Addressing weight bias in public health

by

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Abstract

Obesity is a highly stigmatized condition due to pervasive personal, professional, institutional and cultural weight bias. Public health policies have been criticized for promoting a simplistic narrative that may contribute to weight bias. Individuals with obesity experience *internal and external stigma*, which can affect their life chances and significantly impact their health and social outcomes. Despite decades of research indicating that obesity stigma significantly affects individual and population health outcomes, very few interventions have been implemented and evaluated to reduce it.

Objective

The objective of this study is to explore how obesity narratives are constructed and enacted among public health policy makers and individuals living with obesity. By developing a deeper understanding of the lived experiences of public health policy makers and people with obesity, we aimed to understand how obesity narratives relate to each other, what tensions might exist between them, and how we can begin to dislodge potential tensions between them.

Methods

The study was implemented in four interrelated components: Part 1 included a narrative inquiry with people living with obesity. Part 2 involved a critical analysis of obesity prevention public health policies and strategies. Part 3 engaged public health policy makers in individual interviews to understand dominant obesity discourses in public health practice and policy. Part 4 used a modified brokered dialogue method to move towards consensus on key messages and strategies that can be used to address weight bias in education, health care and policy sectors.

Results

The narrative inquiry findings demonstrated that individuals with obesity experience damaged identifies due to internal and external weight bias. We present ten counterstories developed in collaboration with persons living with obesity as a way to address some of these damaged personal and social identities.

The critical review of obesity prevention policies and strategies revealed five prevailing narratives about obesity: 1) childhood obesity threatens the health of future generations and must be prevented; 2) obesity can be prevented mainly through healthy eating and physical activity; 3) obesity is an individual behaviour problem; 4) achieving a healthy body weight should be a population health target; and 5) obesity is risk factor for other chronic diseases not a disease in itself.

The individual interviews with public health policy makers revealed that although the prevailing obesity discourse in public health is that obesity is a complex problem, policy makers face personal, institutional, and political barriers operationalizing this understanding. Findings also demonstrated the emergence of a paradigm shift in Canada towards health and wellness as opposed to weight-centric population health approaches.

Through the modified brokered dialogue, participants agreed on the following key messages to reduce weight bias in education, health and policy sectors: 1) weight bias and obesity discrimination should not be tolerated in education, health care, and public policy sectors; 2) obesity should be recognized and treated as chronic disease in health care and policy sectors; and 3) in the education sector, weight and health need to be decoupled. There was also

consensus on the following strategies to reduce weight bias: 1) creating resources to support policy makers; 2) using personal narratives from people living with obesity to engage audiences and communicate anti-discrimination messages, and 3) developing a better clinical definition for obesity.

Conclusions and Recommendations

Public health obesity narratives about obesity being preventable mainly through healthy eating and physical activity contributes to weight bias by oversimplifying the causes of obesity. Operationalizing the complexity of obesity in public health obesity policies using person-centered and non-weight centric chronic disease frameworks, may help mitigate tensions between public health obesity prevention discourses, clinical practice and the experiences of persons living with obesity. Future research should: a) explore how we can support emerging health focused paradigm shifts in obesity prevention and clinical practice; b) implement and evaluate weight bias reduction messages and strategies; and c) engage individuals living with obesity to change stigmatizing narratives, practices, and policies.

Preface

Some of the research conducted for this thesis forms part of a national research collaboration, led by the EveryBODY Matters Collaborative. Members of this collaborative include: Ximena Ramos Salas, Canadian Obesity Network, Dr. Mary Forhan, University of Alberta, Department of Occupational Therapy, Faculty of Rehabilitation Medicine, Dr. Shelly Russell-Mayhew, University of Calgary, Werklund School of Education, Dr. Angela Alberga, Concordia University, Department of Exercise Science, Dr. Erin Cameron, Lakehead University, School of Medicine, Dr. Sara Kirk, Dalhousie University, IWK Health Centre and Mount Saint Vincent University, and Dr. Arya M. Sharma, University of Alberta, Faculty of Medicine & Dentistry and Scientific Director of the Canadian Obesity Network.

The introduction and literature review in chapter 1 are my original work. Part of the literature review of this thesis included in Chapter 2, has been published as: Ramos Salas, X. The ineffectiveness and unintended consequences of the public health war on obesity. *Canadian Journal of Public Health*, 2015;106(2):e79-e81. The article was written by myself, with review and feedback provided by members of my PhD Committee: Dr. Kim Raine, Dr. Mary Forhan, Dr. Tim Caulfield, and Dr. Arya M. Sharma, Scientific Director, Canadian Obesity Network.

The narrative inquiry with persons affected by obesity in chapter 3 is my original work and will be submitted for publication in collaboration with my PhD committee and knowledge translation collaborator, the Canadian Obesity Network.

Chapter 4 of this thesis is my original work and has been accepted for publication in the Canadian Journal of Public Health: Ramos Salas, X. Forhan, M., Caulfield, T., Sharma, A.M. and Raine, K. A Critical Analysis of Obesity Prevention Policies and Strategies. *Canadian Journal of Public Health*, 108(5-6): e598-e608.

Chapter 5 of this thesis is my original work and has been submitted for publication in collaboration with my PhD committee and knowledge translation collaborator, the Canadian Obesity Network. Chapter 6 of this thesis was conducted in collaboration with the Canadian Obesity Network's EveryBODY Matters Collaborative and has been published as: Ramos Salas, X., Alberga, A. S., Cameron, E., Estey, L., Forhan, M., Kirk, S. F. L., Russell-Mayhew, S., and Sharma, A. M. (2017) Addressing weight bias and discrimination: moving beyond raising awareness to creating change. *Obesity Reviews, 18*: 1323–1335. The concluding analysis in Chapter 7 is my original work.

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This thesis is dedicated to my family.

For their endless love, support, and encouragement.

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Besides my advisor, I would like to thank the rest of my thesis committee: Professor Mary Forhan and Professor Timothy Caulfield for their mentorship and encouragement. Both provided me with insightful comments and hard questions, which inspired me to widen my research from various perspectives.

My research could not have happened without the participation and support from Dr. Arya M. Sharma and the entire Canadian Obesity Network team. I would like to thank the many, many Canadian Obesity Network staff, researchers, students and new professionals, clinicians, partners, and patients living with obesity, who provided me with their insights, experiences and expertise, helping my research to be more practical and relevant. Your work has inspired me to continue to work in this field and find new innovative ways to improve the lives of people with obesity.

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To my Canadian and international public health friends for your encouragement, collaboration, and support, I am forever grateful.

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CHAPTER 1 INTRODUCTION

Obesity is a chronic disease that is a considered a primary driver of many other chronic conditions including cancer, heart disease, and diabetes.[1] In 2011, 18.3% (7 million) were classified as having obesity. [2] In response to the obesity epidemic, Canadian federal, provincial and territorial health ministers have called for multi-sectoral action on promoting healthy weights and curbing childhood obesity.[3,4] Many obesity public health campaigns have focused heavily on educating individuals about the health risks associated with obesity and encouraging individuals to avoid risky behaviours.[5] The majority of these initiatives use individual-based behaviour change approaches and often fail to recognize the complex drivers of obesity.[6] The emphasis on individual behavioural (lifestyle) approaches to obesity prevention is based on a causal model of obesity (now identified as flawed) that, on the whole, attributes obesity to personal responsibility.[7] Researchers challenge such simple causal models and argue that obesity is a complex condition that requires a complex systems approach. The Foresight model, for instance, depicts over 100 obesity drivers ranging from genetics, to food formulation and individual psychology and over 300 interconnections acting in complex feedback loops. [7] Unfortunately, in spite of increasing research in obesity prevention and management, much of what is known about obesity is not moved into effective practice. [8]

Behavioural-based and weight-centred public health approaches cause unintended consequences such as body dissatisfaction, dieting, disordered eating, discrimination and even death from effects of extreme dieting, anorexia, obesity surgery complications, and suicide that result from weight-based bullying.[9] Many obesity prevention efforts operate under several assumptions that do not reflect current evidence. These assumptions include: 1) weight is within the control of the individual, 2) weight gain is caused by a simple imbalance between an

individual's energy intake and output, 3) the health of an individual can be assessed and predicted based on body mass index, 4) excess weight causes disease and premature death, 5) successful and sustained weight loss can be achieved by changing eating and physical activity patterns, 6) losing weight and achieving a healthy weight will result in better health. [9] These assumptions contribute to myths and misconceptions about obesity and people with obesity, which can ultimately lead to broad-based and pervasive weight bias in our society. There are now a number of myths and misperceptions about obesity which associate obesity with "ugliness, sexlessness, undesirability and moral failings such as lack of self-control, social irresponsibility, ineptitude and laziness across cultures and borders" that contribute to weight bias.[10]

Public health obesity prevention strategies that emphasize the duty and responsibility of individuals to make healthy choices can end up blaming or punishing those who make unhealthy or "contested" choices.[11] The public has started to resist such initiatives[12,13] and recent studies indicate that individuals with obesity perceive obesity public health messages as overly simplistic, disempowering and stigmatizing. [8,14] In the US, public health campaigns that promote negative attitudes and stereotypes toward people with obesity, stigmatize youth with obesity, or blame parents of children with overweight have been strongly criticized by the media and the research community. [15] Such campaigns are not only ineffective in motivating behaviour change but also end up labeling and stigmatizing individuals further.[16,17]

Weight Bias and Obesity Stigma: Definitions, Prevalence & Consequences

There are many terms used interchangeably in the literature that refer to weight bias, obesity stigma, weight discrimination, and prejudice. To clarify, in this proposal weight bias is defined as negative attitudes toward and beliefs about others because of their weight. [18] These negatives attitudes are manifested by stereotypes and/or prejudice toward people with overweight and obesity. Ultimately, weight bias can lead to obesity stigma, which is the social sign or label

affixed to an individual who is the victim of prejudice.[19] Obesity stigma can lead to devalued social identity that increases vulnerability to loss of status, unfair treatment, and discrimination. [19] Weight-based discrimination involves actions against people with obesity that can cause exclusion, marginalization, and lead to inequities. For example, when people with obesity do not receive adequate health care or when people with obesity are discriminated against in workplaces. Individuals who have obesity are less likely to get hired and employees who have obesity are less likely to be recommended for promotions compared with employees without obesity.[18,20,21]

The prevalence of weight-based discrimination in the United States has increased by 66% over the past decade, and is comparable to rates of racial discrimination, especially among women.[18] The prevalence of obesity stigma across life domains such as employment, schools, health care and interpersonal relationships ranges from 19.2% among individuals with class 1 obesity (BMI 30-35 Kg/m^2) and 41.8% among individuals with severe obesity (BMI > 35 Kg/m^2).[22] Weight bias has been documented among parents and families, [23] pre-adolescents and adolescent peers, [24] teachers,[25] in employers and human resource professionals, [26] in health care professionals, [27] and among individuals with obesity themselves.[28] Among health professionals specifically, weight bias has been documented among physicians, dietitians, nurses, psychologists, and obesity specialists.[29] Weight bias has also been investigated among pre-service health promotion students.[30] Studies have also explored how weight bias may reveal itself through public health campaigns.[31]

A Canadian study that examined the experiences of individuals living with obesity, health professionals and health services policy makers found that the dominant discourse of obesity casts blame and shame upon individuals with obesity.[8] Although health professionals understand the environmental and social causes of obesity, they experience frustration and disappointment

with individuals' "unwillingness to commit to a change in lifestyle", indicating a lack of understanding of the complexity of obesity"[8] (p. 5). Moreover, although policy makers felt that the health care system has a responsibility to address obesity and to support people living with the disease, they also searched for simple solutions and argued that prevention (as opposed to treatment) should be a priority. Many health professional and policy makers also questioned whether obesity is a disease and whether medical treatment is necessary. The conflicting prevention and treatment obesity discourses among health professionals and policy makers is ineffective and leads to an "overwhelming oppressive experience" (p. 8) for individuals with obesity. The authors conclude that there is a need to reframe the public debate on obesity and avoid dichotomous thinking. It is clear that we need both prevention (beyond individual behaviour change approaches) and treatment (evidence based and patient centered) that are respectful and non-judgmental. We should also challenge the "social and political culture that seeks to blame individuals for a failure to maintain a healthy body weight" (p. 8) as this can lead to further weight bias in our society.

Obesity stigma affects a person's mental health, interpersonal relationships, educational achievement, employment opportunities, avoidance of preventive health care, can hinder weight management efforts, and can increase overall morbidity and mortality.[32-35] It can also have social and economic consequences for individuals as reflected by fewer opportunities for education and employment. [36] Furthermore, a view prevails among health professional groups that shaming individuals experiencing obesity will motivate a change in behavior, when in fact the opposite is true.[37] This view leads to challenges across both sides of the therapeutic relationship.[8]

Despite decades of research indicating the negative impact of weight bias on individuals' health and social wellbeing, only a few efforts to reduce it have been identified.[37] From a review of published literature, in the few interventions that have been implemented and evaluated, there

is a general lack of consistency in theoretical frameworks, methodologies, and approaches.[36] Thi is why Canadian and international organizations, including the Canadian Institutes of Health Research, agree that intervention research is urgently needed to address weight bias and obesity stigma.[38] Existing research indicates that educational interventions aimed at shifting health professionals' attitudes, beliefs, and knowledge about the complex causes of obesity can translate into less blaming of the individual. [36] These types of educational interventions have been mainly experimental in nature and have not been evaluated for long-term sustainability, nor have they been assessed for impact on practices and behaviours. [39] Moreover, by focusing on changing individuals' attitudes and beliefs, interventions fail to address structural and institutional sources of weight bias that produce stigma and in turn lead to discrimination, rejection and exclusion.

Counterstories have been proposed as a method to examining and addressing the sources of existing master narratives that create oppressive identities.[40] In the case of obesity, existing master stories that are spread through global public health campaigns emphasizing individual responsibility for weight and promoting ideal/healthy body weights may be creating oppressive obesity identities. Current obesity master narratives may be driving weight bias around the world [17] and contribute to the lack of public support for comprehensive obesity prevention and treatment initiatives, which may actually be effective in addressing obesity.[41]

Examining experiences, beliefs, values, practices and relationships that contribute to the dominant obesity narrative has been recommended as a way to address some of the social and institutionally generated negative views of individuals with obesity.[8] Practitioner reflexivity may also help challenge personal, institutional and social obesity discourses and change attitudes, beliefs and practices about obesity prevention. [42] Finally, engaging people with obesity to explore their experiences with stigma and to find solutions has also been found to be effective in the literature.[43,44] Sharing the experiences of people with obesity can help dislodge and replace myths

and stereotypes that contribute to weight bias and stigma. Counterstories can also be used as a method to address internalized weight bias among people with obesity themselves. By telling and retelling their personal story, individuals can resist dominant obesity narratives and alter perceptions of themselves.[45]

Objective

The objective of this study was to explore how obesity narratives are constructed and enacted among public health policy makers and individuals living with obesity. By developing a deeper understanding of the lived experiences of public health policy makers and people with obesity, we aimed to understand how obesity narratives relate to each other, what tensions might exist between them, and how we can begin to dislodge potential tensions between them.

Research Approach

Research questions were developed in partnership with the Canadian Obesity Network (principal knowledge user) as a way to advance the dialogue about weight bias and to promote the uptake of obesity evidence in public health. The research team included my PhD committee members and a knowledge user from the Canadian Obesity Network, Dr. Arya M. Sharma. Research participants – public health policy makers and persons living with obesity - did not participate directly in research team meetings. However, the study methods (i.e. narrative inquiry and brokered dialogue) are inherently relational and collaborative, thus allowing participants to contribute their experiences and knowledge throughout the study. Study participants provided final approval of their own narrative accounts, thus ensuring that the narratives represent their experiences accurately and meaningfully.

Specific Research Questions

Through this research study we aimed to address the following research questions:

- What are the personal, cultural, social and institutional obesity narratives reflected and enacted in obesity prevention public health policies?
- Do public health obesity prevention narratives have unintended consequences, including contributing to weight bias and obesity stigma?
- How can we begin to address weight bias and obesity stigma in public health?

Epistemological Framework

We approached these research questions using qualitative methods (critical policy analysis, individual interviews, and a modified brokered dialogue method) and methodologies (narrative inquiry). These methods and methodologies are epistemologically and theoretically linked. Epistemologically, our research is positioned within post-structuralist and critical population health research, where conceptually knowledge is viewed as experience and where experiences are constituted, shaped, expressed and enacted through social, cultural, and institutional narratives. [46] Based on this epistemological framework, experiences people have with obesity are constructed within personal, social, cultural and institutional contexts. Hence, the experiences that public health policy makers may have had in their personal, familial, and professional context can contribute to their knowledge and perspectives on obesity. Likewise, the experiences that people with obesity have had with respect to weight bias and obesity stigma may have also contributed to their knowledge and perspectives on obesity.

As the lead investigator in this doctoral research, I am also committed to conducting *relational and collaborative research* that has personal, practical and social justifications. Hence, the research questions in this study came from my commitment to reducing oppression and social injustice. From a practical perspective, this research study has implications for public health practice/policy, and from a social perspective, addressing weight bias and obesity stigma has implications for population health outcomes. Throughout the study, participants and I

collaborated, critiqued and reflected on the tensions between obesity narratives and developed strategies and solutions that were person-centered. I strongly believe that social change needs to be rooted in lived experiences of people or it will be ineffective.[47]

This study was conducted in four interrelated components:

- **Part I:** Engagement of people with obesity in a narrative inquiry to explore their experiences with obesity, weight bias and obesity stigma.
- **Part II:** A critical review of existing public health policies for obesity prevention in relation to current obesity prevention evidence base.
- **Part III:** Engagement of public health policy makers in a qualitative study to explore how obesity discourses are enacted in public health.
- **Part IV:** Implementation of a modified brokered dialogue between public health policy makers, obesity and weight bias researchers, health professionals and people living with obesity to move towards consensus on key messages and strategies for future weight bias reduction interventions.

Although study parts are presented in a sequential way in this thesis, in reality the process was iterative. As I lived alongside individuals with obesity, I was also reviewing policy documents and interviewing public health policy makers. This iterative process made it possible for me to bring forward issues and tensions revealed in one particular conversation, interview or policy statement and discuss them openly with participants. I was also able to record these tensions through my personal research journal which helped me reflect on my own learning, stories, and experiences.

In the first part of my study, I used narrative inquiry methodology. Narrative inquiry was conceived as a methodology and a phenomenon, with the aim to understand lived experiences.[47] The epistemological perspective of narrative inquiry is that knowledge is dynamic and created

through experiences. Its philosophical or ontological underpinning is in Dewey's theory of experience, which stipulates that human experience is interactive, continuous and enacted in situations.[48] I used this methodology because I wished to engage people with obesity as active participants in the research process. Since, weight bias and obesity stigma are sensitive topics, narrative inquiry gave me the opportunity to give participants a voice and decision making in the development of their own stories.

In the critical review of public health obesity prevention policies and strategies, I used Bacchi's 'what's-the-problem-represented-to-be?'(WPR) approach. [49] Bacchi's approach is grounded in *post-structuralist theory*. Her first position is that problems are not given, but rather they are *socially constructed*. The approach challenges one to think about policy as a problem representation and to think about the origins, purposes and effects of that representation. This method also encourages reflexivity when reviewing policies because the way in which problems are represented may elicit particular forms of subjectivity and influence how we see ourselves and others.[50] Reflexivity is an important component of critical public health practice and research and I wished to make sure this aspect is incorporated into every phase of my study.

In the qualitative study with public health policy makers, I used individual interviews as a way to understand their experiences with obesity discourses. This method worked well with policy makers because of their time and availability barriers. I gave participants the opportunity to review and modify transcripts. I also shared the final analysis with them and incorporated their feedback.

Finally, in the last part of my study, I used a modified brokered dialogue method as a way to bring different perspectives on the topic of weight bias and obesity stigma. The brokered dialogue is a film-based qualitative research method for studying controversial issues in health care and social policy. This method is epistemologically and theoretically informed by *narrative*

inquiry and visual anthropology. [51] The *role of story and dialogue* in allowing a person to recognize another person and seeing 'oneself in another' is a critical component of the brokered dialogue method. It is through this process that we can begin to acknowledge what connects us and what separates us. The underlying assumption is that dialogue can be an important research tool as it can reveal points of disagreements and "opportunities for resolution and reconciliation in socially controversial issues"[51] (p. 1). Genuine and respectful dialogue is seen as a potential solution to the breakdown in communications in health care and policy situations. This has been used to create dialogue on topics such as homelessness and mental illness.[51] Rather than using film, I modified this method and applied it through an in-person workshop. The workshop created a safe space and allowed for communication between people with obesity, health care professionals, policy makers and researchers.

Organization of the Dissertation

The dissertation is organized in seven different chapters:

- Chapter 1: Introduction
- Chapter 2: The ineffectiveness and unintended consequences of the public health war on obesity.
- Chapter 3: Narrative Inquiry with people living with obesity
- Chapter 4: A critical analysis of obesity prevention policies and strategies.
- Chapter 5: Tensions in obesity prevention and obesity stigma discourses: Perspectives from public health policy makers
- Chapter 6: Addressing weight bias and discrimination: moving beyond raising awareness to creating change
- Chapter 7: Discussion and Conclusion

The purpose, methods and results of each study is described below.

CHAPTER 2: THE INEFFECTIVENESS AND UNINTENDED CONSEQUENCES OF THE PUBLIC HEALTH WAR ON OBESITY

The purpose of this paper was to review criticisms of public health obesity prevention initiatives. This paper is based on a review of the literature on weight bias in public health. In this paper, I identified key factors that may be contributing to unintended consequences for people, such as weight bias and obesity stigma. I also conclude there is a need for more critical public health practice in order to avoid weight bias and obesity stigma. This paper sets the context for the different components of this research study.

CHAPTER 3: NARRATIVE INQUIRY WITH PEOPLE LIVING WITH OBESITY

The objectives of this study were to:

a) Explore weight bias and obesity stigma experiences of people living with obesity;

b) Develop counterstories to reduce weight bias and obesity stigma; and

c) Reflect on opportunities for personal, professional practice and social change.

This part study used narrative inquiry methodology [48] to construct, reconstruct, interpret and reinterpret participants' experiences with obesity, weight bias and stigma. Narrative inquiry is a research methodology that aims to understand the phenomenon of experience beyond the lens of the researcher. [52] Research questions were explored with a strong relational commitment to the people whose stories are lived and told and with an understanding that experiences are always interactive and can change over time and in contexts.

The stories are situated within the three-dimensional narrative inquiry space: a) *temporality* (events and experiences are always in transition and are linked through the past, present and future), b) *sociality* (personal and social conditions that inform each individual's context), and c)

place (the physical and topological boundaries where the inquiry and events take place).[48] In this paper, we share counterstories[45] of ten individuals living with obesity who have experienced weight bias and stigma. We invite the reader to place themselves within the narratives, reflecting on their own experiences and as well as our collective master narratives of obesity. Ultimately, we hope that unpacking these narratives can help us reveal opportunities for critical public health practice and social change to prevent further weight bias and obesity stigma.

CHAPTER 4: A CRITICAL ANALYSIS OF OBESITY PREVENTION POLICIES AND STRATEGIES

The objectives of this study were to:

a) critically analyze Canadian obesity prevention policies and strategies to identify underlying dominant narratives;
b) deconstruct dominant narratives and consider the unintended consequences for people with obesity; and
c) make recommendations to change dominant obesity narratives that may be contributing to weight bias.

We applied Bacchi's 'what's-the-problem-represented-to-be?' (WPR) approach to 15 obesity prevention policies and strategies (one national, two territorial, and 12 provincial). Bacchi's WPR approach is composed of six analytical questions designed to identify conceptual assumptions as well as possible effects of policies. Our objective was not to assess whether these policies and strategies have been effective. Instead, our goal was to engage in critical analysis to better understand how obesity prevention policies and strategies construct a specific narrative about obesity and people with obesity. Critically assessing how this narrative has been constructed can help us understand its possible effects on public health practice as well as its potential effects on people with obesity. In this paper, we identify five prevailing narratives that may have

implications for public health approaches and unintended consequences for people with obesity. We also provide some recommendations for changing these narratives to prevent further weight bias and obesity stigma.

CHAPTER 5: TENSIONS IN OBESITY PREVENTION AND OBESITY STIGMA DISCOURSES: PERSPECTIVES FROM PUBLIC HEALTH POLICY MAKERS

The objective of this study was to explore how obesity prevention discourses are constructed and enacted among public health policy makers in Canada. Using purposive sampling, we engaged public health policy makers (n=10) from five Canadian provinces in a qualitative study to construct and interpret participants' experiences with obesity prevention policies, weight bias and obesity stigma. We used a semi-structured interview guide to engage participants in in-depth interviews about their experiences with obesity prevention policies, weight bias and stigma. Interviews were recorded, transcribed and coded using an inductive method to reveal emerging themes. In this paper, we present findings in three different themes, which emerge from data analysis. We conclude that despite a higher awareness about the impact of weight bias and obesity stigma on population health outcomes, public health policy makers need practical resources and strategies to address these issues in their practice.

CHAPTER 6: ADDRESSING WEIGHT BIAS AND DISCRIMINATION: MOVING BEYOND RAISING AWARENESS TO CREATING CHANGE

In the last part of this study, we integrated narratives of persons living with obesity, researchers, and public health policy makers using a modified brokered dialogue approach. [51] The brokered dialogue method uses the process of telling stories to articulate different "takes" on a particular problem and offer suggestions and directions for what participants believe should happen. The premise behind this method is that through dialogue, participants can confront values, relationships, and a full range of stakes via respectful interactions among those with

seemingly divergent views. Using a modified brokered dialogue approach, participants, including researchers, health professionals, policy makers and people living with obesity, reviewed the evidence and moved towards consensus on key messages and strategies for future interventions.

CHAPTER 7: DISCUSSION AND CONCLUSION

The purpose of this chapter is to summarize the entire study, present a theoretical model for future weight bias and obesity stigma interventions, present recommendations for public health practice and professionals, identify limitations and provide an overall conclusion.

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CHAPTER 2 THE INEFFECTIVENESS AND UNINTENDED CONSEQUENCES OF THE PUBLIC HEALTH WAR ON OBESITY

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Abstract

The public health war on obesity has had little impact on obesity prevalence and has resulted in unintended consequences. Its ineffectiveness has been attributed to: 1) heavy focus on individual-based approaches and lack of scaled-up socio-environmental policies and programs, 2) modest effects of interventions in reducing and preventing obesity at the population level, and 3) inappropriate focus on weight rather than health. An unintended consequence of these policies and programs is excessive weight preoccupation among the population, which can lead to stigma, body dissatisfaction, dieting, disordered eating, and even death from effects of extreme dieting, anorexia, and obesity surgery complications, or from suicide that results from weight-based bullying. Future public health approaches should: a) avoid simplistic obesity messages that focus solely on individuals' responsibility for weight and health, b) focus on health outcomes rather than weight control, and c) address the complexity of obesity and target both individual-level and system-level determinants of health.

Introduction

The public health war on obesity, defined as a broad, health-based set of policies and programs designed to control the growing threat of the obesity epidemic and related chronic diseases,[9] has had little impact on obesity prevalence. Indeed, some of these policies and programs could result in unintended consequences.

The premise behind the public health war on obesity is that if we do not address the current global obesity epidemic, this condition will devastate population health in the future through chronic diseases related to obesity, such as heart disease, cancer and diabetes. This ticking "health time bomb" is relevant to wealthy industrialized countries and low- and middle-income countries alike.[53] Global public health responses to this anticipated threat to population health

have been heavily focused on childhood obesity prevention with efforts aimed at changing individuals' behaviours and the practices of communities or institutions (i.e., schools, workplaces) around healthy eating and physical activity.[54] Despite these public health responses, obesity rates have continued to increase.[55]

Ineffectiveness of the public health war on obesity

The ineffectiveness of the public health response has been attributed to: 1) heavy focus on individual-based approaches and lack of scaled-up socio-environmental policies and programs, 2) modest effects of interventions in reducing and preventing obesity at the population level, and 3) inappropriate focus on weight rather than health.

Failure to Address Complexity of Obesity

Critics blame the failure of public health obesity policies and programs on the latter being framed within an individual behaviour change paradigm or health education model that does not take into account the complexity of obesity.[56,57] An in-depth discussion of obesity drivers is beyond the scope of this paper, however the most recent Foresight obesity model depicts over 100 drivers, ranging from genetics to food formulation and individual psychology, and includes over 300 interconnections acting in complex feedback loops.[7] The vast majority of government campaigns designed to prevent obesity fail to address these complex drivers. [6]

Insufficient Effects of Policies and Programs

A systematic review on the effects of weight gain prevention programs concluded that most (79%) did not produce statistically reliable weight gain prevention effects.[58] A more recent study that looked at 60 meta-analyses and 23 systematic reviews of interventions to prevent and treat obesity found that the majority of reviews reported only modest effect sizes in outcomes such as dietary habits, physical activity and anthropometric measures (e.g., weight).[59] Public health

advocates defend poor obesity prevention results and argue that prevention efforts have been sporadic and lack consistent evaluation frameworks. They propose that a systematic mix of education, regulatory, and socio-environmental approaches are needed in order to effectively prevent obesity at the population level.[60]

Recently, researchers have suggested that obesity prevention efforts need to change target groups.[61] A developmental perspective on obesity recognizes that genetic and developmental factors interact with environmental factors to create substantial variation between individuals regarding risk of obesity. Specifically, factors such as maternal stress and maternal–infant interactions have been linked to changes in the offspring's epigenetic state.[62] Although pregnancy is seen as a good stage at which to intervene in an effort to prevent childhood obesity, behaviour-based interventions implemented to date have not provided good quality results that can inform practice and decision-making.[63]

In addition to individual-based obesity prevention programs, the public health war on obesity has also developed policy approaches. A recent rapid review identified four widespread obesity prevention policy categories: 1) improved access to healthy foods, 2) increased taxing of unhealthy foods, 3) targeted healthy food subsidies and reform of food assistance programs, and 4) information-based policies, such as calorie labeling on menus.[64] This review concluded that "current obesity policy rests on a very narrow evidence base" (ref.15, p. 186) and that there is a lack of suitable evaluations to assess the impact of these policies.

