections on research question two

In the development stage of this study, stakeholders involved in developing BalancedView thought that an effective way to respond to the complexity of weight bias would be to draw on multiple stigma reduction strategies, while taking a balanced approach to discussions of weight and health. This aligns with contentions in the literature that interventions that draw on multiple stigma reduction techniques show the most promise (Daníelsdóttir et al. 2010). This was also reflected in my implementation findings. As noted in the focus group, there seems to be no one key ingredient to successful weight stigma reduction; rather, it is a combination of elements that promotes change among learners. The negative response of some committee members to the initially strong anti-medicalization stance taken in draft one of the BalancedView curriculum also suggested that there was a need to be aware of and responsive to emotional reactions among learners, lest they disengage (O’Reilly, 2016).

In my implementation findings I demonstrate that, after taking the BalancedView course, participants showed significant improvements to both explicit and implicit measures of weight bias, although the effect size was smaller for the Implicit Association Test than the explicit measures. Further, many participants reported an intention to make changes to their practice and,

at follow-up, some participants had indeed implemented changes. This can be taken as further evidence that multi-prong interventions play an important role in addressing weight stigma. It also points to the benefit of online interventions and suggests that more widespread implementation of BalancedView would be of use. Through a primarily qualitative analysis I show how some of the effective strategies to use in a weight stigma intervention for health care providers were: using patient stories to appeal to participants' emotions; using evidence to appeal to participants' minds; exposing participants to a balanced approach to medicalization along with health-centred education and skill building; and raising awareness and encouraging self-reflection. These themes align with the major strategies for weight stigma reduction articulated by Alberga et al. (2016). Alberga et al. (2016) highlighted four primary principles to weight stigma reduction interventions in health sectors: intellectual understandings; empathy of lived experience of heavier people; self-awareness and self-reflection; and using trusted professionals or opinion leaders to influence people to think differently. All of these were relevant in this study. The strategy of empathy is discussed first.

Stigma reduction and empathy

In this study I found that sharing patients' stories of weight stigma evoked an emotional reaction among BalancedView participants that encouraged them to learn more about the subject and engendered a willingness to challenge their own beliefs and practices. Many participants (59.1%) found this to be the most important part of the course according to the post-course questionnaire. Some studies using empathy have had mixed results and empathy as a weight stigma reduction strategy is understudied (Dánielsdóttir et al., 2010). This study, however, provides strong evidence in favour of the importance of evoking empathy and appealing to emotions within such interventions. The strength of this evidence was clear during the thematic

analysis coding process. Clarke and Braun (2013), in an article on thematic analysis, talk about the importance of engaging with questions like whether the analysis is bottom up (guided by data), top down (guided by theory) or both. I drew on both these approaches throughout my analysis. However, the theme of evoking empathy through patient stories was predominantly data-driven, which underscores the preeminence of this theme and the importance of emotional appeals to address weight stigma.

The potential benefit of education or training designed to evoke compassion is suggested in a recent neuroscience article on empathy and compassion (Singer & Klimecki, 2014). The authors suggest that compassion training can have a positive effect on neurological indicators of empathy as measured through imaging of the brain. Furthermore, educators and researchers have been exploring the role of emotions to learning for some time. In adult learning, the historical tendency has been to see emotions as interfering with the learning process – that is, as obstacles. Increasingly, however, those focused on adult learning have begun to acknowledge the important and, at times, transformative role, that emotions can have on adult learning (Dirkx, 2008). Jarvis (2006) shows how emotions affect the way we think, our motivation to learn and even attitudes and beliefs. In a study like BalancedView that is focused on changing attitudes and beliefs, emotions then become central, especially as we consider the affective dimension of weight-biased attitudes. This is an area that needs further attention in the field of weight stigma reduction given that emotions can be harnessed for change and social good.

As this study showed, evoking feelings of empathy, compassion and even sadness for those who faced stigma was of benefit. However, evoking feelings with a more negative connotation had a mixed effect. In the development stage, people who felt threatened or shamed by the initial perceived ‘radical’ iteration of the BalancedView content experienced a pulling

away effect, or a disengagement (O'Reilly, 2016). On the other hand, however, perhaps some shame and guilt can be used in a transformative way. In the words of Walker (2017), "Shame both stymies and motivates learning; it prevents adults from participating in educational programs yet, with accompanied self-examination, it can be the catalyst for transformation" (p 1). Perhaps then, evoking shame does not need to be entirely shunned in such interventions, but rather approached delicately and coupled with opportunity for self-reflection. While strategically harnessing emotions may help to address weight stigma in health care settings, so too may relying on evidence and appealing to people's intellect.

Stigma reduction and evidence-informed appeals

Some have hypothesized that weight stigma is connected to anti-intellectualism, that is, a prioritization of common sense thinking over critical, evidence-informed thinking (Azétsop & Joy, 2011). While I was not able to explore that to any great extent in the context of this study, a major finding from the implementation phase was the importance of using evidence-informed appeals to the mind in conjunction with emotional learning. Since stigma was conceptualized in this study as involving explicit attitudes or beliefs, relying on evidence to sway people to challenge their thinking was important. Without the provision of counter-evidence, there is little to no opportunity to change beliefs. Using evidence to mitigate weight bias has been pointed out previously. Puhl, Schwartz and Brownell (2005) conducted three experiments that explored social norms/consensus theories with American university students. In the third experiment ($N = 200$), a social norm approach was compared with other means of mitigating weight stigmatizing attitudes, including the provision of positive information about obese people framed as scientific truth. The intervention based on presentation of information framed as factual and scientific was most influential. This aligns with my finding that appealing to the mind through evidence is

important. However, as we also found in the development phase of BalancedView, we must remember to teach people to think critically and not just present them with information framed as ‘true’, as there will always be some counter-evidence (O’Reilly, 2016). In the words of Gard (2016), who also speaks of the importance of resisting imposing one truth about body weight on learners, “respecting one’s audience/students/listeners includes resisting neat conclusions or premature clarity . . . secure knowledge about most things is elusive, and if there is one truth that teachers owe their allegiance to, it is this” (p 244).

While evidence was useful in swaying people in this study, an evidence-informed strategy may be best paired with emotional appeals, as was the case for many participants who took BalancedView. Some weight stigma intervention studies using attribution theory alone have been unsuccessful (Lippa & Sanderson, 2012; Teachman, Gapinski, Brownell, Rawlins & Jeyaram, 2003). Of note, such studies often rely on information provision to mitigate explicit attitudes or beliefs – that is, they rely on evidence and appeals to intellect to mitigate weight bias. Literature from other domains may help us understand one possible reason some of these interventions have been unsuccessful, while in this study the use of evidence to change beliefs was nonetheless important. For instance, Kaplan, Gimbel and Harris (2016) conducted functional MRIs (fMRIs) with 40 subjects with strong political beliefs and measured brain activities when they were presented with arguments in contrast to their beliefs. Beliefs were measured at baseline and after provision of counter-information. During provision of counter-information, the fMRI was conducted. Resistance to belief change corresponded with activity in the insular cortex and amygdala – portions of the brain responsible for feeling and emotion. The authors postulate that the brain’s emotional systems are involved in protecting strongly held beliefs (Kaplan, Gimbel & Harris, 2016). Thus, while using evidence to sway people’s beliefs might have some

utility, it may need to be paired with strategies to influence emotions. As Russell and Cameron (2016) articulate with regard to fat pedagogy, “The ‘affective turn’ that is occurring in many disciplines . . . makes it increasingly clear that knowledge alone is insufficient in making change” (p 255).

Of note, the effectiveness of using emotions and evidence to create change was often mediated by participants’ personal experiences with weight. For instance, one interviewee discussed how she easily understood and accepted the science presented concerning how difficult it is for individuals to control their weight. She discussed how she had struggled with her weight her whole life despite eating healthily. As I discussed formerly, I had a similar experience. Despite having thin privilege (Bacon, O’Reilly & Aphramor, 2016), my own prior challenges with my weight and occasional instances of felt weight stigma as a youth led to both a willingness to readily embrace the science challenging controllability myths and an increase in empathy for those who face weight stigma. Regarding this latter point, participants also spoke of how their own experiences of weight stigma led them to be more compassionate. Overall, I found that personal connection to the topic affected how people related to the information, not just in a positive way as the above examples show, but also in a negative way. For instance, for individuals professionally invested in obesity reduction and health improvement, it is likely to be quite difficult to face information suggesting this investment contributes to stigma. As such, strategies for stigma reduction may need to be tailored very differently depending on the lived realities of the target population.

Stigma reduction, medicalization and health-centred education

If one accepts the premise that the medicalization of weight may contribute to weight stigma in health care, then addressing medicalized beliefs and practices among health care

providers is essential to stigma reduction. This finding coheres with recent work by Frederick, Saguy, Sandhu and Mann (2016), who found that participants exposed to messages with a Health At Every Size frame had less anti-fat prejudice than participants exposed to fat negative frames, such as those that emphasize the health risks of obesity. In BalancedView, medicalization was addressed in two main ways: through exposure to the pros and cons of medicalizing weight and through awareness raising and skill building on the importance of and how to adopt health-centred rather than weight-centred practices.

Exposure to the debate regarding medicalization was well received in the course. Most participants reported appreciating hearing both sides, as shown in the findings. This was in contrast to the position we attempted to take in the initial iteration of the curriculum prior to its launch, in which medicalization was unilaterally presented as negative. As shown in the first findings chapter, participants did not respond well to this approach. As I discuss in O'Reilly (2016), the benefit of presenting competing evidence and allowing participants to come to their own conclusions about that evidence is that it encourages critical thinking. In contrast to this, if one perspective alone is highlighted, this leaves room for evidence to the contrary to emerge and call into question the veracity of what is presented. The strategy of balancing mainstream perspectives on weight and health with a more radical fat studies, health-centred position is also supported by Bombak, McPhail and Ward (2016), who argue that “. . . any true interruption of obesity stigma in the reproductive healthcare interaction requires a bridge between critical and mainstream scholarship, and careful attention to the risk-based foci in clinical settings which can be interpreted by clients as moralizing” (p 94).

The other way we addressed medicalization in BalancedView was through promoting a health-centred approach and drawing on – yet not relying on – Health At Every Size principles.

While one goal of the course was to address medicalized beliefs, the health-centred approach was more practically oriented and aimed to change practices of participants. To encourage participants to adopt a health-centred approach, we provided evidence on the benefit of this approach to patient health outcomes and an opportunity for participants to practice shifting to a health-centred paradigm through an interactive video vignette. In this study, regardless of whether participants in the development phase were in favour of or against the medicalization of weight, they were still able to see benefits of health care providers adopting a health-centred rather than weight-centred perspective.

Using HAES principles remains on the periphery of theories concerning how to reduce weight stigma, with few studies employing this approach. However, studies drawing to varying extents on HAES-related tenets have shown a positive effect (Frick, 2007; McVey et al., 2013), suggesting its potential and pointing to the need for further investigation as a means of addressing weight stigma. The benefit of the approach taken in *BalancedView* on the topics of medicalization and health-centred practice is demonstrated by the fact that we managed to successfully decrease medicalized beliefs and practices among participants at post-course.

Much like the ways in which prior experiences constrained or enabled people in their uptake of the emotional and scientific strategies, the ways in which participants related to the medicalization content was often grounded in their own experiences. Having friends or patients express the potential harms of medicalizing weight allowed participants to more easily perceive the drawbacks of a medicalized approach to weight. Working in obesity fields, on the other hand, was associated in the development phase with less of a willingness to accept the drawbacks of medicalizing weight.

Stigma reduction, self-awareness and reflection

Another finding of this study was the importance of raising awareness and encouraging self-reflection. Initially, in the context of the committees, we thought that the IAT would encourage this awareness and self-reflection, since committee members suggested it would be a useful tool to get people to reflect on their biases without engaging in a blaming discourse. However, the later implementation data called this into question.

Some participants who took the course did indeed have this experience, citing the IAT taken as the first exercise at the beginning of *BalancedView* as ‘eye opening’ and the most impactful part of the course. In other fields the IAT has also been found to be helpful in raising awareness of one’s own biases. Casad, Flores and Didway (2013), for example, found that the IAT, when used with undergraduate psychology students, helped raise awareness of their implicit biases, as seen through essays written by students about their experiences with the IAT.⁸³ More often than not, however, participants in this study did not perceive the IAT as useful and discussed it as a poor use of time or as an unreliable indicator of their true feelings. While the mixed qualitative data in this study raises questions about the usefulness of the IAT as a self-reflection tool, fostering awareness of the harms of weight bias and one’s own role in unintentionally perpetuating bias in a general sense was still important in this study. As McVey et al. (2013) also found in their weight stigma intervention for health promotion professionals, participants appreciated the awareness-raising component. In other fields, such as in inter-professional education, it has also been argued that an opportunity for reflection is a precursor to challenging one’s beliefs and attitudes (Charles, Bainbridge & Gilbert, 2010). The data from

⁸³ Students took an online version of the IAT and were instructed to select an IAT topic of their choice, e.g. racism, sexism.

BalancedView suggest that in the area of weight stigma reduction, an opportunity for reflection is an important part of belief and attitude change, however the IAT should perhaps be an optional rather than mandatory learning activity within such courses.

Stigma reduction through a 2.5 hour, interactive, online intervention

In my findings, I highlight the pros and cons of a multi-hour, multi-medium, interactive, online intervention in reducing weight stigma among health care providers. While participants provided mixed qualitative feedback about the length of the intervention, the overall effectiveness of BalancedView provides evidence for the utility of a longer, multi-hour intervention. Of note, moving beyond very brief information provision was seen as helpful in producing longer term positive effects on weight-biased attitudes in one study (Swift et al., 2013). However, due to the high attrition rate in BalancedView and the feedback by many completers that the length of the intervention was prohibitive in the context of busy professional lives, the use of shorter interventions should be explored. This needs to be balanced with the likelihood that true change cannot likely occur with very brief information provision and with the finding that multiple strategies need to be used to create change.

The online nature of BalancedView also had its proponents and critics. For some participants, online learning was seen to be very useful, particularly the interactive material provided in BalancedView. Others discussed wanting to make it more human and perceived in-person learning as preferable. A drawback to online learning noted in this study is that it provides standardized training to all participants with no room for individualization to suit different learning needs. Yet, the benefit of BalancedView's online nature is in part in its reach and sustainability.

Also, the overall effectiveness of BalancedView in shifting participants' weight bias provides evidence for the utility of online learning for health care providers, despite drawbacks to such learning noted in this study and in the literature, such as challenges with attrition and Internet infrastructure (Doorenbos et al, 2010). Cook et al. (2008) conducted a meta-analysis of 201 studies that looked at the effect of web-based training for health professionals, either in comparison to no training or to non-online training (e.g. in-person). After pooling the studies they found online education was associated with a large positive effect when compared to no training. Effect size differences compared to in-person training were small, suggesting a similar level of effectiveness. The use of in-depth online learning also has the benefit of video vignettes, as were used in BalancedView, which:

. . . can teach and promote the application of new skills by modeling behaviors in video format and then offering providers the chance to reflect on what they have seen and on their own approaches to similar situations. The opportunity to see both best-practice and non-ideal examples of approaching various situations can engage providers on a deeper level and prompt critical thinking and self-assessment. (Doorenbos et al., 2010, p 239)

With these main themes in mind, I now briefly discuss other findings of relevance regarding stigma reduction and situate these within the weight stigma reduction literature, including the utility of attribution theory and social consensus in reducing weight stigma among HCPs.

Stigma reduction, attribution theory and social consensus

In the BalancedView course, the utility of attribution theory, along with the other approaches, was explored as a stigma reduction strategy. One way to examine the usefulness of

this strategy is to assess whether controllability attitudes or beliefs were mitigated through the course. In the case of BalancedView, many participants exhibited changes to their controllability beliefs after the course. For instance, at the pre-course measurement point, 42.2% of participants believed that fatness was caused by uncontrollable factors, while at the post-course measurement point, 80.3% felt that fatness was due to uncontrollable factors ($N = 249$). Interviewees and some course participants also spoke of the use of challenging controllability beliefs, as shown in the last chapter. However, attribution theory was only one strategy of many perceived to be possibly helpful. Social consensus is also discussed in the weight stigma literature as one possible strategy to use to address weight stigma (Puhl, Schwartz & Brownell, 2005). In this study I thus explored the role of social consensus to mitigate weight stigma. The ‘professional voices video’ was, based on average rankings, the second most useful part of the course. While social consensus was not one of the main themes that emerged from the qualitative implementation analysis regarding how to reduce weight stigma, it likely remains a useful part of interventions like this. Some committee members, for example, discussed how the rubber stamp of an organization like the PHSA was probably enough to legitimize the BalancedView intervention and increase acceptance of the information provided to participants.

6.3 Contributions

In this section, the contributions of the research to current knowledge and the implications of this for reducing weight stigma in healthcare settings are discussed. This is one of the first studies to research the effects of a weight stigma intervention on current health care professionals rather than pre-service health students (Alberga et al., 2016). The main conclusion of this study was that an online, multi-strategy intervention showed promise in reducing weight-biased attitudes among participants in both the short-term and longer term (up to six months

later). In addition, the qualitative and self-reported data collected at follow-up indicated that decreases to weight-biased attitudes translated into changes in practice at three and six months after the course (e.g. improved interactions, focusing on health rather than weight and ensuring available medical equipment capable of accommodating people with larger bodies). This is important, as to date most weight bias interventions have focused primarily on attitude change, rather than on changing behaviours (Lee et al., 2014). This study thus shows that an online course with multiple stigma reduction strategies can impact not only attitudes and beliefs but also the real life behavioural *and environmental* manifestations of weight bias in health settings. To this end, this study has advanced academic knowledge about how to address the scope of weight stigma in health care. This knowledge can be taken and used in applied settings to address the problem of weight stigma in health sectors.

In terms of strategies to reduce weight stigma, building on Daníelsdóttir et al. (2010), I demonstrate how important it is to draw on multiple stigma reduction strategies as part of addressing weight stigma. I provide evidence for others hoping to engage in similar initiatives concerning the benefit of appealing to both people's emotions and their intellect when attempting to reduce weight stigma among health professionals. In particular, I provide information on the utility of evoking empathy and leveraging emotions as part of multi-prong weight stigma reduction initiatives. From a practical standpoint, the patient stories used in the BalancedView course were particularly well received and could be emulated by others wanting to engage in developing similar stigma reduction programs.

This study also contributes to the still limited knowledge base on the role of Health At Every Size to weight stigma reduction in health care. Frick (2007) drew on HAES concepts as part of their stigma intervention with health professionals, with success. This study builds on

Frick's findings, showing how health-centred education informed by HAES-related principles is one important component of successful weight stigma reduction that is worthy of future exploration. Relatedly, one novel contribution of this study is to provide evidence on the benefit of taking a 'balanced' approach to the medicalization of obesity within weight stigma reduction efforts in health care. Participants overwhelmingly appreciated the balanced stance on the medicalization issue taken in BalancedView and left the course with improved attitudes about weight and fatness in a general sense, as well as with decreases to their medicalized beliefs.

Relatedly, this study also contributes to the growing, yet still relatively limited, literature regarding the ways in which the medicalization of weight is part of weight stigma (Calogero et al., 2016; Goldberg, 2014; McMichael, 2013; Wann, 2009). Given that so few studies have considered medicalization as a critical part of the weight stigma construct, there are limited measures pertaining to the medicalization of weight at present. Thus, another contribution of this study was to develop measures of medicalization that can be explored and validated (or adapted, as necessary) by other researchers.

In addition, the development of BalancedView, which I observed and participated in over several years, provided a rich opportunity to observe weight stigma in interaction. I believe that the value of this interactive piece of my research should not be understated. In essence, the collaborative development period allowed the team to 'test' our initial ideas about what might work to reduce weight stigma among health care providers via the committees. Through this, we discovered that while addressing medicalization may be important to reducing weight stigma, it needs to be done in a way that is sensitive to where learners are at. If learners are pushed too hard, they will disengage, closing a valuable window of opportunity for learning (O'Reilly, 2016).

Finally, the BalancedView online course, due to its widespread uptake, may have contributions beyond this study. Many people who were excluded from the present analysis because they did not meet the inclusion criteria (e.g. because they were health care providers from out of province or were current students) could be included in future studies using the same dataset. Furthermore, BalancedView remains publicly available at the time of this writing and could be used by other researchers in upcoming studies. This is strongly recommended given the continuing urgent need to both continue to develop theory on what works to reduce weight stigma among health care providers and to counter the prevalence and implications of weight stigma in the health sector.

6.4 Methodological reflections

Here I reflect on some methodological questions or insights that arose during my study, after which I consider the limitations of my research design. I begin by situating my experiences in using the implicit association test (IAT), a short form of the Fat Phobia Scale and questions from the Attitudes about Treating Obese Patients Scale in relation to the literature. I then discuss the benefit of the participatory approach used in this study.

One interesting question brought up by participants was of the accuracy of the IAT as a measure of one's true implicit weight-biased attitudes. In the scripted reflection following the IAT in module one of BalancedView, many participants discussed feeling that the IAT was not an accurate reflection of their implicit attitudes about weight. This issue has been taken up in the literature. When Casad, Flores and Didway (2013) were using the IAT with university students, they also found that more students thought their result was inaccurate (46%) than accurate (33%), while 21% were unsure. Another study explored participant perceptions of the

validity and reliability of the IAT through four experiments. The author found that across the studies about 73% found the test valid and that approximately 82% thought it was reliable. They concluded that more research is required to assess how to improve the reliability and validity of the IAT (Rezaei, 2011). Given the qualitative data on the IAT from BalancedView, I would agree that efforts to improve the reliability and validity of the IAT are important. Developing other implicit measures of weight bias may similarly be useful.

This study also drew on a short form of the Fat Phobia Scale and, as such, one insight from this study gleaned from the questionnaires was to provide data on levels of fat phobia among a sample of health care providers in BC in comparison to that found in other studies. The mean fat phobia score for the BalancedView cohort at pre-course ($N = 249$) was 3.22 ($SD = 0.48$). Among the entire cohort who met eligibility criteria, including those who did not complete the course, the pre-course score was 3.21 ($SD = 0.48$) ($N = 654$). According to the design of the scale, scores above 2.5 are considered negatively biased (Bacon et al., 2001). The scores reported prior to taking BalancedView are similar to what is seen in the literature, although slightly lower than in some studies and slightly higher than in others. Puhl, Latner, King and Luedicke (2014) found that among eating disorder professionals, the mean fat phobia score was 3.16 ($SD = 0.47$). In comparison, in Wolf (2010), a study of physician assistant student attitudes, the mean score was 3.7 ($SD = 0.63$). Reportedly, 3.6 is an ‘average’ level of weight bias and scores of 4.4 or greater are considered ‘high’ (Wolf, 2010). Given this, we can conclude that, based on this measure, the BalancedView cohort demonstrated weight bias at pre-course, although at a level lower than average.

This study also used several adapted items from the Attitudes Towards Treating Obese Patients scale (Puhl et al., 2013). Here, I discuss insights about the sensitivity of these items as a

measure of weight bias. Of note, at the pre-course measurement point, participants reported lower levels of bias on these measures, when compared to the Fat Phobia Scale. These findings were also seen in Puhl et al. (2014), who similarly found that low percentages of participants agreed with biased negative statements about treating obese patients when using this scale. Despite this, Puhl et al. (2014) found that participants in the same study reported high levels of bias among their colleagues (as per questions on perceptions of weight bias among other practitioners that were asked alongside the Attitudes about Treating Obese Patients questions). This finding was also echoed in the BalancedView dataset at the pre-course measurement point. The below table compares the results from BalancedView to Puhl et al. (2014) on these different scale items.

Table 11 Attitudes about Treating Obese Patients & Perceptions of Weight Bias Among Practitioners: Comparison to Puhl et al. (2014)⁸⁴

Scale Items	Agreement (%) Puhl et al. (2014) (<i>N</i> = 369)	Agreement (%) before BalancedView (<i>N</i> = 249)
<i>Attitudes about Treating Obese Patients</i>		
I would rather treat a non-obese patient than a patient with obesity	5%	12%
It is difficult to feel empathy for a patient with obesity	2%	4%
Treating a patient with obesity is more frustrating than treating a non-obese patient	6%	11%
I feel that patients with obesity lack motivation to make lifestyle changes	9%	14%
I feel that patients with obesity are often non-compliant with treatment recommendations	17%	13%
<i>Perceptions of Weight Bias among Practitioners</i>		
I have heard/witnessed other professionals in my field make negative comments about patients with obesity	56%	50%
Other health providers in my field often have negative stereotypes toward patients with obesity ⁸⁵	42%	45%

Note. Agreement includes responses of ‘strongly agree’ or ‘agree’.

Given the low percentage of participants who agreed with biased negative statements on these scale questions in both Puhl et al. (2014) and this study, despite scoring as biased on other, more established measures, it is likely that the questions used from the Attitudes Towards Obese

⁸⁴ In BalancedView we rephrased questions from the scale that included the term “obese patient[s]” to “patient[s] with obesity” as discussed in the methodology chapter.

⁸⁵ This was a modified question. Puhl et al.’s (2014) wording was specific to “other practitioners who treat eating disorders”.

Patients scale were not as sensitive measures of explicit weight bias as other measures in the literature, like the Fat Phobia Scale.

Of note, in BalancedView, we did not use the full version of the Attitudes Towards Treating Obese Patients scale presented in Puhl et al. (2014) as the length of this scale was prohibitive when paired with the many other measures used in our questionnaires. We also rephrased questions from the scale that included the term ‘obese patient[s]’ to ‘patient[s] with obesity’ as discussed in the methodology chapter. Despite these modifications, the five items from the scale used at pre- and post-course had an acceptable to good level of internal consistency as a measure of reliability (Cronbach’s alpha of .78 at pre-course and .86 at post-course) (Tavakol & Dennick, 2011). Now that I have discussed learnings from this study in relation to the above-validated measures, I next discuss lessons learned about the benefit of a participatory approach to projects like this.

In the development of this study I considered whether or not to ground my work in Participatory Action Research (PAR) principles. Sixsmith and Daniels (2011) point out that action research and PAR take many forms and there is no one set of rules. However, many researchers using a PAR approach emphasize its emancipatory element where people most directly affected by issues – in this case patients who experienced weight stigma – play a lead role in developing and testing solutions (Harrison, Johnson, Hiller & Strong, 2001). In this study, we did not capture the voices of those marginalized by weight stigma to the same extent as those of health care providers. Nonetheless, this study was a highly collaborative, participatory project, particularly in the development phase of BalancedView. The curriculum and questionnaires were developed in partnership with steering and advisory committee participants over time. As a result

of this extensive collaboration, the uptake of the course was likely much greater than what I would have been able to achieve by myself.

The effectiveness of the course content was also likely strengthened by the participatory approach. Through collaborative curriculum development we were able to draw on not only best practices available in the literature but also the experiential expertise of health care providers themselves on what kind of content they found most thought provoking and how they wanted it to be delivered. As one focus group participant stated: “Well, so for me I would speak about the importance of pooling together your stakeholders so that it’s aligning with not just what the literature is telling us, but what-- it’s aligning with current practice and policy” (Focus group participant, female).

6.5 Methodological limitations

There were several limitations to this study. First, although I hope my findings enrich conceptualizations of weight stigma in health care and ways to reduce it, I recognize that my findings are case specific. As Yin (2003) argues, a common criticism of case study research is that the results are not generalizable at a population level. This means that a case study can never claim to be representative of the broader population. Rather than attempting to assert that one’s findings are generalizable, Yin (2003) instead argues that through transparency and thick description the researcher can enable others to interpret their findings and consider whether such findings might apply to other contexts or cases. In my study, I thus aimed to provide thickness and richness of description with the hope that others reading the outputs of my study would be able to judge the relevance of my findings beyond this case.

Another limitation of the current study is that participants generally self-selected to participate, unless required by their employers, thus it is unknown to what extent the findings

would hold with a random sample. It is possible that people who opted to participate in this had more open mindedness towards weight stigma than a random sample would have, although the pre-course Fat Phobia scores do demonstrate that participants in this study held fat phobic attitudes. Also regarding my sample, the findings are not representative of males or of doctors. Falker and Sledge (2011) previously ran a web-based bariatric sensitivity training educational module for health care staff. They similarly experienced limitations with their sample: 87% were female and 80% were nurses, with the rest comprising health care technicians and unit secretaries. The question remains as to how to successfully recruit from underrepresented groups including males and physicians for web-based training. It is possible that, as Stancic, Mullen, Prokhorov, Frankowski and McAlister (2003) state, physicians may prefer in-person, live learning. Alternatively, perhaps the BalancedView course was prohibitively long for physicians. Another alternative is that the dissemination strategy was not well enough targeted to reach physicians (or males). A further suggestion is that perhaps weight bias is something that females are more interested in than males and, as nursing remains a female dominated profession, this somewhat accounts for the overrepresentation of nurses and females in the BalancedView sample.

Another limitation of this study is that it did not employ a control group, which is argued to be important to advance the field (Alberga et al. 2016). It is difficult in a multi-strategy intervention to say with certainty what it was about the intervention that had effect without running a randomized control trial. However, in this study this was somewhat offset by a qualitative investigation into participant perceptions of the most useful components. Alberga et al. (2016) and Daníelsdóttir et al. (2010) comment that a lack of follow-up is often seen in weight stigma reduction studies. While this study did have a small cohort of participants

included in three and six-month follow-up, the follow-up data was not analyzed in as much detail as the pre-course and post-course data and the sample size was smaller. Thus, the conclusions that the course was effective in the longer term should be interpreted with caution as these findings were specific to those in the three- and six-month follow-up.

One criticism of some weight stigma interventions is that implicit measures are not often used (Dánielsdóttir et al., 2010). While a repeated measure Implicit Association Test was used in this study, we relied on self-reported scores from participants who were instructed to take the test on the external Project Implicit® website. This may have led to data entry errors at the participant end. Also, participants on Project Implicit are randomly assigned to one of two groups: 1) those who pair Fat People + Bad / Thin People + Good first, followed by Fat People + Good / Thin People + Bad second; and 2) Those who pair Fat People + Good / Thin People + Bad first, followed by Fat people + Bad / Thin People + Good (Project Implicit®, 2011). Reportedly, if you are assigned to group one, the results may be more biased towards fat people. Project Implicit® minimizes this through random selection (Project Implicit®, 2011), however, since participants did repeat IATs at baseline and post-course, it is possible that they were randomized to a different group at baseline than post-course, thus skewing the results.