Despite the lack of scientific evidence for obesity prevention policies, policy-makers have a sense of urgency to adopt policies in order to preempt the impending chronic disease epidemic. Thus, policy-makers must rely on best practices and accept "a slightly lower standard of promising practices" (ref.15, p. 168). Political scientists, however, warn that policy-makers should consider policy options carefully since some could be classified as soft paternalism. [64]

Based on the global domino effect of obesity prevention policies, it is clear that public health stakeholders increasingly support policies that nudge as opposed to push people to change their behaviours. [65] Social scientists also argue that such policies could increase health disparities. Menu-labeling policies and tax incentives to promote physical activity, for example, can widen health disparities because they are more likely to benefit individuals from higher socio-economic status groups. [64,66]

Inadequacies of Focus on Weight Rather Than Health

As the debates about targets and approaches for obesity prevention continue, critics argue that weight-focussed public health policies can lead to unintended consequences, such as excessive weight preoccupation among the population, which can lead to body dissatisfaction, dieting, disordered eating, discrimination and even death from effects of extreme dieting, anorexia, and obesity surgery complications, or from suicide that results from weight-based bullying.[9,67,68] The main assumptions of the weight-focussed health paradigm are: 1) weight is entirely within the control of the individual, 2) weight gain is caused by a simple imbalance between an individual's energy intake and output, 3) the health of an individual can be assessed and predicted based on body mass index (BMI, a number estimated by dividing an individual's weight in kilograms by his or her height in metres squared; a BMI of 25 indicates overweight and a BMI of 30 indicates obese[69]), 4) excess weight causes disease and premature death, 5) successful and sustained weight loss can be achieved simply by changing eating and physical activity patterns, and 6) losing weight and achieving a healthy weight will result in better health. [9] These assumptions contribute to myths and misconceptions associating obesity with "ugliness, sexlessness, undesirability and moral failings such as lack of self-control, social irresponsibility, ineptitude and laziness across cultures and borders" and contributing to weight bias in our society (p. 269).[10]

Weight bias consists of negative attitudes toward and beliefs about others because of their weight.[18] These negative attitudes are manifested by stereotypes and/or prejudice toward people with overweight and obesity. Weight bias can lead to obesity stigma, which is the social sign or label given to an individual who is the victim of prejudice.[19] The consequences of weight-based stigmatization have been studied for decades. Obesity stigma can affect a person's mental health, their interpersonal relationships, educational achievement and employment opportunities and ultimately lead to inequities.[32]

Obesity prevention strategies that emphasize the duty and responsibility of individuals to make healthy choices can end up blaming or punishing those who make unhealthy or 'contested' choices. The public has begun to resist information-based initiatives and recent studies indicate that individuals with obesity perceive obesity public health messages as overly simplistic, disempowering and stigmatizing.[12] Some obesity reduction strategies have even used stigma as a way to motivate people to change their behaviours. In the US, public health campaigns that promote negative attitudes and stereotypes toward people with obesity, stigmatize youth with obesity, or blame parents of children with overweight have been strongly criticized by the media and the research community. [15] Such campaigns not only are ineffective in motivating behaviour change but also end up further labeling and stigmatizing individuals.[17]

Conclusion

Simplistic obesity public health policies and programs that are only evaluated against changes in body weight or BMI are ineffective and can have unintended consequences. Public health professionals need to be more critical of current obesity narratives (which can cast shame and blame on individuals with obesity) and avoid simplistic obesity messages that focus solely on individuals' responsibility for weight and health. Public health should address the complex

drivers of obesity by focusing on both individual-level (behavioural, psychological, and early life factors) and system-level (socio-environmental) determinants of health.

Public health practitioners should examine the values that underpin public health practices and be accountable to both evidence and ethics. Guidelines and models to support improved health rather than promoting weight loss have started to emerge.[70] An example that is gaining increasing recognition is the Health At Every Size (HAES) approach, which promotes self-acceptance and healthy day-to-day practices, regardless of whether a person's weight changes. [71] The Edmonton Obesity Staging System (EOSS) is also increasingly being used as a way to assess health based on risk behaviours rather than weight.[72]

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CHAPTER 3 WEIGHT BIAS AND OBESITY STIGMA COUNTERSTORIES: NARRATIVES OF PEOPLE LIVING WITH OBESITY

> *"We are never more (and sometimes less) than the co-authors of our own narratives…we enter upon a stage and we find ourselves part of an action that was not of our own making" (Alasdair MacIntyre in Linderman-Nelson, p. 55).* [40]

Introduction

Weight bias is defined as negative attitudes toward and beliefs about others because of their weight.[18] These negatives attitudes are manifested by stereotypes and/or prejudice toward people with overweight and obesity. Ultimately, weight bias can lead to obesity stigma, which is the social sign or label affixed to an individual who is the victim of prejudice. [19] Individuals with obesity experience *external stigma*, which can affect their life chances and significantly impact their health and social outcomes. [73] Specifically, obesity stigma can lead to devalued social identity that increases vulnerability to loss of status, unfair treatment, discrimination, and health and social inequalities.[19] Obesity stigma can also lead to avoidance of preventive care, which is counterproductive to public health efforts. [74] Weight bias and stigma can ultimately increase both morbidity and mortality.[35]

It is increasingly recognized that self-stigma or *internalized stigma* can also have adverse health outcomes including poorer health related quality of life (HRQoL).[75] In other words, holding negative beliefs about oneself because of one's weight or size can have a distinct and direct effect on health outcomes, independent of any obesity related health impairments.[76] This internalization process occurs in the context of experiencing stigma through external sources such as from the media, family, school, work, and institutional structures and systems.

Despite decades of research indicating that obesity stigma significantly affects population health, obesity stigma has not been recognized as a key determinant of health. [77-80] This is surprising considering that obesity in itself is a global priority and public health policies to prevent and manage obesity have been established worldwide.[3,81] Public health has an important role in protecting individuals living with obesity from further harm and inequities. There is precedence in public health practice for addressing stigma associated with medical conditions such as mental illness, HIV/AIDS, and diabetes. [78] However, despite decades of research indicating the negative impact of weight bias on individuals' health and social wellbeing, there have been very few efforts, either in the public or health domains, to reduce it.

Few interventions to reduce weight bias and obesity stigma have been implemented and evaluated and there is a general lack of consistency in theoretical frameworks, methodologies, and approaches.[36,82] Weight bias intervention studies to date have been primarily focused on changing individuals' attitudes and beliefs about obesity, and show mixed results. For example, interventions that increase health professionals' understanding and knowledge about the complex causes of obesity can translate into less blaming of the individual. Such interventions, however, have not been evaluated for long-term sustainability, nor have they been assessed for impact on practices and behaviours.[39] Moreover, by focusing on changing individuals' attitudes and beliefs, interventions fail to address structural and institutional sources of weight bias that produce stigma and in turn lead to discrimination, exclusion and rejection.

Through a recent critical review of Canadian public health obesity prevention policies and strategies, we showed that the current public health narrative may contribute to weight bias and obesity stigma.[83] Specifically, we found that public health obesity prevention narratives focus mainly on individual-based behaviours, which can simplify the causes of obesity as unhealthy eating and lack of physical activity and contribute to the belief that obesity can be controlled

through individual behaviours. This narrative can also cast shame and blame for individuals living with obesity. These findings are consistent with studies from the United States and Australia, indicating that individuals with obesity perceive current obesity public health initiatives as overly simplistic, disempowering and stigmatizing. [14]

While the prevalence of weight bias and obesity stigma continues to increase,[32] there is a need to develop theory-driven interventions.[77] Health and social scientists have developed a variety of theoretical models that can guide the development and evaluation of weight bias and obesity stigma reduction interventions.[74,79,84-86] However, in an era of people-centered health care and policies, it is important to develop weight bias and obesity stigma reduction interventions that engage individuals affected by stigma.

New person-driven theoretical models to reduce weight bias and obesity stigma are needed.[78] One potential model that could be used to reduce stigma was developed by Linderman-Nelson. The narrative repair model stipulates that persons who are affected by stigma can be active agents in changing damaged or stigmatized narratives by creating counterstories.[40] The premise behind the narrative repair model is that social narratives can shape how we think and how we act.[40] In other words, social narratives can influence how we identify groups and populations (i.e. social identity) and how individuals act (i.e. individual agency). Social narratives can create damaged identities for certain groups or populations, which can influence how individuals see themselves, how they act and how they are treated in society.

When people distinguish and label human differences it can lead to stereotypes and social prejudice, which can drive bias and stigma.[12,87] These labels reflect dominant cultural beliefs and create degrees of separation between groups. Labeled persons can in turn experience status loss and discrimination that leads to inequalities through reduced access to social, economic and political power [18]. Through the power of counterstories, Linderman-Nelson argues that

individuals can resist and replace damaged social identities that have been created about them and for them.[40] A counterstory "is a story that resists an oppressive identify and attempts to replace it with one that commands respect" (p.6). [40]

Linderman-Nelson's theoretical model of counterstories makes it possible to address the effects of both external and internal stigma. For instance, through the process of telling their stories of weight bias and obesity stigma, individuals may restore their own personal identity and reframe their lives to create a healthier self.[40] In addition, others who read their stories and who may have had similar experiences, may also find it transformative. Finally, by disseminating counterstories with a broader audience, we may be able to create social and political messages about the way that society defines and treats people with obesity. Thus, based on this theoretical model, by counteracting master narratives about obesity and about people with obesity, we may be able to transform the way we think about obesity.

Objectives

The objectives of this study were to:

a) explore weight bias and obesity stigma experiences of people living with obesity;

b) develop counterstories to reduce weight bias and obesity stigma; and

c) reflect on opportunities for personal, professional practice and social change.

Methods

NARRATIVE INQUIRY METHODOLOGY

The term 'narrative' is used within various qualitative research methodologies. For example, narrative is used in the sense of "stories as data, narrative or story as representational form, narrative as content analysis, narrative as structure…narrative analysis such as linguistic analysis, structural analysis, and more recently, visual analysis"[48] (p. 11-12). All of these

methods have different descriptions. Narrative inquiry, specifically, was conceived as a methodology and a phenomenon. [47] The aim of narrative inquiry is to understand lived experiences. Its philosophical underpinning is in Dewey's theory of experience which stipulates that human experience is interactive, continuous and enacted in situations.[48] His ontological perspective was that we learn through our experiences or stories. To put it simply, we live storied lives. Narrative inquiry is rooted in this ontological perspective and uses story as the mechanism to find meaning in people's experiences. Narrative inquiry is the study of experience as story. [88] The premise on narrative inquiry is that humans "shape their lives by stories of who they and others are and as they interpret their past in terms of these stories" (p. 22).[88] Story is the portal through which a person enters the world and by which "their experience of the world is interpreted and made personally meaningful" (p. 22). [88]

We conducted this study with a strong relational commitment to the people whose stories are lived and told and with an understanding that experiences are always interactive and can change over time and in contexts. There is an assumption that narrative inquiry is as easy as just listening and retelling stories. But narrative inquiry is much more than that. It is a *relational* methodology in which the researcher and participants, over time, in a place, and in social interactions, explore "the social, cultural, familial, linguistic, institutional narratives within which [their] experiences were and are constituted, shaped, expressed and enacted" [48] (p. 18). The point of inquiry is not to generate exclusive, faithful representation of a reality independent of the participants or the knower. A researcher does not just analyze texts and decides on themes and meanings based on transcripts. Narrative inquiry is an inherently collaborative and relational methodology.

We engaged participants in conversations about their experiences with obesity, weight bias and stigma, focusing on public and health domains. Together, participants and researchers created

coherence between our experiences and found meanings within the stories. [48] We kept a journal, recorded field notes, and asked participants to provide other data sources such as pictures and other memory artefacts that could help us develop in-depth narrative accounts. Based on our field notes and field texts that were co-composed with participants, we developed interim narrative accounts applying the three-dimensional narrative inquiry space [47] to uncover personal, social, political context that have shaped our understanding of obesity, weight bias and stigma. We shared *interim research texts* with participants and invited their feedback and responses, always being attentive to participants' and our own emotions, responses, including silences that may reveal critical meanings. *Final research texts* were also produced with full participation from participants.

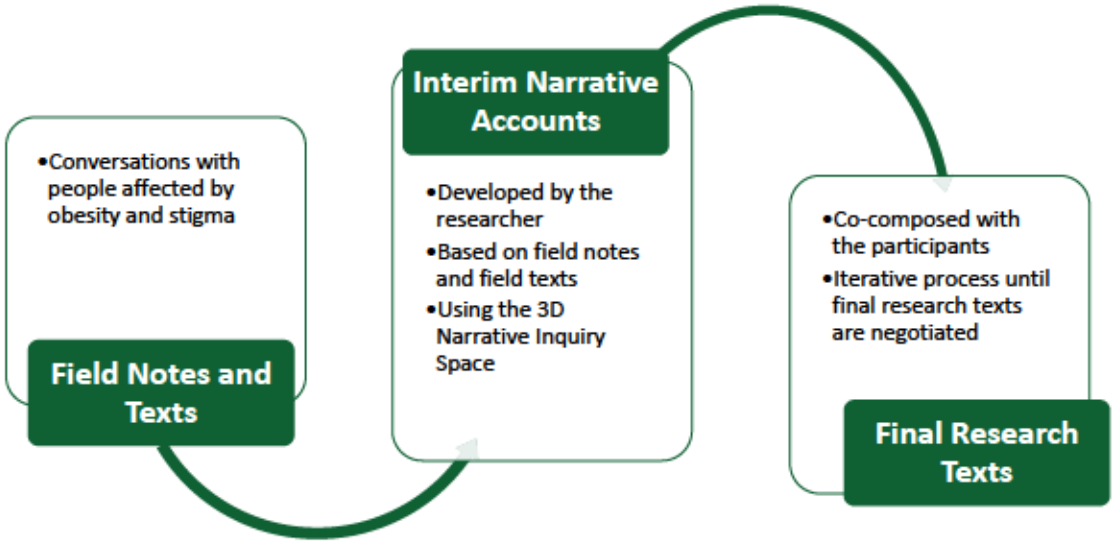

Figure 3-1 Narrative Inquiry Process

The *three-dimensional narrative inquiry space* is used as a conceptual framework in narrative inquiry. Experiences are basically storied in terms of: a) *temporality* (events and experiences are always in transition and are linked through the past, present and future), b)

sociality (personal and social conditions that inform each individual's context), and c) *place* (the physical and topological boundaries where the inquiry and events take place).[48] Hence, the analysis and interpretation process of field texts always considers contextual and relational factors. Moreover, prolonged and intensive engagement with participants is central as it allows the inquirer to interact with participants and determine the degree to which they are comfortable with the final narratives and to gauge how participants' perspectives may have shifted through the research process.

In this paper, we share counterstories developed by ten individuals living with obesity who have experienced weight bias and stigma. A counterstory is a story that resists oppressive master narratives.[40] We invite the reader to read these narratives and to place themselves within them, reflecting on their own stories (or experiences) and as well as our collective master narratives of obesity. Examining experiences, beliefs, values, practices and relationships that contribute to dominant obesity narratives has been recommended as a way to address some of the social and institutionally generated negative views of individuals with obesity.[8] Reflexivity may also help challenge social narratives about obesity and change personal attitudes, beliefs and practices about obesity prevention and management.[8] Ultimately, we hope that unpacking these narratives can help us reveal opportunities for critical public health practice and social change to prevent further weight bias and obesity stigma.

MY PERSONAL JOURNEY

My interest in weight bias comes from and has led to questions of social justice, health disparities, and the institutional narratives in which they are embedded. Through the narrative inquiry process, I came to understand what narrative inquiry researchers call "living in the midst". Over a period of two years, I lived alongside people with obesity, while also interviewing

public health policy makers, and reviewing public health policy documents. These experiences made me realize that our lives are always in the midst. While I was engaging in this research, our lives (my life and the lives of participants) were literally unfolding over time in different places through various events and people, and situated within our individual and shared social, cultural, familial, and institutional contexts. Narrative inquiry helped me make sense of the complex context in which we live and work as we composed our lives through personal and professional landscapes.

I began to think about my own stories that I have told and re-told about obesity through my personal and professional landscapes and this helped engage in further conversations with policy makers and individuals with obesity. The process was iterative. As I lived alongside individuals with obesity, I also discussed the tensions between their experiences and the stories we tell about obesity in public health with policy makers. As I discovered the tensions between these stories, I reflected on them personally and professionally with colleagues, friends and family. This experience became part of my personal and professional story. It changed my life and the way I think about obesity significantly.

This experience raised many questions for me about the way that public health is approaching obesity. It led me to ask myself how the experiences that people with obesity have in their personal and social lives relate to the stories we tell about obesity in public health. Are there tensions we can address? What silences exists in these stories that shape the way we compose our personal and professional narratives? Are there opportunities for us to engage with public health professionals to find ways to resolve these tensions and open up dialogue about weight bias?

In this narrative inquiry, I was not just interviewing individuals about their stories. I was living alongside participants and the research process became part of our own story. I was not outside of the research process. I was part of the process. I was not just observing an experience. I

was part of the research experience and this experience has reshaped the way I conceptualized obesity and weight bias entirely. This is the reason why I included myself in one of the counterstories presented in this paper. This particular story represents the transformational aspect of narrative inquiry.

PARTICIPANTS

Using purposive sampling, we engaged persons living with obesity (n=10) from various Canadian provinces in a narrative inquiry to construct and interpret participants' experiences with obesity prevention policies, weight bias and obesity stigma. Although all participants self-described as having obesity, participants were of all shapes and sizes. No anthropometric measures were taken. All participants were over 18 years of age. Participation was voluntary, and participants were recruited through bariatric clinics and through the Canadian Obesity Network public engagement initiative. Participants did not receive financial compensation for their participation in this study. Each participant was assigned a pseudonym.

ETHICS

We obtained ethics approval from the University of Alberta Health Research Ethics Board (HREB). All participants provided informed consent after receiving a study information package prior to the conversations.

Results

CATHERINE: COUNTERACTING MY UNHEALTHY SOCIAL IDENTITY

My doctor told me that obesity is a chronic disease, meaning that I will live with obesity for the rest of my life. Not unlike other chronic diseases such as diabetes or hypertension, obesity requires lifelong management. Right now, I am in remission, he says. I am managing my disease well enough that my weight does not impact my health. This is consistent with the World Health

Organization definition of obesity which states that obesity is defined as abnormal or excess adiposity that impairs health. Right now, I am healthy, and my weight is not impairing my health. But, it is hard work and if I stop doing all this work, my weight could start affecting my health once again.

However, my friends and family still think I should lose more weight and they still make comments about my "unhealthy weight". The unwanted comments from friends, family or strangers never stop. People are well meaning but they have no idea what I am going through. They have no idea what I am doing to manage my disease. They just see my body and assume that I am unhealthy. I cannot change the size of my body. This is the body I have learned to accept after years of abusing it and trying to make it "*normal*". I tried to make my body fit in this world because that is what I thought I needed to do.

I believe the messages about *"healthy weight"* have certainly contributed to my weight bias experiences. Society tells us that obesity is bad and that obesity and people with obesity are a burden to the health care system. This narrative has an impact on social attitudes, which has had a direct impact on me as an individual.

When I walk down the street, strangers tell me: "You know that obesity is unhealthy, right? You should lose weight" or "You should not be eating that" or "You should take the stairs instead of the elevator". My body is identified by others as "*unhealthy*" and over time, I started to believe that my body was unhealthy and that I was unhealthy. Everything I have done to lose weight is because I wanted to become healthy. I have spent years trying to change my body so that it could be "*normal*" and "*healthy*".

I can't escape the social identity that people with obesity have been given. We live damaged and oppressive identities. I know it is an oppressive identity because of the way that I

am treated in society. Wherever I go, my body is identified as "*unhealthy*" or "*abnormal*". That means that the first impression I make in someone is that I am unhealthy.

As an indoor cycling instructor, I am always looking for new places to teach. During a job interview at a few years ago, an employer asked me if I considered myself to be healthy. I was taken a back with that question and I asked her to clarify what she meant. She clarified her question by saying: "do you think your body size is healthy"? I have come to accept that people will get a negative impression of me the first time they meet me. This is how our society views people with obesity. They see us as unhealthy and abnormal. So, I make sure that I change that perception by sharing some of my journey with them.

I tell them that I eat healthy based on what my bariatric dietitian has recommended and that I exercise as much as I can. I teach 4-6 cycling classes per week and run in as many races for which I have time in my busy life as a mother, wife, and teacher. I am taking medication to manage my obesity just like people with diabetes take medications to manage their disease. I see a bariatric doctor regularly and I although I still live in a large body, I am healthy.

I also tell them about my journey in accepting my body and treating myself with respect. I share some of my experiences with weight bias and bullying. I have so many experiences that have happened gradually over time. The experiences of weight bias have always been there. They have become blurred in my mind, but that does not mean that they don't hurt. Every experience is like a mini-trauma. It leaves a mark and makes it is harder to recover from them. But you develop a "thick skin". These mini-traumatic experiences have become part of my life. I have learned from them.

At the beginning the experiences were small like verbal teasing in school and I could manage them. But then, the experiences became worse leaving scars both physical and mental. Looking back, these scars are permanent, just like my weight set point in the brain. Stigma scars

are permanently imprinted in my brain. I can live with them, but they are always there. Sometimes, I need to put a lot of effort to prevent them from affecting my disease management process. Negative self-talk and poor body confidence are barriers to my health and my obesity management process. I explain to people that shaming people for their body size is not helpful. It has never helped me to change my behaviour. In fact, in the past, shaming experiences at the gym, for example, have prevented me from going to the gym. As a cycling instructor, I want to encourage and support others who feel unwelcomed in fitness facilities because after all exercise is good for everyone.

CAROLINE: OBESITY IS A COMPLEX CHRONIC DISEASE NOT A LIFESTYLE CHOICE!

In grade two or three, I missed a vaccination day in school and my mother had to take me to the public health clinic instead. The public health nurse took my weight measurement in the waiting room in front of everyone and told my mother that I was obese. Once we were in the private room, the nurse scolded my mother because I was obese. My mother asked the nurse what she should do. The nurse told her that she needed to put me on a diet and she needed to make me exercise more. That was the beginning of my weight loss career. I call it a career because I truly have been working at my weight all my life.

As an adult, I finally found a doctor that specialized in obesity. Meeting my bariatric doctor changed my life. She took the time to explain to me what obesity is, and I realized that a lot of what I knew about weight and health was incorrect. I had been obsessed with losing weight through diet and exercise because I wanted to be healthy. At least that is what I had convinced myself that I was doing. But, in retrospect, I just wanted to be normal. I wanted to be skinny. But after all those years of yo-yo dieting and exercising, I had actually damaged both my soul and body. I had convinced myself that there was something wrong with me because I could not

manage my weight. Clearly, if the public health nurse had told my mother to simply put me on a diet and exercise plan, I should have been able to manage my weight. But, since it did not work for me, there had to be something wrong with me.

Once I realized that I had a disease, I took every opportunity to learn more about it. I even went to an obesity conference in the United States to inform myself about the latest science on obesity. I felt empowered to learn more about obesity. But, I also realized how much damage I had done to my body, my metabolism, and my soul.

One of the most important things I have learned is that obesity is a chronic disease and not a lifestyle choice. The Canadian Medical Association (since 2015), the American Medical Association (since 2013), the World Health Organization (since 1948), the Canadian Obesity Network (since 2011), The Obesity Society (since 2013), the Obesity Action Coalition, the European Association for the Study of Obesity (since 2013), the World Obesity Federation (since 2017) are just a few organizations that have recognized that obesity is a chronic disease. For years, I have been told by health professionals, friends, family, and the media that obesity is about my lifestyle (unhealthy eating and lack of exercise). Well, I have tried healthy eating and exercise plans and that has not changed my obesity. For 20 years, I tried that. Yet, I still have obesity.

From the moment that the public health nurse told my mother that I was obese and to put me on a diet and exercise plan, I have tried to change my body. For my mother, having a daughter that had been labelled as obese was devastating. She tried to make me healthy in her own way. She cooked different foods for me at each meal. While everyone else was eating regular meals, I was eating broth soup or raw vegetables or cabbage soup. Whatever, her friends told her to try, she tried it on me. I resented the fact that everyone could eat whatever they wanted, while I was stuck on an endless diet. My mother put me in dance classes, swimming,

power skating, and even made me do exercises at home such as running up and down the stairs or running around the backyard.

When I deconstruct the current health narrative about obesity, it says to me that health professionals blamed my mother and me and so they did not need to help me find evidence-based treatments. My mother internalized this message and truly believed it was her fault that I had become obese and that it was her responsibility to fix it. I also internalized the weight loss failures and truly believed that there was something wrong with me.

It took years for me to realize that there is nothing wrong with me as a person. That my identity is not defined by my weight. That I am a human being that deserves respect and to be treated with dignity. That I have a chronic disease that requires long term management and that it is my right to expect respectful and dignified care.

Now I am making it my mission in life to prevent weight bias and obesity stigma. People need to understand that obesity is not a lifestyle choice. I did not choose to have obesity. In fact, I suspect that my obesity can be linked back to years of yo-yo dieting as a child, which have reduced my metabolism (maybe permanently) and made my body much more energy efficient. Years and years of losing and gaining weight may have also increased my weight set point, which makes my body counteract any weight management plan I may want to start by releasing a cascade of hormones designed to protect against weight loss.

Health professionals have a responsibility to educate the public about obesity in a holistic way. Obesity is not just about the environment and behavioural mechanisms. We now know that weight is also intrinsically linked to genetic and hormonal control. Rather than presenting obesity solutions as "eat less and move more" strategies, health professionals should adopt the consensus of the medical community and international health agencies that obesity is a chronic disease that requires prevention and management strategies that are evidence-based. Simply telling people to

"eat less and move more" is frankly unethical, considering that individuals can cause major damage to their mental and physical wellbeing.

SARAH: RESISTING INSTITUTIONALIZED STIGMA AND CHANGING THE WAY WE ACCOMMODATE PEOPLE WITH OBESITY – A STORY NARRATED FROM THE PERSPECTIVE OF A WEIGHT BIAS RESEARCHER!

Sarah exudes confidence and happiness as she comes into my office. I welcome her with a hug but the atmosphere changes quickly when I realize my office does not have chairs to accommodate her body. Sarah laughs it off and tells me:

> *"I am used to not finding seating. The first thing I do when I walk into a room is to scan for chairs. If I do not find one that fits my body, I prefer to stand. The looks I get when I try to fit in a chair are just not worth it."*

I am in shock that in this state-of-the-art obesity research institution there are no seats for people with obesity. The next time we meet, it is at a coffee shop with more comfortable seating. But, there I notice people turning to look at us. Their critical faces show judgment and criticism.

> *"I am used to those looks too. These looks can become verbal attacks sometimes. Strangers will stop me on the street and tell me that I should eat less and exercise more."*

I am uncomfortable and want to leave. I want to protect her from this experience but I realize that this is part of our story. While living along Sarah's side, I am travelling into her world. She gladly brings me into her world and tells me about her story living with obesity. Weight bias and stigma are common experiences that have shaped her story and life chances. She tells me about her dream to become a teacher and how her dream almost fell apart on the first day of University. As she entered the classroom on the first day of classes, she realized the chairs had built-in tables around them and she knew immediately that her body would not fit in those chairs. Before people could notice she was in the room, she left the classroom. She felt like never returning. But her dream of becoming a teacher motivated her to find a solution.

The next day, she went to the classroom ten minutes before so she could find a place to sit. She found a place in the back of the classroom. This became one of her safe places on campus. Over time, she found a few more places where she could sit and study. These spaces represented her own resistance to physical barriers that limit her participation in life. As she shares this personal story with me, she knows that she is creating a resistance against the social exclusion of larger bodies.

We discuss how bodies are marginalized in our society and how people of size are affected.

> *"We live in a world that does not accept people with obesity. The message is that I do not belong here because I have obesity. The stories lying around about us tell the world that we are unhealthy, lazy, unmotivated, unintelligent and ugly. People make judgements about my moral character because of my size. The assumption is that I did this to myself. It is my fault. I somehow lack the discipline and willpower to be healthy. These assumptions drive the belief that I am a burden to society or that I do not contribute to society. That gives people the right to exclude me from participating in society to my full potential. But everything I have done to my body is to become healthy. I had bariatric surgery because I wanted to become healthy. But that is not enough because I will never be considered a "healthy weight".*

We explore the idea of healthy weight a bit further. As she tells me her experiences with fat shaming from family, friends, colleagues, and strangers, she appreciates that she has internalized these harmful stereotypes and attitudes. Unconsciously, she internalized a harmful personal identity which has constructed her life story. Despite having lost a significant amount of weight after her surgery, her body is still classified as obese. But her bariatric physician recommended that she not lose more weight because it could have negative consequences for her overall health.