Qualitatively, the interview portion of this study was limited to a smaller number than would commonly be seen in interview-based dissertations (Mason, 2010) or published studies (Thomson, 2011). However, since I drew on methodological triangulation (Bekhet & Zauszniewski, 2012) and there was a large qualitative dataset aside from the interviews, this limitation was minimized and the themes were saturated. Future interviews were considered, though it was not deemed to be of benefit to interview more female participants who found the course helpful as no new themes were emerging from such interviewees. Further interviews with

more varied participants would have been of benefit, for instance, physicians, males or those who perceived the course to be ineffective, but recruiting this group was difficult due to a lack of interest and a small sample of possible participants to draw from.

Another limitation of my study included not having a measure of empathy beyond one question in the adapted and shortened Attitudes about Treating Obese Patients scale. Thus, it is difficult to ascertain both if the strategy of evoking empathy was useful in this study primarily because the sample was a naturally empathetic group and if this strategy would also hold more broadly. I also did not measure ideological beliefs. Although my findings provide some support towards attribution theory as one theory of weight stigma, I was not able to validate attribution theory to the extent that I would have been able to if I had included measures of ideology. The measures of medicalization used here were also not validated prior to use and were created specifically for this study. Thus, the extent to which the measures used accurately captured medicalized beliefs about weight could be questioned. However, this lack of validation was somewhat mitigated through the collaborative process of questionnaire development with the committees. Developing and validating measures of medicalization of weight remains an important area for future research, should the concept of medicalization continue to be explored as a component of weight stigma and one possible perpetuating or contributing factor.

A further limitation of BalancedView was that it was more successful in mitigating explicit than implicit attitudes. If the IAT is accepted as a tool that accurately measures implicit attitudes, this suggests that, as others have argued, implicit weight-biased attitudes are more resistant to change (Teachman et al., 2003). Regarding race, implicit attitudes are said to be

predictors of discriminatory behaviour to a greater extent than explicit attitudes (Greenwald, Poehlman, Uhlmann & Banaji, 2009). However, a more recent meta-analysis⁸⁶ of 426 implicit bias studies found that changes of implicit bias achieved through interventions did not mediate changes in behaviours or explicit bias (Forscher et al., 2016). Also, Meadows et al. (2017) recently found that implicit weight-biased attitudes among medical students at the start of their studies were not predictive of explicit weight bias at the end of medical school. Given this, while changing implicit bias about weight among HCPs is likely valuable, it is possible that changing explicit bias and behaviours alone remains a worthy and important aim. After all, as Link and Phelan (2001) point out, without discriminatory behaviours or outcomes, stigma has little social salience.

Currently we do not know enough about how implicit attitudes among HCPs affect patient experiences in health care (Sabin, Marini & Nosek, 2012). Further exploration of the relationship between implicit bias among HCPs and their behaviours towards heavier patients would be helpful to this field, such that we can better understand whether interventions are best targeted towards implicit, explicit or overt behavioural manifestations of weight stigma.

If implicit attitudes are deemed important to address in future intervention studies, further research should also consider how strategies to reduce implicit and explicit weight bias may need to be different. As Puhl, Phelan, Nadglowski and Kyle (2016) state in an article on overcoming weight bias in the management of patients with obesity, strategies may need to be tailored differently for implicit versus explicit bias in health care. In particular, the role of experiential learning could be explored. A study on implicit attitudes in another area (climate change) found

⁸⁶ Unpublished manuscript available on the Open Science Framework.

that those with direct experience with the negative effects of climate change (e.g. hurricanes) were more likely to implicitly favour ‘green’ politicians. This was based on a study that explored implicit attitudes before and after hurricanes (Rudman, McLean & Bunzl, 2013).

One final and rather important limitation to my study was that privileged – rather than marginalized – voices were prioritized in the development of BalancedView and thus in the analysis and findings. Despite the participatory nature of the development of BalancedView, how weight stigma was conceptualized, what was proposed to reduce it and what was eventually implemented and tested in terms of its success in reducing weight bias did not fully account for the perspectives of marginalized groups. Cooper (2013) and Russell and Cameron (2016) have previously argued for a ‘nothing about us without us’ approach to the study of weight-based oppression. This study, while drawing on the perspectives of a small number of patients impacted by weight bias in the scoping review ($n = 3$) and course itself ($n = 4$),⁸⁷ disproportionately relied on health care providers and weight stigma experts with thinner bodies. Many of the committee members were thin. Only a few were visibly heavy and I know of only two, other than myself, who allied themselves with the fat acceptance movement. The voices at the table were also privileged racially and in terms of profession. Farrell (2011) talks about how racial tensions played a key role in the development of weight stigma in contemporary culture. This did not emerge as central in my analysis, although it does not mean that this is not a critical component of weight stigma. Instead, the lack of consideration of this aspect could be a reflection of the fact that most people involved in developing BalancedView were educated

⁸⁷ Three of the patients interviewed on film for BalancedView as having experiences weight bias were visually heavy while one was slim.

professionals and appeared light skinned. Had we further involved people with larger bodies, in different socioeconomic statuses and from different ethnic and racial groups, we may have found the discussion looked quite different. Ultimately, the prioritization of privileged perspectives in the development of BalancedView was manifest in the course itself. One participant commented on this in the post-course questionnaire:

I did notice that the bodies in all of the videos (with the exception of the one from Harvard or wherever that one outside video was from) seemed to appear to be white. I work in a rural isolated community and I imagine that in my community as well as elsewhere through BC, racialized and specifically Indigenous folks are very impacted by weight stigma and bias (compounded by racism) in health care settings. It would've been nice to see that reflected in the modules. (UID 456, post-course questionnaire)

Future work on weight stigma and its reduction should seek to prioritize to a greater extent the voices of those most affected by weight stigma. In the words of Puhl, Himmelstein, Gorin and Suh (2017), it is important to include “. . . people with stigmatized identities in stigma-reduction research; their insights provide a necessary and valuable contribution that can inform ways to reduce weight-based inequities” (p 25). The importance of this cannot be understated since to date, although there has been some work on gender and fat stigma (Fikkan & Rothblum, 2012; Gilman, 2004), we know very little about weight stigma among other different social identities or how it varies by race, ethnicity, class, sexual identity or age (Calogero et al., 2016).

6.6 Suggestions for future research

Alberga, Russell-Mayhew, von Ranson, McLaren, Ramos Salas and Sharma (2016) recently highlighted that one priority for ongoing weight stigma research is to explore “. . . root causes and definitions of weight bias” (p 1208). While this study adds to theoretical knowledge about the weight stigma construct, ongoing research on theories of weight stigma is essential. Such work is an important precursor to continuing to develop and refine strategies capable of mitigating weight stigma. In particular, from a conceptual perspective, this study has shown that more research is needed examining how medicalization is implicated in weight stigma. So far this is an issue that has been taken up by academics (Cameron & O’Reilly, 2015; Rasmussen, 2012), fat activists (McMichael, 2013; Wann, 2009) and in this study by health care providers themselves. However, less is known about how fat people in the general population feel about the pathologization of their bodies. There also remains disagreement and uncertainty about the role of medicalizing obesity to weight stigma.

Further attention is also warranted concerning how emotions are connected to weight stigma, as discussed in the first findings chapter. In this study I did not set out to collect data on emotions per se, but in the process of qualitatively analyzing the development data, emotions emerged as an important factor. In this study emotions were seen as part of the implicit dimension of weight-biased attitudes and played a role in how weight stigma was conceptualized (i.e. emotions shaped what people considered stigmatizing or not). Inducing emotional reactions was also a way of evoking empathy and promoting stigma reduction.

However, much remains to be known. For example, should emotions be seen as central to weight stigma and, if so, how and why are they implicated in this stigma? Currently little work is

available on emotions and weight stigma theory, although there are some insights in the literature that could be used to inform future research. For instance, as discussed in the literature review, weight stigma may be connected to feelings of disgust (Lieberman et al., 2012) or to fear within the context of a moral panic (Boero, 2007). A recent study on weight stigma by Wirtz, van der Pligt and Doosje (2016) showed how attribution theory may relate to emotions. The authors demonstrated that when people blame heavier individuals for their weight, they are more likely to feel emotions of contempt and disgust and thus to have more biased attitudes and negative behavioural intentions. Given these insights, future work on weight stigma might usefully include measures of emotions like contempt, disgust or fear.

Overall, given the prevalence and consequences of weight stigma in health care, there remains a need for more research concerning how to reduce weight stigma in health care settings. This study was one of the first of many, I hope, to make both a practical contribution to address this problem in practice and to the body of knowledge concerning how to reduce weight stigma among health care providers. In terms of future research directions, there is a need to continue to distil what exactly are the essential elements of successful weight stigma reduction in health care. While my dissertation has explored essential elements of weight stigma reduction qualitatively, other similar qualitative work could be conducted to see if these findings hold outside of this case study. In the quantitative arena there remains a need “. . . to conduct randomized controlled trials to develop evidence-informed, effective weight bias reduction practices in healthcare settings” (Alberga et al., 2016, p 186).

While this study filled a gap in terms of providing information about how to reduce weight stigma among practicing health care professionals, physicians and males were notably missing among my subjects. Males comprise over 50% of the physician population in BC and

Canada (Canadian Medical Association, 2017)⁸⁸ and it is imperative that research includes this group. It is my hope that interventions such as BalancedView, or even BalancedView itself, could be used to try and affect change among these understudied populations. For instance, BalancedView could be implemented and studied among pre-service physicians. While this would not address physicians currently in practice, it would potentially equip future doctors with sufficient information to change their beliefs and avoid weight bias in their forthcoming practice. The implementation of BalancedView with such populations is critical given that a recent environmental scan found that the current undergraduate curricula for pre-service health students does not often include information on weight bias (Russell-Mayhew et al., 2016).

Ways to target physicians currently in practice should also be explored. It is my view that time constraints and the current billing structure create a barrier for physicians to engage in lengthy interventions like BalancedView.⁸⁹ Thus, should other researchers want to model an online intervention off of BalancedView for doctors, it might be helpful to use an approach with similar content and mixed media, and to search for ways to condense the length of the intervention to increase its uptake. Given that the IAT was not well received by many and was time consuming, the utility of including this could be reconsidered in future studies, unless measuring implicit attitudes in this way is deemed critical.

Future research might also compare the effects of in-person interventions to online interventions. Many participants in this study suggested the need to put a human face to their

⁸⁸ The Canadian Medical Association (2017) data shows that 59% of physicians in Canada are male, while 62% of British Columbian physicians are male.

⁸⁹ Unlike other health professions in Canada where time is often provided in work hours for continuing education, many physicians are independent contractors and thus continuing education may not be something they are able to bill for. Thus, time and financial constraints become prohibitive to taking lengthy online courses. Other factors like perceived lack of relevance of the content or a preference for in-person learning potentially also created barriers for physicians in this case.

learning. Of note, while outside the scope of this study, the BalancedView team did develop a facilitator's guide, such that BalancedView could be utilized in group settings with a facilitator. The impact of this is another possible avenue for future research.

6.7 Summary and conclusions

In response to a lack of clarity about the problem of weight stigma in health care and what might be done to reduce it, this study explored the different ways weight stigma can be conceptualized in health care and focused upon strategies to reduce this stigma. Through a case study of BalancedView – an online course on weight bias and stigma for health care providers that was developed over a few years – I examined how stakeholders involved in developing and taking BalancedView conceptualized weight stigma. I found that stigma was conceptualized as a process involving negative attitudes, beliefs and stereotypes about higher weights, that lead to discriminatory behaviour against heavier patients and, thus, negative outcomes for those who experience this stigma. While the medicalization of weight has only recently begun to be taken up as part of the weight stigma construct, this study showed that while there is not agreement among health care providers that medicalizing obesity may lead to stigma, many health care providers do see this as contributing to weight stigma. This notion of the medicalization of weight as contributing to stigma is similar to the perspective of Link and Phelan (2001) who point out that labelling is the first step in the stigma process. I also showed how stigma is a topic that is related to emotions, in that emotional reactions to weight constrain or enable how different stakeholders conceptualize weight stigma and what is considered stigmatizing.

Given a lack of knowledge about how to successfully reduce weight stigma, particularly in the health care context, I also examined the proposed strategies to reduce weight stigma in health care considered during BalancedView's development and, following implementation of

the course, the effectiveness of the strategies used in BalancedView in reducing weight stigma among participants. BalancedView was a course that drew on multiple different stigma reduction techniques. As I demonstrated in this study, the course was effective in reducing weight-biased attitudes right after the course ($N = 249$) and, at three- ($n = 56$) and six-month ($n = 46$) follow-up, these positive changes were maintained. Participants also reported enhancing their skills to address weight bias in their work and making changes to their practice as a result of taking the course. This provides evidence of the benefit of a multi-strategy, online course to address weight stigma among health care providers. Based on a qualitative exploration of the most useful parts of the course, I demonstrated the importance of using patient stories to evoke empathy, using science to influence health care providers, exposing participants to the pros and cons of medicalizing obesity, providing health-centred skill building and encouraging critical reflection. Given the positive effects of BalancedView in reducing weight stigma, I recommend the course continue to be disseminated – particularly to males and physicians who were under represented in this study – and that future stigma reduction efforts also incorporate multiple stigma reduction strategies, similar to those used in BalancedView.

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Appendices

Appendix A Scripted reflections

Each module contained scripted reflections. In module one, participants were asked the following:

Reflect on your experience taking the IAT. Were you surprised by your results? Why or why not? Enter your reflection in the box below: _____ (BC Mental Health and Substance Use Services, 2015)

Later in reflecting on module one they were asked to respond to:

- Question 1. The material presented here was: Completely new to me; Somewhat familiar; Very familiar; or Other.
- Question 2: After reading and reviewing this material, I feel: _____⁹⁰
- Question 3: I also want to say that: _____ (BC Mental Health and Substance Use Services, 2015)

In module two participants were asked to:

Use the green button at the bottom of this video to pause and make observations as you listen to the patient stories. (BC Mental Health and Substance Use Services, 2015)

In module three participants were asked to:

Reflect on the ways that the medicalization of obesity has impacted your patients, either negatively or positively. Feel free to add one or more examples on this board. (BC Mental Health and Substance Use Services, 2015)

In module four participants were asked:

What steps could you take or have you already taken to incorporate a health-centred approach in your practice?

⁹⁰ Drop-down list with feelings including: Exhausted, confused, ecstatic, guilty, suspicious, angry, hysterical, frustrated, sad, confident, embarrassed, happy, disgusted, frightened, enraged, ashamed, cautious, depressed, overwhelmed, hopeful, lonely, bored, surprised, anxious, shocked, or other.

No will power	_____	_____	_____	_____	_____	Has will power
Attractive	_____	_____	_____	_____	_____	Unattractive
Good self-control	_____	_____	_____	_____	_____	Poor self-control
Fast	_____	_____	_____	_____	_____	Slow
Having endurance	_____	_____	_____	_____	_____	Having no endurance
Active	_____	_____	_____	_____	_____	Inactive
Weak	_____	_____	_____	_____	_____	Strong
Self-indulgent	_____	_____	_____	_____	_____	Self-sacrificing
Dislikes food	_____	_____	_____	_____	_____	Likes food
Shapeless	_____	_____	_____	_____	_____	Shapely
Healthy	_____	_____	_____	_____	_____	Unhealthy
Under eats	_____	_____	_____	_____	_____	Overeats
Secure	_____	_____	_____	_____	_____	Insecure
Low self esteem	_____	_____	_____	_____	_____	High self esteem
Intelligent	_____	_____	_____	_____	_____	Unintelligent

2. Attitudes about treating obese patients and perceptions of colleagues' bias

Please indicate how much you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I feel that patients with obesity are often non-compliant with treatment recommendations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that patients with obesity lack motivation to make lifestyle changes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Treating a patient with obesity is more frustrating than treating a non-obese patient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is difficult to feel empathy for a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

patient with obesity.

I would rather treat a non-obese patient than a patient with obesity.

Other health providers in my field often have negative stereotypes toward patients with obesity.

I have heard/witnessed other professionals in my field make negative comments about patients with obesity.

2. **I would rate my overall level of knowledge about weight bias and stigma as (select one):**
I'm not at all knowledgeable about this topic; I'm slightly knowledgeable about this topic; I'm moderately knowledgeable about this topic; I'm very knowledgeable about this topic; I'm extremely knowledgeable about this topic
3. **Please briefly describe what you think are the consequences of weight stigma** (*participants do not answer this if they are not at all knowledgeable of weight stigma as per question above*)
4. **I am able to identify ways to avoid weight stigma in my practice** (*participants do not answer this if they have no knowledge of weight stigma as per question above*)
(five-point agreement scale from strongly disagree to strongly agree)
Please explain:
5. **I have the skills necessary to avoid weight-biased care in my work**
(five-point agreement scale from strongly disagree to strongly agree)
Please explain:
6. **I discuss weight with my patients** (Response options: Never; rarely; sometimes; often; always; not applicable)
Please explain your answer:

***If they discuss weight with your patients as per above question, answer below question, otherwise skip.**

7. **I advise heavier patients to lose weight** (Response options: Never; rarely; sometimes; often; always; not applicable)
Please explain:

8. **Please list the three main reasons why you are taking this course**

B.2 Post-course questionnaire

1. **Participating in BalancedView has helped to decrease my weight-biased attitudes** (strongly disagree, disagree, neutral, agree, strongly agree)

2. Fat Phobia

Listed below are 16 pairs of adjectives sometimes used to describe obese or fat people. For each adjective pair, place an X on the line closest to the adjective that you feel best describes your feelings and beliefs.

Lazy	_____	_____	_____	_____	_____	Industrious
No will power	_____	_____	_____	_____	_____	Has will power
Attractive	_____	_____	_____	_____	_____	Unattractive
Good self-control	_____	_____	_____	_____	_____	Poor self-control
Fast	_____	_____	_____	_____	_____	Slow
Having endurance	_____	_____	_____	_____	_____	Having no endurance
Active	_____	_____	_____	_____	_____	Inactive
Weak	_____	_____	_____	_____	_____	Strong
Self-indulgent	_____	_____	_____	_____	_____	Self-sacrificing
Dislikes food	_____	_____	_____	_____	_____	Likes food
Shapeless	_____	_____	_____	_____	_____	Shapely
Healthy	_____	_____	_____	_____	_____	Unhealthy
Under eats	_____	_____	_____	_____	_____	Overeats
Secure	_____	_____	_____	_____	_____	Insecure
Low self esteem	_____	_____	_____	_____	_____	High self esteem
Intelligent	_____	_____	_____	_____	_____	Unintelligent

3. Attitudes about treating obese patients

Please indicate how much you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I feel that patients with obesity are often non-compliant with treatment recommendations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that patients with obesity lack motivation to make lifestyle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

changes.

Treating a patient with obesity is more frustrating than treating a non-obese patient

It is difficult to feel empathy for a patient with obesity.

I would rather treat a non-obese patient than a patient with obesity.

4. Please repeat the **Implicit Association Test**. It will help us understand the impact of the resource. When you get to the Implicit Association Test (IAT) Canada homepage, click “Go to the demonstration tests”. Next click “I wish to proceed”. Click on the Weight (Fat-Thin) IAT to begin. Please make note of your results, as you will need to input them below. (Response options: slight automatic preference for thin vs. fat people; moderate automatic preference for thin vs. fat people; strong automatic preference for thin vs. fat people; little to no automatic preference between thin and fat people; slight automatic preference for fat vs. thin people; moderate automatic preference for fat vs. thin people; strong automatic preference for fat vs. thin people)

5. **Participating in the BalancedView has contributed to increasing my knowledge about weight stigma** (five-point agreement scale from strongly disagree to strongly agree)

6. **I would now rate my overall level of knowledge about weight bias and stigma as (select one):** I’m not at all knowledgeable about this topic; I’m slightly knowledgeable about this topic; I’m moderately knowledgeable about this topic; I’m very knowledgeable about this topic; I’m extremely knowledgeable about this topic

7. **Please briefly describe what you think are the consequences of weight stigma**

8. **Below you will see a series of statements about weight. To help us assess what you have learned and how your perspectives have changed please answer the following:**

a. **BEFORE taking BalancedView** - Excess fat is primarily caused by:

- Controllable factors (diet and exercise)
- Uncontrollable factors (genetics and environment)

b. **AFTER taking BalancedView** - Excess fat is primarily caused by:

- Controllable factors (diet and exercise)
- Uncontrollable factors (genetics and environment)

c. **BEFORE taking BalancedView** - For most people with obesity, achieving a large amount of permanent weight loss:

- Is impossible
- Is achievable

d. AFTER taking BalancedView - For most people with obesity, achieving a large amount of permanent weight loss:

- Is impossible
- Is achievable

e. BEFORE taking BalancedView - Focusing on weight loss:

- Improves health
- Leads to health problem E.g. disordered eating

f. AFTER taking BalancedView - Focusing on weight loss:

- Improves health
- Leads to health problem E.g. disordered eating

g. BEFORE taking BalancedView - People who are overweight (BMI 25-29.9) are:

- Usually healthy
- Usually unhealthy

h. AFTER taking BalancedView - People who are overweight (BMI 25-29.9) are:

- Usually healthy
- Usually unhealthy

9. After taking this course, I am able to identify ways to avoid weight stigma in my practice (five-point agreement scale from strongly disagree to strongly agree)

Please explain:

10. To what extent do you agree with the following statement: Participating in the BalancedView course has contributed to my developing skills to address weight stigma in my work (five-point agreement scale from strongly disagree to strongly agree)

11. Have you yet implemented any changes in your practice as a result of this course? If so, please describe:

12. I will apply what I have learned in this course in my work (five-point agreement scale from strongly disagree to strongly agree)

13. Please describe what you will do differently in your practice, if anything, after taking this course

14. In the pre-questionnaire we asked you whether you discuss weight with your patients. Now that you have taken this training:

- Do you plan to discuss weight with your patients? (Response options: Never; rarely; sometimes; often; always; not applicable)
- Do you plan to advise heavier patients to lose weight? (Response options: Never; rarely; sometimes; often; always; not applicable)
- Please explain

15. After participating in the course, how likely are you to do the following? (Response options: Extremely unlikely, unlikely, neutral, likely, extremely likely)

- Do more reading on the topic of weight bias

- Talk to a colleague about this issue
- Find more educational activities on this subject
- Critically reflect on how my attitudes about weight might impact my practice
- Other: Please list

16. Previous research has found that attitudes about weight and weight stigma are related to a person’s own weight and to whether or not they have previous experiences with weight-based teasing. With this in mind please answer the following:

- What is your height? (optional)
 _____ (inches or cm); prefer not to answer; don’t know
- What is your weight? (optional)
 _____ (kgs or lbs); prefer not to answer; don’t know
- Have you ever been teased for your weight?
 - Yes
 - No
 - Prefer not to answer

17. I would recommend this course to my colleagues (Response options: definitely not; probably not; not sure; probably; definitely)
 Please explain:

18. Please check the answer that best describes your response regarding course content:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Course content was clear	<input type="radio"/>				
The information was useful	<input type="radio"/>				
Course content addressed my learning needs	<input type="radio"/>				

Comments:

19. How long did it take you to complete the course?

20. Please check the answer that best describes your response regarding course format:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Course length was appropriate	<input type="radio"/>				

(If disagree or strongly disagree, was it:

- Too long*
- Not long enough*)

- I could navigate the modules easily
- Course activities were engaging

21. What did you find most useful about this course?

22. Which of the following aspects of the course did you find most impactful? (1=most impactful; 8=least impactful)⁹¹

- Patient stories with weight bias in health care
- Professionals sharing experiences of change
- Information on the myths about body weight
- Information on the consequences of weight stigma
- Information on health-centred approaches
- Information on the medicalization of weight
- The opportunity to reflect on your beliefs
- The video scenarios

23. Please describe any factor or situation that impeded your learning in this course

24. How could BalancedView improved?

B.3 Follow-up questionnaire

1. Repeat implicit association test

When you get to the Implicit Association Test (IAT) Canada homepage, click “Go to the Demonstration Tests”. Next, review the preliminary information on the next screen and click “I wish to proceed”. Click on the Weight (Fat-Thin) IAT to begin. **Please make note of your results as you will need to input it in the below drop-down menu.**

(Response options: slight automatic preference for thin vs. fat people; moderate automatic preference for thin vs. fat people; strong automatic preference for thin vs. fat people; little to no automatic preference between thin and fat people; slight automatic preference for fat vs. thin people; moderate automatic preference for fat vs. thin people; strong automatic preference for fat vs. thin people)

2. Participating in BalancedView has contributed to decreasing my weight-biased attitudes (strongly disagree, disagree, neutral, agree, strongly agree)

3. Fat Phobia

Listed below are 16 pairs of adjectives sometimes used to describe obese or fat people. For each adjective pair, place an X on the line closest to the adjective that you feel best describes your feelings and beliefs.

Lazy _____ Industrious

⁹¹ Previous version included ‘other’ as a ninth option.

No will power	_____	_____	_____	_____	_____	Has will power
Attractive	_____	_____	_____	_____	_____	Unattractive
Good self-control	_____	_____	_____	_____	_____	Poor self-control
Fast	_____	_____	_____	_____	_____	Slow
Having endurance	_____	_____	_____	_____	_____	Having no endurance
Active	_____	_____	_____	_____	_____	Inactive
Weak	_____	_____	_____	_____	_____	Strong
Self-indulgent	_____	_____	_____	_____	_____	Self-sacrificing
Dislikes food	_____	_____	_____	_____	_____	Likes food
Shapeless	_____	_____	_____	_____	_____	Shapely
Healthy	_____	_____	_____	_____	_____	Unhealthy
Under eats	_____	_____	_____	_____	_____	Overeats
Secure	_____	_____	_____	_____	_____	Insecure
Low self esteem	_____	_____	_____	_____	_____	High self esteem
Intelligent	_____	_____	_____	_____	_____	Unintelligent

4. Participating in BalancedView had contributed to increasing my knowledge about weight stigma (Strongly disagree, disagree, neutral, agree, strongly agree)

5. Please rate your knowledge of weight stigma: (I'm not at all knowledgeable about this topic; I'm slightly knowledgeable about this topic; I'm moderately knowledgeable about this topic; I'm very knowledgeable about this topic; I'm extremely knowledgeable about this topic)

6. Attitudes about treating obese patients

Please indicate how much you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I feel that patients with obesity are often non-compliant with treatment recommendations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that patients with obesity lack motivation to make lifestyle changes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Treating a patient with obesity is more frustrating than treating a non-obese patient. | <input type="radio"/> |
| It is difficult to feel empathy for a patient with obesity. | <input type="radio"/> |
| I would rather treat a non-obese patient than a patient with obesity. | <input type="radio"/> |

7. Please briefly describe what you think are the consequences of weight stigma
8. Below you will see a series of statements about weight. To help us assess what you have learned and how your perspectives have changed please answer the following:

a. **BEFORE taking BalancedView** - Excess fat is primarily caused by:

Controllable factors (diet and exercise)

Uncontrollable factors (genetics and environment)

b. **AFTER taking BalancedView** - Excess fat is primarily caused by:

Controllable factors (diet and exercise)

Uncontrollable factors (genetics and environment)

c. **BEFORE taking BalancedView** - For most people with obesity, achieving a large amount of permanent weight loss:

Is impossible

Is achievable

d. **AFTER taking BalancedView** - For most people with obesity, achieving a large amount of permanent weight loss:

Is impossible

Is achievable

e. **BEFORE taking BalancedView** - Focusing on weight loss:

Improves health

Leads to health problem E.g. disordered eating

f. **AFTER taking BalancedView** - Focusing on weight loss:

Improves health

Leads to health problem E.g. disordered eating

g. **BEFORE taking BalancedView** - People who are overweight (BMI 25-29.9) are:

Usually healthy

Usually unhealthy

h. AFTER taking BalancedView - People who are overweight (BMI 25-29.9) are:

Usually healthy

Usually unhealthy

- 9. After taking this course, I am able to identify ways to avoid weight stigma in my practice** (five-point agreement scale: strongly disagree to strongly agree)
Please explain
- 10. In the pre-questionnaire we asked you whether you discuss weight with your patients. Now that you have taken this training:**
- Do you plan to discuss weight with your patients? (Response options: Never; rarely; sometimes; often; always; not applicable)
 - Do you plan to advise heavier patients to lose weight? (Response options: Never; rarely; sometimes; often; always; not applicable)
 - Please explain
- 11. Participating in BalancedView contributed to my developing skills to address weight stigma in my work** (five-point agreement scale: strongly disagree to strongly agree)
- 12. I have applied what I learned in this course in my work** (five-point agreement scale: strongly disagree to strongly agree)
- 13. Have you yet implemented any changes in your practice as a result of this course? If so, please describe. If not, please explain.**
- 14. After the course ended, did you do any of the following?** (Check all that apply).
- Do more reading on the topics of weight bias
 - Talk to a colleague about this issue
 - Find more educational activities on this subject
 - Critically reflect on how my attitudes about weight might impact my practice
 - Other: Please list
- 15. Reflecting back on the resource now, which of the following aspects of the course was most impactful for you?** Please rate from 1 – 9 (1=most impactful; 9=least impactful).
- Patient stories about weight bias in health care
 - Professionals sharing experiences of change
 - Information on the myths about body weight
 - Information on the consequences of weight stigma
 - Information on health-centred approaches
 - Information on the medicalization of weight
 - The opportunity to reflect on your beliefs
 - The case study video scenarios
 - Other (please list)
- 16. What was the most important lasting lesson learned for you from this course?**

17. Please provide any feedback on how we can improve the course in the future to better meet the needs of health care providers like yourself

B.4 Additional questionnaire questions from pilot

The following questions were included in questionnaires in the pilot but not included in questionnaires in the implementation stage. Participants were asked to please answer always, often, sometimes, rarely or never to the following questions at both pre and post:

- If patients are **overweight** I plan to inform them of the health risks of remaining overweight
- If patients are **overweight** I plan to inform them of the health risks of remaining overweight
- If patients are **obese** I plan to inform them of the health risks of remaining obese
- If patients are **overweight** and have additional risk factors, like type two diabetes, I plan to advise them to lose weight
- If patients are **obese** and have additional risk factors, like type two diabetes, I plan to advise them to lose weight
- If patients are **heavy** but seem otherwise healthy, I plan to advise them to lose weight
- If patients are **average weight** I intend to ask them about their dietary and exercise habits
- If patients are **fat** I intend to ask them about their dietary and exercise habits
- If a patient **visually appears heavy** I intend to weigh them
- If a patient **visually appears average** weight, I intend to weigh them

At post participants were also asked the following additional questions during the pilot:

- Please describe your experience with the learning assessments at the end of each module
- How can we improve the learning assessments?
- The length of the pre-test questionnaire was appropriate (Agreement scale)
(If disagree or strongly disagree, was it: too long or not long enough)
- The length of this post-test questionnaire was appropriate (Agreement scale)
(If disagree or strongly disagree, was it: too long; or not long enough)
- How can we improve this post-test questionnaire?