> *"He told me that I have reached my best weight. He defines best weight as the weight at which I can be healthy and live happily. And I agree with him. But my family doctor keeps telling me to continue to lose weight – to eat less and move more. But how am I supposed to do that when I am already eating the least amount of food that my body needs to function? How am I supposed to fit in more time for physical activity when I am already exercising 2 hours each day?*

Clearly, my family doctor thinks that health is a number on the scale. He expects me to reach a certain number on the scale as if that number will make her healthier."

Sarah believes that the idea of "*healthy weight*" comes from public health messages and is contributing to the internalization of weight bias among people with obesity.

"What does "healthy weight" mean? I am healthy right now but when people look at me they assume that I am not healthy because I am big. I don't focus on the number on the scale anymore. I count my non-scale victories. I focus on the activities that I can do now, which I could not do before, like going on a roller coaster or going on a vacation or getting a new job. I also work hard to be as healthy as I can be by exercising and eating healthy foods."

Sarah shares with me stories about other individuals in her bariatric support group. She has seen what internalized weight bias can do. Unhealthy weight loss practices are common. She tells me about one friend that goes to the gym three times per day (before work, at lunch time, and after work).

"She became obsessed with her weight loss and alienated everyone in her life in the process. I do not want to do that", she adds.

We discuss this further and question why people with obesity are held to a different moral standard than others who have chronic diseases such as cancer, heart disease, and hypertension.

"Weight is supposed to be under my control. I have the control to change my body weight because I choose what I eat and I choose how much I exercise. That's what most people believe. I believed that too. It was not until I started learning about obesity that I realized that there are many factors that influence my weight and the choices I have. I was hard on myself back then. I used to blame myself every time I gained weight. But I did not know that lack of sleep was affecting my hormones, for example. I did not know that the medication I was taking for depression was making me gain weight. There is such little awareness about obesity in our society."

The assumptions we make about people's moral character are based on lack of knowledge about obesity. We discuss this further as we sit in this now crowded coffee shop. The sound of the espresso machine is in the background. The smell of coffee and pastries is filling our senses

and we are enjoying each other's company. We are connecting as humans and we are sharing an experience that is filled with empathy and respect. I notice that a family with two young children sits next to us. They are staring at us and whispering to each other. They look at our plates and I notice they are making comments about our lemon pie. We came here because there would be more comfortable seating but also because we both love the lemon pie in this coffee shop. I noticed that both the parents and the children keep looking at Sarah's body as she repositions on the couch. Once again, I have the urge to protect Sarah from noticing these judgmental looks and stares. But Sarah is aware of the looks already. I make a comment about the lemon pie, desperately trying to stop thinking about this family who is staring at us. Sarah senses my discomfort and says:

> *"Even though everyone judges me for eating pie, I still do it. I am aware of the looks, she says. It happens in almost every restaurant. As if I somehow do not have the right to eat pie or eat in restaurants because I have obesity. Mostly everyone in this coffee shop is eating some kind of pastry with their coffee or latte, but do they feel judged as I do, I wonder. Is this in my head? Am I imagining the stares?".*

No, she is not imagining the judgmental looks. I can see them too. In fact, if I am honest, I tell her, I may have done this myself. In my training as a kinesiologist, I learned all about the "energy in and energy out" model. That is as much as I learned about obesity in my four years of undergraduate studies. In my masters' degree, there was no discussion or learning about obesity as a chronic disease. Instead, obesity was seen as a risk factor for other chronic diseases. So, the lack of understanding of obesity in the general public is similar to the lack of training and awareness among health professionals. This is why I am doing this research study, I tell her.

> *"I am thankful to you for including me in your study. I am thankful to you for sharing my story. But I am more thankful to you for sharing this experience with me. I can see how it has changed both of us. We have become friends and I feel respected and valued by you as a researcher. I wish other researchers*

would engage people living with obesity in their work. By working together, we can create more change in our society".

LOUISE: WEIGHT BIAS AND OBESITY STIGMA – IT'S ABOUT LIFE AND DEATH!

I had a nice childhood. A nice family. I am educated. I am intelligent. I have a successful career. I am self-disciplined. But obesity runs in my family. My parents and grandparents had obesity. But, my sister does not. She can eat whatever she wants. She never exercises. I guess, I got the obesity genes in the family. I am managing my obesity well. I was lucky to have a good primary care team that helped me. But I still have a high BMI and I feel like there is something wrong with me and that I need to lose more weight. Somehow my value as a human being is lower than someone whose weight is considered "normal". I want to be normal. I want to fit in.

Thinking back, I realize that my parents have been telling me that I need to lose weight since I was a child. Even though I ate healthy foods and I participated in extracurricular activities such as swimming and running, they continued to tell me that I need to eat healthier and exercise more. I was not doing enough in their eyes. As a teenager, my parents questioned my eating habits and accused me of hiding junk food in my room. I never hid food in my room. But, I remember going to bed hungry because I was not eating enough before and after my swimming or running practices. It hurt that my parents did not believe me. But they did not know better. If my parents had known what we know today about the biology of weight control, they would not have done that because they love me. I know that. But there is no doubt that I have scars from my childhood experiences. My relationship with my parents was damaged. To this date, they comment on my weight, my eating habits and my appearance.

My parents really believed that I could control my weight. But this is not surprising because this is the main public health message. I do not blame my parents. Public health messages about obesity make weight control sound easy. But, my journey has not been easy. It has been difficult

for me. Every day is difficult. I have lost over 100 lbs. and I am managing my disease well but I still have obesity according to the BMI categories. My goal is to maintain this weight loss. Based on what I am doing now, I cannot eat less and I cannot exercise more. So, I will never achieve the healthy weight range promoted through public health campaigns. I am at my "best weight" and I need to accept that. Why is public health not ok with that?

The idea that we need to pursue a "*healthy weight*" or a "*healthy BMI*" is not relevant to most people living with obesity. There is a lack of recognition in public health that people come in different sizes and shapes and we cannot all look the same. Furthermore, public health obesity prevention strategies should not emphasize size or looks. Public health should aim to improve health outcomes. Size is not a health outcome. BMI is not a health outcome.

Rather than looking at changing the size of the population, public health efforts should aim to support people with obesity. But somehow, we are not part of the public health policy making process. We are often excluded from health policies all together. Obesity prevention strategies target individuals who are "normal" weight in order to prevent them from becoming "obese". But what about us living with obesity already? Who will help us?

Finding obesity care in Canada is challenging, to say the least. Most health care professionals have not been trained in obesity and will simply advise their patients to "eat less and move more". So, we are left to fix this ourselves. How is this acceptable? Well, it is acceptable because people with obesity are not valued in society. We are seen as lazy, stupid and dishonest individuals that simply cannot adopt public health messages and strategies. Obesity is our fault. Public health warned us about obesity and we simply failed to follow through their advice to "eat healthy and exercise". Those are the assumptions that people make about us.

Well, it is time for us to change those assumptions. People with obesity deserve to be treated with respect, just like everyone else. It should not matter how we developed obesity. What

matters is that we need support. Rather than shaming us or making us internalize the need to fit into a "normal" BMI category, public health should help us get healthier.

The way people or health professionals, more specifically, think about obesity has a direct impact on my health and well-being. A direct example of this in my case was when my doctor blamed the back pain I was experiencing on my obesity. He dismissed my complaints and I lived with pain for over two years, until I decided to get a second opinion. I went to see another doctor who has been trained in obesity and he completed a full health assessment, without any moral judgement or preconceived ideas about my weight. After a few weeks of medical tests, we discovered that I had kidney cancer. By the time we discovered the cancer, it had progressed to stage 2. I was angry and upset. The cancer could have been discovered earlier if it was not because my previous doctor believed that I just needed to lose weight and my back pain would go away.

Never mind finding adequate evidence-based obesity treatment and care within the current Canadian health care system. We can't even find dignified health care in general. Every time a medical problem is blamed on obesity, we experience bias and discrimination. This can have serious health consequences for us as individuals and for society in general.

The majority of the time, health care professionals do not make assumptions about how someone developed diabetes or cancer or heart disease. But people make assumptions about our behaviour. Health care professionals assume that individuals with obesity are eating unhealthy and exercising too little. This thinking leads to disrespectful treatment and poor quality of care. We need to challenge these assumptions. People with obesity need to challenge these assumptions and share their stories. We need to change the social identity that has been created for us. We need to regain our moral value as human beings.

KAREN: DOES MY LIFE MATTER TO PUBLIC HEALTH DECISION MAKERS?

My grandfather used to bribe me so I would stop eating. He used to give me money if I skipped dinner. Then he would say – 'see you just need motivation and you can lose weight'. The problem was that I was starving and my body went into starvation mode. My body became extremely efficient at storing fat. The more I restricted my eating, the more weight I gained.

Diets never worked. I continued to gain weight. My parents started telling me that I needed to take responsibility for my own decisions and that they would no longer help me. I never felt supported by my family. Today, I am still hurting because my family believed that I did this to myself.

In school kids were relentless. They called me names and abused me physically and mentally. I remember one day in grade 6, a boy in my class walked up to me and spit in my face and yelled "you disgust me, why don't lose some weight". I was in shock and could not say anything so I turned around to walk away but he pulled my hair and I fell to the floor. He then proceeded to kick me in the stomach while continuing to yell at me "you are a disgusting pig." Nobody did anything. There were other kids watching the whole thing. I heard kids laughing. I was crying and yelling at him to please stop but he kept kicking me. He eventually stopped and walked away but not before spitting in my face one last time. I started skipping school and avoided being alone around school. But I had no friends. So, often I hid in the bathroom during recess so that kids would not see me. This abuse went on for years. There were times when I wanted to die. I stopped telling my mother about the bullying in school because she would just put me on another diet. That was her way of trying to help me.

After years of abuse and isolation, I began to comfort myself with food. The weight gain continued. I suffered in silence and I was relieved when my mother's new boyfriend who also

had obesity joined our family and we could have conversations about our shared experiences with bullying. I trusted him. The first time he raped me, he threatened to tell my mother that I was skipping school. The threats become worse every time he raped me. I was broken. I was alone. I had no one to trust.

By the time I was 15, I had lost the will to live. I ran away from home and had nowhere to go. Soon, the darkness of the streets consumed my life. Drugs, sexual violence, and crime became part of my life. When I was 17, I was raped, beaten and left for dead on the streets. A public health nurse found me and took me to a safe place. She saved my life. Today, I am a working to address homelessness in my community. I found my voice and I want to give a voice to others.

Obesity has been part of my life and I continue to struggle to manage my weight. But the isolation, abuse and violence that I experienced because of it has changed me. As an isolated, lonely child with obesity, I was more vulnerable to sexual predators. We need to protect our children from adverse childhood experiences. We need to help them before it gets out of control. I hope that my personal experience, living with obesity and experiencing shame, blame and abuse can help others. There is no question in my mind that obesity stigma can lead to experiences of social exclusion, abuse, and discrimination that ultimately leads to health and social inequalities.

Public health could have taken away the pop and junk food from my school cafeteria. They could have influenced the food environment in my community. I am sure that would help many people. But I would have still gone out to buy these items from the local convenience store. Yes, I ate unhealthy foods throughout my childhood. It was how I coped with the abuse. I did not choose to experience physical and sexual abuse as a child. But I chose to eat junk foods. *It was all I felt I had control over.* So, yes, I guess obesity is my fault. I did this to myself. But does it matter? Does that give people the right to treat me without respect? Does that mean that public

health strategies do not need to take me into account? Is it too late for me? Does my life not matter?

I hope my journey helps health professionals understand that there are many causes of obesity. Obesity prevention strategies should address the true causes of obesity. In my case, the underlying factor for my obesity was shame, trauma and abuse. These are psychological factors that should have been addressed early on. Prevention in my journey should have involved psychological support – not just lifestyle strategies to improve my eating and physical activity. What I needed was someone who could help me deal with the trauma that lead to obesity.

The underlying cause of obesity for others may be genetic or a physical injury that prevents them from living a healthy life. The bottom line is that health professionals need to understand that a healthy lifestyle is just one component of obesity. In fact, a healthy lifestyle is important for the prevention of many chronic diseases, not just obesity. So, the question is: what is public health doing to specifically prevent obesity (other than promoting healthy lifestyles)? How is public health addressing the many underlying causes of obesity? How is public health addressing the realities that people with obesity experience?

STEVE: FINDING A COMMUNITY AND CHANGING OBESITY NARRATIVES

It has been almost ten years since my surgery and I don't regret it for a second. People often ask me if I regret having bariatric surgery, but I always say that I don't regret it. I don't like living with regret. It was a decision that I made for myself to save my life. I may not have been here today if I had not had bariatric surgery. When I think back at the three months I spent in the hospital suffering from bariatric surgery complications, I realize that I was put in this world for a specific reason.

My obesity journey did not start at the point of the surgery. My journey started so many years ago when I was a young boy living with my mother who raised a family the best way she could. She loved with food and I needed that love so much. I don't think she ever knew how much I needed her love. A mother is the person who is always there for you. But my mother was not able to be there for me due to her experiences with depression. Reflecting on my childhood I realize that so much of my journey started with my mother.

My mother struggled with depression most of her life. I loved my mother because I know that she tried her best. I don't have resentment towards her now. But, for a long time during my teenage years and early adulthood, I resented her for not protecting me from my big brother who inflicted so much pain on me.

My brother took out his resentment towards our mother on me. I was the target of his abuse for years. He terrorized me at home and at school. He made his friends terrorize me as well. School was hell. Home was hell. The only thing I could find comfort in was food. I used food as comfort, as love, as a mechanism to change my body and become invisible. The larger my body became, the more invisible I was to the world – I hoped. But, I did not become invisible to my brother's relentless physical, emotional and sexual abuse. It went on for years.

I have been ashamed to speak of this to anyone. Until now. I am turning the page. I am free from this past. I am looking to the future where I can share my story to make a difference in this world.

My obesity story is always going to be with me. Looking back, I can see how my experiences have created a scar in me. Adverse childhood experiences of neglect, abuse, isolation and shame have left a scar. A scar like the one from the bariatric surgery. The complications from the surgery will always be there as a reminder of past experiences that changed me. The scars are

not just physical. The scars are also emotional. They will always be there to remind me of where I have been and how far I have come.

My childhood was not easy. It was lonely and heart-breaking. But I am still here. My story continues. Reflecting on the loneliness and heart-breaks from my childhood, I can see that all I wanted to do was to run away from that world. I left home searching for love and belonging.

I was 18 years old weighing 350 pounds when I left home. This is how I entered my adult life. I had been beaten down by my family, friends and teachers and I did not want anyone to know about my childhood experiences. I hid my experiences from everyone. Even from myself. I tried to erase the memories and used food to feel in control. My eating decisions were directly related to my need to have control. I wanted to have control of my life. Nobody could tell me what to do anymore. And yes, doctors warned me that I was "morbidly obese". I hated hearing those words because it made me sound like a monster. But I am not a monster. My childhood experiences were monstrous. But, I am a human being in search for love and belonging. I am trying to repair the pain in my body and soul.

I continued to gain weight and along the weight gain, came the experiences of bias and stigma. Some would say to me: *"You are being reckless with your body and health. Get a hold of yourself. Wake up or you will kill yourself"*. Even when I was in the process of waiting for bariatric surgery, strangers, health care professionals, family and friends looked at me in disgust and contempt. They judged me and created their own stories about me. Stories about me lacking discipline, being unintelligent, and not caring about myself. Stories about my food addiction and my inability to control myself. One day, I realized that these stories about me were hurting my health. These stories affected how people treated me as a patient and as a person. The stories created a damaged identity for me, which people used to justify stigmatizing and discriminatory behaviour against me. I was accused of lying about my food intake countless of times by

healthcare professionals. I was blamed for my obesity over and over again by healthcare professionals who believed I was acting recklessly and did not care about my life. I was shamed for my obesity in hospitals when told that I could not get an MRI because I did not fit in the machine, or that I had pneumonia because I was "morbidly obese".

This is why I decided to share my obesity journey. I need to correct these stories about me so that healthcare professionals can understand the root cause of my obesity. So that people can see that I do care about myself and that I want to have a healthier life. I found a community of people living with obesity who have experienced similar stigmatization and discrimination in schools, workplaces, and health care. This community has helped me re-gain my sense of belonging. By telling and retelling my story, I am reliving my story and I can see the places, times, and relationships that shaped my life. I now understand that my life has led me to this new community. With their support, I am building a new life for me and my children. A life where I can reflect and learn from my past experiences.

Why do I need to change my obesity story, you ask? It's simple. The story that the public, healthcare professionals, the media and society in general has of me is not true. The story about me choosing to develop obesity because I didn't care about myself is not true. I did not choose to do this to myself. Nobody chooses to do this to themselves. Obesity is not a lifestyle choice. The idea that I can just lose weight if I decided to get a hold of myself is as far away from the truth as it could be. It is a lie that has affects my life every day.

As I walk down the street, the stares from strangers haunt me. As I dine with friends and colleagues, the stares and comments follow me. My children's experiences with weight bias in school and work also affect me. These are no different than the abuse that I experienced in childhood. They also leave scars. They also make me feel lonely, unloved and invisible. But,

when it comes to making a better future for my children, I need to take charge. Their stories need to be different.

I have found my purpose in life. My purpose is to change the obesity narrative and demand respect for everyone, regardless of what disease they may have. Every person with obesity has their own story, which means that each person needs a different type of support. However, because people with obesity have been beaten down all their lives, many of them are not ready to share their own stories. But those of us who can need to share our stories so that we can help our community. People need to hear these stories without judging them and without imposing their own biases on them. There is no need to judge these stories or the people who share them. We are human beings and we all deserve respect and dignity.

NANCY: YOU CANNOT EMPOWER ME, I CAN EMPOWER MYSELF!

My experiences with weight bias go deep, deeper than I had ever thought. The stories of weight bias are within me. They are part of me.

Years and years of bullying in schools, physically abusive relationships, and unfair treatment at work led to feelings of isolation, loneliness and not belonging. These experiences changed who I am. These stories made me who I am. These stories have shaped my life and have helped me see myself differently.

My earliest experience of weight bias was from my mother. My mother loved me and wanted the best for me. She wanted me to be healthy and marry a good husband so I could have a beautiful, healthy family. The love of a mother is undeniable. But, how far can that love go?

My mother put me on my first diet when I was 10 years old. At the time, I did not think I was chubby or fat. I was a normal little girl who played outdoors all day on our family farm. I ate home-made meals with freshly farmed produce. I played sports in school and loved art classes. I

was a curious child and would explore my family farm every day and all day. I loved being outdoors and found ways to create a friendly world on my family farm. I would stay outdoors so I would not have to hear my mother's comments about my weight. I would stay outdoors to be safe and happy in my own world.

Despite seeing doctor after doctor, trying diet after diet, practicing and performing dance after dance, my weight continued to increase. My mother was worried about my weight and my health. But she was also worried I would not be able to find a husband who would love me because of my weight. This story went on for years and it became my story.

> "*Would anyone love me? Was there something wrong with me? How can I be such as disappointment to my mother who loves me so much? I need to try harder", I said to myself.*

And I did everything I was told to do. I tried the cabbage soup diets. I would just eat fruits and vegetables. I would stop eating carbohydrates. I would stop eating high fat foods. I would exercise more. I would run more or dance more. I was my mother's project. She tried and tried to make me lose weight so I could be beautiful and healthy. But nothing worked. The weight would come off and then it would come back again. I did it again and again, like a yo-yo. Hundreds of pounds gained and lost throughout my life.

My ideal of beauty became about weight. Sure, doctors talked about my health. But for my mother, it was more about her daughter being able to find a husband and get married. My mother did not think boys would find me beautiful because I was too big. She never said I was ugly. She just kept trying to change me. She kept trying to make me more beautiful. My mother's story about me was the story I came to live by.

I tried and tried to change my body.

"*But why couldn't anyone see my beauty? Why am I not beautiful? What is wrong with me? My mother's story of me became the story that everyone else told about me".*

Everyone in my family would tell me to lose weight or nobody would love me or marry me. They would recommend diets, exercise programs and/or doctors. Little by little, this story became true to me.

"There is something wrong with me. I cannot lose weight because I am stupid, lazy, and unmotivated. I am not like the rest of the world. I cannot do simple things like eating healthy and exercising long enough to keep the weight off. Everyone else can do it, except me. It is just me. I am alone".

Despite my mother's fear that I would not meet a boy who loved me, I did. I moved in with him only to experience another form of weight bias. My boyfriend said he loved me and then he stopped buying food. We had no food at home and my weight went down, way down. I became underweight. I was at my lowest weight ever because my boyfriend who loved me would not buy food. I had nowhere to go. I thought this was love. This is what my mother wanted me to find. She wanted me to find love. Taking away the food was just the start. Soon the abuse became physical and emotional. How is this love? Why is love so lonely? I eventually I left him. This was not the story I wanted to live. I needed to change my story.

I went back to University to finish my degree and started a career in business. I graduated with honours and quickly developed a career in technology. I achieved tremendous success in my career as I put all my energy towards it. Slowly the weight came back. The stressful career and the stories I had left behind just made the weight come back. My brain re-claimed the weight it had lost and put on even more weight. But this time, my health is started deteriorating. The weight started affecting my health. Diabetes, hypertension, sleep apnea, bone and muscle pain coupled with anxiety and depression became part of my story.

The story I was trying to re-write in which I took control over my body and reclaimed my life became another story. It became a story about feeling unhealthy, tired, and frustrated. By this time, I had re-married and had a daughter of my own. I wanted to be there for her. I tried so hard

not to make her story about weight. I wanted her to be strong and confident. But, in re-writing my story, I lost track of my health.

It was time to reclaim my health. This time I realized that years and years of yo-yo dieting, shaming, weight bias, abuse, and loneliness had taken a toll on my body and health. My metabolism was destroyed. My weight was out of control and my health was suffering. I took control and empowered myself to seek support. This is something that health professionals needs to understand. Health professionals cannot empower others. Empowerment is internal. It cannot be given to others. All health professionals can do is to provide support and respect. I reached out to a medical expert. I refused to try another diet. This time, I realized that I needed help from someone who understands obesity. Someone who can tell me how weight and health truly works. It is not about looking skinny or beautiful. It is about my health. It is because I need to be healthy and live a long life with my daughter, son and grandchildren.

But, wait. To see the look in my husband's face when I undress. That is also important. He is a loving husband and has never said anything about my weight. But, the looks in his face reinforce all the shame and blame I feel.

"*Could it be that the person that I trust the most shares the worst beliefs I have about myself? Does he believe the same things about me that the rest of world does? Does he also believe that I don't have self-control and that I did this to myself?*"

At work, this is the story I live. Colleagues and co-workers have those looks too. It's not just looks. They tell me that I need to find a way to control my impulses and that I cannot take it out on them. Just because I need to lose weight does not mean they cannot eat doughnuts. I argued that having healthy meeting snacks is good for everyone but they don't see it like that. I did it to myself and it is my fault. They don't need to eat healthy. It is my problem.

By now, I have reflected on my story and how I got here. I know that weight bias was one of the main drivers of my weight gain. I know that my mother's sense of love for me was

expressed through weight bias. She tried to change me and in the process, I made her story about me part of my story. Now I must share my story so that others can change their story about me. I did not do this to myself. I am a human being who deserves to be loved no matter what size I am. I also deserve to have access to the right support to manage and improve my health and to change my future.

I have peeled every layer in me to reveal the beauty in me. I have re-defined what healthy weight is for me. I no longer have the expectations that I can be the "*healthy weight*" that public health messages promote or the "ideal weight" that my mother wanted me to be. I am me and I am at "my best weight". This is the weight that I can live happily at for the rest of my life. Every day will be a struggle against my brain who wants to pull me back to my heaviest weight. I know that. But today, I am focused on my health and my life. I have a new job that keeps me active and that promotes healthy food environments. I can go to work and trust that people will stop offering me unhealthy foods or any food, for that matter. They respect my journey and my story and want to be supportive.

I wish every person living with obesity would have this type of supportive environment. An environment where they can be themselves and where they can be the healthiest and happiest that they can be. Where they are in control of their story!

Health professionals need to re-write their story. People with obesity have different stories and cannot be put into one box. Each person has a story. We need to listen to those stories and create environments in which every story can flourish. Obesity prevention and management strategies are needed but they cannot be measured against weight loss or reductions in Body Mass Index. People with obesity are more than their weight. People with obesity are more than their Body Mass Index. People with obesity want to be healthy, loved and respected just like

everyone else. Health professionals cannot keep focusing on the weight. We need to go deeper and ask what people with obesity need.

If health professionals do not change that narrative, people like my mother will continue to believe that to be healthy or loved you need to be skinny. And that people with obesity cannot be healthy or loved. That people with obesity need to change to become "*normal weight*" or "*healthy weight*". This is how my story began. I am living the stories that health professionals tell about weight and health. My mother tried to change me to make me "*normal*" but instead she changed my life. I am now living with a chronic disease that I need to manage every day. Every day, I need to think about my food decisions, my exercise levels, my stress levels, my sleep, and my emotional health. I will never be considered a "*healthy weight*" and I will never have a "*healthy body mass index*" but I have lost the weight that was impairing my health and now I can live my life. I can be there for my children and my grandchildren. I can be loved by husband and live a happy life. I don't need to be skinny to be healthy and loved.

People with obesity will do about anything to be "*normal weight*" or "*healthy weight*". I am living proof of it. The stereotypes that we are lazy, unmotivated, stupid and lacking will power are wrong. We must change these narratives or people with obesity will continue to be pray for the commercial weight loss industry that promotes unrealistic weight loss. This industry is taking advantage of people who are desperately trying to fit in this world. Should it be the responsibility of the public health sector to prevent diseases by regulating this industry that promotes un-evidence based weight loss methods? If people with obesity had access to evidence-based supports, they would not be trying these dangerous products. But they have no choice. Why is that? It is because people with obesity did this to themselves. It's their fault. Public health or health care professionals don't need to support people with obesity. People with obesity just need to eat healthy and exercise more and they will lose the weight. Well, if it was really that easy,

why do we have a multi-billion-dollar weight loss industry? Clearly, weight-centric health messages are contributing to people trying to have a "*healthy weight*" or "*normal body weight*". Health professionals need to reflect on this health message.

MARGARET: SHAME & INTERNALIZED BIAS

Shame penetrates every part of your body. It penetrates your mind deeply. Shame triggers deep feelings of inadequacy, guilt, and vulnerability in your mind. Shame hits your mind and you feel out of control. When you feel out of control, you can do a lot of damage to yourself.

Shame also channels into your heart and you stop loving yourself. You start believing that nobody can love you because you don't love yourself. This leads to loneliness. I am alone. Shame gets into your gut triggering the shame triggers or the hunger hormones. All you can do is feed those triggers to calm them down. The gut hormones can do a lot of damage.

But every time you feel shame and lose control, you lose a bit of yourself and you feel yourself changing slowly. But you get up and you go to work, you take the kids to school, you exercise and you start another diet once again. Each time you fail, the shame increases. Until one day your weight affects your health and you get sick: a stroke, a heart attack, diabetes, back pain, knee pain. One day, you realize that you could die from obesity. You also realize you could die from feeling all this shame. But where do you go for help?

Society tells you it is easy. You just need to make healthy choices and eat less and move more. But, how do I deal with the lifelong shame I have internalized in my mind, my heart and my gut. Nobody is there to help me. I am alone.

And I try again, and again, but nobody can do this alone. We all need someone. It is a basic human need to have someone to trust to rely on for help. But all I hear is: "you did this to yourself and you need to get your act together and figure it out alone". Nobody can help you

unless you want to help yourself, they say. What does that mean? Would you say that to someone who has cancer? Does that work for anyone who has mental health issues? Does it work for anyone out there?

I walk down the street and the stereotypes about obesity are everywhere: in my family, in my school, in my workplace, in my local fitness centre. I can never get away from those stereotypes. I believe these stereotypes. I live those stereotypes. These stereotypes became my story.

Weight bias is about shame. I am ashamed of my body. I am ashamed for my failure to control my weight. But the reality is that our bodies adapt to weight loss. Our brain and gut will work together to counteract weight loss and defend the highest weight at all cost. On the one hand, this is a positive scientific finding because it shows that weight regain or weight loss failure are not the result of lack of will power, commitment, or effort. Unlike what my friends, family and bariatric specialists believe, I am not lying about my food intake or physical activity levels. My body is simply very efficient at counteracting my weight loss efforts. That is the bad news about this scientific finding. Significant biological mechanisms will counteract every behaviour change I make, making weight loss maintenance even harder.

These compensatory biological mechanisms are not well understood by scientists but as an individual living with obesity who has tried to lose weight all my life, I can certainly attest to them. Each time I lose weight, I feel hungry and my body temperature goes down. My body becomes way more efficient at storing fat and although I am still running the same distance and eating the same number of calories, my weight loss will either stop or I will start regaining weight. This means that if I want to sustain the weight loss, I need to reduce my calories even more and I need to spend more calories by exercising even more. But, there is a limit to how

much I can increase this effort. This limit is not just relevant to my case. Any person trying to sustain this effort would struggle. It is not impossible but it is hard.

So, when people tell me to eat less and move more, I just get frustrated because they have no idea how much effort I am making to maintain this weight loss. These comments trigger feelings of shame in me. Even though I know that there are strong biological forces working against me. When I reflect on the shame that I experience every time I regain weight, I realize that this is unfair. I am not a failure. I simply do not have the right tools and support to manage this chronic, relapsing disease. What if I was living with hypertension? Would I be expected to manage my blood pressure on my own through diet and exercise? No, my doctor would first give me medications and then support me to make behaviour changes. But because this is obesity and I should have control of my weight, I am expected to manage obesity on my own. Forget all the compensatory mechanisms working against me. Those are just excuses and I just need to try harder.