Appendix C Interview guides

Two interview guides were used in this study, one for the group interview and the other for course participant interviews. Each is shown below.

C.1 Interview guide for course participants

Interviews were semi-structured, based on the following thematic interview guide:

1. Contextual information

- Current job and professional experience
- Positive or negative experiences with their own weight
- Self-reported beliefs & attitudes about weight before course and practices when working with clients with weight issues pre-course
- Overall values (e.g. re: individualism versus egalitarianism)

2. Recruitment

- Reasons for participating
- Perceptions of likelihood of colleague participation
- Feedback on recruitment strategy and how to enhance recruitment
 - Perceptions re: barriers to successful recruitment

3. Overall perceptions of course

- What stood out the most?
- What was most impactful?
- Did anything stand out as particularly helpful or unhelpful, anything they really liked or didn't like?

4. Participant changes as a result of course

- Perceptions of changes in attitudes or beliefs as a result of course
 - Explore whether changes are to implicit vs. explicit attitudes
- Behaviour change
 - Ask re: changes in behaviour since course
 - Examples
- Skills learned
 - What skills, if any, do they feel they [need] to develop but did not have a chance as a result of course?
- Reflexivity
- Perceptions of necessary changes to training to help ensure it is effective in meets its aims

5. Perceptions of course process and format

- Perceptions of course length
- Barriers to engaging or participating when in course
- Feedback on various learning activities
- Feedback on interactive design

- Feedback on videos
- Feedback on learning assessments
- Feedback on technology
- What should be changed, if anything, re: how training was delivered (process)?

6. Perceptions of various weight stigma reduction strategies (content)

- Perceptions of effectiveness of attribution theory strategies on attitude change
- Experiences with learning about medicalization of weight
 - What would experience have been like without this information?
 - How did they feel when learning about this? Was it hard to hear, was there disbelief? What emotions came up?
- Feedback on evoking empathy as a stigma reduction strategy
 - Explore role between individualism as cause of obesity/empathy
- Feedback on social consensus and social norms strategies
- What should be changed re content?

7. Feedback on evaluation and research (asked at pilot stage only)

- Feedback on pre/post questionnaires & learning assessments
- Feedback on interview
 - What are most important questions to be asking participants in post-training interviews?
 - Was there anything that should be changed?

C.2 Group interview guide

Based on thematic interview schedule, as follows:

1. Diagnosis phase of intervention development

- **Problem identification**
 - How was problem of weight stigma in BC identified?
 - Who was involved in problem identification?
- **Mobilizing for change:**
 - Political and public health context pre-funding that enabled training
 - Process of mobilizing to address weight stigma
 - Factors that enabled mobilization on weight stigma
 - Change in Health Minister
 - Eating disorder prevention group efforts re: weight stigma
 - Academic research on weight stigma or weight-centered approaches to health
 - Partnerships with researchers or professionals

- Intersectoral action
 - Economic
 - Political pressure
 - Equity
 - Scientific argument
 - Other
- **Securing funding for weight stigma training**
 - Stakeholders involved
 - Process

2. Development phase

- **Developing training**
 - Who made what decisions and how
 - Process of developing content and format
 - Successes and challenges
 - Extent to which development was aligned with promising practices in health promotion intervention
 - Interdisciplinarity and intersectoral action
 - Stigma target group involvement
 - Theory- and evidence-based
 - Challenges in aligning development with health promotion practices
 - Successes in aligning development with health promotion practices
 - Aligning training development with weight stigma research
 - Process of aligning intervention with extant weight stigma theory and evidence
 - Extent to which development was connected to evidence and theory in weight stigma reduction
 - Extent it was connected to weight stigma theory on:
 - Attitude change
 - Enhancing knowledge
 - Behaviour and skill change/building
 - Reasons for decisions made
 - Challenges/successes in aligning development with weight stigma research
 - Recommendations for others developing similar interventions
 - Extent intervention was tailored to address array of factors said to be causally related to weight stigma through an interdisciplinary review of weight stigma literature
 - Aligning training development with promising practices and evidence in other areas of stigma research
 - Extent it was developed to be aligned with broad stigma theories re: attitude change, re: causality of stigma, changing behaviours, etc.
 - Aligning training development with theory and evidence in strategies to influence adult learners, with a specific focus on health professionals
 - What was process of considering how to influence adult learners re: weight stigma?

- What was process regarding how to promote learning specifically among health professionals?
- Successes and challenges
- What educational theories were or were not used and why?
- What is the subjective, perceived impact of choices made?

3. Implementation phase

- What is strategy for diffusion of weight stigma intervention?
- Who is involved in determining intervention diffusion plan?
 - Is this process collaborative and intersectoral?
- How is program implementation supported and sustained?
- Challenges and successes in this phase

4. Evaluation phase

- Who was involved?
 - Extent to which an array of interdisciplinary and intersectoral stakeholders consulted to develop evaluation plan?
- Outcomes evaluation
 - How were desirable outcomes decided?
 - How were outcome indicators developed?
 - What tools were used and why?
 - Extent to which outcome evaluation was aligned with promising practices and theory in outcomes evaluation and theories of weight stigma measurement
- Process evaluation
 - How were desirable outcomes decided?
 - How were outcome indicators developed?
 - What tools were used and why?
 - Did the program developers determine if successes and failures in project were related to process of intervention development and implementation rather than content of training? If so, how?
- Strengths and areas for improvement/successes and challenges in this phase

5. Recommendations for other groups or regions wishing to undertake similar work

- How to mobilize and secure funding to address weight stigma
- Suggestions for effective and successful intervention development
- Recommendations re: promising practices in evaluation and research on weight stigma reduction

Appendix D Evaluation report

The following appendix includes the BalancedView evaluation report that I co-authored, with all identifying details (names) redacted. The report appendices are not included here.



EVALUATION REPORT

Final Version – September 20, 2017

Prepared by: [REDACTED] *Caitlin O'Reilly, MPP, PhD Cand.*

EXECUTIVE SUMMARY

In recent years, an extensive body of literature has developed demonstrating the scope and consequences of weight stigma across society, including in health care. Research shows that health professionals may endorse stereotypes and negative attitudes about overweight and obese patients and that this can have a significant impact on mental and physical health, independent of weight. These impacts may include poor body image and body dissatisfaction, low self-esteem and low self-confidence, depression, anxiety and other psychological disorders, maladaptive eating patterns and eating disorders, and avoidance of physical activity. Weight stigma can also result in barriers to accessing health care.

In response to this, the Provincial Health Services Authority funded a three-year project focused on addressing weight stigma in health care in British Columbia (BC). The aim of this funding was to enhance the awareness, knowledge and skills of health professionals in BC in the area of weight bias and stigma. To achieve this aim, stakeholders from across the province worked together to develop and launch BalancedView. BalancedView is an online learning resource for health professionals, designed to raise awareness about weight bias and stigma in health care and reduce weight bias and stigma in practice.

An evaluation plan was developed early in the project to explore project outcomes. The evaluation examined responses from health professionals in BC who completed the BalancedView resource and participated in pre and post (n=74), and three- (n=56) and six-month (n=46) follow-up surveys that included self-report questions and validated measures, including the fat phobia scale as a measure of explicit attitudes and the implicit association test. Results from these measures demonstrate that BalancedView contributed to reducing weight bias and stigma among participants and improving attitudes, knowledge, skills and behaviours. The positive changes noted at post were maintained at both follow up points.

The patient stories and the video scenarios within BalancedView were perceived as particularly helpful in reducing weight bias and stigma among participants and were ranked by most participants as the two most influential components. Notably, however, participants commented on the usefulness of having multiple components of the resource.

Based on this small sample size, BalancedView achieved its intended goals of increasing knowledge of weight bias and stigma, improving weight-related attitudes, and decreasing weight bias in clinical practice. Further investigation is needed to explore the impact of the resource on a larger and more diverse sample size. Given that at the end of the evaluation (January 2016), 692 users had registered for BalancedView, this dataset provides a rich opportunity for further study.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	II
TABLE OF CONTENTS	III
1.0 INTRODUCTION	1
2.0 PROJECT'S APPROACH	2
3.0 EVALUATION OVERVIEW	3
3.1 DATA COLLECTION METHODS	3
3.1.1 RECRUITMENT	4
3.2 DEMOGRAPHICS	5
4.0 FINDINGS: HOW DOES THE RESOURCE CONTRIBUTE TO REDUCING WEIGHT BIAS AND STIGMA IN HEALTH PROFESSIONALS?	7
4.1 CHANGES IN PARTICIPANTS' ATTITUDES	7
4.1.1 FAT PHOBIA SCALE	7
4.1.2 ATTITUDES ABOUT TREATING OBESE PATIENTS	9
4.1.3 SELF-REPORTED ATTITUDES	9
4.1.4. IMPLICIT ASSOCIATION TEST	10
4.2 CHANGES IN PARTICIPANTS' KNOWLEDGE	12
4.3 CHANGES IN PARTICIPANTS' SKILLS AND BEHAVIOURS	13
5.0 FEEDBACK ABOUT BALANCEDVIEW	16
5.1 PARTICIPANT COMMENTS ON THE RESOURCE	16
5.2 MOST INFLUENTIAL COMPONENTS	17
5.3 LEAST INFLUENTIAL COMPONENTS	18
5.4 AREAS FOR IMPROVEMENT	19
6.0 DISCUSSION	20
LIMITATIONS	21
7.0 CONCLUSION	22
REFERENCES	22
APPENDIX A: LIST OF STEERING AND ADVISORY COMMITTEE MEMBERS	23
APPENDIX B: BALANCED VIEW LOGIC MODEL	25
APPENDIX C: EVALUATION DATA COLLECTION PLAN	26
APPENDIX D: QUESTIONNAIRES	30

REGISTRATION	30
PRE- QUESTIONNAIRE	30
POST QUESTIONNAIRE	33
FEEDBACK ABOUT COURSE	38
FOLLOW-UP QUESTIONNAIRE	40
APPENDIX E: CHANGES IN IAT SCORES OVER TIME	45

LIST OF FIGURES

Figure 1: Participant regional distribution	5
Figure 2: Participants' age	6
Figure 3: Participants' professions.....	6
Figure 4: Fat Phobia scale results over time	8
Figure 5: Self-reported change in weight-biased attitudes	10
Figure 6: Implicit Association Test results.....	11
Figure 7: Self-reported change in knowledge.....	12
Figure 8: Comparison of self-reported knowledge before and after BalancedView	13
Figure 9: Self-reported change in skills.....	14
Figure 10: Application of learnings in practice	15
Figure 11: Most influential component of the resource.....	18
Figure 12: Least influential component of the resource.....	19

1.0 Introduction

BalancedView is an online learning resource designed to raise awareness about weight bias and stigma in health care and to help health professionals reduce weight bias and stigma in practice. It was developed by BC Mental Health and Substance Use Services with funding provided by the Provincial Health Services Authority (PHSA) Population and Public Health Program. The project was a response to extensive literature showing that health professionals may endorse stereotypes and negative attitudes about overweight and obese patients and that this can have a significant impact on mental and physical health, independent of weight. These impacts may include poor body image and body dissatisfaction, low self-esteem and low self-confidence, depression, anxiety and other psychological disorders, maladaptive eating patterns and eating disorders, and avoidance of physical activity.

The aim of BalancedView is to enhance the awareness, knowledge and skills of health professionals in the area of weight bias and stigma. To meet this aim, the five interactive modules in the resource cover a variety of topics: Understanding Weight Stigma, Patient Voices, Commonly-Held Beliefs and Introduction to Health-Centred Approaches, Professional Voices, and Applying Health-Centred Strategies in Practice. Following completion of BalancedView, users can submit for professional development or continuing education credits. At the end of the evaluation time period (January 2016), 692 users had registered for BalancedView.

The resource was developed over a period of more than three years by a team supported by a steering committee and advisory committee that included health professionals from a variety of backgrounds (see [Appendix A](#) for a list of committee members). As part of the development process, the resource was pilot tested with 8 individuals as well as with committee members. During the pilot test, the evaluation questionnaires were also used to make sure they were gathering the intended data. Although intended for a larger group, participants dropped out due to technical challenges with the resource. Regardless of the low number of participants, the pilot test results suggested the resource was effective in decreasing weight-biased attitudes, improving knowledge and enhancing competency to address weight bias in clinical practice. Participants found the resource content useful and important, and had few suggestions for how to improve content. The few suggestions for content change included having more patient stories and more information on the medicalization of weight.

The evaluation process has accompanied the project since its inception. An external evaluator, [REDACTED], participated in all committee meetings. Once it was agreed that there was interest in a more engaged evaluation that drew on the current literature on weight bias and took advantage of the data as research material, one of the steering committee members, Caitlin O'Reilly, joined [REDACTED] in the evaluation work. She decided to use BalancedView as the focus of the doctoral research. By participating in committee meetings, the evaluators were able to support the team in clarifying and specifying the evaluation questions and manage achievable data collection and reporting expectations. This report describes the evaluation methods and findings.

2.0 Project's approach

The project, entitled Weight Bias and Stigma Education for Health Professionals, was the result of a growing interest in the area of weight bias and stigma in BC. The PHSA identified Promoting Healthy Weights as a priority area for Population and Public Health. A review of the interrelationships between obesity, overweight, positive mental health and weight bias and stigma across the life course was completed in May 2012, identifying weight bias, stigma, bullying and discrimination both within the health system and in the public sphere as a key action area.

In July 2012 the PHSA funded BC Mental Health and Substance Use Services to develop a provincial weight bias and stigma resource for health professionals. The project outputs included a needs assessment (literature review, environmental scan and gap analysis) to understand the needs of health professionals, patients and families in BC with regard to weight bias and stigma; an evidence-informed resource to address weight bias and stigma among health professionals in BC; its dissemination and evaluation.

The project was administered and run by Project Managers from the Health Literacy team (BC Mental Health and Substance Use Services, PHSA). They assembled and maintained project committees and participated in external ones, communicated with contractors and ensured deadlines were met, shared materials with committee members, gathered their input and communicated back to consultants, implemented strategies and promoted the resource.

Project Managers assembled two committees:

- Steering Committee (SC) with 11 members representing experts in the field of healthy weights and weight bias provided overall guidance and leadership in the project development process. The SC met 14 times with some members attending the meetings in person and others participating over the phone. They reviewed project materials ranging from literature review drafts to resource logo and format.
- Advisory Committee (AC) representing the target audience advised on resource content, format, and dissemination strategies. This committee included 10 members¹ representing different regions, areas of focus and populations. The committee held 11 meetings.

Membership and affiliation of these groups can be found on Appendix A.

Project managers also used existing external reference groups to advise on resource content and resource validity as an educational tool for health professionals.

A variety of expert consultants were contracted to carry out the needs assessment, write the resource's content, develop the dissemination and branding materials and strategy; and evaluate the project. All material developed by the consultants was reviewed by the different committees.

The approach taken to steer the project through project managers, reference groups and consultants, allowed the project to progress overall according to planned timelines while engaging stakeholders in the

¹ Membership on these committees fluctuated over time. The numbers reported here represent the total number who consistently attended.

development of the resource. The engagement of a variety of stakeholders through the reference groups acknowledged the complexity of weight bias and stigma in its need to include a variety of perspectives. The fact that many members of the committees are recognized as experts in the field brought enhanced credibility to the final products. Participation of SC and AC members in the development of the resource and its dissemination, allowed the team to align the resource with the current literature, practices and policies in the field. This engagement also facilitated the dissemination of the resource as committee members were able to bring it to their work and professional organizations.

SC and AC members reflected on the approach of the project and agreed that the combination of the three components (project management, reference groups and consultants) was the best strategy to develop a professional development tool.

3.0 Evaluation Overview

The evaluation focused initially on documenting both the project's process and outcomes. It was guided by evaluation questions that were collaboratively developed and agreed to. The two main questions were:

1. How did the process of developing and testing the resource enhance its content, format and effectiveness?
 1. a. Who was involved in designing and testing the resource and how?
 1. b. What is the evidence that supports the components of the resource?
 1. c. How can the resource and its uptake be improved?
2. How does the resource contribute to reducing weight bias and stigma in health professionals?
 2. a. What are the changes in participants' attitudes, knowledge and skills that the resource contributes to?
 2. b. What are the changes in participants' attitudes, knowledge, skills and behaviours that are sustained over three and six months?

A logic model was developed that describes the inputs, activities, and intended outcomes. Once there was agreement on the intended outcomes and the resources available, a detailed evaluation plan was designed (See [Appendix B](#) and [Appendix C](#)).

Although the initial focus was on both the process and outcomes questions, it was collaboratively decided that the focus should be on outcomes achieved by the project. This report focuses specifically on evaluation question two, and the changes that the project brought about among participants who registered and completed the resource. The bulk of the data collected is quantitative and is described using figures and descriptions. Qualitative data is used in the report to contextualize the findings and to illustrate how participants described the changes brought about by their participation in BalancedView.

3.1 Data collection methods

The primary method of data collection for the outcomes evaluation was through the online surveys at four points in the process: when participants registered and before starting the resource, after

completing the resource, three months after completing the resource and six months after completing the resource. The first two data collection points consisted of surveys embedded in the resource and aimed to assess whether the learning triggered by BalancedView influenced participants' attitudes, knowledge and skills and intended behaviours. The follow-up surveys, administered through Fluid Surveys, were designed to measure if the changes to attitudes and behaviours were sustained over time. Copies of the questionnaires used are included in [Appendix D](#). Descriptive statistics from the measures used are presented in this report.

BalancedView modules include self-assessment activities. There was some concern that participants would not want to complete additional evaluation questionnaires. To mitigate this challenge, participants were offered an incentive to complete all surveys (see recruitment section 3.1.1). However, there was some concern that the surveys included too many questions. Therefore, it was decided that the majority would be closed questions that incorporated validated scales² to measure changes in attitudes, and Likert scales to assess self-reported changes in knowledge and skills. An in-depth analysis of qualitative answers would have been beyond the scope of the evaluation. Regardless, a few open-ended questions were included that asked participants to elaborate on their answers and/or describe changes that came about as a result of their participation in BalancedView.

3.1.1 Recruitment

Prior to the launch of BalancedView, the resource was pilot tested with eight participants. Their feedback guided revisions made to the resource, which were mainly of a technical nature. The resource was then launched publicly through a targeted dissemination strategy developed in collaboration with the committees.

This report focuses specifically on data provided by 75 participants recruited through monetary incentives to participate in outcomes evaluation. Two mechanisms of recruitment were used. First, project managers contacted individuals who had been interested in pilot testing but were not selected for that purpose. Second, project managers sent out an email invitation to various networks, including the SC, AC and External Reference Group asking them to share with their networks. Interested individuals were asked to fill out an online survey with their information. Responses were divided by regional health authority with the target of having 15 participants from each regional health authority (for a total of seventy-five participants). If there was not enough interest to get 15 participants from one health authority, the extra spaces were equally distributed among the rest of the health authorities. Previously interested individuals were prioritized over those who filled out the survey. In addition, these previously interested individuals were prioritized based on response time. Within each region there was an attempt made to have representation from each of the target audience health professional groups (one each from medical professionals, mental health professionals, allied health professionals and public health professionals).

Ultimately, 74 participants were included in the evaluation, with equal representation from each of the regions of BC, and a diversity of health professionals. One participant originally included was from outside of BC, and was therefore subsequently excluded, as the evaluation was limited to the province of

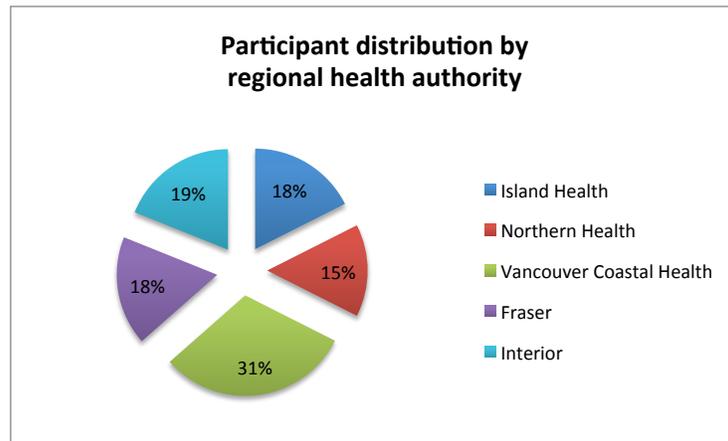
² E.g. the Fat Phobia Scale and questions from Attitudes about Treating Obese Patients. These scales can be found in the questionnaires in Appendix D.

BC. Seventy-four participants completed the resource and the pre and post surveys. Fifty-six completed the three-month follow-up, and forty-six completed the six-month follow-up survey. The report compares results from each of these data collection points. To avoid confusion, each table indicates the number of participants whose data are included in that particular table.

3.2 Demographics

Of the 74³ participants who completed the resource pre and post surveys, 86% were employed by a BC health authority. There were participants from all five health authority regions, with Vancouver Coastal Health Authority having the largest percentage of participants. The participants' identified health authority region was used as a way of identifying regional distribution of participants.⁴ The regional distribution among all 74 participants was as follows:

Figure 1: Participant regional distribution

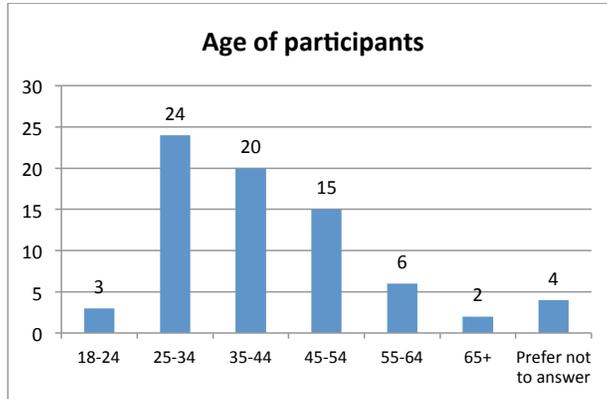


Participants were mostly female, with **only two of the 74 evaluation participants identifying as male**, one as a woman, and the rest identified as female. Most participants were in the age range of 25-54, as the chart below shows.

³ Demographic data were collected at baseline only through a registration form before participants started BalancedView. Cross-referencing follow up demographics was beyond the scope of this evaluation.

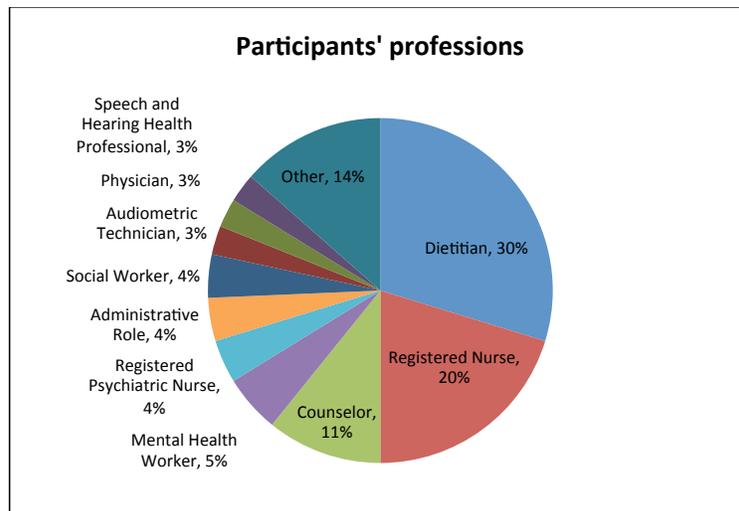
⁴ Registration forms asked participants about their location based on regional health authorities. However not all participants completed this question. Data was used from their original email exchanges with project managers to have complete regional information.

Figure 2: Participants' age



Participants' professions were varied. The three professions with the greatest representation within this sample were: dietitians (30%), registered nurses (20%), and counsellors (11%).

Figure 3: Participants' professions



4.0 Findings: How does the resource contribute to reducing weight bias and stigma in health professionals?

The main question that the evaluation strives to answer is whether engaging with the BalancedView modules and completing the learning activities influences attitudes, knowledge, skills and behaviours related to weight. Findings are organized around these main points of interest. We first discuss changes in attitudes, then knowledge, skills and behaviours, based on descriptive statistics and supplemental qualitative data. Additional supporting data are included in the appendices as indicated.

4.1 Changes in participants' attitudes

BalancedView defines weight bias as “the negative weight-related attitudes, beliefs, assumptions and judgments toward individuals who are at the ends of the weight spectrum. Weight bias does tend to be experienced differently by those who are overweight and obese.”

(https://balancedviewbc.ca/new_to_site.html)

To measure the change in participants' explicit attitudes, three measures were used: the short form of the Fat Phobia Scale,⁵ a condensed version of Attitudes about Treating Obese Patients (ATOP) scale, and self-reported changes in attitudes. To measure changes in implicit attitudes, participants were asked to complete the Implicit Association Test (IAT) at the start of the resource, and then again in the post-survey and at both follow-up points. Results from the explicit and implicit measures are promising, suggesting that BalancedView improved participants' attitudes about weight.

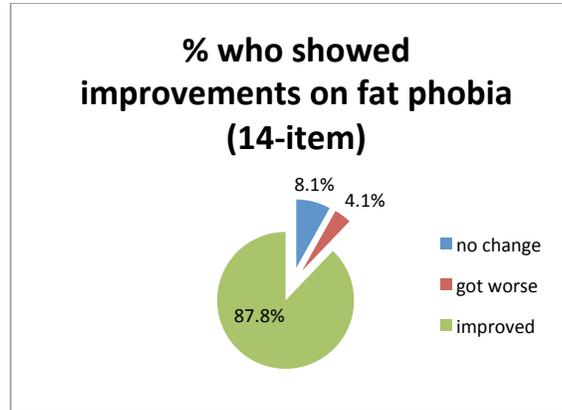
4.1.1 Fat Phobia scale

The Fat Phobia scale was the primary measure used to ascertain levels of weight-biased attitudes at registration and after completing the BalancedView modules. This is a common, validated measure in the literature with 14 self-reported items with five-point response options, where scores closer to five are more biased, and lower scores less biased.

Overall, when comparing results between the registration and after engaging in the modules, 87.8% of participants showed improvement on fat phobic attitudes on the Fat Phobia scale. Results are described in the figure below.

⁵ Two items were added to the Fat Phobia Scale to create a 16-item measure, however only the 14-item results are presented here.

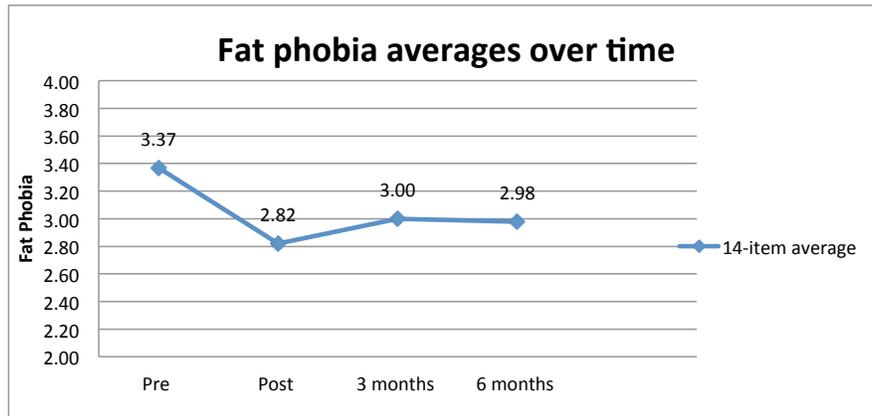
Figure 4: Fat Phobia scale results pre & post BalancedView



Source: Pre and post surveys (n=74)

Based on the Fat Phobia scale, improvements from baseline were generally maintained at follow-up, although not entirely, as pictured below.

Figure 4: Fat Phobia scale results over time



The pre-test mean score for the seventy-four evaluation participants on the Fat Phobia scale was 3.37 (SD⁶ 0.41). Post-test the mean was 2.82 (SD 0.43), showing an overall decrease in bias upon completion

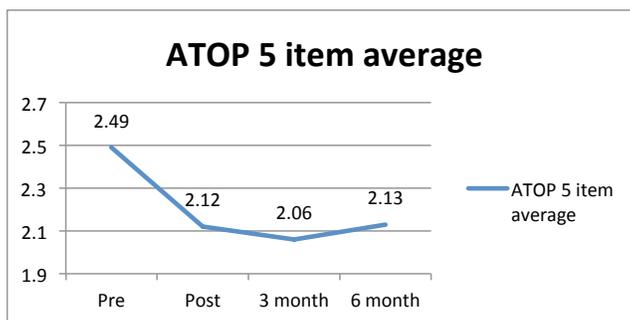
⁶ SD refers to standard deviation.

of the resource.⁷ At follow up, the mean scores were 3.0 (SD 0.45) (three month, $n = 56$) and 2.98 (SD 0.37) (six months, $n = 46$), indicating sustained improvements.