ANDREW: IT'S 'US' VERSUS 'THEM'

I have a room full of trophies and medals that remind me of my hockey career. I remember the early morning and late evening practices. I remember the weekend journeys to hockey tournaments and the many hockey camps I participated in. But, the memory of the day I broke my ankle is more vivid than any other memory. It was the end of my hockey career. All I had was gone from that moment. Although, doctors, family and friends supported me and gave me hope that I could play again, I knew this was the end. It felt like it was the end of my life. I developed severe depression and became isolated and alone. I felt that I was alone. Nobody could understand what I was going through.

Doctors put me on anti-depressants but they did not really help. By now, I had missed so

much of school that I could not finish the school year. I dropped out and hid away from society for a long time. When I finally came up for air, I weighed over 300lbs. My body and soul were damaged.

Obesity can be triggered by something like a childhood trauma, an injury, a genetic condition, a mental health condition, a metabolic issue, a socioeconomic issue, and even by shame. Whatever triggers obesity, it impacts peoples' lives and health. I hear people say that obesity is not a disease. Fat is just normal. Fat is not killing you. It is the internalized weight bias and shame that is killing you. Where does that shame come from? It comes from social stereotypes. It comes from the bias and stigma we experience on an ongoing basis. Yes, it can be part of it. But, the impact of obesity on my health is real. How can obesity be a social construction. Whether it is a disease or a social construction matters to academics but what matters to me is the ability to be here when my kids graduate and get married. What matters to me is my health.

We can debate whether obesity is a disease or not or whether calling obesity a disease will either reduce or increase weight bias and stigma, but it does not matter. These debates are not helpful. They are delaying the ability for people with obesity to receive health care services. It can be a matter of life and death for individuals affected by obesity. Our lives are not academic projects. If you really think that obesity is not a disease and that our health is not affected by weight, that is your personal belief. I understand that there are people who identify as fat or as big persons. But do they have the right to question whether I have a disease or not? Even if you believe that it is the shame (weight bias and stigma) that is affecting my health, why do you deny me the right to seek support? Maybe it is the weight bias and shame that made me gain weight. Yes, there are studies that show that experiencing weight bias and stigma can increase obesity. But, so what? I still have to deal with the consequences of obesity because it is now affecting my

health. Obesity is real. It is real to me. ***Obesity impacts my life. We do not need to argue about labels.***

There are health professionals that do not accept that obesity is a disease. There are fat advocates that do not accept that obesity is a disease. But these debates seem to ignore that there is a person at the core of the discussion. Who is asking people with obesity what they think? At this point, it is fair to say that the voices of people with obesity are not invited in either the medical or the fat scholar debates. A core social value is to respect the rights of all human beings. Specifically, the purpose of the Canadian Human Rights Act is to:

> *... to extend the laws in Canada to give effect, within the purview of matters coming within the legislative authority of Parliament, to the principle that all individuals should have an opportunity equal with other individuals to make for themselves the lives that they are able and wish to have and to have their needs accommodated, consistent with their duties and obligations as members of society, without being hindered in or prevented from doing so by discriminatory practices based on race, national or ethnic origin, colour, religion, age, sex, sexual orientation, gender identity or expression, marital status, family status, genetic characteristics, disability or conviction for an offence for which a pardon has been granted or in respect of which a record suspension has been ordered.*

Where do the rights of people with obesity fit in the Canadian Human Rights Act? Based on the understanding that obesity is a chronic disease, obesity could fit within the protected area of disability. But disability is also a labelled and stigmatized condition.

Research shows that stigma is created when people distinguish and label human differences. These labels reflect dominant cultural beliefs and have a particular purpose. By placing people in distinct categories, we create degrees of separation between groups of people. It is an 'us' versus 'them' mentality. I am different than you and therefore you have the right to treat me differently. This idea that people with obesity are different or '*not normal*' gives people the opportunity to label us and to treat us as '*abnormal*'. This label has consequences for all of us

living with obesity. People believe we did this to ourselves. We are not respected in society. We are seen as immoral persons because we have not taken care of our health and weight and we are somehow defective. We are not responsible persons and we should be punished for stepping outside of the '*normal boundaries*'."

Stigmatized persons experience status loss and discrimination that leads to various unequal health and social outcomes. I do think that obesity stigma has impacted my life chances. When I finally got help to address my depression, I went back to school to finish my university degree. I had trouble making friends because I could not participate in sports anymore. I did not have group to belong to so I was alone most of the time. When I entered the workforce, I went to many interviews and I could see the stares and negative attitudes among employers. I am certain I did not get many jobs because of my obesity. In my current employment, I have been passed for several promotions despite me having higher qualifications and better performance results. I know there has been at least one complaint about me at work because of my obesity. One co-worker complained to my manager that I smelled and he wanted to move offices because he could not sit next to me. He did not tell me this to my face but I overheard his comments in the washroom one day.

We must consider the power relations that underlie the ability of dominant groups to act on their biased attitudes and beliefs. We need weight bias and obesity stigma interventions to change institutional practices that work to disadvantage people with obesity in health care settings, workplaces, and schools.

LAURA: SHAME AND VULNERABILITY

Let's unpack the shame that can trigger negative health behaviours. In my case, I hid in my room and ate until I weighed 250 lbs. The shame came from outside. People shamed me for my

size since I was a baby. My parents put me on my first diet when I was about 12 months old because the doctor said I was too big for my age. My parents were worried about my size. They put me on a skim milk diet (as per the doctor's advice). I ended up in the hospital. Just imagine what that did to my health. Science shows that every time you diet, your metabolism is reduced. Well my metabolism has been reduced since I was a baby.

The worry and shame that my parents felt about my size has been going on all my life. It made me feel unloved and alone. Like I was not "*normal*". I have always been told that there is something wrong with my size. But, the way I coped with the shame was all on me. I responded to this shame by internalizing it. I believed my body was ugly, useless, worthless and abnormal. I disconnected from my physical body and began to hate it as if it was not part of me. But you cannot disconnect your body from you mind. As you start hating your body, you start hating yourself. You start hating everything about yourself. Not just your body. You hate who you are as a person. What do you think happens when you hate yourself that much? How do you reconcile this hatred in your mind? You simply try to survive. You try to repair the hate. But you do it by trying to change your body. By trying to look "*normal*". By trying to fit into the "*normal BMI*" range. You try and try. You fail over and over. And when you fail, it is your fault. Everyone tells you it is your fault. You are not trying hard enough. You just lack the will power to change. It's all on you.

What happens when you fail so many times, you internalize this failure and start believing that you are just incapable of doing this. In my case, I developed alcoholism. That is how I coped with the shame. But I was able to get help for alcoholism within the health care system because alcoholism is a disease. But I was not able to get help for obesity. I have been a recovered alcoholic for 25 years and I still have not been able to get help for my obesity.

Why is alcoholism a disease and not obesity? My alcoholism was also triggered by

something else – the shame – the internalization of shame – the feelings of being out of control – the feeling that I was not "*normal*". Doesn't this sound familiar. It is the same shame that I have internalized that has led to me having obesity. But alcoholism is a disease and obesity is not. You don't tell someone with alcoholism to deal with it alone. You provide support. You help people.

Once I realized that obesity is a disease just like alcoholism I asked my primary care doctor to refer me to the bariatric program. I was hopeful that I would have access to a team of health care professionals who are trained in obesity management and I finally would be able to get help. But that hope was shattered the moment I enrolled in the program. The bariatric program has basically continued to shame me. I expected these specialized health care professionals to be empathetic, knowledgeable, and supportive. Instead, they are arrogant, provide me with conflicting messaging, and tell me that I just need to have bariatric surgery because that is the only treatment that will work for me. But, I don't want to have surgery. So that means the program can't help me. They are just pushing me towards the bariatric surgery path and I don't want to have surgery. Where is the support?

From the moment, I walk into the bariatric clinic, the staff is rude to me. Nobody says hello. The dietitian implies that I am lying about my food intake because I have not lost weight. She doesn't even look at my Fitbit or food journal. One dietitian told me that Fitbits are inaccurate so not to bother with it. But the first dietitian I met in the clinic told me to get one. Now this dietitian does not even want to look at it? I just spent $200 on this piece of equipment that she now claims is useless.

The psychologist and psychiatrist have read my file and they know my history. They ask me if I think I need to talk to them? I say no because they just want to put me on medication. I have already done that. I am not doing that again. The anti-depressive medications I was on for years had something to do with my weight gain. That is what the research show. Many

psychiatric medications make you gain weight. I gained about 35lbs while on that medication. The nurse, on the other hand, tells me that if I don't want surgery, the program can't help me. How is this an obesity management program? We need to do better than this. People with obesity deserve better.

Like obesity, weight bias and obesity stigma is always there, lingering. Self-stigma can come back anytime as a result of an experience of external obesity stigma. Unfortunately, obesity stigma can come from anyone. Even from health professionals working in an institution that specializes in obesity. Although the goal is to eradicate weight bias all together, this may not be possible. Research on implicit attitudes and general research on socialization and identity theory suggests there is always going to be a process of "us" and "them" at work in social interactions. However, taking examples from racism research, we know that racist ideologies have not changed completely but the manner in which racial prejudice is expressed has changed. It is not legal to discriminate against someone because of the colour of their skin. This is where weight bias and obesity stigma interventions at the policy level are necessary. Legislations and policies to protect people with obesity from being discriminated against should be put in place.

Analysis

Stories are selective, interpretative and connective representations of human experience over time. They contribute to our self-identity and agency (i.e. our own understanding of who we are and what we do).[40] When we tell stories about our lives, we select elements in a way to represent a process of happening (beginning, middle and end). We also interpret elements of a story by characterizing people, events, and places. The interpretation is always from a particular perspective or a way of seeing things. We then connect these elements of our stories over time to constitute our self-identity.

Our identities, however, are developed through an interaction of how we see ourselves and how others conceive of us. How others conceive of us is influenced in part by master narratives – *"stories found lying about in our culture that serve as summaries of socially shared understandings"* (p.6). [40] These master narratives are like repositories of norms that inform our moral intuitions. Many master narratives are morally benign and socially necessary. They help us make sense of ourselves and one another. There are, however, oppressive master narratives lying about in our culture. These narratives can unfairly depict particular social groups as lacking in virtue. [40] Oppressive narratives can create damaged identities for groups and individuals, which can result in unjust treatment and deprivation of opportunity for individuals or groups. This can in turn decrease life chance for individuals of a stigmatized group, resulting in health and social inequities. Importantly, when individuals internalize damaged identities (infiltrated consciousness), they can have implications on their own self-identity and agency.[40]

Through this cluster of individual stories, we can weave together a counterstory – a story that resists oppressive master narratives of people with obesity. The fragments of each story, demonstrate how oppressive master narratives have been created and how individuals can challenge unjust assumptions that contribute to damaged identities. The first task in constructing a counterstory for a group that faces stigmatization and oppression is to identify the oppressive master narratives have create damaged identities. Based on the counterstories shared in this study, the following master narratives may contribute to damaged identities for people with obesity:

- Obesity is bad for health. This narrative contributes to the notion that people who have obesity are bad persons and a burden to society.
- People with obesity are "unhealthy", "abnormal" because of their size.
- Obesity is a lifestyle choice.

- Body size or Body Mass Index is a good indication of a person's health.

These oppressive narratives are based on unjust assumptions and stereotypes about obesity and about individuals affected by obesity. The narratives in this study, cast light on some unjust assumptions that create damaged identities for individuals and groups affected by obesity.

- People with obesity cannot be healthy unless they achieve a "normal weight".
- People with obesity do not exercise regularly and do not eat healthy.
- Individuals choose to be sedentary and to eat unhealthy foods – hence they choose to have obesity.
- Individuals could control their weight by eating healthy and exercising regularly, they just choose not to.
- People with obesity lie about their eating and exercise habits.

These unjust assumptions about individuals with obesity can have significant consequences for individuals. The counterstories in this study reveal some of these consequences, including:

- Internalization of weight bias and stigma, where individuals with obesity come to believe in unjust assumptions about obesity. Linderman-Nelson refers to this as "infiltrated consciousness" where individuals who internalize hateful and dismissive views of themselves, may lose or fail to acquire self-respect. [40] The belief that their bodies are not "normal" and their desire to "fit in" and be "normal" leads to perpetual weight loss practices, as evident by the narratives in this study. Internalized weight bias and stigma can also lead to negative self-talk, feelings of shame and guilt that impacts their ability to engage in health promoting behaviours.

- External stigmatization via institutional and social practices can reduce individuals' participation in education, employment, and in health promoting settings such as fitness and recreational centers.
- External stigmatization can also lead to unjust treatment by healthcare professionals, with serious consequences such as medical misdiagnosis.
- External stigmatization can take many forms, including verbal teasing and physical and mental abuse by family members, peers, health care professionals, and work colleagues.

These counterstories also demonstrate that individuals with obesity challenge and resist unjust assumptions and oppressive narratives. Through their personal narratives, we observe that individuals find many ways to resist weight bias and stigma. Some strategies individuals use to resist weight bias and stigma include:

- Confronting their own internalized weight bias to find self-acceptance and self-respect. This gives individuals a sense of self-empowerment where they can redefine health in their own terms.
- Substituting master narratives of obesity as a lifestyle choice with chronic disease narratives where individuals can negotiate health versus weight outcomes. The substitution can be advantageous in many respects, including identifying factors that drive obesity that are beyond individual control, finding evidence-based disease management strategies that are unique to their individual needs, and seeking communities of support that they can use to renegotiate their self-identities.
- Resisting discrimination by identifying the power relations that underlie stigmatization and framing weight bias and stigma as a human rights issue.

- Resisting oppressive master narratives that depict people with obesity as engaged in unhealthy behaviours by inserting themselves in spaces where people with obesity are excluded (e.g. fitness and recreational centres).
- Resisting public bias, shaming and stereotyping by educating themselves and others about the complexity of obesity.
- Creating new communities of support to resist oppressive narratives and damaged identities and to educate themselves and others about the complexity of obesity.
- Contesting master narratives about obesity by opposing them with counterstories both publicly and systematically. Individuals with obesity are in effect saying: *"we don't buy these stories about us. These master stories oppress us. Now you are going to hear what we have say about who we are"*.[40] These counter stories are also effective in helping individuals with obesity to challenge their own self-perception, which has been affected by oppressive master narratives. This re-identification process permits people to repair their own damaged identities. It is important to note, however, that a counterstory can be used as a tool to repair a person's infiltrated consciousness (internalized weight bias) but sometimes it can be very difficult for someone to endorse a counterstory. It depends on the degree of infiltrated consciousness. [40]

There are several criteria for a successful counterstory. First, a good counterstory can pull apart master narratives that contribute to damaged identities for people with obesity and replace them with credible, less morally degrading narratives. A counterstory must also be culturally digestible and widely circulated and taken up not only by those who are on the receiving end of stigma, but also by those who have benefited from it. Finally, a counterstory aims to free not only individuals but the entire group whose identity is damaged by an oppressive master narrative.

Although, a counterstory cannot end oppression, it can help re-identify a person or a group and so freeing their agency.

As theorized Linderman-Nelson, our identities are constructed and influenced by our experiences. This is a basic human act that gives meaning to our personal and communal existence. [89] Our stories or lives can be influenced by past, present and future experiences. Our lives unfold over time in different places through various events and people, and are situated within our individual and shared social, cultural, familial, and institutional context. [48] Narrative inquirers refer to this phenomenon as "living in the midst".[47] When reading these stories, (research participants, researchers and readers alike) are "living in the midst". This means that our subjectivity or present is always interfering with how we reflect or view our past experiences.

It is important to understand that narrative inquiry is not just a research method. It is a phenomenon that can be transformative. For instance, through this narrative inquiry, I intervened by focusing on the quality of lived experience, collaborated with participants to transform the narratives into counterstories, and thus sought to lay the foundation for personal and social change. While conducting this research my life and the lives of research participants continued to unfold. This process helped us see how we compose our lives within our familial, work, and social situations. As I co-composed these stories with participants, they have left an impact on my personal and professional life. I have compared what I have been trained to "know" about obesity and what I have learned from living alongside individuals affected by obesity. I have questioned where my knowledge about obesity came from and how I adopted that knowledge. I have reflected on my role in contributing to weight bias and reflected on my own weight biased attitudes and beliefs. It has been a difficult journey, but I have developed more empathy and feel even more motivated to address oppressive obesity narratives and social injustice. In one of the

counterstories, I included myself as a researcher in order to share how my own story has unfolded through this narrative inquiry.

These individual counterstories offer a door to the personal, familial, professional and social situations in which weight bias and obesity stigma take place. In public health, we refer to this as context. I have come to understand that context also includes personal relationships. Personal relationships impact what we know and what we do. As I lived alongside persons with obesity, I developed a strong relationship with each person. These relationships have influenced what I know about weight bias, stigma and obesity and what I will do moving forward. I am now more sensitive to lifestyle choice narratives, labels, and implicit weight bias attitudes and beliefs, which are so pervasive in our culture. This has changed how I think and speak about obesity.

In using interview and conversations recordings, memories, journals, field notes to compose the final research stories, participants and I included actions and practices or things that we experienced together in the field. We composed the field texts over multiple interactions with each other and through reflections of earlier life experiences. Hence these research texts are embedded within these relationships and interactions. The final research stories may therefore reflect multiple nested stories and reveal key aspects of weight bias and obesity stigma that were important to us as we negotiated the meaning of each story together. One of the key learnings of this research study for me was the transformative aspect of narrative inquiry. It is clear that both participants and I changed during the inquiry process. This research journey has made a difference in our lives, a key characteristic of narrative inquiry.

Implications for Public Health

Just as it is not possible to link all of our unique experiences into a coherent or unitary chain of events, we cannot link study participants' experiences into unified themes. Each story is unique and trying to find one particular theme or meaning, would introduce bias.

However, using the three-dimensional space of narrative inquiry, we can position participants' stories within place, time, and social milieu, helping us to present the stories in a more pragmatic way that can inform future research and interventions.[48] Applying the three-dimensional space to these stories, it is clear that individuals with obesity experience weight bias across settings, including in their homes, schools, workplaces, recreational/fitness settings, and public health/health care settings. Weight bias experiences also take place across the lifespan and are influenced by institutional and social narratives (including public health narratives). These findings are consistent with the existing weight bias and obesity stigma literature. [32] Weight bias attitudes and beliefs are embedded in our culture leading to experiences of stigmatization, which cause disrespect, moral judgement, physical and mental abuse, social exclusion, and discrimination against people with obesity. Obesity stigma is used to enforce social norms and to try to get people to stay within normative boundaries. The normative boundaries about "*healthy weight*" or "*normal weight*" in our society can drive internal and external obesity stigma processes. For individuals who do not stay within the normative weight categories, this social label creates damaged identities that causes experiences of stigmatization or discrimination, ultimately leading to health and social inequalities. [80]

Public health is also situated within cultural contexts. Since weight bias and obesity stigma are so ingrained in our culture, public health practice will inevitably be affected. Nobody is immune from these social and cultural biases.[27] As public health professionals, we need to

critically reflect on these socio-cultural and personal biases and consider how they affect our practice. This means that the implications of these counterstories for public health professionals depends on our own critical reflection skills and subjective realities. Below are a few implications for my personal public health practice that have emerged from this narrative inquiry.

- People with obesity experience weight bias across settings (home, school, work, health care settings, and communities), causing social isolation, depression, anxiety, low self-esteem, poor body image, suicidal acts and thoughts, medical illnesses, and overall poor quality of life.
- Weight bias and obesity stigma have direct and independent impacts of health and social wellbeing of individuals with obesity. As such, weight bias and obesity stigma should be considered as key social determinants of health.
- Oppressive narratives have become embedded in social institutions and systems producing obesity weight bias and stigma. Through our own practice, we can either reproduce weight bias and stigma or change systems to be more accepting and respectful.
- As public health professionals and researchers we have a responsibility to advocate and act to reduce weight bias and obesity stigma. But, we need theoretically driven and participatory interventions that can be implemented practically within current social organizations and systems.
- Working with individuals affected by obesity to develop counterstories aimed at changing damaged social identities, can be transformative in terms of addressing internalized weight bias and creating empathy.
- Education about the multiple causes of obesity needs to be incorporated into public and health domains. For examples, some individuals will develop obesity because of adverse

childhood experiences or their socioeconomic status or because of internalized weight bias and lack of early evidence-based interventions.

- Conceptualizing obesity as a complex chronic disease requires comprehensive approaches that include public health and medical solutions. Reductionist approaches (energy balance model) are not helpful and do not reflect the realities of people with obesity. A focus to wellbeing of populations includes a need to support people with chronic diseases to live fulfilling lives.

Conclusion

Weight bias and obesity stigma impact the health and wellbeing of individuals and populations. Public health has a responsibility to address weight bias and obesity stigma and can do so by critically reflecting on institutional narratives, strategies and policies. Interventions to address weight bias and obesity stigma should involve individuals living with obesity and affected by both external and internal stigma. Counterstories and narratives can be a transformative way to address internal weight bias and to create social change.

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CHAPTER 4 A CRITICAL ANALYSIS OF OBESITY PREVENTION POLICIES AND STRATEGIES

Ramos Salas, X., Forhan, M., Caulfield, T., Sharma, A.M., Raine, K. A critical analysis of obesity prevention policies and strategies. *Canadian Journal of Public Health*, 108(5-6): e598-e608.

Abbreviated Title: Analysis of obesity prevention policies

MeSH: obesity, policy, public health, weight bias

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Abstract

Public health policies have been criticized for promoting a simplistic narrative that may contribute to weight bias. Weight bias can impact population health by increasing morbidity and mortality. OBJECTIVES: The objectives of this study were to: 1) critically analyze Canadian obesity prevention policies and strategies to identify underlying dominant narratives; 2) deconstruct dominant narratives and consider the unintended consequences for people with obesity; and 3) make recommendations to change dominant obesity narratives that may be contributing to weight bias. METHODS: We applied Bacchi's 'what's-the-problem-represented-to-be?' (WPR) approach to 15 obesity prevention policies and strategies (one national, two territorial, and 12 provincial). Bacchi's WPR approach is composed of six analytical questions designed to identify conceptual assumptions as well as possible effects of policies. RESULTS: We identified five prevailing narratives that may have implications for public health approaches and unintended consequences for people with obesity: 1) childhood obesity threatens the health of future generations and must be prevented; 2) obesity can prevented through healthy eating and physical activity; 3) obesity is an individual behaviour problem; 4) achieving a healthy body weight should be a population health target; and 5) obesity is risk factor for other chronic diseases not a disease in itself. CONCLUSION: The consistent way in which obesity is constructed in Canadian policies and strategies may be contributing to weight bias in our society. We provide some recommendations for changing these narratives to prevent further weight bias and obesity stigma.

Introduction

Obesity is a chronic disease characterized by abnormal or excessive fat accumulation in adipose tissue to the extent that health is impaired.[90] Obesity has been identified as a public

health issue that threatens to significantly impact population health.[3,90] The impact of public health obesity prevention strategies has been evaluated, [59] and criticized, [71] and new models and frameworks continue to be proposed.[91] These activities and commentary are necessary and contribute to the advancement of evidence-informed public health solutions. Public health policies have been criticized for promoting a simplistic narrative that may contribute to weight bias in several countries, including in Canada. [17,92,93] Specifically, the current public health obesity narrative promotes assumptions about personal irresponsibility and lack of willpower among people with obesity.[94] These assumptions contribute to the beliefs that people with obesity and their children lack awareness and knowledge about healthy eating and physical activity and are to blame for the obesity epidemic. [95]

There is extensive research demonstrating the negative effects of weight bias. Weight bias can affect a person's mental health, interpersonal relationships, educational achievements, employment opportunities, lead to avoidance of health promoting behaviours, hinder weight management efforts, and increase overall morbidity and mortality.[32,35] There are several ways in which public health obesity policies may be unintentionally contributing to weight bias.[96] According to attribution theory, the belief that obesity is simply caused by unhealthy choices is associated with weight bias because individuals will attribute unhealthy behaviours to people who have obesity. [10] Similarly, social consensus theory stipulates that individuals look at how others (including policy makers) think about obesity to inform their own beliefs about obesity.[97] Beliefs, values, and socio-political ideologies are also closely linked to an individual's views of the controllability of obesity and intolerance towards people with obesity.[98] Critical obesity scholars have also provided theoretical models to explain how the obesity discourse reinforces weight bias and perpetuates obesity stigma.[86] Together, these theories from the field of social-psychology and critical obesity research can inform future interventions to address weight bias.

Few studies have critically analyzed obesity prevention policies and strategies to assess whether they may be contributing to weight bias and obesity stigma. Traditional policy analysis approaches view public policies as solutions to social problems.[49] In other words, a social problem exists and policy makers are viewed to be developing policy solutions to address it. This view implies that policy makers simply react to social problems and are not inherently involved in the shaping of social problems. There is an opportunity to critically analyze Canadian obesity prevention policies and strategies to explore how provincial and territorial governments may be constructing and reinforcing specific obesity narratives that contribute to weight bias. Previous critical policy studies have focused on Atlantic provinces[95]. Our study adds to this literature by including federal and additional provincial and territorial policies and strategies. Deconstructing obesity prevention policies and strategies may also help to reveal assumptions that have shaped our shared narrative of obesity and reveal opportunities for change.

Objectives

The objectives of this study are to:

1) Critically analyze Canadian obesity prevention policies and strategies to identify underlying dominant narratives;
2) Deconstruct these dominant obesity narratives and consider the unintended consequences for people with obesity; and
3) Make recommendations to change dominant obesity narratives that may be contributing to weight bias.

Methods

Our study is grounded in critical population health research, which aims to reduce health and social inequities by critically deconstructing concepts and relationships taken for granted in

public health practice.[46] In our analysis, we draw upon critical obesity research and theories such as post-structuralism feminism, healthism, and social stigma.[86] Using Bacchi's 'what's-the-problem-represented-to-be?' (WPR) approach[49], we conducted a critical analysis of Canadian obesity prevention policies and strategies to understand what the prevailing obesity narrative is. Our objective was not to assess whether these policies and strategies have been effective. Instead, our goal was to engage in critical analysis to better understand how obesity prevention policies and strategies construct a specific narrative about obesity and people with obesity. Critically assessing how this narrative has been constructed can help us understand its possible effects on public health practice as well as its potential effects on people with obesity.

Bacchi's WPR approach is composed of six analytical questions. With the first question, we identified how obesity is problematized (i.e. how is obesity socially constructed to become the 'truth' about obesity) in policies and strategies. Looking backwards from a specific policy solution we asked what is the implied problem? For example, if a policy solution proposed to educate Canadians on healthy eating to prevent obesity, the implied problem could be lack of knowledge about healthy eating. Using the second question, we deconstructed the obesity solutions to identify their underlying assumptions. In question three, we identified epistemological and ontological assumptions behind each problematization and considered how this way of problematizing obesity has come about. Using the fourth analytical question, we considered the silences in policies and strategies, recognizing that what is omitted and/or silenced in policies also contributes to the social construction of issues. In the fifth analytical question, we considered the effects that this problematization has on public health practice and people with obesity. Finally, applying the last analytical question in the WPR approach, we considered how this way of problematizing obesity is disseminated through coordinated practices to become the truth about obesity (i.e. our shared narrative of obesity).

We analyzed obesity prevention policies and strategies published by federal, provincial and territorial health authorities in Canada (Table 1). We began with an online search of policies publically available on the Public Health Agency of Canada's website. Search terms included: obesity prevention AND federal OR provincial OR territorial policies OR frameworks OR strategies OR initiatives. We followed links available on the "Curbing Childhood Obesity: A Federal, Provincial, and Territorial Framework for Action to Promote Healthy Weights"[3] page to other provincial and territorial health authorities' websites. On these websites, we found additional links to policy documents concerning obesity. We searched for government policy documents that focused primarily on obesity prevention. However, some provincial governments did not have specific obesity prevention policies. Rather, they outlined obesity prevention strategies as part of their overall wellness and health promotion policies. For provinces that lacked specific obesity prevention policies, we found links to government programs that provided obesity education and programing to the public. For example, in Northwest Territories, we used the choosenwt.com program to apply Bacchi's WPR approach. We made PDF files of the website pages and downloaded any documents already in PDF format. The search was conducted between October 2014 and January 2015 and included obesity prevention policy and strategies developed between 2001-2014. In total, we collected and reviewed 15 policy proposals (one national, two territorial, and 12 provincial) (Table 1).

In Canada, the responsibility for health services (prevention and management) lies with provincial and territorial governments, explaining the low number of national policies and strategies. Saturation was reached when additional searches came up with the same links and documents. We selected policy texts in an open-ended manner, including government frameworks, reports, strategies, and initiatives that have been proposed and/or implemented, allowing for a fuller picture of the problem representation. Most documents we reviewed

discussed obesity prevention strategies and did not provide any evidence that these strategies had been implemented.

Using an excel spreadsheet, we systematically coded the background sections and each policy solution or recommendation according to the six guiding questions of Bacchi's WPR approach. The final data file included 15 sheets, each listing the specific policy recommendations within each policy document and categorized according to each WPR question. There was significant overlap across policy documents, leading to duplication of answers for each WPR question. The final findings and analysis, is therefore presented in an integrated way by nesting the six guiding questions of Bacchi's WPR approach across policy documents.

Although the application of the WPR approach is systematic, it is important to acknowledge that researcher subjectivity can affect interpretation. The WPR approach also requires someone to have an in-depth knowledge about the issue at hand (i.e. in this case, obesity). As researchers using this approach, we had to think critically about how we conceptualize obesity and become aware of our own biases, values, and experiences that we bring to this issue. For example, our understanding of food, physical activity, obesity and health is grounded in different epistemological contexts. The obesity research field is full of powerful discourses (e.g. medical, ethical, social political) that are often silenced. As obesity researchers, we have been complicit in constructing these discourses.