4.1.2 Attitudes about Treating Obese Patients

Five items from the Attitudes About Treating Obese Patients (ATOP), an 18-item survey from the Rudd Center (Puhl, Latner, King & Luedicke, 2014), were assessed at all time points. Participants were asked to rank the extent to which they agreed with biased statements to do with treating obese patients, on a five-point scale, from strongly disagree (score of 1), to strongly agree (score of 5). Higher scores indicate greater bias. The pre test mean was 2.49 (SD 0.69). **Post course and at both follow-up points, scores were improved in comparison. At post the mean was 2.12 (SD 0.62), at three month follow up the mean was 2.06 (SD 0.66) and at six month follow up it was 2.13 (SD 0.54), suggesting a decrease in weight bias immediately after the resource was completed which was sustained up to six months afterwards.**

Figure 6: ATOP results

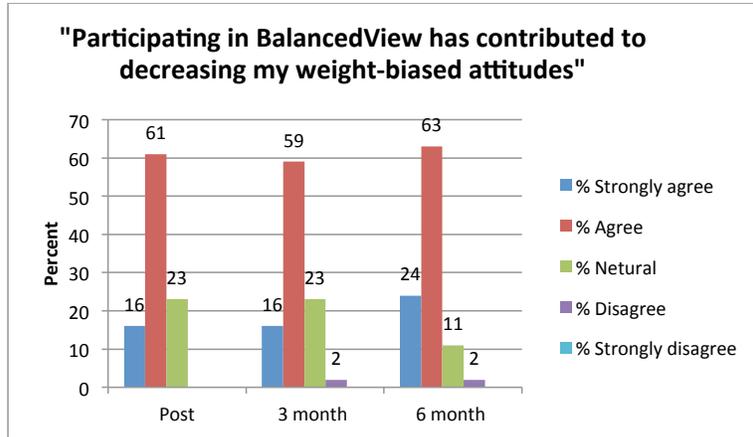


4.1.3 Self-reported attitudes

Seventy-seven percent of participants agreed or strongly agreed that BalancedView contributed to reducing their weight-biased attitudes after completing the resource. At the follow-up surveys, 75% (3-month) and 87% (6-month) agreed or strongly agreed that the resource helped reduce their weight-biased attitudes.

⁷ Descriptive statistics are presented for all of the measures. Predictive statistics were out of scope for this evaluation.

Figure 5: Self-reported change in weight-biased attitudes



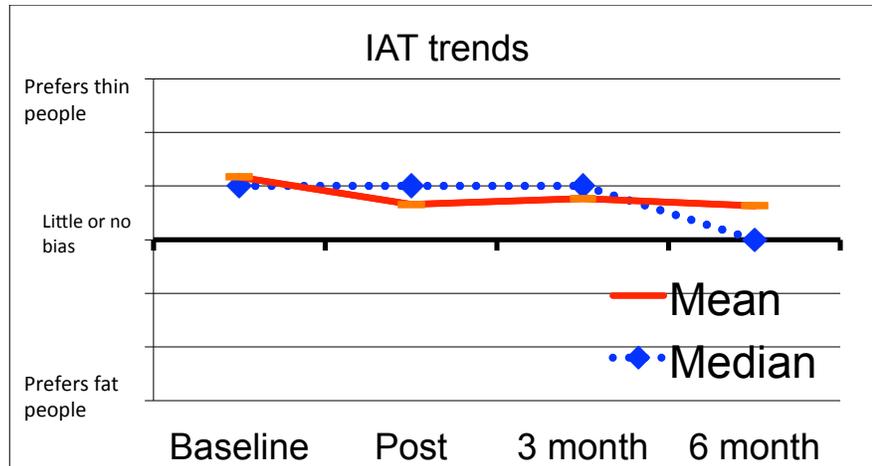
4.1.4. Implicit Association Test

The Implicit Association Test (IAT, <https://implicit.harvard.edu/implicit/takeatest.html>) is a measure designed by Harvard University sociologists to detect the strength of a person's automatic association between mental representations of objects (concepts) in memory. The test was included in all four data collection points for the evaluation.

As the below chart helps illustrate, slight positive changes were observed in mean and median IAT scores. The median IAT score improved between the start of the resource (“baseline”)⁸ and the six-month follow-up survey, but otherwise stayed constant. The mean scores decreased at post, with those improvements generally maintained over time. These results suggest that the positive changes to explicit attitudes also resulted in changes to implicit reactions.

⁸ The baseline IAT measurement was not taken pre-test, but rather was the first exercise within the BalancedView resource.

Figure 6: Implicit Association Test results



The percentage scores for the IAT at each time point are presented in [Appendix E](#).

The answers to open-ended questions provided additional information related to observed changes in participants' attitudes and beliefs. Participants shared how their awareness about weight bias influenced how they think about their individual patients, themselves as caregivers, as well as the impact of weight bias on the health system, the community, and the general population.

I am able to determine when my beliefs or perceptions about patients are not true. I have also gotten better at not letting weight or diet impact the discussions I will have with a patient. I no longer feel certain attributes are associated with certain weights, which has improved my practice. (Participant, six-month follow-up survey)

[The most important, lasting lesson learned from this course was that] I was previously naive to weight bias and how it impacted my life, interactions and practices. The more I reflect on the course I recognize it in all different ways in myself and others. The first step in change is being aware of what needs to change and I am now more aware than ever. (Participant, six-month follow-up survey)

In the follow-up surveys, participants described their understanding of how weight stigma can cause patients to experience feelings of discomfort, sadness, frustration, and a sense of rejection and isolation that may lead to mental health problems.

Weight stigma leads to body shaming, a blame mentality or the tendency to put responsibility of obesity on individuals and expect them to lose weight as an outcome of treatment. Weight stigma proliferates the belief that health is only possible at a designated weight and that to be above or below that weight is somehow disrespectful of your body. (Participant, three-month follow-up survey)

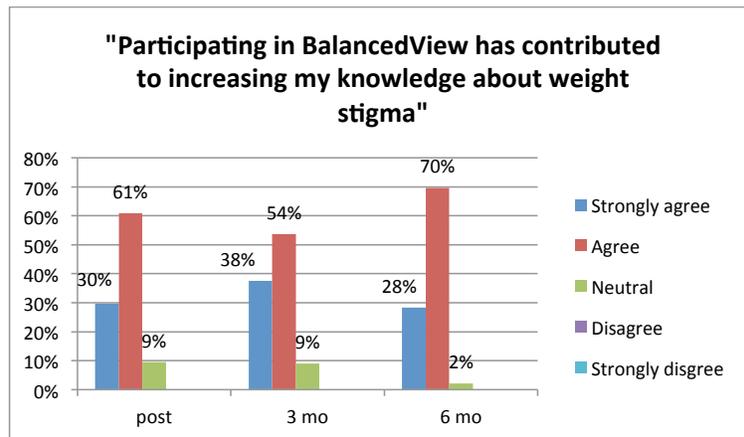
Like [with] any marginalized population, stigma can cause low self-esteem, prevent people from reaching out for health care. Turning the blame on themselves for having obesity that somehow they are not good enough, don't work hard enough, or don't have any self-control. (Participant, three-month follow-up survey)

There are a wide range of effects, from frustration during interactions with health care professionals, to subpar quality of care, or even overlooking health issues due to health care professional's assumptions about a person's health status due to their size. I think overall there is a negative experience within health care, which can influence that person's access to, and participation in health care services. (Participant, six-month follow-up survey)

4.2 Changes in participants' knowledge

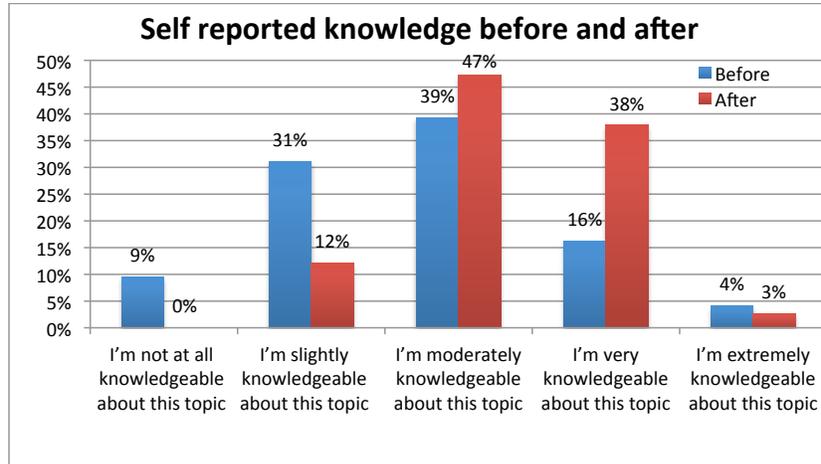
Ninety-one percent of participants self-reported after completing the resource that participating in BalancedView helped increase their knowledge about weight stigma, as the below chart shows.

Figure 7: Self-reported change in knowledge



Participants were also asked to rate their level of knowledge before starting and after completing the resource. As the below chart shows, more participants reported being “moderately” or very “knowledgeable” after the resource than before.

Figure 8: Comparison of self-reported knowledge before and after BalancedView



Source: Pre and post surveys, n=74

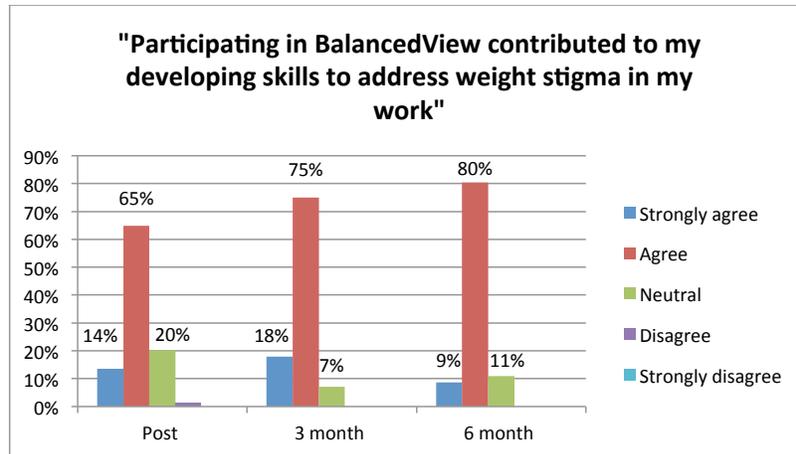
Qualitatively some participants also shared what they learned:

[I learned] strategies including self-reflection. not participating in weight based discussion with colleagues focusing on the client's perceived issues. focusing on health behaviours rather than weight and weight loss. (Participant, post survey)

4.3 Changes in participants' skills and behaviours

One goal of the resource is to enhance participants' competencies (skills and behaviours) to avoid weight stigma in clinical practice. **Most participants agreed after taking the resource and at follow-up, that the resource had helped them develop skills to address weight stigma in their work.**

Figure 9: Self-reported change in skills



After completing the resource, participants shared ideas about what they would potentially do differently in their practice:

We need to look at the chairs, equipment and reading material provided in our clinic as well as the attitudes of our colleagues. We need to be reminded of respectful attitudes towards our patients and each other. (Participant, post survey)

After three months, they had started implementing changes:

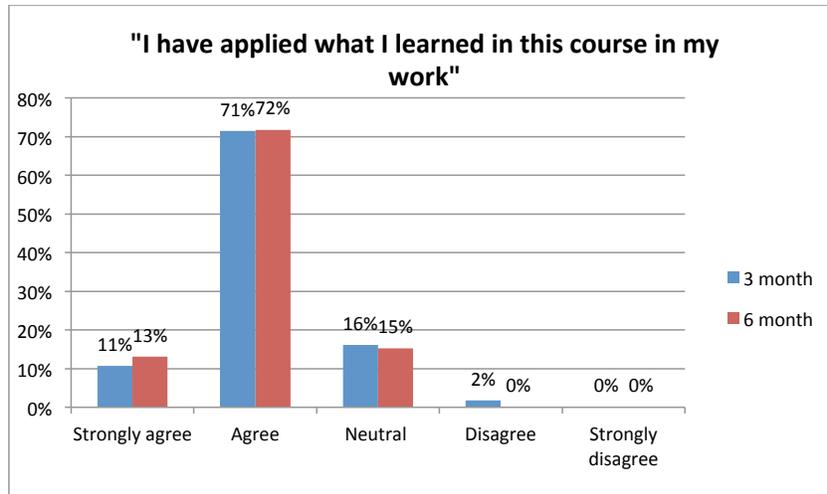
I have incorporated more of a holistic approach, providing more thorough physical exams and in turn I am able to better advocate for my clients' overall health and wellbeing. (Participant, three-month follow-up survey)

After taking this course, I don't bring up the weight topic with client unless they want to talk about it. I don't request clients to step on the scale. I rather ask if they want to. I listen to client's concerns and stories before I bring up calories intake or physical activities. (Participant, six-month follow-up survey)

I am focusing on my work with my clients to promote healthy behaviours, rather than focus on "losing weight" or reaching a target on the scale. (Participant, six-month follow-up survey)

As the below chart shows, most participants agreed in the follow-up surveys that they had applied their learnings from BalancedView in their work.

Figure 10: Application of learnings in practice



Overall, participants shared that even those who were aware of, or knew about weight bias and its impact before BalancedView, had a more profound understanding and made changes in their practice as a result of participating in BalancedView.

To me, the voice of the patient is the most important lasting lesson learned from this course. I have always known about the consequences of weight bias, the information related to weight bias etc., yet listening to the patients directly really gave me a sense of what they have been experiencing, their frustration, their disappointment, their helplessness. The way these patients are being treated by their doctors is unbearable, and we need to put a stop to it. (Participant, six-month follow-up survey)

Even when a health professional means well, and strives to be non-judgmental and client-centered, focusing on physical weight loss can send the wrong signal to the client, and reinforce stigma. I don't think I ever was cruel or rude to an obese client, but my focus on their need to "lose weight" likely reinforced negative attitudes and beliefs, and probably wasn't very helpful to them. Now I know to speak about things from a different angle, and that the focus needs to be on overall health, rather than size. (Participant, six-month follow-up survey)

Participants also shared how what they have learned in the resource has impacted how they interact with other professionals:

I've discussed this course with colleagues and explained what I have learned through it and how we can all address our stigma towards obesity. (Participant, three-month follow-up survey)

As a leader in my department I can sway conversation away from erroneous assumptions about the obese - promote compassion for these people. (Participant, six-month follow-up survey)

Participants also shared changes they brought about in their practice after completing the resource:

We shifted our intake process from weight management focus to overall perceived health/wellness as rated by client. We reviewed (our) current environment and (I) am advocating for changes re: process and equipment needed to provide equal quality of service to all individuals regardless of weight. (Participant, three-month follow up survey)

I have ordered scales with higher weighing capacity for our clinic as well as larger blood pressure cuffs. We already have some chairs without arms. I have discussed this course with our psychiatrists and clinical staff also and encouraged them to take the course. (Participant, three-month follow-up survey)

I have spoken up when weight stigma conversations occur at work. Have made sure that there are comfortable chairs available for larger people. (Participant, six-month follow-up survey)

We have new seating in the waiting room. I've removed magazines that are weight biased. (Participant, six-month follow-up survey)

Lead staff discussions around weight stigma. Reviewed and changed intake practices. Advocated for all staff to participate in balanced view. (Participant, six-month follow-up survey)

When looking at program planning/evaluation I consider supplies and equipment needs for large people. (Participant, six-month follow-up survey)

5.0 Feedback about BalancedView

As described above, the main focus of the evaluation was to assess the changes BalancedView brought about for participants. Limited data were also collected on participant experiences with the resource itself, including what worked well with the resource and what could be improved.