We recognize there are many different perspectives and opinions about how to frame and discuss obesity and weight bias. However, we strongly believe that the fields of obesity and weight bias will benefit from further interdisciplinary research and practice. Alhtough, our weight bias perspectives are rooted in the framework of obesity as a chronic disease, a framework now adopted by the World Health Organization and other major obesity scientific organizations, [90,99-102] we also applied other non-obesity frameworks in our analysis. For example, we applied public

health perspectives that recognize stigma as a fundamental driver of population health and health inequalities.[79] Similarly, our health promotion background helped us to critically consider the determinants of obesity and helped us shift our thinking towards social justice for everyone regardless of their weight of size. We also drew on non-obesity perspectives such as fat studies and feminist studies[103], which challenged us to focus on health, not weight or size and to consider the power relations that can come about through our obesity policies and practices. Critical fat studies perspectives have, for example, helped us to critically reflect on biased assumptions we have about weight, body size, obesity, and health. Furthermore, using the lens of intersectionality helped us examine the effects of these biased assumptions on gender equality and social exclusion for people with obesity and for people who identify as fat.

Similarly, readers must apply the same critical reflection about their obesity knowledge and how it has come about. We wish to create a space for critical reflection among readers, practitioners and researchers alike. It is through this ongoing critical reflection that we may begin to see the opportunities for personal and professional learning, dialogue and social change.

Results and discussion

CHILDHOOD OBESITY THREATENS THE HEALTH OF FUTURE GENERATIONS AND MUST BE PREVENTED

Childhood obesity was problematized in almost every obesity prevention policy and strategy. In the "Federal, Provincial and Territorial (FPT) Framework for Action to Promote Healthy Weights", childhood obesity was used to call for urgent cross-sectoral action because the epidemic is intensifying, creating significant health, social and economic implications for future generations such as increased chronic diseases and health care costs[1] . This policy framework uses strong language to warn Canadians that: *"[...] if we do not reverse the trend of childhood*

obesity, today's children may have less healthy and possibly shorter lives than their parents."[3]

Most policies and strategies paint a similar picture calling for immediate action.

> *"Ontario is at a tipping point. If nothing changes – if we are not able to reverse the current weight trajectory – we will continue to see increases in unhealthy weights and in all the related health conditions. By 2040, up to 70 per cent of today's children will be overweight or obese adults and almost half our children will be an unhealthy weight. A much larger proportion of children will cross the line from being overweight to being obese, and the impact on their physical and mental health and well-being will be severe."*[104]

This dominant narrative contributes to our shared understanding of obesity as being bad for individuals, families, communities, and society. All sectors of society are enlisted to govern themselves and act to reduce the burden of obesity. By concentrating on childhood obesity, this narrative asks parents to exercise discipline over their children's weight.[105] The Ontario Healthy Kids Strategy positions parents as influencers of their children's weight:

> *"Parents told us that they are the ones who have the greatest influence on their child's health – including their weight. [This echoes] the findings of a national survey of Canadians: 98 per cent said parents should play a key role in addressing obesity and 71 per cent said children themselves should be involved."* [104]

In this narrative, the discourse quickly became gendered. For example, a common solution to preventing childhood obesity was providing education to women about the impact of weight and health and the importance of exclusive breastfeeding for childhood obesity prevention.

> *"Educate women of child-bearing age about the impact of their health and weight on their own well-being and on the health and well-being of their children."*[104]
> *"For infants, breast milk provides the best first nutrition and helps protect against health problems later in life, including overweight and obesity, type 2 diabetes, high blood pressure and heart disease."*[106]

Although these policies and strategies presented breastfeeding as an evidence-based solution for childhood obesity prevention, a clear relationship is difficult to ascertain.[107] The information about the link between breastfeeding and subsequent child weight is presented in a lopsided way by excluding opposite evidence and additional considerations such as the fact that some mothers

are unable to breastfeed their babies. It is important to critically reflect on this dominant narrative, which rests on taken for granted assumptions about mother blame and fat shame. [108] Another assumption that prevailed in these policies and strategies that preventing childhood obesity will reduce obesity in future generations of adults. This assumption does not take into consideration that there is significant individual variability in the tracking of childhood obesity into adulthood.[109] Finally, although the psychosocial impact of weight bias on children can have lasting effects into adulthood, [110] weight based bullying and stigma were rarely explicitly discussed in these policies and strategies.

OBESITY CAN BE PREVENTED THROUGH HEALTHY EATING AND PHYSICAL ACTIVITY

We deconstructed policies and strategies further to understand how childhood obesity is problematized. The dominant narrative presented in these policies and strategies was that obesity is caused by two critical factors: unhealthy eating and lack of physical activity. This way of problematizing obesity provides the rationale for developing obesity prevention and wellness interventions. Most policy proposals used obesity to justify wellness strategies to promote healthy lifestyles.

> *"Unhealthy lifestyles have contributed to dramatic increases in obesity, and subsequently to the rise in the incidence of chronic conditions, which are now occurring much earlier in the lifespan…I strongly encourage Yukoners and Yukon leadership to work together to create an environment where all Yukoners engage in active lifestyles and where integration of physical activity into everyday life benefits our personal, social and economic well-being. Dr. Brendan Hanley, Yukon's Chief Medical Officer of Health."*[111]

This narrative is highly simplified and not entirely evidence-based. [7] Although unhealthy eating and lack of physical activity contribute to obesity, the relationship between these two factors and obesity is very complex.[91] We now know that energy balance is tightly regulated through mechanisms operated by the brain.[26] The perpetuation of this simplistic narrative in public health

policies is problematic because the belief that obesity is simply caused by overeating and lack of physical activity is a key driver of weight bias.[57] This simplistic view of obesity also limits the type of policy solutions, focusing mostly on individual-level approaches rather than comprehensive population level interventions. This is in spite existing evidence demonstrating that single component lifestyle interventions alone are not effective for long-term weight management.[112] Very few policy proposals we reviewed proposed changing the broader societal factors that have created obesity in the first place (e.g. food industry practices, agricultural policies, food pricing, social determinants of health, etc.)

Although policies and strategies discussed the social determinants of health (SDH), few solutions that considered the social aspects of health and body weight were proposed. Some policies identified children in low socio-economic status groups as being at higher risk and as potential targets for interventions. This narrative could contribute to further stigmatization of lower socio-economic groups as being unaware, uneducated, and confused about healthy lifestyles, and ultimately lacking morality. The following are some examples of how obesity and unhealthy lifestyles are moralized and reduced to individual choices in these policies and strategies:

> *"Active Living engages individuals in constructive leisure, which can reduce the incidence of self-destructive and anti-social behaviour."*[111]
> *"Here are some common barriers and possible solutions to overcome hurdles that may prevent you from taking the first step towards physical activity:*
> • *'I don't have enough time' – We all have the same amount of time in a day, it just depends on how we use it. Just 5 minutes a day is a great start.*
> • *'I'm too tired' – When you are physically inactive you feel more tired. As you become more active you won't feel as physically tired. Try taking a short 5 minute walk the next time you are tired and you may be surprised with the energy it gives you'."*[113]

The assumption is that healthy eating and active living can prevent social problems and that individuals have the moral responsibility to *'choose'* healthier lifestyles. [105] We must reflect upon

how the "choose to eat less and move more" narrative can cast shame on individuals. Individuals experience shame and frustration for not being able to implement lifestyle change recommendations.[94] We also know that the public perceives strategies that imply personal responsibility for obesity negatively.[14] Furthermore, individuals who feel stigmatized for their weight may engage in unhealthy behaviours and dangerous weight loss practices, impacting their health even more negatively.[76,114,115] Similarly, public health messages that emphasize the role of good mothers to helping children make healthy choices, may invoke feelings of guilt among low-income mothers who do not experience the romanticized version of cooking family meals in the context of their stressful lives.[116] Thus, personal responsibility messages could inadvertently harm those that need support the most (thereby increasing health inequities).

OBESITY IS AN INDIVIDUAL PROBLEM

Canadian obesity prevention policies and strategies presented obesity as a complex social and individual problem, but reduced the issue to a lack of information to make healthy choices.

> *"While it is unrealistic to expect that Ontario families will give up all pizza and fast food, stop ordering sugar-sweetened beverages and never eat cake or cookies, parents told us they would like opportunities to develop the knowledge, shopping skills and cooking skills to choose healthy foods most of the time, and to treat high-calorie non-nutritious foods as just that: occasional "treats". By providing more easy-to-understand information about nutrition where families make purchasing decisions, society can change the defaults and make healthy choices easier."*[104]

Bacchi (2014) argues that policies are complex, located within a web of interconnected policies and often combine a range of strategies or solutions. This means that there might be more than one problem representation in the same policy. We found this to be true for Canadian obesity policies and strategies. Although, obesity was represented to be a social issue (i.e. physical and social environmental causes of obesity), the solutions presented were framed within an individual level.

> *"We need a social marketing program to educate the public on healthy eating, active living, active transportation, sleep hygiene, and mental health (reduced stress). This will create healthier communities, reduce or eliminate broader social and health disparities that affect children's health and weight."*[104]

This narrative is consistent with what Boswell describes as the "Facilitated Agency" narrative of obesity in the United Kingdom and Australia, which calls for policy action in "education through health promotion campaigns and community interventions; food industry self-regulation and voluntary measures in relation to production and marketing of food (p. 350)." [117] This narrative is used by "most politicians, bureaucrats, food industry, weight loss and fitness industries, conservative non-profit organizations, community and celebrity activists, and is pervasive in government policies and documents (p. 350)." [117] Examples of Canadian policies and strategies based on the Facilitated Agency model include:

> *"Supporting individuals, organizations, and communities to feel connected, independent, and capable enables them to make healthier choices and take more responsibility for their personal wellness and the wellness of others."* [118]
> *"Reducing children's exposure to the marketing of foods and beverages high in fat, sugar, and/or sodium will be key to decreasing consumption and assisting parents in making healthy choices with and for children."*[3]

Even though obesity is framed as a social problem stemming from the physical and social environmental factors, the solutions are framed in individualistic terms. Individuals are seen as lacking education, awareness, self-discipline and willpower to resist the food environment, and as a result are making poor choices. Although there is a commitment to reducing inequities in most policies and strategies, the dominant focus is on developing interventions to fix or help disadvantaged populations in making healthy choices. The governments' concerns for our children's health can be perceived as benevolent and compassionate, but it can also reinforce power relations between citizens and governments. Furthermore, although these policies called for multi-sectoral collaboration and solutions, none of them provided specific guidelines for engaging in multi-sectoral partnerships, leaving the door open for interpretation in terms of what

partners to engage, and when or how to engage them. There was also no discussion about potential conflicts of interest between partners or how to identify and resolve such issues. Finally, most policy documents talked about the need to engage the public or to create people-centered approaches. For example, the Newfoundland and Labrador Healthier Together Strategic Health Plans states:

> *"People-centered - the health and community services system regards the interests of people as the central priority when making decisions. The needs of individuals, families, and communities are identified and addressed by implementing a coordinated approach to service delivery and helping individuals participate in decision-making to improve their health and well-being."*[119]

Despite this commitment, there was no evidence that people with obesity were engaged in the development of these policy solutions. This could have unintended consequences, such as policies being unhelpful or irrelevant to the lived experiences of people with obesity. Ultimately, if the goal is to improve population health, public health policies should consider the lived experiences of people living with obesity or they will be ineffective.[93,120] People with obesity who feel that unfair assumptions are being made about their lifestyles and their abilities may resist such public health policies. [92,121]

ACHIEVING HEALTHY BODY WEIGHTS SHOULD BE A POPULATION HEALTH TARGET

Canadian policies and strategies on obesity prevention essentially create two categories of individuals – those who have a "healthy weight" and those who have an "unhealthy weight". The Public Health Agency of Canada defines overweight as a Body Mass Index (BMI) between 25 and 29.9 and obesity as a BMI over 30 (Body Mass Index is calculated by dividing a person's weight (in kilograms) by height (in metres squared). These ranges are used to categorize individuals as healthy or unhealthy and to set population health targets. Here are some examples of population health targets based on weight:

> *"Decrease the proportion of the population who are overweight (Body Mass Index > 25) from 60% to 55% by 2007…Increase the rate of babies born with a healthy birth weight.*[119]
> *"In January 2012, the Ontario Government set a bold, aspirational target: reduce childhood obesity by 20 per cent in five years.*[104]

The main assumption behind these weight targets is that BMI and/or body weight can tell us something about a person's health and their health behaviours. This assumption leaves the door open for potential judgments and social condemnation of children, youth and adults with a higher body weight. Essentially perpetuating the idea that a healthy weight individual signifies a morally worthy citizen that exercises discipline over his or her own body.

Most obesity experts agree that BMI, by itself, is an inadequate measure of an individual's health. [38,39] Although BMI is a useful tool in population studies, there is too much variability at the individual level to be able to make a direct link between a person's BMI and their health. Even at the population level, some individuals that fall within a BMI between 25-35 kg/m^2 are metabolically healthy.[122] The Canadian Obesity Network and other obesity scientific organizations are currently working on redefining obesity based on a more precise clinical definition that moves beyond BMI and is based on adequate clinical assessment. [123,124] It is essential that when we talk about obesity as a disease, we apply a definition that ensures we are only speaking about individuals where body fat is actually affecting their emotional, physical and/or functional health. The continued use of BMI in public health practice influences the public's understanding of obesity, as demonstrated by several studies assessing the public and media discourse on obesity.[125,126] The pursuit of a "healthy weight" has also led many Canadians with obesity to seek help within a flourishing commercial weight loss industry, which in many cases offers expensive, unregulated and untested weight loss methods.[127]

Few policies and strategies questioned the link between weight and health. The British Columbia Provincial Health Services Authority's Population and Public Health Program questions weight-centric population health strategies by saying:

> "*Some people who are obese are metabolically healthy, while others of normal weight are metabolically unhealthy, as indicated, for example, by levels of insulin sensitivity, blood lipid profiles and blood pressure. Overweight and mild obesity have been found in some studies to be protective of health. Also, small amounts of weight loss can produce improvements in metabolic health without achieving an "ideal" weight. Indeed, improvements to physical health can be made through changes in physical activity and diet in the absence of weight loss."*[128]

Critically, this government report argues that traditional weight-based public health approaches have resulted in unintended consequences such as the belief that weight loss is simple and that people who cannot achieve and sustain weight loss are failures.[128] The concern that weight-centric population health goals have had unintended consequences, is echoed in British Columbia's Northern Health position statement on health, weight, and obesity. [47]

This new narrative led the province of British Columbia to create a chronic disease and injury prevention policy framework rather than a childhood obesity prevention or wellness strategy.[129] Similarly, Nova Scotia's policy calls for a paradigm shift and a focus on wellness and the creation of environments that are conducive to health and wellbeing.[106] These examples demonstrate that, when public health changes its narrative, it can lead to changes in policy solutions. As these policy frameworks were only developed recently, it will be important to monitor their impact in terms of changes in public health practice and reduction of weight bias.

OBESITY AS RISK FACTOR FOR CHRONIC DISEASES AND NOT A DISEASE IN ITSELF

Although the World Health Organization classifies obesity as a chronic disease (when excess or abnormal body fat affects health),[69,81] the majority of policies and strategies we reviewed framed obesity as a risk factor for other chronic diseases, and not as a disease in itself.

This framing of obesity as a risk factor and not a disease in itself is used, in part, to promote more prevention efforts to reduce the burden of other chronic diseases on Canadians.

> *"Atlantic Canadians... are generally less healthy than central and western Canadians because we smoke more, drink more, exercise less, and carry more body weight. As a result, Atlantic Canadians have higher rates of chronic disease such as cancer, cardiovascular disease, chronic lung disease, diabetes and obesity."*[130]

Within this discourse, obesity is seen as a behavioural or lifestyle risk factor that is modifiable through wellness and health promotion strategies. This is likely an attempt to balance health care spending, which (in general) is predominantly allocated towards the treatment of diseases. In Canada and the United States, for example, less than 5% of healthcare spending is allocated towards prevention efforts.[131,132] However, in the case of obesity, this is entirely a different situation, where in fact very little health care funding has been allocated for treatment and management.[41,120]

The narrative of obesity as a risk factor is used to make the argument that "upstream" investments in population health that focus on disease prevention and health promotion will decrease demand for and the utilization of "downstream" acute care health care services. The BC Northern Health policy, for example, argues that *"from a population health perspective, prevention is an effective means of avoiding treating or managing obesity"*, referring to the cost-effectiveness of prevention approaches in the long term.[133]

Bacchi (2014) warns that polices have the potential to create "dividing practices" by setting groups of people in opposition to one another. In this case, the representation of obesity as a modifiable risk factor may pit prevention and treatment professionals against each other, since medical professionals increasingly approach obesity as a chronic disease. From a chronic disease perspective, however, public health and medical professionals should work collaboratively to avoid conflicting messages for the public.[134] The narrative of prevention can also silence the

needs of Canadians affected by obesity.[101] Apart from the province of Alberta, few public policies and strategies included even a mention of obesity treatment. Finally, although a few policies discussed the need to address weight bias and promoting mental health and resilience, strategies to address these issues were vague.

Conclusions and recommendations

In our application of the "What's the problem represented to be?" (WPR) approach to Canadian obesity prevention policies and strategies, we identified five prevailing narratives that can have unintended consequences. First, these narratives create the opportunity for Canadian obesity policy recommendations to focus mainly on individual-based healthy eating and physical activity interventions. This has implications for our shared understanding of obesity, mainly by simplifying the causes of obesity as unhealthy eating and lack of physical activity and contributing to the belief that obesity can be controlled by individual behaviours. The conceptualization of obesity as a risk factor also has implications policy recommendations, by prioritizing prevention strategies over treatment strategies and potentially alienating Canadians who already have obesity. These reductionist narratives also exclude the lived experiences and needs of people with obesity.

The World Health Organization recognizes obesity as a chronic disease and there is evidence that obesity affects morbidity and mortality at the population level.[90,135] Adopting a chronic disease framework for obesity means that both prevention and management strategies need to be implemented. Within this chronic disease context, public health needs to ensure that strategies do not have unintended consequences for individuals and populations. There is sufficient evidence demonstrating that weight bias and obesity stigma are fundamental drivers of health inequalities. [71,79] Public health can leverage existing health promotion frameworks such as

the health for all policy framework and the global plan of action on social determinants of health to address weight bias and obesity stigma. [136,137]

Although we recognize that obesity is a public health issue, our critical analysis demonstrates that current public health policies and strategies are: a) not sufficiently comprehensive (i.e. solely focused on prevention and mainly focused on children; exclude evidence-based management approaches; not person-centered); b) based on reductionists obesity models (i.e. models that cast shame and blame on individuals); and do not account for individual heterogeneity in body size and weight (i.e. generalize weight and health).

The final aim our study was to make recommendations to change dominant obesity narratives that may be contributing to weight bias. Below are some recommendations based on our critical policy analysis.

1. Provincial and territorial governments can establish weight bias as a relevant public health issue in the context of their actions to prevent and control non-communicable diseases and achieving health equity.
2. Public health policies and strategies can provide balanced information on weight and health and disseminate evidence that not everyone who has a higher body weight has obesity (i.e. the chronic disease). Using less generalizing strategies may help reduce the negative views and moral judgements of people with obesity and people who live in larger bodies. While promoting and respecting body size diversity, it is also necessary to support people who have obesity. Public health can, differentiate between individuals who live in larger bodies and those who have obesity.
3. Creating "healthy" versus "unhealthy" weight categories labels groups by their size and/or weight and contributes to weight bias in our society. Population health outcomes need to go beyond BMI and body weight and focus on health outcomes.

4. Public health policy makers can also consider if "obesity" needs to be mentioned at all in health promotion and wellness campaigns.
5. Public health has a responsibility to develop comprehensive prevention and treatment strategies to address obesity. Changing the narrative that obesity is a lifestyle risk factor may help mitigate the lack of evidence-based treatment services for people with obesity.[41,138] Although, healthy eating and physical activity strategies can be part of obesity policies, they should not be the only strategies to address obesity at the population level.
6. Public health policies and strategies can also leverage new obesity models that move beyond energy balance and do not solely position the responsibility on individual Canadians. In an era of people-centered health care, public health can engage people with obesity in the development of policies and strategies. Having active participation of individuals with obesity can help change negative attitudes and beliefs and facilitate the development of compassionate and equitable population health strategies.

We do not pretend to have the right solutions to avoiding unintended consequences of these narratives, but we wish to contribute towards a healthy and constructive dialogue by offering some potential recommendations. More research is needed to understand the impact that obesity policy narratives have on Canadians living with obesity.

Individuals affected by weight bias and obesity, researchers, and health care professionals have different perspectives and opinions about how to frame and discuss obesity and weight bias. There is currently not sufficient research to know whether treating obesity as a chronic disease will reduce weight bias and obesity stigma. Although emerging studies show some positive effects[139], however, more research is needed to determine whether having a better clinical definition for obesity as a chronic disease can reduce weight bias and stigma.[124]

We also recognize that the field of weight bias research includes different perspectives, generally driven from the fields of sociology, psychology and health care. Unfortunately, these perspectives are almost completely segregated making it difficult to foster interdisciplinary research to address weight bias.[103] As public health scholars, we draw on all of these different research areas in hope to contribute to reflective public health research and practice. We do not feel that these weight bias perspectives are mutually exclusive rather that we must work together to reduce weight bias and improve population health.

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Table 4-1 Policy documents examined, the representation of obesity and solutions offered to address obesity.

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
1	Federal, Provincial and Territorial	2010	Curbing Childhood Obesity: A Federal, Provincial and Territorial Framework for Action to Promote Healthy Weights (Public Health Agency of Canada) [1]	Childhood obesity is a problem. Obesity is a complex social (environmental) and individual problem. Obesity is caused by unhealthy eating and physical inactivity. Obesity is a risk factor for chronic disease, which will increase health care costs and affect the Canadian economy. Healthy Weights Discourse.	Changing the social and physical environment to support physical activity and healthy eating. Promoting healthy choice. Supporting healthy weight in children and youth.
2	Yukon	2012	Yukon Active Living Strategy (Yukon Community Services, Sport and Recreation Branch) [23]	Childhood obesity and inactivity are problematized. Obesity is caused by unhealthy eating and physical inactivity. Obesity is a risk factor for CD. Healthy Choice Narrative	Position physical activity as a crucial component of population health. Create environments, which make choosing and engaging in more active lifestyles easier. Social marketing to shift attitudes and motive behaviours that contribute to active healthier lifestyles.
3	Northwest Territories	2011	a) Choose Website (choosenwt.com): Healthy Choices for	Unhealthy weight gain is a risk factor for chronic diseases.	Choose is the public face of the Healthy Choices Framework, a GNWT-wide approach to encouraging and supporting NWT residents to make healthy and safe

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
			Healthy Communities (A program of the Government of Northwest Territories) [28] b) Building on existing tools to improve chronic disease prevention and screening in primary care (https://choosenwt.com/programs/building-on-existing-tools-to-improve-chronic-disease-prevention-and-screening-in-primary-care-better/) c) Healthy Eating & Healthy Weight Guide (Choose Program) d) NWT: Healthy Eating and Weight Management (https://choosenwt.com/wp-	Obesity is caused by unhealthy eating and physical inactivity. Healthy Choice Discourse Health and Weight Narrative	choices, consistent with the 17th Legislative Assembly's goal of fostering healthy, educated people.

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
			content/uploads/2014/02/NWT-Healthy-Eating-and-Weight-Management.pdf)		
4	British Columbia	2010 2012, 2013 & 2014	British Columbia Provincial Health Services Authority: Population & Public Health Program - Healthy Weights Website and related documents. [46-48] a) Recommendations for an Obesity Reduction Strategy for British Columbians (2010) b) Weight to well being: Time for a shift in paradigms? (2013) c) British Columbia Healthy Families Strategy Policy Framework: A focused approach to chronic disease and	Adult and childhood obesity is problematized. Obesity is a risk factor for chronic disease. Obesity is caused by social and individual factors. Shift in Paradigm (from weight to health)	Recommendations in 2010 • Tackling the obesogenic environment; • Encouraging and increasing physical activity; • Encouraging healthy food and beverage choices and discouraging less-healthy food and beverage choices; • Enhancing health services; and • Evaluating the effectiveness of initiatives and ongoing monitoring of obesity rates. Strategies in 2013-2014 • Tackle weight bias, stigma, bullying and discrimination among professionals and in the public sphere. • Support individuals and families to prevent or address weight-related issues. • Address the determinants of mental and physical well-being for all, through five areas of particular relevance to weight-related issues.

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
			injury prevention (2014) d) Northern Health Position on Health, Weight and Obesity: An Integrated Population Health Approach (2012)		
5	Alberta	2011	Alberta Health Services Obesity Initiative: First-year highlights of obesity prevention and management initiative. [56]	Obesity is a complex social and individual problem. Obesity as a chronic disease. Focus on prevention and management.	Increasing access to **health promotion** and prevention initiatives for adults, children and at-risk populations. Invest considerable resources in raising capacity and expertise within **primary care.** **Secondary bariatric care**: Investments will be made to support secondary adult and pediatric care. **Tertiary care (bariatric surgery):** The AHS Obesity Initiative aims to significantly increase surgical capacity by its fifth year.
6	Ontario	2012	No Time to Wait: The Healthy Kids Strategy- Ontario's Healthy Kids Panel). [17]	Childhood obesity is a problem Obesity is a risk factor for chronic disease. Obesity is a complex social and individual problem.	To meet its target of **reducing childhood obesity by 20 per cent in five years,** Ontario must set the bar high. Ontario should focus on three areas that will make a significant difference in our children's weight and health:

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
				Obesity is caused by unhealthy eating and physical inactivity. Paradigm Shift (from weight to health)	Strategy I: Start all kids on the path to health. We must provide the support young women need to maintain their own health and start their babies on the path to health. Strategy II: Change the food environment. Strategy III: Create healthy communities.
7	New Brunswick	2009 & 2014	a) Live well, be well: New Brunswick's Wellness Strategy – Summary Report 2009-2013. [33,57] b) Live well, be well: New Brunswick Wellness Strategy 2014-2021	Childhood obesity is a problem Obesity is caused by unhealthy eating physical inactivity. Obesity is a risk factor for chronic disease.	**2009-2013 Wellness Strategy** • To improve the mental fitness & resilience of New Brusnswickers • To increase the rates of healthy eating among New Brunswickers • To increase physical activity levels of New Brunswickers • To promote tobacco-free living and increase the number of New Brunswickers **2014-2021 Wellness Strategy** The renewed wellness strategy recognizes that, in order to achieve sustained population level improvements on wellness, the goals must be broader in scope than only addressing healthy lifestyle behaviours. Goals: • Increase number of New Brunswickers with capacity to support healthy development and wellness.

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
					• Increase number of settings that have conditions to support wellness.
8	Nova Scotia	2012	Nova Scotia Thrive: A plan for a healthier Nova Scotia. A policy and environmental approach to healthy eating and physical activity. [19]	Childhood obesity is a problem. Obesity is a risk factor for chronic disease. Obesity is a complex social and individual problem. Healthy Choice Discourse. Obesity is a symptom of the "obesogenic" environment in which we live. Obesity is caused by unhealthy eating and physical inactivity. Paradigm Shift (from weight to health)	Change the conversation from weight to health and shift the focus of our health-care systems from illness to wellness. Create environments that work to increase healthy eating and physical activity and reduce unhealthy eating and sedentary time. Directions: 1) Healthy start for children and families. 2) Equip people with skills and knowledge for lifelong health 3) Create more opportunities to eat well and be active 4) Plan and build healthier communities
9	Prince Edward Island	2002	Prince Edward Island Strategy for Healthy Living. [50]	Obesity is a risk factor for chronic disease. Obesity is caused by unhealthy eating and physical inactivity. Healthy Choice Discourse Obesity is a symptom of the "obesogenic" environment in which we live.	Encourage and support Islanders to take measures to address the common risk factors that contribute to chronic disease (tobacco use, unhealthy diet, and physical inactivity). Goal #1: To slow the growth in the prevalence of preventable chronic disease in PEI (Action Area #1 - Addressing the Common Risk Factors/ Action Area #2 - Healthy Weights and Obesity) Goal #2: To reduce tobacco use and the

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
					harm it causes to the population of PEI Goal #3: To increase the number of Islanders who participate in regular physical activity to promote optimal health Goal #4: To improve healthy eating habits that support good nutritional health Goal #5: To increase capacity for health promotion and chronic disease prevention
10	Newfoundland and Labrador	2001	Healthier Together: A strategic health plan for Newfoundland and Labrador. [34]	Obesity is a risk factor for chronic disease. Healthy Choice Discourse	Goal 1: Improve the Health Status of the Population of Newfoundland and Labrador. A wellness strategy will be developed and implemented to support this goal. Objectives: o Increase healthy behaviours and supports; o Improve health outcomes and reduce negative impacts of select diseases; o Improve healthy growth and development for children and youth. Targets: o Decrease the percentage of adults in the province who are inactive from 64% to 54% by 2007 o Decrease the proportion of the population who are overweight (Body Mass Index > 25) from 60% to 55% by 2007

	Jurisdiction	Year	Policy/Strategy Document(s)	Representation of obesity (what's the problem represented to be?)	Solutions
					Goal 2: Improve the Capacity of Communities to Support Health and Well-Being. Goal 3: Improve the Quality, Accessibility, and Sustainability of Health and Community Services

CHAPTER 5 TENSIONS IN OBESITY PREVENTION AND OBESITY STIGMA DISCOURSES: PERSPECTIVES FROM PUBLIC HEALTH POLICY MAKERS

Ramos Salas, X., Forhan, M., Caulfield, T., Sharma, A.M., Raine, K. Tensions in Obesity Prevention and Obesity Stigma Discourses: Perspectives from Public Health Policy Makers. *(Submitted)*.

Abstract

Obesity is a highly stigmatized condition due to pervasive personal, professional, institutional and cultural weight bias. Public health policies have been criticized for promoting a simplistic narrative that may contribute to weight bias. The objective of this study was to explore how obesity narratives are constructed and enacted among public health policy makers. By developing a deeper understanding of the lived experiences of public health policy makers, we wished to identify tensions that might exist in current obesity prevention public health discourses. Using purposive sampling, we engaged public health policy makers (n=10) from five Canadian provinces in a qualitative study to construct and interpret participants' experiences with obesity prevention policies, weight bias and obesity stigma. Transcripts were coded using an inductive method for emerging themes. Three mains themes emerged from our data analysis: a) negotiating obesity discourses in public health, b) assumptions and unintended consequences of obesity prevention public health discourses, and c) weight bias and obesity stigma as determinants of population health. Although the prevailing obesity discourse in public health is that obesity is a as a complex problem, policy makers face personal, institutional, and political barriers operationalizing this understanding. Findings also demonstrated the emergence of a paradigm shift in Canada towards health and wellness as opposed to weight-centric population health approaches.

Keywords: obesity, stigma, public health, weight bias, policy makers

Introduction

Public health has an effective record of addressing stigma. Examples include HIV/AIDS and mental illness.[87] However, public health has not recognized or addressed obesity stigma as a key determinant of health.[83] On the contrary, studies have shown that public health may be contributing to obesity stigma by perpetuating a simplified understanding of obesity.[14,93] Specifically, public health initiatives for obesity prevention have been criticized for using individual-based behavioural approaches that often fail to recognize the complex drivers of obesity. [83,112,140] The ineffectiveness of public health obesity approaches has been attributed to a narrow focus (diet and exercise) and their inability to represent the realities of people with obesity. [86] Obesity researchers have challenged individual-based obesity prevention approaches and argue that obesity also requires a system level approach.[7] Importantly, individuals with obesity perceive current obesity public health initiatives as overly simplistic, disempowering, and stigmatizing.[14,16,93] Through a critical review of Canadian public health obesity prevention policies and strategies, we showed that individual-based approaches prevail across provinces and territories and may be contributing to unintended consequences such as perpetuating weight bias and stigma.[83]

Stigma is the social sign or label affixed to an individual who is the victim of prejudice and that can lead to devalued social identity, increasing vulnerability to loss of status, unfair treatment, and discrimination.[19] Stigma is an important and independent determinant of health.[79] There are many types of stigma statuses or characteristics, (such as mental illness, minority sexual orientation, obesity, HIV/AIDS, disability, and minority racial/ethnic status) linked to poor outcomes such as housing, employment or income, social relationships, psychosocial or behavioural responses, health care access and overall health and quality of life. In many cases

groups or individuals will experience multiple stigmatized statuses or characteristics and outcomes.[141]

It is believed that the six stigmatized conditions/statuses described above affect more than half of the general population. [141] The prevalence of obesity stigma across life domains such as employment, education, health care and interpersonal relationships ranges from 19.2% among individuals with class 1 obesity (BMI 30-35 Kg/m^2) and 41.8% among individuals with moderate to severe obesity (BMI > 35 Kg/m^2).[22] Obesity stigma affects multiple outcomes and life chances and it is considered a major social determinant of health. [74,86,141]

There are multiple theoretical stigma models. For the purpose of this study, we used a multicomponent stigma model, which proposes that stigma is produced when: 1) people distinguish and label human differences; 2) dominant cultural beliefs link labeled persons to negative stereotypes; 3) labeled persons are placed in distinct categories; and 4) when labeled persons experience status loss and discrimination that leads to unequal outcomes. Based on this theoretical model, stigmatization can happen when all of these components emerge.[141] A key premise of this theoretical model is that stigma is contingent on access to social, economic, and political power. In other words, stigma is used as a way for dominant groups to maintain social, economic, and political power over others.

Addressing weight bias and obesity stigma in public health is important because there is evidence to indicate that stigma may increase inequalities.[32] At the individual level, internal and external obesity stigma can also lead to avoidance of preventive care, which is counterproductive to public health efforts.[114] Deeper examination of obesity prevention discourses applied in public health can be a way to address some of the social and institutionally generated views of obesity that may drive weight bias and obesity stigma.[42,46]

Objective

The objective of this study was to explore how obesity prevention public health discourses are constructed and enacted among public health policy makers in Canada.

Methods

Using purposive sampling, we engaged public health policy makers (n=10) from five Canadian provinces in a qualitative study to construct and interpret participants' experiences with obesity prevention policies, weight bias and obesity stigma. Participants self-identified as working in public health policy. Some worked in the area of chronic disease prevention policy. The majority worked in obesity prevention strategies directly. Participants worked in both federal and provincial public health or health promotion ministries and departments. Three participants were from Ontario, three from Alberta, two from British Columbia, one from Quebec, and one from Nova Scotia. We obtained ethics approval from the University of Alberta Health Research Ethics Board (HREB). All participants provided informed consent after receiving a study information package prior to the semi-structured interviews.

We used a semi-structured interview guide to engage participants in conversations about their experiences with obesity prevention policies, weight bias and obesity stigma. Participants were interviewed once for approximately 60-90 minutes each, for a total of 10 interviews. Interview questions included: What are the causes of obesity? How do you think that public health obesity prevention discourse relates to the experiences of people with obesity? Are there tensions between public health obesity discourse and the experiences of individuals with obesity? What strategies can we use to reconcile any tensions between these discourses?

The first author conducted, recorded and transcribed all the interviews. During the interview process, participants were asked probing questions to clarify and expand meanings as

needed. We kept a journal to track study documentation and decision-making processes and to reflect on our own biases and analytical choices, as a way to maintain rigor and to attend to the trustworthiness of the analysis.[48] We used pseudonyms for all the interviewees.

We read and re-read the transcripts and went back to participants to clarify concepts and statements. Sometimes we went back to the recording to listen for moments of reflection, silences, and emotions. Reading over the transcripts allowed us to catch resonant threads between participants' experiences. Transcripts were coded using an inductive method for emerging themes. Themes were discussed through routinely scheduled research meetings with all the authors. We analyzed data with the understanding that knowledge is constituted, shaped, expressed and enacted through personal, professional, social, cultural, and institutional discourses. [42,48] We paid attention to the negotiations, skepticisms, and resistances that were possible within the discourses.

Findings & Discussion

Findings are presented in three main themes, which emerge from data analysis: a) negotiating obesity discourses in public health, b) assumptions and unintended consequences of obesity prevention public health discourses, and c) weight bias and obesity stigma as determinants of population health.

NEGOTIATING OBESITY DISCOURSES IN PUBLIC HEALTH

Most participants described population health as their primary professional mandate. Even though not all participants worked in obesity prevention directly, addressing obesity as a way to prevent chronic diseases at the population level was a common discourse. The majority also prioritized the importance of social and physical environments in obesity and chronic disease prevention. Ann discussed why obesity is important for population health outcomes:

> *"Obesity is a risk factor driving the prevalence of chronic diseases and population health outcomes. If we are not able to control the obesity epidemic, the rates of non-communicable diseases will continue to increase. Our health care system will not be able to sustain that. This is why obesity prevention public health strategies are so important."*

Unpacking this discourse of obesity as a risk factor for other chronic diseases, participants demonstrated a commitment to health promotion, often rooted in the ecological model of health promotion.[142] This model focuses attention on both individual and social environmental factors driving diseases and inequalities. When asked what the primary focus of obesity prevention should be, John stated:

> *"Our social and physical environments are driving unhealthy behaviours such as unhealthy eating and inactivity. Children today do not eat the same foods we ate when we were kids. Children today don't play outside like we used to do. This is because our environments have changed. Our social environment is very important as well. As we have more social inequalities, Canadians have fewer opportunities to eat healthy foods and to be active."*

All participants discussed the need to change the social and physical environments as a way to improve healthy eating and physical activity. When probed about what they believed the causes of obesity were, participants negotiated biomedical and ecological models of health. Specifically, participants recited the systems models of obesity which calls for interventions directed at the individual and social levels and the energy balance model of obesity, which considers obesity to be the result of excessive food intake and insufficient physical activity.[143,144] Many participants referenced the UK Foresight report.[143] Mary added:

> *"This is what we learn. Obesity is about energy balance. We have all seen the UK Foresight obesity model that shows the many, many factors that influence obesity. But at the core of the diagram you see it is about energy balance. It is hard to wrap your head around all the other factors so we make it manageable for public health practice and we narrow down the priorities from a population health perspective."*

While trying to make the complex systems model of obesity more practical for public health practice, some participants referred to their own personal experiences as a way to negotiate system and individual level obesity discourses. For example, Stephanie used herself as an example to explain what drives obesity.

> *"I have been in energy homeostasis most of my life. [laughter] This is because I eat pretty much the same food and I exercise every day. As soon as I stop doing any of those two things - as soon as I increase my caloric intake or as soon as I reduce my caloric expenditure, I will gain weight. This is how our bodies work."*

Participants discussed how and where some of the dominant obesity discourses have come from and how they continue to drive public health practice and policies. Several participants argued that the individual responsibility obesity discourse in public health originates from biomedical paradigms of public health. Ann who has worked in community practice for many years and now has transitioned into public health policy struggles with the biomedical paradigms of obesity because the focus is on weight as opposed to health.

> *"We need to also recognize that the medical paradigm influences public health. The idea that we can intervene at the community level based on population level BMI data is the same as the idea as intervening at the clinical level based on a person's BMI classification. We are making an assessment based on just looking at a person's size or based on the 'community's' size. We have not done a proper assessment at the community level."*

Many participants framed obesity as an energy balance issue, as a way to help decision-makers, politicians and the public understand this complex public health issue and to obtain support for health promotion interventions. John described obesity prevention public health approaches:

> *"Fundamentally, obesity is about energy balance. We cannot get away from that. But, factors that affect energy balance are complex. Public health needs to prioritize policies that will have an impact on the whole population. Based on that context, public health frames strategies that will influence the energy balance issues from a population health perspective. That means we focus on policies to reducing barriers to healthy eating and physical activity."*

Unpacking this discourse, some participants agreed that obesity is sometimes used by public health professionals as a hook for health promotion interventions. Eva talked about how there is limited support for health promotion within the Canadian health care system and how lack of political willpower prevents action to address social factors that impact population health outcomes.

> *"The political aspect of public health cannot be understated. Political influences also present a barrier for systems thinking in public health. In order to prevent diseases, we need to have a better understanding of the larger forces that influence behaviours. In the field of obesity prevention, we need a shift in paradigm. But shifting paradigms is challenging. We still work in a biomedical paradigm. This is the context in which we live our professional lives."*

This political influence in obesity prevention and health promotion policies has been described by scholars in the United States and the United Kingdom.[105,145] Dominant neoliberalist political rationality in which the freedom and responsibilities of citizens is emphasized while privileging market relations is a key factor driving personal responsibility public health obesity prevention strategies. This dominant political ideology marks people with obesity as the targets for health promotion interventions by asking them to "self-regulate". [105]

Participants negotiated professional health promotion values and principles alongside traditional biomedical paradigms and dominant political ideologies. Many participants agreed that individual interventions are just one component of the larger puzzle but the overall goal is to improve population health and to reduce inequalities. Stephanie resisted the biomedical model and focused on the social environmental aspects driving obesity.

> *"We cannot just do obesity prevention by educating people about healthy eating and physical activity. That is not enough. We need to change the social environments in which people live."*

Not all participants believed that obesity is a social problem. Eva, for example, presented another discourse focused on mental health.

> *"I believe that obesity is a consequence of something else. People do not develop obesity for no reason. Many times, it is a traumatic experience, food addiction, stress and anxiety which can drive unhealthy behaviours and cause obesity."*

Both Stephanie and Eva have worked in mental health initiatives and have experience working in clinical practice. They both referenced the Adverse Childhood Experiences Study which originated in an obesity clinic and looked at the effects of several types of trauma (such as sexual, verbal, and physical abuse, having a parent who has mental illness or alcoholism, a mother who is a victim of violence, a family member who has been incarcerated, a loss of a parent through divorce or abandonment, emotional and physical neglect) on adult onset of chronic diseases, including obesity. [146] Now working in public health policy, they make the connections between their experiences in community practice and public health policy priorities.

> *"Obesity is a sign something, perhaps physical, metabolic, or mental factors could be playing a role in someone's weight patterns. But in public health policy making, the idea is to create policies that impact the whole population. Sometimes we lose track of the fact that populations are made of individuals. There will always be individual differences."*

Some participants resisted the biomedical paradigm because it reduced obesity as a disease. Mary explained:

> *"I hesitate calling obesity a disease. Labeling obesity as a disease does not really help. On the contrary, medicalizing obesity is part of the trend that is medicalizing public health in general. Obesity to me is a social issue and public health is uniquely positioned to address the social determinants of obesity and unhealthy weights."*

As participants negotiated between biomedical and psychosocial paradigms, the discourse of obesity as a disease helped some participants understand the role of public health. Julia explained how different obesity discourses is operationalized in public health policy and practice.

"Public health conceptualizes obesity as a risk factor. Even though the World Health Organization recognized obesity as a chronic disease decades ago, our narrative is mainly that obesity is contributing to rising levels of non-communicable diseases."

The conceptualization of obesity as a risk factor for other chronic diseases allows for obesity prevention strategies to be part of broader chronic disease prevention strategies. If obesity was to be considered as a chronic disease in itself, participants thought that public health approaches might be more comprehensive. Stephanie thought:

"But if obesity is a chronic disease, we need to consider implementing both prevention and treatment strategies. It is not either or. I think today there is a lack of comprehensive strategies for obesity prevention and management. We would not just do diabetes prevention and ignore diabetes treatment? We need to ask ourselves what assumptions are we making about obesity in our policies and strategies? It is not easy to question our core assumptions because we have been living these stories for decades."

ASSUMPTIONS AND UNINTENDED CONSEQUENCES OF OBESITY PREVENTION PUBLIC HEALTH NARRATIVES

While most participants adopted the dominant obesity discourse of obesity as a complex public health problem, many expressed concerns about this discourse and discussed potential unintended consequences. Mary reflected on the assumptions behind this public health obesity prevention discourse:

"...What assumptions are we making in these healthy eating and physical activity health promotion strategies? Are we assuming that weight is controllable solely through behaviour change? Are we simplifying obesity too much? Can we include other factors in our messages that tell the public that obesity is not entirely controllable through healthy behaviours and that there are other factors that can drive weight gain?"

Eva reflected on the "healthy choice" discourse and considered the unintended consequences for people with obesity. The assumption that health is about weight and that weight is controllable

through individual behaviour marks people with obesity as "the problem", "the unhealthy", "the irresponsible" and as "a burden to society".[86]

> *"There are deep assumptions ingrained in the healthy eating/healthy choice narrative. The judgments we make about food also make us judge those who consume it. When we vilify a food or a restaurant, we also make assumptions about those who consume it. Thus, a person who consumes "unhealthy foods" is categorized as an "unhealthy person". This labeling has deep connotations for people who have obesity in that they are often categorized as "unhealthy". People then assume that individuals with obesity consume unhealthy foods all the time and that this is why they have obesity."*

The consequences of this discourse for individuals' day-to-day lives is that society views individuals with obesity as irresponsible citizens. This can in turn effect how people with obesity are treated, their job prospects, and other life chances.[50] This reflective and critical thinking led to participants uncovering the source of the "healthy weight" discourse. Many participants believed that this discourse originates in the biomedical paradigm of public health. Carol reflected on the unintended consequences of the dominant obesity discourse.

> *"This is an example of how, in public health, weight or obesity is often viewed through a biomedical lens. Through this lens excess weight and obesity are highly undesirable conditions. This lens contributes to social attitudes and views about obesity that ultimately result in weight bias and obesity stigma."*

Although some participants found ways to resist dominant discourses about weight and health using alternative models such as the Health At Every Size approach[71], the pervasiveness of weight bias in Western cultures made their resistance very challenging. Eva was met with criticism when trying to advocate for non-weight centric public health approaches.

> *"... public health messages about 'healthy weights' and 'normal BMI' are contributing to weight bias.... Individuals will interpret the healthy weight narrative differently. For some public health professionals, it may mean a certain BMI number, for others it may be more fluid. But I have personally witnessed public health nurses measuring height and weight on children, adolescents, and adults and labeling individuals as obese. This is a normalized public health practice. Some public health*

professionals are starting to resist these practices, but they are sometimes criticized for trying to normalize obesity. I was accused of normalizing obesity."

John also reflected on the unintended consequences of public health obesity discourses.

"We have done a great job promoting the ideal 'healthy weight' or 'healthy Body Mass Index' or the 'normal weight'. Our public health messages have been clear and simple. To be healthy, you need to fit within a certain weight category and you need to avoid falling outside of that range. But we did not do this out with malicious intent. This is what we have been taught in our training."

There seems to be confusion among public health professionals about the definition of obesity, which may be leading to different approaches in policy and practice. For some, obesity is defined as a BMI category. Policy makers working on population health studies will rely on this proxy measure of obesity to conduct surveillance studies. While for others, working in communities, obesity is defined as a disease when it impairs health (as per the definition used by the World Health Organization).[147] Participants reflected on the difference between body size and obesity. Christine talked about this confusion:

"I think there is confusion about what obesity is. Because obesity is defined using the Body Mass Index, health professionals will automatically look at a person's size. This is not strange because BMI is really a measure of body size. But we know that size is not a disease. It makes no sense to label size as a disease. But it is all really rooted in that confusion that people define obesity according to BMI. BMI is actually creating a lot of confusion."

Similarly, participants identified the need to have better tools to measure population level obesity rates. Ron argued that if we are not going to use BMI as a proxy for obesity, we need to develop practical population level tools.

"When it comes to measuring obesity rates at the population level, we need practical tools. This is particularly relevant when it comes to measuring obesity rates in low income countries where public health professionals do not have access to expensive measuring tools. There is simply no way that we could use other measures of adiposity in low income countries. BMI is all we have."

There is an emerging clinical discussion to redefine obesity.[124] Traditionally, the medical community has defined obesity using a proxy anthropometric measure for excess adiposity referred to as the Body Mass Index.[148] This proxy measure, however, is not sufficient determine if a person has obesity. [124,149] Obesity is a medical term used to describe the disease in which excess or abnormal adiposity impairs health.[147] Some scientists and clinicians use the term obesity to group all obesity related issues (e.g. metabolic, physical, genetic). This is not unlike diabetes mellitus which is the medical term to refer to a variety of metabolic disorders. In the context of diabetes, blood sugar levels in themselves are not considered to be an illness. Only when blood sugar levels increase for a prolonged period of time and impact a person's health do we talk about a person having diabetes. Similarly, when excess adiposity increases over time and the distribution of adiposity starts to impair the health of a person is when clinicians would diagnose obesity.

A clear understanding obesity is important and could help prevent unintended consequences, such as weight bias and obesity stigma. Obesity can develop across varying BMI scores in different individuals.[135] Scientists and clinicians also argue that the quantity and distribution of adiposity matters for diagnosing obesity.[150] The relationship between BMI and health can be obscure at the individual level.[135] Persons with a normal BMI score could have an abnormal adiposity distribution, which may affect their health. On the other hand, persons with a higher than 'normal' BMI, could have a healthy distribution of adiposity and not experience health impairments.

The use of BMI to define obesity has caused confusion among health professionals and the public. Individuals who have excess weight or who have a higher BMI score may believe they have obesity and since obesity is a highly stigmatized condition, persons who self-diagnose with

obesity may experience shame, guilt and body dissatisfaction leading to unhealthy weight loss practices.[94,151] Obesity should be diagnosed by a qualified health care professionals using clinical tests.[101] At the population level, obesity should be treated like any other chronic disease, using chronic disease frameworks that are non-size or weight-centered and focused on improving health and decreasing morbidity and mortality.[101,134,150]

Ann questioned the way health promotion strategies are assessed in terms of their effectiveness and impact on weight outcomes.

> *"We may be shooting ourselves in the foot when we assess the impact of our health promotion programs based on BMI outcomes. First, we may not be able to see such outcomes for decades. Second, there is now emerging evidence that obesity is driven by genetic and neuro-hormonal processes that go beyond individual behaviours. Yes, healthy behaviours are important but they are not the only factors driving obesity. If we only measure the impact of our public health strategies based on obesity outcomes, we may not see good results. As the value of health promotion continues to be questioned, we may be shooting ourselves in the foot."*

Carla reflected critically on the impact of specific obesity prevention interventions.

> *"What is the assumption we make when people do not make the 'healthy choice'? A person who consumes 'unhealthy foods' is categorized as an 'unhealthy person'. This labeling has deep connotations for people who have obesity in that they are often categorized as 'unhealthy'. People assume that individuals with obesity consume unhealthy foods all the time and that this is why they have obesity…when we think about the experiences that, for example, single mothers in low-income communities have, it makes us reflect on the fact they often do not have the ability to make the 'healthy choice'… We also have evidence that education based interventions do not work very well. We need to remember that when population-based interventions do not work for everyone, it is bad for everyone."*

Participants also realized that despite emerging non-weight centric obesity discourses, public health happens in highly politicized environment. Even though their personal values embrace these emerging public health discourses, their actions are constrained by political views

and ideologies. Eva explained that the political context in which public health policy makers matters.

> *"Public health policy makers work in highly political environments. This creates a situation in which policy makers shift their work/decisions/practices to fit with this political environment. Public health practitioners are often on the defensive because of budget cuts threats and political factors that tend to change government priorities. This becomes a factor in decision-making."*

Furthermore, Christine agreed that political influences present a barrier for population health perspectives and how governments approach public health issues, such as obesity.

> *"...political pressures influence policy-makers' decision-making processes more than their own knowledge and values. Political influences present a barrier for systems thinking in public health. In the field of obesity prevention, we need a shift in paradigm, but this is challenging in the current political environment."*

WEIGHT BIAS AND OBESITY STIGMA AS A DETERMINANT OF POPULATION HEALTH

Reflecting on the impact of weight bias and obesity stigma on population health, participants discussed that we need to shift paradigms towards recognizing that stigma is a fundamental determinant of health. Ann discussed how obesity stigma could be addressed in public health:

> *"Obesity stigma has serious consequences for population health outcomes. Weight bias and obesity stigma are more mainstream. We need to change the public health narrative from weight to wellness, regardless of a person's size. We need to recognize that not everyone who lives in a larger body has obesity. Obesity is not about a person's size. It is about a person's health. We need a paradigm shift to recognize that obesity is a disease and that obesity is not about size. We also need to recognize that stigma is a social justice issue, driving poor health outcomes at individual and population levels."*

Resistance towards size- or weight-based population health policies and strategies was recited by several participants. Carol supported the need for a paradigm shift in public health practice but recognized challenges.

"Our health care decision makers and policy makers are fascinated by this potential paradigm shift. But they still cannot reconcile weight bias and the evidence on obesity as a chronic disease. They ask me: How do we prevent obesity without causing further weight bias? This is also an example of how, in public health, obesity is often viewed through a biomedical lens. Through this lens obesity is defined according to size. This lens contributes to social attitudes and views about obesity that ultimately result in weight bias and obesity stigma."

Participants also reflected on the "healthy weights" public health discourse and explained that this has led to a focus on obesity prevention in children. Some discussed how this discourse can create a divisive effect, positioning children who fall outside of the "healthy weight" category as unhealthy. There was concern that exposing children early to the "healthy weights" message could set up children for a lifelong struggle with body dissatisfaction. Furthermore, by reinforcing the individual responsibility discourses, public health may be contributing to experiences of shame and guilt among children and parents. Julia expressed the need for more reflective public health practice.

"People are well meaning. As public health professionals, we are not even aware that our practices can be biased or may contribute to weight bias. Our paradigm is to help people. Our paradigm is to do no harm. We are compassionate, community oriented, and equitable. How could any of our practices be biased? There can be a level of arrogance to public health. But if we think about public health critically, we can see that some of our practices can be biased."

Participants unpacked the prioritization of childhood obesity prevention in public health policies, explaining that childhood obesity is a political issue. This political prioritization, however, presents an opportunity for positioning health promotion policies.

"But the reality is that there is a lack of political will to prevent chronic diseases in general. But certainly, if you look at obesity policy proposals, childhood obesity is a priority. There is a political window of opportunity in terms of chronic disease prevention and health promotion."

However, within this political window of opportunity, Julia explained that dominant political ideologies privilege private interests, making it difficult to actually implement system level health promotion policies. Reflecting on her experiences, Julia can see how the public health obesity discourse is enacted within neoliberalist ideologies, labeling individuals as targets for interventions and asking them to take responsibility for their weight.

> *"[Obesity] ...prevention requires sustainable funding because it may take 20 years before we see any impact. We also need political support for government policies to facilitate healthy eating but there is no political will for these interventions. So, we end up with interventions targeted at individuals, placing the responsibility and 'choice' on them."*

Although, many childhood obesity prevention public health policies call for policies such as food industry regulation and measures in relation to production and marketing of food, some participants were critical about these approaches because of the potential to perpetuate healthism. Healthism, a term originally coined by Crawford [152], is a system of beliefs which define health-promoting activities as a moral obligation. The premise of healthism is the idea of a free individual choosing to undertake behaviours necessary to enhance and/or maintain good health. In the case of the obesity prevention discourse, healthism is used to set norms and systems in place to help individuals engage in self-regulation and self-surveillance. Ron reflected on the impact of this discourse on individual behaviour:

> *"We emphasize healthy behaviours as normative behaviours. Individuals measure themselves against these norms and are always watching their eating and activity levels. You see this in the media, with more TV shows promoting weight loss. I have had people coming to me telling me that the Biggest Loser TV show is great and that the problem of obesity is that people are just lazy and unmotivated. Public health messages become norms that individuals measure themselves against."*

The personal responsibility framing is a key tenet of the healthism belief. Even though obesity prevention public health strategies recommend changing the social and physical environment,

sometimes these messages end up communicating an obligation to individuals to actively pursue good health through behavioural choices.

Some participants discussed strategies to shift the obesity discourse in public health. Julia suggested that public health policy makers engage in more reflective practice and consider developing more people-centered strategies.

> *"Unlike clinical practice, we don't focus on individual health outcomes and some have criticized public health for not taking into consideration the lived experiences of the individuals who make up populations. Take the example of taxing unhealthy foods [as a way to prevent obesity], this could have unintended consequences for a part of our population because we have not thought it through completely. We don't have a value in our society that helps us put ourselves in other peoples' shoes."*

Furthermore, Christine expressed the need for practical strategies to help public health professionals recognize and address weight bias in their practice.

> *"Motherhood statements" do not tell practitioners what to do about weight bias and obesity stigma. Health professionals also told us that they do not have the time to do this. This is the same argument we get with addressing obesity in our health care system. It is the same argument we get when we want to address weight bias in the health care system. This is because we are asking them to do something different."*

Discussion & Recommendations

Our study was designed to explore how obesity prevention discourses are constructed and enacted among public health policy makers in Canada. Our findings indicate that while participants generally understand obesity as a complex public health issue, they face personal, professionals, and political barriers to operationalizing this understanding at policy levels. At the professional level, participants navigate biomedical and socio-ecological models of obesity and reflected on health promotion and biomedical paradigms. Public health discourses about personal responsibility and "healthism" were contested by many participants, while system level public

health strategies were preferred. Participants negotiated their professional support for obesity prevention focused on individual responsibility with the opportunity to do health promotion at the population level. There was a recognition, however, among participants that these individual-based health promotion strategies are just pieces of a what should be a more comprehensive population health strategy.

Participants negotiated their personal beliefs about obesity causes, weight bias and obesity stigma within different health paradigms and political contexts. We recognize public health is an interdisciplinary field and we consider this to be a strength that public health can build upon. Integrating different perspectives, disciplines and approaches can reveal opportunities for practice reflection and change. Our findings, however, also demonstrate that participants enact public health obesity discourses within social, cultural and political contexts. Since weight bias is pervasive in Western cultures, public health obesity discourses are intrinsically embedded within these biased social, cultural and political contexts. The same weight biased discourses that are embedded in society are also embedded in public health policy and practice.

One of the more compelling findings from this study is the emerging paradigm shift in Canada towards health and wellness as opposed to weight-centric public health approaches. This could be attributed in part to increasing awareness about weight bias and obesity stigma. [78,128] Dominant public health discourses of 'healthy weight' and 'healthy choice' were interrupted by this increased awareness of weight bias and obesity stigma. Based on the theoretical model of stigma framing this study, labelling individuals and placing them in distinct categories is one component that can produce stigma.[141] The "healthy weight" and "healthy choice" labels and categories combined with cultural beliefs that link persons with obesity with these labels may contribute to persons with obesity experiencing stigma.

Experiencing sigma can include direct-to-person discrimination when for example one person discriminates against another person based on prejudicial attitudes or stereotypes.[32] Stigma, however, also operates at structural and societal levels through cultural norms and institutional policies that can constrain the opportunities, resources, and well-being of stigmatized groups.[80] Policies, for example, can create, exacerbate, diminish, or mitigate stigma-related problems. Policy inaction, on the other hand, can also be a policy regime affecting stigmatized groups, particularly, when policies ignore the concerns of stigmatized groups or when policies are constructed and implemented selectively.[80] In our study, participants recognized that public health should address obesity stigma since it is considered a determinant of health.[73,153] Recognizing the unintended consequences of the current weight-centric discourses, participants actively discussed ways to support this paradigm shift in public health policies and practices. Some strategies included: critical reflection about the unintended consequences of public health discourses, questioning of assumptions about obesity causes, shifting focus to health and well-being, addressing obesity as a chronic disease, and prioritizing people-centered health promotion approaches.

Our study had a small sample and this brings limitations. We also did not have representation from all provinces and territories. Our sampling methods may have skewed data since we recruited public health policy makers who were working in obesity prevention directly. Many provinces and territories did not have specific obesity strategies and it was challenging to identify individuals who were working directly on obesity prevention policies. As such some of the participants were recruited although they were working in chronic disease prevention portfolios and not on obesity strategies directly. The perspectives of individuals working in obesity versus chronic disease prevention could be different.

Despite these limitations, our study contributes to the existing literature of weight bias and stigma in public health. First, our results demonstrate that public health obesity prevention discourses, are enacted within personal, professional, and socio-cultural contexts, which are themselves rooted in unclear obesity definitions driving weight bias and obesity stigma.[27] Secondly, despite a higher awareness about the impact of weight bias and obesity stigma on population health, public health professionals do not have access to resources and strategies to address weight bias and obesity stigma in their settings. Finally, our study shows there are tensions between public health obesity prevention discourses and clinical/biomedical obesity paradigms.

Supporting public health professionals to operationalize obesity in a non-weight centric chronic disease framework may help mitigate tensions that exist between public health obesity prevention discourses, clinical practice and the experiences of persons living with obesity. Public health can address weight bias and obesity stigma in many different ways. Specific action on weight bias and obesity stigma could include:

- Monitoring the impact of weight bias and obesity stigma at the population level (i.e. in schools, workplaces, health care settings, public policy, etc.)
- Developing interventions to address weight bias and obesity stigma at the population level.
- Addressing weight bias in public health practice; sensitize public health professionals and policy makers to the impact of weight bias and obesity stigma.
- Critically reflecting on the unintended consequences of current health promotion strategies on the experiences of people with obesity.

- Considering how personal beliefs, values, practices, relationships, and language contribute to weight bias and obesity stigma.
- Giving a voice to persons living with obesity and create person-centered public health policies.
- Challenging individual responsibility messages ("healthy choice") and focus on improving social, cultural, economic, and physical environments that can enable health and well-being for the whole population.
- Aiming healthy eating and physical activity strategies at the entire population without specifically targeting people with obesity.
- Considering if obesity needs to be mentioned in health promotion and wellness campaigns at all (rather than using obesity as a hook for health promotion programs).
- Challenging the "healthy weight" discourse in obesity prevention strategies by shifting focus to health and move away from quantifying health in terms of numbers (i.e. BMI, weight).

Future research should explore how we can evaluate and support the emerging paradigm shifts in obesity public health and clinical practice.

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CHAPTER 6 ADDRESSING WEIGHT BIAS AND DISCRIMINATION: MOVING BEYOND RAISING AWARENESS TO CREATING CHANGE

Ramos Salas, X., Alberga, A. S., Cameron, E., Estey, L., Forhan, M., Kirk, S. F. L., Russell-Mayhew, S., and Sharma, A. M. (2017) Addressing weight bias and discrimination: moving beyond raising awareness to creating change. *Obesity Reviews, 18*: 1323–1335. doi: 10.1111/obr.12592.

Keywords: weight bias, weight-based discrimination, obesity stigma

Running Title: Consensus on strategies to reduce weight bias

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Abstract

Weight discrimination is the unjust treatment of individuals because of their weight. There have been very few interventions to address weight discrimination, due in part to the lack of consensus on key messages and strategies. The objective of the third Canadian Weight Bias Summit was to review current evidence and move towards consensus on key weight bias and obesity discrimination reduction messages and strategies. Using a modified brokered dialogue approach, participants, including researchers, health professionals, policy makers, and people living with obesity reviewed the evidence and moved towards consensus on key messages and strategies for future interventions. Participants agreed to these key messages: 1) weight bias and obesity discrimination should not be tolerated in education, health care, and public policy sectors; 2) obesity should be recognized and treated as chronic disease in health care and policy sectors; and 3) in the education sector, weight and health need to be decoupled. Consensus on future strategies included: 1) creating resources to support policy makers; 2) using personal narratives from people living with obesity to engage audiences and communicate anti-discrimination messages, and 3) developing a better clinical definition for obesity. Messages and strategies should be implemented and evaluated using consistent theoretical frameworks and methodologies.

Introduction

Weight discrimination is the unjust treatment of individuals because of their weight. [85] Individuals with obesity experience discrimination from educators[25,154,155], employers, health professionals[94,156], the media[126,157-159], and even from friends and family[160]. Although weight discrimination is pervasive in our society, few efforts have been made to address it[82,161]. Not unlike other forms of discrimination (i.e., race, class, ability, gender, and sexual orientation),

discrimination based on weight is associated with significant physiological and psychological consequences, including increased depression, anxiety, and disordered eating, and decreased self-esteem.[32,76,162,163] Weight discrimination also impacts the quality of care for patients with obesity, ultimately leading to poor health outcomes[41,164,165] and increasing mortality risk.[166]

The Canadian Obesity Network - Réseau canadien en obésité (CON-RCO) is Canada's largest obesity network for health professionals, researchers, policy makers, obesity stakeholders, and members of the public.[167] In 2008, CON-RCO identified weight discrimination as a key barrier to advancing evidence-based and patient-centered obesity strategies in Canada. CON-RCO's mission is to improve the lives of Canadians affected by obesity through the advancement of anti-discrimination, prevention and treatment efforts. In 2015, CON-RCO established the EveryBODY Matters collaborative to exchange knowledge, identify opportunities for collaboration across research and practice or policy, and to support CON-RCO's effort to reduce weight discrimination in Canada.[168] CON-RCO's efforts acknowledge that unjust actions towards individuals living with obesity are fueled by negative weight-related attitudes, beliefs, assumptions, and judgments in society that result in harmful stereotypes, what is referred to as weight bias.

In May 2016, the Canadian Obesity Network's EveryBODY Matters Research Collaborative[1] hosted the third Canadian Weight Bias Summit.[169] Previous Summits focused on raising awareness about weight bias and discrimination where weight bias refers broadly to negative assumptions and attitudes about individuals because of their weight [170], and identifying future research directions to reduce weight bias and discrimination in Canada.[77] A key outcome

[1] See http://www.obesitynetwork.ca/pg.aspx?pg=452 for more information

from the previous two Summits was the need to move beyond raising awareness, towards developing theory informed, evidence-based, and patient-centered interventions. However, since there have been very few interventions implemented and evaluated, there is a general lack of consistency in theoretical frameworks, methodologies and approaches.[82] Consensus on key messages and strategies to reduce weight discrimination is urgently needed to better evaluate the impact of these efforts through coordinated and collaborative strategies in research, education, policy and activism.

Objective

The objective of the third Canadian Weight Bias Summit was to bring together representatives from health care, education and public policy sectors to review current evidence and move towards consensus on key weight bias reduction messages and strategies for future interventions. The aim of this paper is to share the findings from the Summit and propose future recommendations for addressing weight bias in health care, education and public policy.

Methods

The Summit took place May 26-27, 2016 in Edmonton, Alberta. A total of 42 delegates were invited, representing individuals living with obesity, researchers studying weight bias and discrimination, health professionals, policy makers, civil servants, knowledge translation experts, industry and non-profit sector partners, Canadian Obesity Network staff, and graduate student volunteers.

The Summit was organized by CON-RCO staff, and the EveryBODY Matters Research Collaborative Core Members[168], representing a multi-disciplinary partnership of weight bias and obesity stigma researchers from across disciplines and research areas in Canada. Ethics approval was obtained through the University of Alberta Research Ethics Board 1.

The process was framed using a modified brokered dialogue method.[51] This method uses the process of telling stories and sharing evidence to articulate different "takes" on a particular problem and offer suggestions and directions for what participants believe should happen. The brokered dialogue method is a participatory methodology in which participants are engaged in the dialogue, thus allowing them to have a voice in how their experiences are represented. The premise behind this method is that through dialogue, participants can confront values, relationships, and a full range of stakes via respectful interactions among those with seemingly divergent views. In this particular meeting, the brokered dialogue was between people who live with obesity, people who identify as fat but do not have obesity, public health policy makers, obesity clinicians, and weight bias and stigma researchers in the hope of illuminating opportunities for reconciling divergent perspectives. All of these participants have different and valuable perspectives and opinions about how to frame and discuss obesity and weight bias. However, the summit facilitator made it clear from the outset that all of these perspectives are not mutually exclusive and that we can learn from all them.

The process was guided logically around four broad categories of questions:

1. **What? (Description):** Where are we at with respect to weight bias intervention research and best practices? What is the prevalent obesity prevention narrative used in education, health care and public policy?
2. **Why? (Explanation):** How do knowledge users (people with obesity, health care professionals, public health policy makers) experience and interact with these dominant obesity narratives?
3. **So What? (Synthesis):** What tensions between current obesity narratives and the experiences of individuals with obesity need to be reconciled? Where do knowledge

users (patient advocates/community members, health care professionals, public health policy makers) feel there is a pressing need to intervene or act?

4. **Now What? (Action):** What are some key messages, principles and/or strategies that can be used to reduce weight bias and discrimination in education, health care, and public policy? How can we collaboratively prioritize future action to create change?

Although there were polarizing debates, recognizing the interests and perspectives of others was a critical step towards finding solutions. By recognizing points of agreements and legitimizing the realities of others we began to bridge distances between perspectives. The dialogue involved critical reflection but in a respectful and transformative space.

STORIES AND EVIDENCE SHARING

On the first day of the Summit, individuals with obesity shared their lived experience with weight bias and discrimination in education and health care settings. These personal narratives highlighted the impact of weight bias on individuals living with obesity and set the stage for the research updates[171,172]. The patient narratives were followed by Pecha Kucha style (rapid fire) presentations by invited weight bias and obesity stigma experts. National and international leaders in the field of weight bias and stigma, were identified and invited by the Canadian Obesity Network's EveryBODY Matters Collaborative to provide 8-10 minutes research updates and to include key recommendations based on the evidence they reviewed. These presentations were grouped into two sections: A) Obesity and Weight Bias Research and B) Stigma Reduction Strategies.

OBESITY AND WEIGHT BIAS RESEARCH

This part of the program reviewed the literature and best practices for reducing weight bias. Specifically, the mini reviews included perspectives from health care professionals working in

obesity management, results from patient focus groups conducted by CON-RCO and narratives from people living with obesity; the results of a systematic review of weight bias reduction interventions among health professionals; a review of how accommodations in educational, health care, and community settings can reduce stigmatization of individuals with obesity; the sharing of and learning from critical weight studies approaches to reduce weight bias; and pedagogical strategies to reduce weight-based oppression.

Positioning Obesity as a Chronic Disease

This review introduced the clinical perspective and presented the importance of recognizing and treating obesity as a chronic disease. The World Health Organization[90], many obesity scientific organizations and medical organizations, including the Canadian Obesity Network[100], the Canadian Medical Association[99], the American Medical Association[173], and the World Obesity Federation[102], have declared obesity a chronic disease. However, there is still a lack of implementation of comprehensive strategies for obesity treatment and management in the Canadian health care system. This is in part due to the lack of a clear definition for obesity. Obesity experts and clinicians, including the World Health Organization and the Canadian Medical Association, agree that the Body Mass Index should not be used as the defining characteristic of the disease. However, while we identify a better clinical definition for obesity, we need to support individuals whose excess adiposity is affecting their health. Arguments for and against treating obesity as a chronic disease were discussed. More research is needed to understand whether calling obesity a disease will reduce weight bias. [174]

Patient Perspectives on Weight Bias and Obesity Stigma in Health Care

Prior to the Summit, the Canadian Obesity Network hosted a focus group with 20 persons living with obesity to understand their experiences with weight bias in the health care system and to get their insights on patient-centered principles and strategies that can be used to address weight bias. Participants agreed that the prevalent obesity narrative in the health care system is that obesity is self-inflicted and that persons with obesity simply choose to have obesity. This narrative leads to assumptions about persons with obesity that they are non-compliant, lack willpower and do not care about themselves. This narrative is rooted in a lack of understanding about obesity among health care professionals, which results in simplistic solutions for obesity (diet and exercise) and a lack of accommodations for persons with obesity in the health care system as well as lack of evidence-based treatments. Patients also agreed that this lack of understanding of obesity results in a lack of respect. Finally, patients agreed that there is a role for patients in weight bias reduction interventions, including the development of patient-led advocacy strategies for obesity as a chronic disease (using a clear definition beyond BMI and focused on health); engaging patients to educate health care professionals on the complexity of obesity and the impact of weight bias on physical and mental health outcomes; and creating a campaign with patient stories to change the portrayal of persons with obesity in the media and public policies; and participating in policy strategies such as the creation of legislations to prevent weight-based discrimination.[175]

Systematic Review of Weight Bias Reduction Interventions Among Health Professionals

The results of this systematic review indicated that there is not sufficient weight bias reduction intervention research.[82] Based on the few studies that exist (N=17) using mixed

samples (students in training and practicing health care professionals), the review concluded that there is no magic way to address weight bias but there are some successful strategies that we can use perhaps in combination with each other. Some of the strategies include: i) presenting facts about the uncontrollable and non-modifiable causes of obesity (i.e. genetics, biology, sociocultural influences); ii) evoking empathy through positive contact with patients living with obesity; iii) peer-modeling, shadowing with empathetic experts; and iv) repeated exposure with patients over the long term. The review concluded that none of these strategies are sufficient by themselves to reduce weight bias and that there is a need to move beyond interventions that aim to raise awareness and deliver information to interventions that raise skills and competencies among health professionals. The review also identified the need to change social norms and address ideologies about body weight[176].

Developing Inclusive Language and Policies to Accommodate People with Obesity

The main argument against making accommodations for persons with obesity is the concern that if the world becomes a place in which persons with obesity can work, play and socialize on even ground with persons without obesity that those with obesity will develop obesity and those who do not currently have obesity will be at a higher risk of developing obesity. The premise behind this argument is that persons with obesity are not entitled to resources designed for people with legitimate disabilities. Individuals think that making life easier for persons with obesity will serve as a disincentive to changing their obesity status and that providing for accommodations implies acceptance of unhealthy behaviour. However, evidence suggests that accommodations policies results in positive outcomes such as: i) increased access to places of healing and self-care, ii) increased opportunities for skill development,

competency development and networks of support; iii) enabling of diversity and respect; iv) increased visibility of persons living with obesity; and v) potential to save money in the health care system. Using inclusive and person-first language can also help reduce weight bias. Person-first language is intended to emphasize the personhood of the individual and treating the obesity as a less relevant or incidental characteristic. Referring to people as obese contributes to weight bias in health care settings. Using the phrase "patient with obesity" rather than "obese patient" is in keeping with policies designed to avoid labeling people with their disabilities or disease. Scientific organizations, including the Canadian Obesity Network, World Obesity Federation, and The Obesity Society now insist on the use of person-first language[177].

Contributions from Critical Weight Studies to Address Weight Bias

This review outlined the historical, theoretical, and practical contributions of critical weight studies to weight bias reduction. There is a long history of fat activism which includes diverse scholars exploring obesity as a biological and cultural phenomenon. These are subtle differences between these scholars but they commonly object to the discourse that: i) obesity is within the control of the individual (i.e. through energy balance, diet and exercise) and ii) losing weight to achieve "healthy weight" status will result in better health. Critical weight studies critique the moralizing nature of the obesity discourse and argue that this discourse impacts how individuals understand their bodies and contributes to weight bias. There is resistance against the Body Mass Index, media depictions of persons with obesity or who identify as fat, and the insufficient focus on the impact of weight bias on mental and social wellbeing of individuals and populations. There is also resistance against the framing of obesity as a disease and a movement towards reclamation of fat. Based on recent research, there is a spectrum of attitudes ranging from self-loathing to fat acceptance among individuals. The review concluded there is a need to improve

messages about obesity, prioritize functional, mental, and social health and wellbeing of individuals and to address weight discrimination. Some fat activists align themselves with the Health-at-Every-Size movement, which focuses on social determinants of health. Others critique this movement for reproducing "healthism".[178]

Pedagogical Strategies to Reduce Weight-Based Oppression

This review focused on pedagogical research that explores how we are taught to think/experience/do health. Critical pedagogy rejects the notion that education is just about giving content and argues that education should develop a critical consciousness among students to question the material they are learning. Social justice education focuses on liberation, transformation, empowerment, anti-oppression and social justice to create an education system that is inclusive, equitable and fair. There are four common threads in social justice education that are relevant to reducing weight bias: i) improving the experiences of people with obesity; ii) changing the knowledge about people living with obesity; iii) challenging the social dynamics of size privilege within society; and iv) addressing reasons why weight bias is challenging. Critical weight studies, critical obesity studies and fat studies scholars teach about weight bias by: 1) intentionally creating an atmosphere of body-inclusivity; 2) gauging what people already know and building on that knowledge; 3) using different theories and perspectives including the lived experience perspective through stories of weight bias; and 4) paying attention to how language, history and privilege can reproduce weight-based oppression. The final conclusions from this presentation were that: 1) we need to recognize that pedagogy matters (i.e. how we deliver messages is very important); 2) we need to start with ourselves (critical reflection on our own bias and privilege); 3) science, stories and processes are important; and that 4) information is not enough (i.e. focus on how we teach and not just what we teach).[179]

Following each section of presentations, summit delegates participated in a facilitated discussion to reflect on key messages and recommendations.

Stigma Reduction Strategies

In the *Knowledge Exchange* session, participants developed an inventory of weight bias reduction interventions and resources from education, health care, and public policy sectors (Table 1). In this session, participants also learned about best practices in stigma reduction initiatives in HIV/AIDS, diabetes, mental illness, and LGBTQ communities.

Lessons from the Field of Mental Illness

There is a vicious cycle of stigmatization in which social stereotypes and labels lead to loathing, discrimination, disadvantage, lower self-esteem, greater disability, and less resistance from people living with mental illness. The mental health field has used three main strategies to reduce stigma. 1) Educational/social marketing campaigns, for which there is little evidence to support its ability to produce long-term behavioural change; 2) Protests, which also have limited evidence to support its ability to produce lasting impact and may induce a "rebound effect" that may increase stigmatizing beliefs even further; 3) Contact-based education, which involve people with lived experience of a mental illness who share their personal stories with an audience and convey positive messages about recovery. Positive contact can increase knowledge about mental illness, reduce anxiety, and increase empathy. This can result in more positive attitudes and anti-stigmatizing behaviours as well as improved social responsibility attitudes. The formats of contact can be direct (face-to-face, which creates an interaction connection) and indirect (video, story books, story-telling, or art, which can be less stressful for individuals, more cost-effective and have broader reach). The target groups for this contact-based education is broad, including schools, journalists, employers, health care providers, and police officers. Lessons learned from

mental illness anti-stigma efforts include: a) programs need to be long-lasting and not just be campaign focused; b) programs need to take a targeted and evidence-based approach; and 3) efforts should leverage networks and coalitions of partners.[43]

Lessons from the LGBTQ Community

Approaches to advance recognition and accommodation of sexual and gender minorities include evidence-based education as a means of challenging stigma and stereotypes, fostering resiliency within the community and empowering individuals. Strategies do not only raise awareness but also equip individuals with the tools and competencies to become effective allies within their communities. Other strategies include leadership and mentorship programs for individuals and resources to support parents, guardians, caregivers, friends, and loved ones.[180]

Lessons from the AIDS Community

AIDS is stigmatized for many reasons but the narrative that HIV/AIDS is a sexually transmitted disease rather than a viral communicable disease suggests that the disease is self-induced and that the disease is the fault of the individual. In the 1980 and 1990s, this narrative influenced public opinion, through pervasive stigmatizing comments and narratives in the media. AIDS stigma is a major barrier for prevention, diagnosis and treatment strategies. It also induces psychosocial stress and resulted in reluctance to access health services by persons affected by AIDS. Individuals may conceal HIV diagnosis to mediate stigma, which has implications for individual and public health. In the 1990's, health care professionals were sources of stigmatization as they had limited education about HIV/AIDS and lacked control for the continuing medical education that was available to them. Organizations also contributed to the stigmatization of AIDS through policies, care procedures, and terminology that acted as barriers

for health care services for persons with HIV/AIDS. The layering of stigma for persons with AIDS is also a key issue (i.e. intersectionality between AIDS stigma and gender, income, mental illness, substance abuse, and ethnicity). Interventions to reduce AIDS stigma included building coalitions of individuals affected by AIDS to change the narrative that AIDS is a self-inflicted disease. Multipronged interventions based on evidence and framed using the socio-ecological framework that included the community as key partners had better impacts on reducing AIDS stigma. Transformative education programs were also effective in reducing AIDS stigma. There are some overlaps between obesity stigma and AIDS stigma: 1) the narrative that obesity and AIDS are self-inflicted: 2) the lack of education about the disease among health care professionals and the fact that health care professionals can be a significant source of stigma; and 3) the power of narratives from individuals living with obesity and AIDS to reduce stigma.[44]

Lessons from the Diabetes Community

Despite many risk factors for diabetes, the majority of Canadians believe that individual behaviour is responsible for the increasing rate of type 2 diabetes. This belief impacts the health and social wellbeing of individuals and affects the support for public policy changes. Stigma reduction strategies by the Canadian Diabetes Association include: 1) position statements on issues that are important to people living with diabetes; 2) Self-advocacy and empowerment strategies; 3) Diabetes Charter for Canada; 4) Public awareness campaigns; and 5) Utilizing human rights acts and policies. [181]

Legal and Policy Approaches to Influencing Social Change

Using legal and policy approaches to reduce weight bias, stigma, and discrimination in education, employment, health care and improving societal attitudes requires a clarification of

concepts. There are different perspectives about what policy and law means. For example, policies could refer to government policies or workplace policies. In addition, legal approaches could involve private or public law. When it comes to the law, the issue that can be addressed is obesity discrimination. But there are also limitations to legal approaches, such as the fact that in Canada health care is under provincial jurisdiction (not federal). Furthermore, the terminology we use may also be a limitation. For example, using terminology such as disability or handicap, which are protected areas under federal and provincial laws, could be used to prevent discrimination against people with obesity, but this may not be acceptable to some people because these terms are also stigmatized. Finally, a major barrier to using law to protect against obesity discrimination is the need to have a complainant. Standing up as a complainant in the court system can be a very painful experience as there is often backlash from the media and the public. Social change through law is possible but it is often slow, burdensome and unpredictable, and painful process. [182]

After each session, participants reflected on the key messages and recommendations from these presentations and wrote down the most important points. These key messages were discussed through a plenary session.

Results

KEY MESSAGES

At the end of day 1, participants agreed that there is substantial evidence demonstrating the pervasiveness of weight bias and discrimination in our society leading to negative educational, health care and social outcomes for individuals with obesity and people of size.[32,156] There is no single approach to prevent or reduce weight bias and discrimination and although education is important, it is not enough. There is an opportunity to use experiential learning with key role

models in both education and health care sectors. We must also change the narrative that obesity is a lifestyle choice and address the myth that weight is entirely under an individual's control.

On the second day, delegates were divided into small working groups based on the sector they represented: health care, education or public policy. There were two groups for each sector. Note takers were assigned to each group to capture the discussion. Participants considered the evidence they heard on the first day and worked together to identify key messages for specific audiences that could be used to address weight bias and obesity discrimination (Tables 2-4); some messages and strategies were similar across all three sectors. After the summit, notes taken over the two days were compiled into a summary report that included next steps and recommendations to address weight bias and obesity discrimination in Canada.[169] Participants reviewed this report and provided comments electronically.

KEY MESSAGE #1: WEIGHT BIAS AND OBESITY DISCRIMINATION WILL NOT BE TOLERATED IN EDUCATION, HEALTH CARE, AND PUBLIC POLICY SECTORS

The first key message that was consistent across all three sectors was the need to recognize the seriousness of discrimination. Participants agreed that discrimination is as problematic as that seen towards other marginalized groups and should not be tolerated. Fundamentally, Summit participants agreed on the need to use terminology and approaches that Canadians should be treated with dignity and respect regardless of their weight or size.

KEY MESSAGE #2: OBESITY SHOULD BE RECOGNIZED AND TREATED AS CHRONIC DISEASE IN HEALTH CARE AND POLICY SECTORS

Both the health care and policy groups felt that to obesity discrimination in health care settings there was a need to recognize obesity as a chronic disease. The World Health Organization defines obesity as:

> *"abnormal or excessive fat accumulation that may impair health. However, the amount of excess fat, its distribution within the body, and the associated health consequences vary considerably between [ ] individuals…BMI does not account for the wide variation in body fat distribution and may not correspond to the same degree of fatness or associated health risk in different individuals and populations".*[183]

Participants also agreed that although the Body Mass Index provides a useful population level measure of obesity, for the purpose of reducing weight bias and obesity discrimination, BMI should not be used as a measure of individual health.[184] Participants also recognized that there remains a gap in our knowledge as to whether excess fat itself is always pathological[122] and people who identify as fat or as a person of size object to the implication that all people with a certain BMI are classified as unhealthy.[95] It is important that we challenge the notion that excess body weight is inherently unhealthy, something that was strongly supported by patients with obesity who participated. Participants agreed that treating obesity as a chronic disease is a key message that could help reduce obesity discrimination for patients accessing health care services. The Canadian Obesity Network's report card also identified stigma as a barrier to access to care for Canadians living with obesity.[101] Furthermore, this key message is aligned with existing studies indicating that individuals with obesity perceive that treating obesity as a disease may help mitigate the lack of evidence-based treatments. [138] We recognize that there is not sufficient research to know whether treating obesity as a chronic disease will reduce weight bias or obesity stigma. However, our frame of obesity as a chronic disease is consistent with decisions of major scientific and medical organizations like the American Medical Association, The Obesity Society, The Canadian Obesity Network, The World Obesity Federation and the World Health Organization. It is imperative that we apply a clear definition for obesity that ensures we are only including individuals whose body fat is actually affecting their emotional, physical and/or functional health. Although BMI is helpful for population health surveillance, it is not a tool that

can be used to clinically diagnose people with obesity. Obesity should be diagnosed by a qualified health professional using clinical tests and measures, beyond BMI. Several authors are involved in the process of redefining obesity.[124]

KEY MESSAGE #3: IN THE EDUCATION SECTOR, WEIGHT AND HEALTH NEED TO BE DECOUPLED

In the education sector (particularly in K-12 schools), there has been an increase in activities designed to promote health that use obesity prevention as a key outcome. To reduce weight bias, participants in the education groups agreed that rather than preventing obesity in schools and communities, there is a need to develop interventions to promote health and body positivity (healthy body image) among children and youth.[185] Considering the important role of parents in shaping eating habits and body image, there is a need to engage parents in interventions to promote healthy body image and healthy eating habits.[186] Childhood obesity prevention interventions in schools can also be developed "upstream" and address broader obesity determinants (e.g. comprehensive school health approaches).[112,187] Interventions to support children and youth who have obesity should also be available through the health care system, ideally with a focus on promotion of healthy behaviours.

PRIORITIZED STRATEGIES TO REDUCE WEIGHT BIAS AND DISCRIMINATION

On day 2, participants also prioritized key strategies to reduce weight bias and discrimination in each sector. These are explained below and listed in Tables 2-4.

KEY STRATEGY #1: CREATING RESOURCES TO SUPPORT POLICY MAKERS

Action is required across sectors, starting with having policies in place to protect people against weight discrimination.[85,188] Participants discussed the need to have Canadian weight bias

and discrimination research synthesized and disseminated to knowledge users, including policy makers. CON-RCO was seen as a key vehicle to disseminate this research and evidence. Participants also believed it would be important for CON-RCO to support policy makers in the development of anti-weight discrimination policies in education, health care and public policy sectors. In the education system, weight-based bullying could be included in anti-bullying policies in schools.[189] In health care, weight discrimination could be included in professional codes of conduct and in health care institutions' anti-discrimination policies. For policy initiatives, weight discrimination can be incorporated into existing education platforms for civil servants (e.g. Gender-Based Analysis Plus (GBA+) Platform).[190] Participants suggested creating weight bias coalitions for each sector involving key champions, researchers, and patient advocates that can support policy changes and activism across provinces and territories.

KEY STRATEGY #2: NOTHING ABOUT ME, WITHOUT ME! USING PERSONAL NARRATIVES FROM PEOPLE LIVING WITH OBESITY TO ENGAGE AUDIENCES AND COMMUNICATE ANTI-DISCRIMINATION MESSAGES

A key strategy that arose from the summit is the use of personal narratives from people living with obesity to engage audiences and communicate anti-discrimination messages. As one participant eloquently explained – *"Nothing about me, without me!"* Hearing narratives from individuals with obesity could help health care professionals, policy makers, and others better understand the detrimental effects of weight bias and discrimination. Although impactful, many individuals with obesity are hesitant to share their stories with others for fear of further stigmatization. We can learn from others who have led stigma reduction efforts in other diseases and populations such as in the mental illness, HIV/AIDS, diabetes, and LGBTQ communities. Engaging people with obesity to create empathy and provide sensitivity training programs for students and health care professionals was also seen an important strategy.[82]

KEY STRATEGY #3: DEVELOPING A BETTER CLINICAL DEFINITION FOR OBESITY

Several medical bodies, including the Canadian Medical Association recognize obesity as a chronic disease.[99] Currently, the health community uses Body Mass Index (BMI), a number calculated by dividing a person's weight by the square of his or her height in meters, to classify obesity. Using BMI alone to define obesity is problematic because, there is a prevalent notion that all individuals with BMI over 30 kg/m^2 are unhealthy and need to lose weight to improve their health.[124,135,191] This fundamental notion can be a driver of weight bias and discrimination.[74]

Recognizing that there is a distinction between the broadly used medical term "obesity" and the social identification process of being a person of size or a fat person, participants agreed that establishing a clear definition of obesity is a starting point needed to address weight discrimination in the health care sector. Several obesity organizations, including the Canadian Obesity Network, The Obesity Society, the World Obesity Federation, and the European Association for the Study of Obesity are working together to develop a better clinical definition for obesity. For the health and policy sectors specifically, participants believed that a better definition of obesity could reduce simplistic approaches to obesity and help improve access to evidence-based prevention and management strategies for people who have this condition. Finally, delegates asked CON-RCO to work with its stakeholders to develop a clear definition of obesity so that the meaning is consistently used in the health care sector.

Conclusion

A key strength of the third Canadian Weight Bias Summit was the inclusion and participation of critical weight studies scholars, patients with obesity, obesity researchers, people who identify as fat, policy makers, and non-governmental organizations from other disease groups and communities (e.g. mental illness, HIV/AIDS, diabetes, and LGTBQ communities).

Using a modified brokered dialogue approach[51], participants were able to review existing evidence and best practices to collaboratively move towards consensus on key messages and strategies that could be used in future weight bias reduction and anti-discrimination interventions. These messages and strategies should be implemented and evaluated using consistent theoretical frameworks and methodologies.

A key priority area for future research highlighted in this review is evaluating the impact of existing weight bias reduction interventions in schools, health care settings and in the media. Furthermore, although weight bias and discrimination is an area where there is room for changes to policy, more research is needed to assess the political feasibility and financial implications of policy initiatives. There is an opportunity to create international collaborations in policy research. The Rudd Centre, for example, has collaborated with researchers in other countries, including researchers from the Canadian Obesity Network, to assess the support for laws to protect against weight-based discrimination. Findings indicate that public support for policies and laws to protect against weight-based discrimination is growing in many countries.[192] Beyond the Canadian context, the recommendations from the third Weight Bias Summit can be tested and evaluated among organizations and stakeholders invested in obesity and weight bias internationally.

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Table 6-1 Examples of Weight Bias & Stigma Resources

Name	Resources	Website
Rebecca Puhl, Rudd Center for Food Policy and Obesity, University of Connecticut, Addressing Weight Bias: Resources and Tools from the Rudd Center	The Rudd Center for Food Policy and Obesity has developed numerous evidence-based resources and initiatives to reduce weight bias. Resources available through the Rudd Center website include: media gallery with non-stigmatizing images and videos of adults and youth with overweight and obesity; guidelines for media portrayal of individuals affected by obesity; educational videos on weight bias; accredited online course to improve obesity care for health professionals; online toolkit with weight bias reduction strategies and resources for health care professionals; fact sheets, strategy-related handouts, and web resources to address weight-based bullying in schools; information handouts about weight, health and bullying and web resources for youth with obesity; resources and handouts to educate parents about weight bias; a website to empower parent advocates with evidence-based resources and tools related to the home, school, media and health care settings; policy briefs to inform key policy makers; and legislation database that tracks the status of different laws to protect against weight-based discrimination.	**www.uconnruddcenter.org/weight-bias-stigma**
Shelly Russell-Mayhew & Angela Alberga,	There is a lack of interventions to reduce weight bias in schools. This Canadian intervention was designed to reduce weight bias among teachers. The intervention increased students' confidence to teach	

University of Calgary, Weight Bias Resources for the Education Sector	health, physical education, and weight-related curriculum to their students and decreased implicit and explicit weight biased attitudes. Key messages from this study included: 1) educating teachers that weight is not a behaviour; 2) target policy and systems change in schools; 3) seek to eliminate weight bias messages, resources and environments, 3) seek resources that promote body diversity and that educate about weight bias. Specific strategies to reduce weight bias in the school sector included: 1) stop discussing weight in schools (i.e. stop weighing and measuring weight in schools through BMI/Fitness report cards); stop disseminating education curriculum materials that has negative weight bias and thin ideal messages; and 3) stop weight-based teasing; 4) question personal assumptions about body size and shape; 5) emphasize health/wellness and quality of life not weight; 6) consider environmental surroundings (i.e. include larger-sized chairs and desks, allow students to move while learning, gym uniforms sizes, etc.); 6) consider weight bias a social justice issue; 7) coordinate change across levels of education (i.e. K-12, post-secondary, educational ministries) to address weight bias in education settings.[193]	
Kimberly Korfu-Uzan, BalancedView: Addressing Weight Bias &	BalancedView: BalancedView is an evidence-based online resource designed to decrease weight bias among health care professionals in British Columbia, Canada. A long-term evaluation of BalancedView and its utility in addressing weight bias and stigma in	**https://balancedviewbc.ca/**

Stigma in Health Care	healthcare was presented. The program improved weight bias attitudes as well as attitudes about treating patients with obesity. Evaluation results also showed increases in participants' knowledge about weight bias and skills to address weight bias and stigma in their workplace. Six month post-evaluation showed that participants applied their knowledge and skills in their work to reduce weight bias. [194]	
Anne Wareham, "Health, Not Weight" Collaborative in Newfoundland and Labrador,	The "Health, Not Weight" Collaborative in Newfoundland and Labrador, Canada, was formed to unite research, policy, and practice related to promoting consistent health messaging and addressing weight bias. The mission of the group is to mobilize individuals, communities, and organizations in the province, to use an evidence-based "health, not weight" approach in how they define, promote, and measure health. The group aims to promote a "health, not weight" approach to create an inclusive and respectful society for all bodies. Members of the group have been involved in various activities to support this aim, such as: • Developing *Thinking about Your Weight, What about Your Health?*—a NL Provincial Government health promotion information booklet for use by the public. • Leading a "promoting health, not weight" intervention targeting Public Health Nurses in the province. • Developing Janeway Lifestyle Program's Health Behaviour Matters toolkit—a necessary tool that	**http://www.livinghealthyschools.com/bodyimagetoolkit.html** **http://www.healthyeatingnl.ca/online-resources/thinking-about-your-weight-what-about-your-health/** **http://www.easternhealth.ca/Professionals.aspx?d=1&id=1880&p=81**

	helps primary care practitioners to discuss healthy behaviour with all children without negatively focusing on weight. It also contains a document on how to discuss weight with parents without causing sigma. • Developing resources such as the Good Health for EveryBODY program and a training program to support community leaders in its implementation.[195] • Writing and promoting the Body Image Network's Grade 2 and 4 toolkit. • Advocating for the inclusion of body size in school board anti-bullying policies.	
Sara Kirk	The "Behind the Scenes: Addressing Weight Bias and Stigma in Obesity" is an online Massive Open Online Course (MOOC) developed by Dr. Sara Kirk, Canada Research Chair and Professor of Health Promotion at Dalhousie University. Dr. Sara Kirk and Dr. Sheri Price also developed and implemented an arts-based, inter-professional workshop with health professionals and patients living with obesity across Atlantic Canada. This intervention explored multiple perspectives on how obesity is managed in the health care system through interviews with individuals with obesity, health care professionals and policy makers. The intervention used drama as an innovative and engaging knowledge translation tool to address weight bias and stigma and to facilitate communication between health care professionals and individuals living with obesity.	https://www.canvas.net/browse/canvasnet/dalhousieu/courses/weight-bias-stigma-in-obesity This video shows a dramatic presentation, or drama, depicting the relationship between a health professional and an individual living with obesity. The setting is the office of a family doctor. https://www.youtube.com/watch?v=LVX4_s5IP3g

Table 6-2 Small group discussion results from the health sector

Sector: HEALTH	**Key Messages**		
	Applied to all audiences: - Obesity should be treated as a chronic disease. - Weight bias and obesity discrimination should not be tolerated.		
Audience	**Key Message(s)**	**Strategies / Tactics**	**Outcome Measures**
Patients with obesity	- You have the right to be treated like everyone else and not be discriminated against because of your obesity. - It is okay to talk to your healthcare provider about obesity. - Obesity management is not just about eating healthy and moving more.	- Engage patients through social media (E.g. CON-RCO Facebook and Twitter). - Engage patients in public gatherings - Provide education (E.g. lunch & learns). - Develop a media campaign.	- How many people sign up to CON-RCO social media pages. - How many stories have been created and shared.
Policy Makers	- Weight bias should be included in relevant policies that protect against discrimination. - Obesity needs to be treated as a chronic disease.	- Develop a position statement against weight bias and obesity discrimination. - Engage with health professional associations to include weight bias and discrimination in codes of conduct/ethics. - Develop a standardized obesity care protocol. - Engage and educate policy makers on obesity as a chronic disease. - Develop certification checklist for bariatric access and quality care (Accreditation levels).	- Criteria to be included by Accreditation Canada and Required Organizational Practices (ROP). - CON-RCO will be the platform for successes and ideas.

Sector: HEALTH	Key Messages		
		- Address discrimination against health care professionals working in bariatric (obesity) medicine.	
Health Care Professionals	- Use patient/people first strategies and language - Be empathetic – don't blame the patient. - Address the unique needs of patients with obesity. - Focus on behaviour and health outcomes.	- Change the curriculum for future health professionals. - Educate current health professionals (E.g. lunch and learns, continuing medical education programs). - Peer mentoring; for example, find champions in primary care to increase buy-in.	- Attendance at education events and sessions. - Measure engagement with follow up questionnaires. - Number of clinicians and patients that present together. - Number of health professionals who join CON-RCO and become weight bias champions.

Note: Includes key messages that can be applied to all the audiences as well as key messages specific to the audience. For specific key messages, strategies/tactics as well as outcome measures are listed.

Table 6-3 Small group discussion results from the education sector

Sector: EDUCATION	Applied to all audiences: - Weight-based discrimination should not be tolerated. - Promote body positivity and inclusivity among children and youth.		
Audience	**Key Message(s)**	**Strategies / Tactics**	**Outcome Measures**
- Professional associations - School and school districts - Parents - Unions	- Discrimination hurts everyone. - Obesity should not be the 'hook' for health news or education. - Appreciation of diverse body sizes benefits everyone.	- Create resources such as lesson plans, slide banks, links, etc. - Invite collaborators and partners to consult and co-create resources. - Leverage existing programs/packages for the inclusion of weight bias reduction information, such as with	- Number of people accessing resources. - Number of collaborators and partners consulted. - Number of tables or settings where weight bias is represented.

- Universities (pre-service teachers); - Administrators - Provincial and National Organizations	- Decouple health and weight. - Promote body inclusivity and positivity. - Include body size diversity in bias and discrimination policies. - Foster resilience in children and youth.	nutrition, physical activity, and anti-bullying. - Develop CON-RCO information briefs by sector. - Initiate CON-RCO awards for advocates; - Identify an inventory of successes and best practices. - Encourage peer-to-peer translation of knowledge, resources, and tools. - Identify and utilize role models or champions. - Develop a vulnerable populations strategy.	

Note: Includes key messages that can be applied to all the audiences indicated as well as strategies/tactics and outcome measures.

Table 6-4 Small group discussion results from the public policy sector

Sector: POLICY	Applied to all audiences: - Obesity should be treated as a chronic disease. - Weight-based discrimination should not be tolerated.		
Audience	**Key Message(s)**	**Strategies / Tactics**	**Outcome Measures**
Canadian Obesity Network and others involved in policy: - Federal and Provincial civil service - Professional associations and the regulatory bodies that oversee them	- Obesity to be recognized and treated as a chronic disease. - Addressing weight discrimination should be a public policy priority. - Weight discrimination should not be tolerated.	- Work with CON-RCO stakeholders to develop a clear definition of obesity. - Work with researchers to synthesize weight bias and discrimination prevalence in Canada. - Support policy makers in the development of policies against weight discrimination. - Engage policy makers in identifying strategies for addressing weight	- CON-RCO to develop a weight discrimination policy in place to guide other policy makers. - Number of weight bias training initiatives. - Number of associations incorporating weight discrimination in their policies and the quality of those engagements.

- Government legislators and administrators - Legal professionals		discrimination in their organizations (i.e. incorporate weight bias training in the federal government's Gender-based Analysis Plus education platform). - Develop weight bias coalitions by sector across provinces and territories engaging key champions, health professionals, and patient advocates.	

Note: Includes key messages that can be applied to all the audiences indicated as well as strategies/tactics and outcome measures.

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CHAPTER 7 DISCUSSION & CONCLUSION

There is significant evidence that weight bias is pervasive throughout health care settings and that stigma causes negative health and social outcomes at the population level.[32] In 2011, the Canadian Obesity Network (CON-RCO) and its partners, convened the first Canadian Weight Bias Summit in which an expert panel recommended the engagement of health professionals, policy makers, patients, partner organizations and the media to increase awareness about the extent and severe negative consequences of weight bias on Canadians.[196] The panel also recommended more research to identify drivers and barriers towards reducing 'institutionalized' weight-based discrimination in health care, education and public policy. The council agreed that it would be a major accomplishment for CON-RCO and its partners to have an impact on changing the attitudes and beliefs of health professionals.

To follow up on the Weight Bias Summit, CON-RCO with support from the Public Health Agency of Canada (PHAC) conducted a study to identify existing obesity myths (i.e. non-evidence based arguments about obesity and people with obesity) that contribute to weight bias and stigma in Canadian health care and public domains.[197] To counteract these myths, 10 relevant evidence-based statements were developed. Health professionals were then surveyed to review these 10 myth-fact format messages. Although respondents endorsed these messages, they believed that to change deeply rooted misconceptions, multi-level knowledge translation strategies would be needed. Obesity experts also agreed that more research is needed to explore how current obesity narratives have been normalized through dominant institutional and cultural practices so that we can begin to change them.

My research study built on the first Canadian Weight Bias Summit expert panel recommendations and the CON-PHAC obesity myth survey. Specifically, I sought to engage

people living with obesity and public health policy makers who work in the area of obesity prevention in a qualitative study aimed at understanding how obesity narratives are constructed and enacted. By developing a deeper understanding of the lived experiences of public health policy makers and people with obesity, I hoped to understand how obesity narratives relate to each other and how we can begin to address tensions between them.

In the first part of this study, I lived alongside persons with obesity to learn about their experiences living with obesity, weight bias and obesity stigma. Over a two-year period, I had many conversations with participants in places where they lived, worked, and enjoyed leisure activities. We went for dinners and coffee together as well as talked on the phone, emailed or texted one another to talk about their experiences with weight bias. I took field notes and converted them into narrative accounts, which participants read, re-read and edited with me. I then analyzed these narratives using the three-dimensional narrative inquiry space to find meaning in these experiences. I looked at these stories from a temporal perspective thinking about the past experiences and how they affected the present and how they may impact the future of participants' stories and experiences. I also considered the social context in which these experiences took place and found that people experience stigma from their families, friends, teachers, co-workers, and health care professionals as well as the general public. Finally, I looked at the stories and considered the places in which these experiences too place (at home, at work, in schools, in hospitals, etc.)

Once we finished the narrative accounts, I worked with participants to develop counterstories to try and address some of the stereotypes, misconceptions about obesity and to repair some of their own personal damaged identities. Using the narrative inquiry approach helped me and participants learn and change together. We learned that the fundamental driver of participants' experiences with weight bias is a lack of understanding of obesity. This lack of

understanding can be linked to public health narratives that oversimplify obesity as an unhealthy eating and lack of exercise issue. It also leads to social narratives that obesity is a self-inflicted choice and that it is up to individuals with obesity to address their own obesity. This lack of understanding in turns can lead to people experiencing weight bias and stigma. The stories revealed people being treated differently by their families, friends, coworkers and health care providers. This lack of understanding of obesity also led to consequences for individuals' conceptualization of their own self. Many internalized the damaged social identities of obesity and felt that they were abnormal, did not fit in this world and this affected their self-confidence and self-worth. That internalization in turn impacted their emotional response and triggered feelings of shame, blame, vulnerability, stress, depression, and even suicidal thoughts and acts. In addition, the stories revealed behavioural responses to weight bias such as avoidance of health promoting behaviours, hiding food, eating in secrecy, and isolating themselves from social situations. These weight bias experiences also hindered their obesity management process and rehabilitation and recovery process. Participants shared how they embraced recovery from weight bias and stigma by developing self-compassion, self-acceptance and in their counterstories talk about their efforts to resist damaged identities and demand respect, dignity and better care.

For me, the most important finding from this narrative inquiry is that the public health narrative of obesity is at odds with the experiences of people with obesity.

Once I had learned about the impact of public health obesity narratives on the lives of people living with obesity, I wanted to identify the specific public health obesity narratives that contribute to weight bias and stigma. In the second part of my study, I conducted a critical review of Canadian obesity prevention policies drawing on critical obesity research and theories such as post-structuralism feminism, healthism, and social stigma. My goal was not to assess the effectiveness of obesity prevention policies, but rather to understand how obesity prevention

policies and strategies construct a specific narrative about obesity and people with obesity. Through this critical review of Canadian obesity prevention public health policies and strategies, I identified five prevailing narratives that can have unintended consequences for people with obesity. [83] The prevailing narratives were: 1) childhood obesity threatens the health of future generations and must be prevented; 2) obesity can prevented through healthy eating and physical activity; 3) obesity is an individual behaviour problem; 4) achieving a healthy body weight should be a population health target; and 5) obesity is risk factor for other chronic diseases not a disease in itself.

The third part of this study was to discuss these narratives with public health policy makers in order to understand how these narratives are generated and enacted. Thus, in this part of my I conducted a qualitative study with public health policy makers working in obesity prevention to understand how they enact obesity discourses, personally and professionally. The results of this qualitative study revealed that public health policy makers generally understand obesity as a complex public health problem, however they face personal, institutional, and political barriers operationalizing this understanding of obesity. Public health policy makers negotiate obesity narratives from various perspectives including biomedical, systems level frameworks, and socio-cultural models of health. This causes tensions between personal and professional narratives of obesity. Public health policy makers also talked about the dominant narrative being the biomedical perspective which views obesity as an "energy in and energy out" problem and how this perspective leads to certain assumptions being made about obesity in policies and programs. For example, the narrative that obesity can be prevented primarily through healthy eating and exercise frames the types of interventions that are developed in public health. There was an emerging recognition of the unintended consequence of public health narratives and how we need to shift our paradigm towards health and away from weight. Public health policy makers have

begun to resist master narratives of "healthy weights" and are increasingly aware of the impact of weight bias and obesity stigma. However, policy makers also talked about the political barriers to systems level approaches and the pervasive focus on individual behaviour.

With the results of these three studies at hand, I proceeded to take the fourth and final part of my study. My primary aim in doing my doctorate study in this field was to affect change in public health policy and practice. Therefore, in the final part of my study, sensing the tensions between the narratives of individuals living with obesity and the narratives of public health policy makers, I used a modified brokered dialogue method to explore ways to address these tensions. Through a moderated workshop and in partnership with the Canadian Obesity Network's EveryBODY Matters Collaborative, we brought together obesity researchers, critical weight scholars, health care professionals, public health policy makers and individuals affected by obesity in a two-day workshop. The goal of the 3rd Canadian Weight Bias Summit was to review current evidence and to move towards consensus on key weight bias reduction messages and strategies for future interventions. Although, there were polarizing debates, participants were able to recognize the interests and perspectives of others, which was a critical step towards finding solutions.

Participants agreed to the following key messages: 1) weight bias and obesity discrimination should not be tolerated in education, health care, and public policy sectors; 2) obesity should be recognized and treated as chronic disease in health care and policy sectors; and 3) in the education sector, weight and health need to be decoupled. Furthermore, consensus on future strategies included: 1) creating resources to support policy makers; 2) using personal narratives from people living with obesity to engage audiences and communicate anti-discrimination messages, and 3) developing a better clinical definition for obesity. The key

messages and strategies identified through the Summit can now be tested and evaluated through future weight bias reduction interventions.[78]

Theoretical Framework for Future Obesity Stigma Interventions

It is my hope that this study can contribute to emerging theoretical and practical knowledge for addressing weight bias and obesity stigma. Figure 1 provides an overview of obesity stigma processes, their impact on individual and population health outcomes and potential strategies to address them. In this figure, I have divided obesity stigma concepts into two different components: external and internal stigma processes.

In this study, participants discussed their experiences with external stigma at home, school, workplaces, health care, and in public settings. This finding is consistent with existing weight bias research from many countries. [198] These experiences of external stigma happen across the lifespan and have a direct influence on the health and wellbeing of individuals with obesity. Weight bias attitudes, social stereotypes, misconceptions and labels about obesity lead to experiences of damaged identities, which result in stigmatization and discrimination experiences in schools, workplaces, health care, and in public settings.[19,115] Interventions to address external obesity stigma could involve programs to address weight bias and obesity stigma in schools, health care settings, and in workplaces. Sociocultural interventions to address social norms about obesity are also needed.[126] These policy and system level interventions should involve individuals who are affected by obesity stigma.

Consistent with emerging weight bias research, study participants also experienced internal stigma.[28,75,165] Specifically, study participants shared their experiences with internalized negative attitudes, beliefs and stereotypes about obesity and how this impacted their health behaviours and wellbeing. Many participants discussed how internalized stigma can be a barrier for obesity

management. Interventions to address internalized weight bias and stigma are also needed. Supporting persons living with obesity can mean developing interventions to address internalized weight bias attitudes and beliefs and self-stigmatization. Such interventions should also be person-centered and could involve programs such as support groups designed to prevent and address internalized weight bias among children, adolescents, and adults.

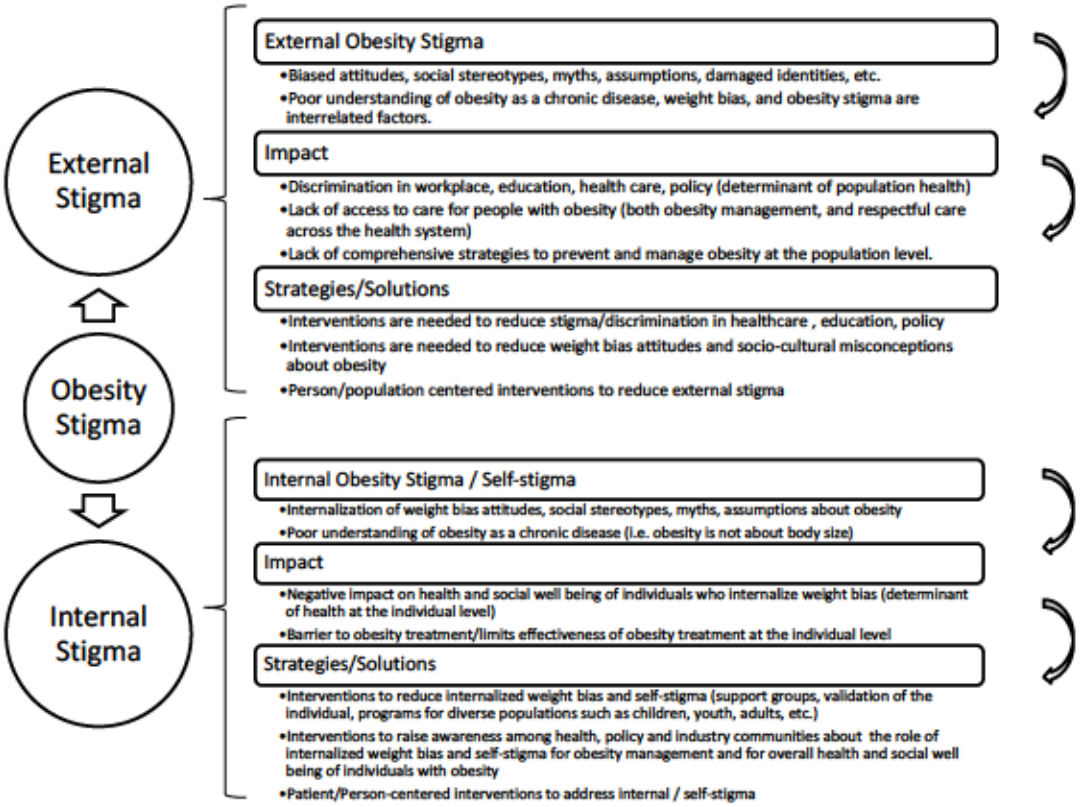

Figure 7-1 Overview of obesity stigma processes, impact and potential strategies.

Future research should assess the impact of developing person-centered "counterstories" and their role in dislodging myths and misconceptions about people with obesity and reducing weight bias and obesity stigma. Learning from other communities that have addressed stigma (e.g. HIV/AIDS, LGBTQ, mental illness), we understand that engaging people affected by stigma in research and interventions is necessary and effective. In this study, we provided a space for

people with obesity to work collaboratively with researchers, public health policy makers, and health care professionals. More research is needed to continue to give people with obesity a voice and opportunities to influence social change.

Implications for Public Health

From public health perspective, why do weight bias and obesity stigma matter? We have significant research showing that stigma is common and affects large portions of the population. There are many stigmatized conditions such as HIV/AIDS, mental illness, and other chronic diseases, including obesity. Studies show that stigma impacts health and social outcomes such as housing, employment, income, social relationships, psycho-social or behavioural responses, health care access as well as overall morbidity and mortality. Overall this research shows that stigma can be an added burden that affects people above and beyond any impairment they may have.[79]

Weight bias and obesity stigma are pervasive in our society. The Rudd Centre for Food Policy and Obesity has measured the prevalence of weight bias and obesity stigma. These studies show that 63% of children with obesity who attend elementary schools face higher risk of being bullied by peers; 54% of adults with obesity report being stigmatized in their workplace, 64% of adults with obesity report experiencing weight bias from health care professionals, and the media tends to portray obesity and individuals with obesity in a very negative way.[192] There are many consequences of weight bias and stigma. Weight bias and obesity stigma can result in increased morbidity and mortality by affecting individual's health and public health policies that can result in health and social inequalities.[74]

Considering the impact of weight bias and obesity stigma for population health outcomes, it is important to investigate how public health can address weight bias and obesity stigma. I have

been working in the field of obesity for over 15 years. Through my work at the Canadian obesity network, the issue of weight bias and its impact on policies became a key interest for me. I also started to see some public health strategies that tried to instill fear and shame into parents and children with obesity as a way to promote behaviour change. These public health obesity prevention campaigns were the impetus for my doctoral research.

Based on my doctoral research experience, here are some possible recommendations for public health practice and policy:

- recognize weight bias and its impact on population health outcomes
- monitor and conduct surveillance on the prevalence and impact of weight bias
- address weight bias in various populations by developing and evaluating interventions.

As public health professionals, I think it is also important to:

- critically reflect on the unintended consequences of public health strategies
- engage in person-centered public health
- leverage existing Chronic Disease frameworks to implement comprehensive obesity prevention and management strategies (rather than solely focusing on prevention and individual behaviour approaches)

Furthermore, as public health professionals, I believe we can apply a weight bias lens just like we apply a gender lens to public health policies and strategies. This may help us to:

- challenge the individual responsibility narrative
- consider the complexity of obesity and the lived experiences of people with obesity
- challenge the healthy weight narrative and consider the implications for weight bias and stigma on population health outcomes

- consider aiming healthy eating and physical activity strategies at the whole population rather than singling out people with obesity
- promote body diversity in our public health strategies
- use person first language in public health strategies and policies about obesity to be consistent with Chronic Disease frameworks
- change the portrayal of people with obesity by using positive and body diverse images in our campaigns.

Limitations

Although we had a small sample in the narrative inquiry, our epistemological perspective is that knowledge is dynamic. Our intent was not to reduce the experiences of people with obesity to generalizable results but to honour participants' realities and experiences and to deepen our knowledge about weight bias and obesity stigma. Although there may be common threads between the narratives presented in this study, we recognize that experiences cannot be interpreted in isolation. We also recognize that the narratives are fundamentally temporal. These narratives reflect what has been, what is now and what is becoming from the perspective of study participants. As participants, researchers, and readers, we also understand that our own lives are under composition, meaning that our knowledge or stories are always changing.[52]

The results from our critical review of public health obesity prevention policies and the interviews with public health policy makers, although not novel, contribute to the larger body of evidence that weight bias and obesity stigma are important public health issues. The strength of these components of our study is that it provides a Canadian contextual perspective. Much of the existing weight bias and obesity stigma research comes from the United States and increasingly from Australia and Europe. Considering that there are social and cultural differences between

countries, having Canadian perspectives can be helpful for the development of future interventions.

Finally, the last study in which persons with obesity, health care professionals, researchers and policy makers moved towards consensus on strategies and principles to address weight bias in Canada, also represents a small study population. However, the results of this study have more practical use for our knowledge user – the Canadian Obesity Network. Although this study was conducted in Canada, the results may also be useful for health professionals and public health policy makers working in other countries.

Conclusion

Obesity is a heterogenous chronic disease affecting millions of Canadians. Unfortunately, obesity is a highly stigmatized disease and people with obesity face widespread bias and discrimination. Our critical policy analysis indicate that master narratives of obesity contribute to the simplification of obesity as a lifestyle choice, which can increase weight bias and obesity stigma. People with obesity experience public health master obesity narratives through direct internal and external weight bias, stigmatization and discrimination. Through this study, we developed ten counterstories to address damaged identities that people with obesity experience in their daily lives. Our study also found that there is an emerging recognition amongst public health policy makers that weight bias and obesity stigma influences population health outcomes and should to be addressed. Finally, through this study, Canadian researchers, health care professionals, public health policy makers and individuals with obesity moved towards consensus on strategies and principles to reduce weight bias in Canada. More research is needed to develop interventions to address internal and external weight bias and obesity stigma.

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