5.1 Participant comments on the resource

Qualitatively, participants had largely positive feedback on the resource.

I really enjoyed it - I particularly found the healthcare and patient stories moving and interesting - I never thought of the effects or how others were feeling. (Participant, six-month follow-up survey)

Found it to be over all a good course. The IAT was an eye opener and a great addition to the course. (Participant, six-month follow-up survey)

A few participants commented on the importance of BalancedView, and suggested that it should be made mandatory for health professionals as part of curriculum in nursing and medical schools:

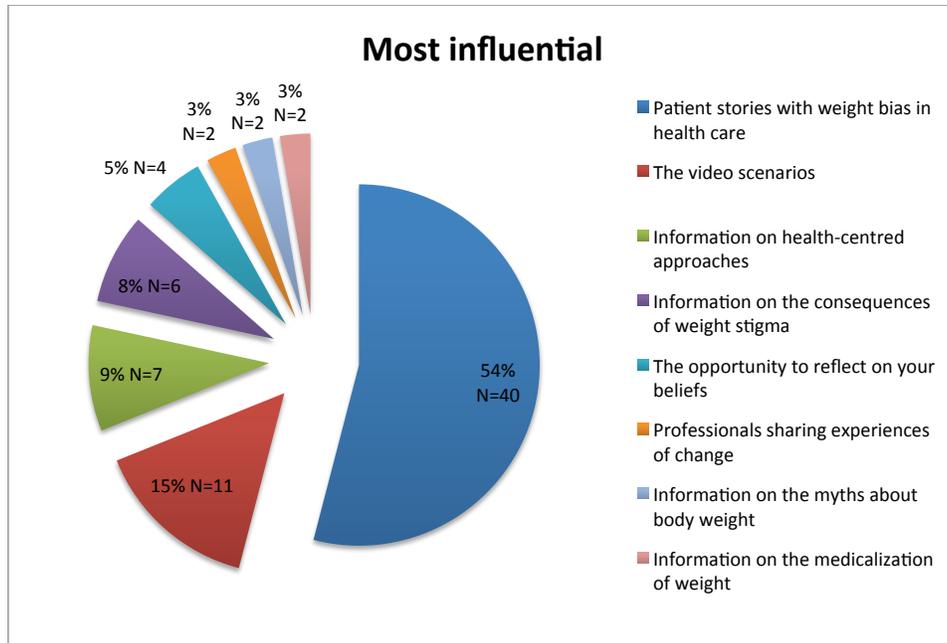
This course should be mandatory for any health professional. This might be easier to achieve in public health clinics as part of the employee's orientation. (Participant, six-month follow-up survey)

Increase profile and accessibility of training (consider including in education ex. nurses, physicians, social workers, etc.). (Participant, post survey)

5.2 Most influential components

To assess which components of the module had the most influence on participants' learning, the survey completed after the resource included a task that required participants to rank eight components of the resource, from the one with the least influence to the one with the most influence. **Fifty-four percent of participants rated the patient stories as the most influential component of the resource.** As one participant shared: "Having clients . . . share their stories was enlightening" (Participant, post survey). **On average, videos were rated as the second most influential component (by 15% of participants).** The table below shows the percentage breakdown of participant perceptions of the most influential component of the resource. Of note, while the videos were often ranked as most helpful, each of the eight components was ranked as most helpful by at least two people.

Figure 11: Most influential component of the resource

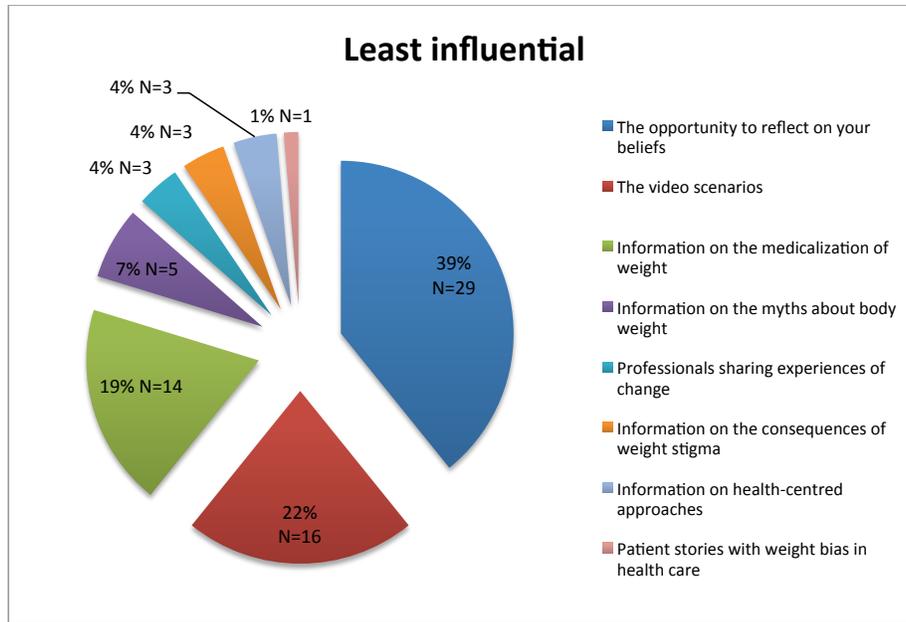


Source: Post survey (n=74)

5.3 Least influential components

Thirty-nine percent of respondents indicated that the opportunity to reflect on beliefs was the least influential component of the resource. Of note, while videos were ranked as the second most influential component by 15% of participants, video scenarios also ranked by 22% as the second least helpful. The next figure shows the number of times each component was mentioned as the least influential. Each component was ranked by at least one participant as the least influential.

Figure 12: Least influential component of the resource



Source: Post survey (n=74)

While there was limited explanation for these rankings, one participant provided some qualitative insight into why the video scenarios were not as helpful in their opinion: “I didn't like some of the case study videos, they felt very scripted and highly unlikely in the extremes of behaviour” (Participant, post survey).

5.4 Areas for improvement

Suggestions for change and improvement were minimal. **One area of improvement related to technical challenges associated with the resource:**

Compatibility issues with surveys and browsers can cause delay in completing them. (Participant, post survey)

Actually, the previous page of this survey was very frustrating as it would not allow me to scroll down to complete the questions. Had to really fiddle around with it to get it to work which added significant time for completing the survey. (Participant, post survey)

Another suggestion was to have the videos more accessible or to build on them in the future:

Have the videos be available without signing in. So easy to forget passwords. Then even when course is complete we can still go back and refer to the material. (Participant, post survey)

Having clients and health professionals of various disciplines share their stories was enlightening. Would like to have more of these stories along with practical solutions on how to make under/overweight patients feel more comfortable. (Participant, post survey)

Summaries of content or shorter resource:

A few participants asked for summaries or easy ways to access the information so it can be reviewed without having to go through the whole resource again.

Provide a summary page that I can always refer to and to refresh myself on this topic. Thanks! (Participant, post survey)

There is so much info on the website. I'd love a 1-page cheat sheet with the main evidence and the references to share with coworkers. Like "talking points" that is a bit of a dialogue to help with the conversation. I feel a bit overwhelmed at the idea of going back into the module to review all the evidence and provide it in a snap shot version to those I speak with. (Participant, post survey)

I would love some sort of refresher! Scheduled tips or reminders through email? And a short recap of the course, focusing on action items for professionals (in the form of a 10-15-minute module that can be watched and re-watched over the course of the following year to solidify learnings). (Participant, post survey)

One participant suggested that a shorter resource would be helpful for busy professionals:

A shorter course might be more accessible for busy health care professionals who cannot commit the full time. (Participant, post survey)

Content suggestions:

One participant wished there had been more instruction on how to help them navigate interactions with clients.

Would have liked some more instruction on how to converse with the obese i.e. is it something to avoid in patient interactions or when would be a good opportunity to broach the subject. (Participant, post survey)

Another participant commented that more content on how to balance the health issues associated with higher weights and weight stigma would be of use.

Public health and media attention frequently cover the type 2 diabetes epidemic which is linked to obesity, especially childhood obesity. Need to balance weight stigma with real health concerns--the course seems to ignore some of the valid issues related to weight rather than showing how to manage both. (Participant, post survey)

6.0 Discussion

Existing literature on weight bias reduction illustrates that little is known about how to successfully reduce weight bias, including in health care. A key finding among existing weight bias reduction interventions is that multi-pronged interventions are most likely to be successful (Dánielsdóttir et al., 2010). The findings of this evaluation support that claim, insofar as the multi-module BalancedView

resource successfully decreased weight bias among the 74 participants on the measures described in this report. These positive results were maintained at three and six-month follow-up. This is noteworthy, as a systematic review of weight stigma reduction interventions found that one methodological shortcoming of many studies was the lack of follow up (Danielsdóttir et al., 2010).

Multiple stigma reduction strategies were used in BalancedView (see PHSA, 2013 for a detailed description of weight bias reduction strategies drawn upon). Of the strategies used, there were mixed opinions regarding what was most and least helpful, as discussed in the findings section. While many participants found the patient stories to be most influential, followed by video scenarios, others found the video scenarios had less of an impact on their learning. The differences of opinion on most and least helpful parts of the resource highlight the importance of using multiple learning strategies to influence learners to address weight-biased attitudes. Given the perceived helpfulness of the patient stories/videos in particular, it can be concluded that sharing real patient stories may be an integral way to evoke empathy among health professionals about experiences of weight bias and to leverage change. Other studies that have tested evoking empathy as a way to reduce weight stigma have found to be less effective (see Danielsdóttir et al., 2010), which is in contrast to the findings of this evaluation. This leads to the question of why the patient stories were so useful in this study. One potential explanation is the emotional nature of the stories shared by real patients. Another potential rationale is that BalancedView effectively paired this approach with other approaches, like increasing awareness about myths about body weight, which taken together, may have led to a new way of thinking about weight, and thus greater receptivity to the patient story videos.

Interestingly, information about the myths about body weight or the medicalization of weight were not identified as being as influential to most participants in comparison to the patient stories or videos, despite these being considered essential components of weight stigma reduction during the development phase of the resource (see PHSA, 2013). The reasons to explain this deserve further exploration in future studies.

Overall, this evaluation shows that BalancedView met its aims. As such it should continue to be widely promoted. As one participant said,

Continue to promote this on-line module and resources. Health care providers are busy but if they hear about a topic enough hopefully they will seek more information and make some changes (Participant, post survey).

Given that few suggestions for change were made, future efforts should be targeted towards these areas for improvement. For example, developing additional supplemental materials, like “cheat sheets”, and addressing any ongoing technical issues associated with the platform. Ongoing evaluation and/or research on BalancedView also remains important. This is discussed below in relation to limitations of the current evaluation.

Limitations

Participants in this evaluation self-selected to participate; therefore their responses may not be representative of the typical health professional who may have less knowledge or interest in this area. Participants were also primarily female. Further, the sample size in this evaluation was small. Another related limitation is that the sample size decreased over time. Therefore, the longer-term changes noted in this evaluation are not reflective of all 74 participants, but only of those who went on to complete the

three- (N=56) and six-month (N=46) follow-up. Further investigation will be required to understand if these findings hold true for a larger sample size. In addition, the majority of participants in the evaluation identified as female. As such, these findings should be interpreted with caution and not representative of all genders.

Recommendations for evaluation or research moving forward include utilizing a larger sample size, implementing longer-term follow-up surveys with more participants, and use of predictive statistics and significance testing. More in-depth qualitative research is also needed to explore participant experiences with the resource and the relative influence of its various components, as these areas are only briefly examined here.

7.0 Conclusion

This evaluation focused on 74 health professionals in BC who completed the BalancedView resource and participated in pre and post (n=74), three-month (n=56) and six-month (n=46) follow-up surveys. The data collected through these questionnaires show that BalancedView contributed to reducing weight bias and stigma among participants. The patient stories and the video scenarios in particular contributed to reducing weight bias and stigma among participants, as these were ranked by most participants as the two most influential components. Notably, however, participants commented on the usefulness of multiple components of the resource. Most participants felt that BalancedView positively impacted their knowledge, attitudes, skills and behaviours. These positive changes were sustained over the duration of the evaluation. Based on this small dataset, it can be concluded that BalancedView achieved its intended aims of increasing knowledge of weight bias and stigma, improving weight-related attitudes, and decreasing weight bias in clinical practice. More evaluation and research is required to understand the impact of the resource on a larger and more diverse sample size.

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Appendix E Data tables

Table 12 Contrast of pre- and post-course Fat Phobia scores

Variable	Pre		Post		<i>t</i> (248)	<i>p</i>	95% CI	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>
Industrious - Lazy	3.03	0.76	2.67	0.67	6.91	< .001	.26	.46
Has willpower - No willpower	3.05	0.76	2.47	0.83	9.54	< .001	.46	.70
Attractive - Unattractive	3.12	0.86	2.72	0.84	6.31	< .001	.28	.53
Good self- control - Poor self-control	3.24	0.73	2.76	0.71	8.47	< .001	.37	.59
Fast - Slow	3.44	0.77	2.90	0.67	9.39	< .001	.43	.66
Having endurance - Having no endurance	3.27	0.73	2.68	0.75	10.27	< .001	.48	.70
Active - Inactive	3.36	0.81	2.76	0.71	10.54	< .001	.49	.71
Strong - Weak	2.77	0.70	2.52	0.77	4.53	< .001	.14	.36
Self- sacrificing - Self-indulgent	3.05	0.66	2.86	0.58	3.71	< .001	.09	.28
Dislikes food - Likes food	3.61	0.73	3.27	0.63	6.58	< .001	.24	.44
Shapely - Shapeless	2.80	0.84	2.66	0.71	2.64	.009	.04	.25
Overeats - Under eats	3.61	0.73	3.14	0.47	9.70	< .001	.37	.56
Secure - Insecure	3.45	0.75	3.00	0.66	8.51	< .001	.35	.56
High self esteem - Low self esteem	3.34	0.72	3.02	0.62	6.20	< .001	.22	.42
Healthy - Unhealthy	3.51	0.77	2.80	0.71	12.64	< .001	.60	.82
Intelligent - Unintelligent	2.61	0.77	2.51	0.78	2.12	.035	.01	.20

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit

Table 13 Contrast of pre- and post-course Attitudes about Treating Obese Patients scores

Variable	Pre		Post		<i>t</i> (248)	<i>p</i>	95% CI	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>
Non-compliant	2.69	0.81	2.31	0.83	6.69	< .001	.27	.49
Lack motivation	2.60	0.88	2.17	0.83	7.35	< .001	.31	.54
More frustrating to treat	2.47	0.90	2.20	0.90	4.05	< .001	.14	.39
Difficult to feel empathy for	1.86	0.86	1.71	0.74	2.57	.011	.04	.27
Would rather treat a non-obese patient	2.30	1.04	2.06	0.91	3.90	< .001	.12	.36

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit