

Self-Compassion as an Alternative Approach to Obesity Treatment

By

Natalie Nuñez

A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Counselling (MC)

City University of Canada

Vancouver BC, Canada

September 30, 2019

APPROVED BY

Christine Dennstedt, Ph.D., Thesis Supervisor, Counsellor Education Faculty,

Jacqueline Mann, M.A., Faculty Reader, Counsellor Education Faculty

Division of Arts and Sciences

### Abstract

Obesity is a complex and multi-faceted condition that has been associated with numerous negative health effects. Traditional approaches to obesity treatment focus on weight loss through behaviour change and place the responsibility on the individual to maintain a healthy weight. However, traditional approaches to obesity treatment have been shown to be ineffective and can contribute to weight stigma. Weight stigma, the prejudice and discrimination that higher body weight individuals face, has been linked with numerous negative outcomes and has been argued to be more harmful to individuals' health than obesity itself. Therefore, alternative approaches to obesity treatment that can help individuals cope with the detrimental impacts of weight stigma are needed. This thesis explores how the practice of self-compassion can be used to help higher body weight people better relate to themselves and their bodies. Self-compassion is a unique approach to helping individuals with obesity and consists of three main elements: kindness, a sense of common humanity, and mindfulness. Based on the literature reviewed, self-compassion has the potential to help improve the overall health and well-being of higher body weight individuals and may help them cope with the negative effects of weight stigma.

*Keywords:* self-compassion, obesity, weight stigma

### Acknowledgements

The completion of this thesis was only made possible with the support from my mentors, colleagues, friends, and family. I would like to express my gratitude for my thesis advisor, Christine Dennstedt, for her continued guidance, insight, and support throughout this thesis journey. Many thanks to my faculty reader, Jacqueline Mann, for taking the time to review my work and providing me with invaluable feedback. I would like to extend my sincerest gratitude to my parents, whose love and support made this thesis possible. In addition, thank you to my wonderful partner Matthew, for keeping me sane throughout this process. Finally, I would like to thank the staff and patients at the Medical Weight Management Centre, who served as the inspiration for this thesis.

### Dedication

This thesis is dedicated to my father, my first and greatest teacher in life. Thank you for all the hours you spent helping me with every science fair project, speech fest, book report, and more. I would not be where I am today without all of the time, love, and support you have given me throughout my educational journey.

## Table of Contents

Abstract .....	2
Acknowledgements .....	3
Dedication .....	4
Chapter 1: Introduction .....	7
Purpose .....	9
Significance .....	9
Theoretical Framework .....	11
Methods .....	12
Definitions .....	12
Situating the Author .....	16
Organization of Remaining Chapters .....	17
Chapter 2: Understanding Obesity .....	18
The Classification of Obesity .....	19
Prevalence and Population Trends .....	21
The Impact of Obesity.....	22
Etiology of Obesity .....	25
Weight Related Paradigms .....	29
Summary .....	36
Chapter 3: Weight Stigma and Discrimination .....	39
Weight Stigma .....	41
Discrimination in Different Areas of Life .....	42
Health Consequences of Weight Stigma .....	47

Weight Stigmatization of Children and Youth .....	53
Weight Bias Internalization.....	55
Summary .....	57
Chapter 4: Self-compassion as an Alternative Approach to Obesity Treatment .....	59
Understanding Self-Compassion .....	60
How Self-Compassion can be Useful for Higher Body Weight People .....	64
Summary .....	75
Chapter 5: Discussion .....	78
Clinical Implications .....	78
Limitations .....	80
Recommendations for Future Research .....	81
Personal Reflections .....	81
Executive Summary .....	85
References .....	87

## Chapter 1: Introduction

*We suggest that a different solution to the “obesity problem” is needed – a solution that acknowledges both the multifaceted nature of health and the complex interaction between person and situation that characterizes the connection between weight and health.*

– Logel, Stinson and Brochu (2015, p. 678)

According to the International Obesity Taskforce (2010), the rates of obesity worldwide have reached “epidemic” proportions. However, the presence of obesity in society is a fairly recent phenomenon in human history. In fact, the term “obesity” did not appear in the English language until the seventeenth century and at the time was used as a positive literary term for full-figured (Eknoyan, 2006). For the majority of human history, the arts, literature, and medical opinions depicted the accumulation of fat on the body as desirable and attractive. As the majority of the population was chronically malnourished due to the scarcity of food, a full-figure was a sign of health and prosperity (Brown & Konner, 1987).

However, the second agricultural revolution in the eighteenth century brought forward technological advances that led to the ability to store and produce food more effectively. This increase in the amount and variety of food led to an increase in public health, longevity, and body size. Once an abundance of easily accessible food and a decline in routine physical activity became the norm in Western Society after the end of the Second World War, the prevalence of obesity began to rise (Eknoyan, 2006). The rise in obesity was coupled with the stigmatization of fatness. Near the end of the twentieth century, thinness became the ideal standard of beauty and fatness became detested and feared (Sobal, 2001).

In the present day, the topic of obesity is ubiquitous. It is difficult to listen to the news or read about the latest health trends without encountering a discussion of the “obesity epidemic”.

For instance, a study looking at articles published in *The New York Times* between 1990 and 2001 found over 750 articles published on the topic of obesity (Boero, 2007). In comparison, *The New York Times* published only 672 articles on the AIDS epidemic, 544 articles on smoking, and 672 articles on pollution during this same time period.

Countries across the globe have declared that the rising rates of obesity are a health crisis and immediate action must take place to combat these rising rates. Public health campaigns, diets, exercise programs, medical interventions, and surgeries are among the growing number of treatments for obesity. The overwhelming message is clear: people are “too big” and “too unhealthy” and something needs to be done.

The majority of these traditional approaches to obesity management place the focus on the individual. Individuals who are overweight and obese are encouraged to lose weight through behaviour change. However, these weight-loss methods have proven to be largely ineffective, as the global rates of obesity remain at an all-time high (Tomiyama et al., 2018). In fact, attempts to study the efficacy of these approaches have mixed, weak, and sometimes contradictory findings (Logel et al., 2015). This suggests that obesity needs to be approached from a different perspective.

This thesis will focus on an alternative approach towards the treatment of obesity. Rather than focusing on the numbers on the scale, this thesis will suggest focusing on the mental well-being of the individuals who live everyday in larger bodies. Mental well-being refers to the emotional, psychological and social well-being of individuals, rather than just the absence of mental illness (Provincial Health Services Authority [PHSA], 2013). The approach will acknowledge the sociocultural and environmental factors that influence an individual’s health and weight, and will provide a more compassionate and holistic approach to obesity care. This

thesis will explore how the practice of self-compassion can be used to help higher body weight people better relate to themselves and their bodies. Moreover, it will discuss how self-compassion can be used as a tool to cope with the stress of weight stigma and discrimination.

### **Purpose**

The purpose of this thesis is to contribute to the existing discussion surrounding the way our world currently deals with obesity. This will be done by exploring the concept of self-compassion as an alternative method of helping people with obesity relate to themselves and their bodies. Moreover, this thesis will critically assess how weight stigma permeates traditional methods of obesity treatment and negatively impacts individuals living with larger body sizes. This thesis will consolidate the current literature on the topics of obesity, weight stigma and self-compassion. This consolidation will help inform mental health practitioners of a potential tool that can be used with clients who are impacted by the negative implications of obesity and weight stigma. In addition, this paper will challenge how the general public views and discusses obesity and will encourage a more compassionate perspective towards those most greatly impacted by the topic. Furthermore, this work is intended to inspire future empirical research to determine the efficacy of self-compassion as a way of improving the way individuals with obesity relate to themselves. Finally, this work is intended to encourage the development of mental health policies and programming that take a more compassionate and holistic view of health and weight.

### **Significance**

In 2016, over 1.9 billion adults were overweight and 650 million individuals were obese according to the World Health Organization (WHO). In Canada, the prevalence of obesity has increased by 300% in the past 3 decades (Twells, Gregory, Reddigan, & Midodzi, 2014).

According to Statistics Canada (2014), the national rate of adult obesity had reached 20.2% and nearly half of the population is predicted to be overweight or obese within the next 5 years.

While the prevalence of obesity continues to rise, so do the concerns over the “obesity epidemic” and its impact on the health of the population, rates of chronic illness, and the increase in health care costs (PHSA, 2013). This growing concern appears to provide fuel for the growing prevalence of weight stigma, which has been referred to as the “shadow epidemic”. Current research suggests the majority of individuals who are overweight and obese have endured some form of stigma, with experiences of stigmatization increasing with body size (Puhl & Heuer, 2009; Friedman et al., 2005).

Recent literature has documented the negative impacts that weight stigma can have on the physical and psychological health of overweight and obese individuals (Nolan & Eshleman, 2016; Pearl & Puhl, 2018; Vartanian & Porter, 2016). This research has also shown that weight stigma is a precipitating factor in the maintenance of obesity and acts as an obstacle for individuals attempting to lose weight (Sutin & Terracciano, 2013). Yet despite this research documenting the negative impacts that weight stigma can have on an individual’s health (Puhl & Suh, 2015), very few of the numerous weight loss solutions and approaches to combat obesity, address weight-based discrimination.

This thesis will explore one possible tool that mental health practitioners can use with individuals to help cope with the stress of weight-based discrimination— practicing self compassion. The practice of self-compassion can help higher body weight people show compassion towards themselves in times of suffering. Neff & McGehee (2010), define self-compassion as “the ability to hold one’s feeling of suffering with a sense of warmth, connection,

and concern” (p. 226). Self-compassion entails three integrated components: kindness towards the self, recognition of our shared humanity, and mindfulness.

Research shows the practice of self-compassion is related to numerous positive outcomes such as increased happiness, optimism, personal initiative, and connectedness. Furthermore, this research also shows that self-compassion decreases depression, anxiety, rumination, and neurotic imperfectionism (Neff, 2009). In regards to eating behaviours and body-image, studies have already shown it to be a useful intervention in reducing guilt after overeating among chronic dieters (Adams & Leary, 2007) and helping young women cope against body-shaming comments from family members (Daye, Webb, & Jafari, 2014). Finally, it appears that self-compassion may guard against some of the harm caused by stigma associated with obesity. For instance, Hilbert et al. (2015) found that individuals who were overweight and obese, who also scored higher on self-compassion scales, depicted lower rates of the negative effects of weight stigma, regardless of BMI.

### **Theoretical Framework**

The worldview that this thesis will be written from is a transformative perspective. This perspective assumes that research needs to address social injustice and reform social structures that marginalize groups of individuals (Creswell, 2014, p. 38). I believe that individuals who live in larger bodies are marginalized in society and face oppression, suppression, and alienation. Therefore, my research challenges the systemic weight bias present in the media, our language, our health-care systems, and our society at large. One of the goals of my research is to raise the collective consciousness of society and start a conversation about the unique issues individuals with larger body sizes face as a result of weight stigma.

In addition, this thesis will be guided by critical theory. According to O'Hara and Taylor (2018), critical theory “seeks to identify and analyze the root causes of social issues and to propose ways to alleviate or resolve them” (p. 2). The most dominant message coming from health authorities and the media is that overweight and obese individuals are unhealthy and lack the will-power and self-control to be a “normal weight”. This message has contributed to weight stigma, unjust social relations and oppressive attitudes and practices towards people with larger body sizes. Therefore, I am critical of the societal discourse surrounding obesity and would like my research to raise awareness of how our society views obesity and help pave the way for a kinder and more inclusive way of thinking about body size.

### **Methods**

This thesis will be a non-empirical manuscript thesis. This thesis contains an introductory and concluding chapter, as well as three chapters that are interrelated, yet can be read as stand alone papers. The research question this thesis explores is how self-compassion can be used to help individuals with obesity. To address this research question, this paper will explore three considerations. First, it will define obesity and how the medical community and the world conceptualizes it. Second, it will define weight stigma and explore how it impacts higher body-weight people. Finally, it will define self-compassion and explore how it can be used as a tool to help higher body weight people cope with weight stigma. In order to do this, this thesis will review the existing literature surrounding the topic and provide clinical recommendations for mental health practitioners who work with this population.

### **Definitions**

The following definitions provide clarity on the language that will be used through out this paper.

## **Obesity and Related Terms**

**Obesity and Overweight.** According to the WHO (2016), overweight and obesity are defined as “abnormal or excessive fat accumulation that presents a risk to health” (para. 1). In 2013, the American Medical Association classified obesity as a complex and chronic disease that requires medical attention (Kyle, Dhurandhar, & Allison, 2016). According to most common medical practice, individuals are classified as overweight or obese based on their Body Mass Index (BMI), an index of weight to height. However, there is much speculation on the validity of this classification system, which will be explored in more depth in chapter two.

**Body Weight and Higher Body Weight People.** It is of note that this thesis will take the position that the terms “overweight” and “obesity” reflect arbitrary classifications that feel stigmatizing to many of the individuals who are given these titles (Puhl, Peterson, & Luedicke, 2013). Therefore, this paper will use the term body weight to refer to a person’s relative fatness or leanness (Logel et al., 2015). Higher body weight people are individuals who would be deemed overweight or obese according to the common medical classification systems. However, when referring to specific studies that use the term “overweight” and/or “obese” as one of their defining characteristics for participants, the terms will be used for accuracy and consistency.

## **Weight Stigma and Related Terms**

**Weight stigma.** This thesis will define weight stigma as the “social devaluation and denigration of people perceived to carry excess weight” (Nolan & Eshleman, 2015, p. 15). It is the overarching term that includes both weight bias (prejudicial attitudes and beliefs) and weight discrimination (harmful behaviour and actions).

**Weight Bias.** This thesis will refer to weight bias as negative weight-related attitudes, beliefs, assumptions and judgement toward individuals who are overweight and obese (Ciao &

Latner, 2011). Weight bias includes stereotypes that higher body weight people are unattractive, lazy, incompetent, unmotivated, sloppy, and lack self-discipline (Puhl & Heuer, 2009).

**Weight Discrimination.** Weight discrimination, sometimes referred to as fatism, is the unequal, or unfair treatment of people because of their body weight (Ciao & Latner, 2011).

Whereas weight bias encompasses negative attitudes and beliefs, weight discrimination is the manifestation of weight bias into unjust behaviour towards higher body weight people.

Discrimination takes many forms such as verbal comments, bullying, physical aggression and victimization.

**Weight Bias Internalization.** Individuals can both experience stigma and internalize it. Internalized stigma is the awareness of negative stereotypes about one's social identity and

agreement with those stereotypes (Corrigan, Watson, & Barr, 2006). In addition, internalized stigma is the application of these stereotypes towards oneself followed by self-devaluation.

Therefore, this thesis will define weight bias internalization as the internalization of negative weight stereotypes and the resulting self-degradation (Pearl & Puhl, 2018).

### **Self-Compassion and Related Terms**

**Self-Compassion.** Although the concept of self-compassion was first described in traditional Buddhist teachings, this thesis will use the definition of self-compassion that has been conceptualised by Neff (2003) in secular terms within scientific literature. To define self-compassion, the concept of compassion must first be explained. Compassion involves a sensitivity to the experience of suffering and the wish to alleviate it (Germer & Neff, 2013). In other words, compassion is the ability to open up one's awareness to the pain of others, without avoidance or disconnection, and allowing feelings of kindness and a desire to relieve their suffering (Wispe, 1991).

Therefore, self-compassion can be understood as compassion directed inwards, towards the self when faced with the experience of suffering (Neff & Davidson, 2016). This compassion is shown towards ourselves in the face of suffering that results from external circumstances, as well as our own mistakes, failures, and inadequacies.

Neff (2003a) has conceptualized self-compassion as consisting of three interrelated components: self-kindness, common humanity, and mindfulness. Self-kindness refers to being “warm and understanding toward ourselves when we suffer, fail, or feel inadequate, rather than flagellating ourselves with self-criticism” (Germer & Neff, 2013, p. 856). The common humanity component of self-compassion recognizes that suffering is part of the shared human experience. It reminds us that all people fail, make mistakes and feel inadequate in some way, therefore allowing us to locate our pain within the broader human experience. Finally, mindfulness entails a non-judgemental, receptive state of mind in which one observes thoughts and feelings as they are, without trying to suppress or deny them. Self-compassion requires that we can recognize our suffering and without becoming overly attached to our negative emotions.

**Mindfulness.** There are two essential components of mindfulness described in the literature: present moment awareness with a non-judgemental attitude (Bishop et al., 2004). In other words, mindfulness is the ability to pay attention, on purpose, to the present moment, with non-judgment and acceptance (Kabat-Zinn, 1994). It includes the recognition of thoughts and emotions that are in momentary experience, then subsequently letting go of them, recognizing them as transitory. Moreover, being mindful of ones’ experience refers to not only what is occurring around oneself (e.g. sounds, sights, events), but also the often neglected, internal experience of physical sensations, emotions and thoughts (Brown, Marquis, & Guiffrida, 2013).

### **Situating the Author**

I identify myself as a 25 year-old cis-gender, able-bodied, heterosexual woman. I define my ethnicity as European-Caucasian and my nationality as Canadian. Finally, I do not identify my body as overweight or obese and would not meet the criteria for overweight or obesity according to common medical classification systems. Therefore, this thesis does not come from the perspective of someone with the lived experience of a higher body weight person. However, like most individuals, I am someone who is friends with, is related to, cares for and loves, individuals with higher body weights. I believe that weight stigma and the pressure to achieve the “perfect body” negatively impacts all of us to varying degrees. Therefore, I recognize that I am also impacted by the topic of this thesis and recognize that I cannot approach this topic without personal bias.

I became interested in this topic after working at an obesity medicine clinic in Coquitlam, BC. While at the clinic, I worked with higher body weight people and became aware of many of the unique challenges that this population faced. One of the most distressing parts of this experience was listening to the stories of discrimination that the clinic’s patients faced. After hearing these stories, I became aware of how pervasive and ubiquitous weight stigma and discrimination was. Moreover, I realized how few mental-health resources were available to this population to help cope with weight stigma and the other unique challenges that came along with living in a larger body. This experience inspired me to write this thesis.

Finally, I am interested in therapeutic work that involves mindfulness and self-compassion. I strive to live my life according to many of the principles of mindfulness and am constantly striving to bring more awareness to the present-moment. Moreover, compassion has long been a value that has guided my life and I have recently become interested in how I can

extend the compassion I give to others towards myself. Therefore, my interests as a researcher and the approach I take as a therapist are strongly influenced by these practices.

### **Organization of Remaining Chapters**

There will be four remaining chapters and three manuscript chapters followed by a concluding chapter. Chapter two of this thesis explores how obesity is currently conceptualized. This chapter reviews the evidence surrounding obesity and weight-related issues, including etiology and the impacts and the common approaches to addressing obesity. The third chapter of this thesis will be the second manuscript and will address the topic of weight stigma. This chapter explores how weight stigma impacts higher body weight individuals and reviews the evidence of how weight stigma can lead to many of the negative health impacts associated with obesity. Chapter three also explores how higher body weight people internalize weight bias and how this impacts them. The final manuscript in this thesis will be chapter four. This chapter reviews the literature on self-compassion and explores how this concept is used in therapeutic work. This chapter illustrates the ways in which the practice of self-compassion can help higher body weight people cope with weight stigma and help them lead healthier lives. The final chapter, chapter five, contains a discussion of the clinical implications and limitations for this thesis, as well as recommendations for future research. Finally, this thesis will summarize and conclude with personal reflections about the value of self-compassion as a beneficial practice.

## Chapter Two: Understanding Obesity

*When you're overweight, your body becomes a matter of public record in many respects. Your body is constantly and prominently on display. People project assumed narratives onto your body and are not at all interested in the truth of your body, whatever that truth might be. Fat, much like skin color, is something you cannot hide, no matter how dark the clothing you wear, or how diligently you avoid horizontal stripes.*

-Gay (2017, p. 120)

Obesity has become a prevalent and hotly debated topic around the world. Most experts agree that there has been a rise in the prevalence of overweight individuals and obesity across the globe. However, how to respond to this phenomenon remains controversial. At the heart of this controversy are different ideas of what obesity is and how it affects individuals, our health care systems, our economies and our society as a whole.

There are many myths and assumptions made about obesity and higher body weight people. Providing clarity on these myths and assumptions is necessary before exploring how the practice of self-compassion can be used as a tool to cope with the challenges and stigma associated with living with a larger body. This chapter provides a foundation for understanding obesity by reviewing the literature on important and often misunderstood facets of this topic. First this chapter describes the most common classification system for obesity outlined by WHO. Next, this chapter looks at the population trends of obesity and describes the current prevalence of overweight and obesity in the global and national population. Subsequently, the chapter explores the economic, physical and psychological impact of obesity. This is followed by an exploration of the etiology of obesity and seeks to describe some of its different causes. Finally, this chapter illustrates four different perspectives on approaching obesity.

### **The Classification of Obesity**

Obesity has recently become recognized as a chronic illness that is an abnormal or excess accumulation of adipose tissue (fat) (WHO, 2018). In 2013, the American Medical Association voted to classify obesity as a disease and in 2015, the Canadian Medical Association did the same (Sharma, 2015). The medicalization of obesity demonstrates a shift in perspective about how obesity is viewed today in society. For many years, obesity was perceived as a moral issue stemming from gluttony and lethargy. However, those who push to recognize obesity as a chronic illness believe that this recognition may help decrease some of the stigma experienced by higher body weight people and lead to financial reimbursement for obesity-related treatments (Karusu, 2013).

However, the decision to classify obesity as a disease is controversial. Critiques argue that medicalizing obesity could make body weight the focus of medical appointments rather than health behaviours. Moreover, there is concern medicalizing obesity could also lead providers to rely on pharmacological and surgical treatments for their overweight and obese patients (Karusu, 2013). Another critique against classifying obesity as a disease is that other than excess fat, there are no other clinical signs or symptoms that are present in all people with obesity. Some individuals with obesity never develop medical problems associated with their weight, and therefore are given a label of disease without any real pathology.

Another controversy surrounding recognizing obesity as a disease is the system we use to classify it. The most common way to classify individuals as overweight or obese is based on their Body Mass Index (BMI), a ratio of weight to height (Garvey, 2019). An individual's BMI can be measured by taking an individual's weight in kilograms divided by the square of their height. BMI is measured on a continuous scale whereby adults are classified as "underweight" if

their BMI falls below 18.5 kg/m<sup>2</sup>, “normal weight” if their BMI falls between 18.5-24.9 kg/m<sup>2</sup>, “overweight” if their BMI falls between 25-29.9 kg/m<sup>2</sup>, and “obese” if their BMI falls above 30 kg/m<sup>2</sup>. Moreover, obesity is further classified according to severity: class I (BMI is 30-34.9 kg/m<sup>2</sup>), class II (BMI is 35-39.9 kg/m<sup>2</sup>), and class III (BMI is greater than 40 kg/m<sup>2</sup>). WHO classifies children and adolescents as obese if their BMI is greater than the 95<sup>th</sup> percentile for their gender and age group according the Centers for Disease Control growth chart

The BMI originated as a statistical tool to collect information on body builds and weights for large population studies. The weight to height squared index, was first described by the Belgian mathematician and astronomer, Adolphe Quetelet in 1859 in an effort to quantify individual human traits (Garvey, 2019). However, in the 1950s, Ancel Keys reinvented it as the body mass index. It was not until 1995 that the WHO adopted BMI as the diagnostic tool for classifying obesity (Komaroff, 2016).

Although BMI is an efficient screening tool, experts have noted several limitations of using BMI to diagnose obesity (Garvey, 2019). Using BMI as a tool to classify obesity has been argued as arbitrary, rather than diagnostic (Karusu, 2013). First, BMI does not accurately depict an individual’s body fat percentage. Lean mass and body water also contribute to an individual’s weight; therefore, BMI can overestimate body fat in patients with edema or athletes with high muscle mass. Second, BMI does not reflect the distribution of body fat. A greater distribution of adipose tissue around the organs and central abdominal region poses a greater risk for disease. Third, the BMI classification paradigm does not consider other factors that influence an individual’s body composition and health such as age, gender, level of physical activity, race or ethnicity (Wyatt, Winters, & Dubbert, 2006). Finally, BMI does not indicate the degree to which excess adiposity is affecting the individual’s health and quality of life.

For these reasons, other systems of measuring and classifying obesity have been suggested. For example, the Edmonton Obesity Staging System (EOSS) classifies individuals based on weight-related health problems, mental health and quality of life (Sharma & Kushner, 2009). Along with anthropometric measurements, the EOSS requires a clinical assessment in order to classify individuals into five graded categories, based on their morbidity and health risk. The EOSS tool presents a more complex view of obesity classification. Unlike the BMI classification system that uses arbitrary cut-off values for different obesity classes, the EOSS acknowledges the level of impact that the excess adiposity tissue has on the individual's life.

### **Prevalence and Population Trends**

Over the past four decades, the global prevalence of obesity has tripled (WHO, 2018). In 2016, more than 1.9 billion adults across the globe were overweight and over 650 million were obese. This is equivalent to 39% and 13% of the world's adult population, classified as overweight and obese respectively. The prevalence of overweight and obesity among children has also significantly increased. In 1975, 4% of the world's children (aged 5-19) were overweight. However, in 2016, the percentage of children who were overweight had risen to 18% and the rate of obesity among children (aged 5-19) has risen from 1% to 7%. Additionally, an estimated 41 million children under the age of five are also obese.

Obesity once was seen as a problem of developed countries, yet, the latest population trends in obesity demonstrate a rise in obesity in low and middle-income countries such as Pakistan and Nigeria (WHO, 2018). Countries that have high rates of malnutrition can simultaneously experience increases in the prevalence of obesity. It appears that children in low and middle-income countries who are vulnerable to malnutrition are also vulnerable to developing obesity. One explanation for this finding is that children in low and middle-income

countries can experience inadequate prenatal, infant and child nutrition. Simultaneously, children are being exposed to low cost foods that are high in fats, sugar, and salt, are calorically dense, and lack adequate micro-nutrients (WHO, 2018). This diet of low cost foods paired with a recent decline in physical activity can lead to the development of obesity.

According to WHO (2018), Canada ranks as the 26<sup>th</sup> country in the world for prevalence of obesity. Canada has seen a 200% increase in the prevalence of obesity since 1985 (Twells et al., 2014). In addition, the percentage of the population having obesity in classes I, II, and III more than doubled. Currently, more than half of all Canadians are either overweight or obese and experts predict that the prevalence of obesity will continue to rise (Twells et al., 2014). Moreover, the prevalence of obesity appears to be slightly higher among men than women. In the province of British Columbia, 44% of adults and 16% of youth (ages 12-17) are overweight or obese (PHSA, 2013).

### **The Impact of Obesity**

One of the most controversial facets of obesity is how being overweight or obese affects individuals, our health care systems, and our economies as a whole. This section will review the existing literature to describe how obesity impacts the Canadian economy, how obesity impacts an individual's risk for disease and premature mortality, and how obesity impacts an individuals risk for psychological disorders and their mental health.

#### **Economic Impact**

There are several reports describing the impact that obesity has on the economy. The Standing Senate Committee on Social Affairs (2016) claims that obesity costs Canada between \$4.6 billion and \$7.1 billion annually in health care and lost productivity. This includes direct costs on the health care system such as hospitalizations, medical consultations with outpatients,

and medication. In addition, obesity impacts work productivity indirectly through work absenteeism, disability, and premature mortality (Lehnert, Sonntag, Konnopka, Riedel-Heller, & Konig, 2013).

### **Physical Health Outcomes Associated with Obesity**

The relationship between obesity and several diseases and premature mortality is complex. On the one hand, WHO (2016) states that overweight/obesity is the fifth leading risk in the globe for deaths, resulting in at least 2.8 million adult deaths each year. In addition, research has consistently shown that higher body weight is associated with several medical conditions and health problems (Guh et al., 2009; Lou et al., 2007; Bray 2004; Klein et al., 2004). According to WHO (2016), a raised BMI is a major risk factor for several non-communicable diseases such as sleep apnea, type two diabetes, osteoarthritis, chronic pain, asthma, cardiovascular disease and several types of cancer.

On the other hand, some researchers argue that more clinical research is needed before drawing conclusions on causality. For instance, some research has identified a U-shaped relationship between body weight and mortality (Flegal, Graubard, Williamson, & Gail, 2007). This means that individuals on either end of the BMI spectrum have significantly increased risk of mortality, and individuals who are overweight and in the middle of the BMI spectrum are at a decreased risk of mortality. Other research has found that obesity may predict better survival with some diseases. For example, research has shown that some higher body weight individuals with type 2 diabetes, cardiovascular disease, hypertension, and chronic kidney disease live longer than lower body weight people with the same diseases (Bacon & Aphramor, 2011). Finally, research has found that as much as 20-30% of people with excess body weight are metabolically normal, therefore not at risk of mortality (Hayes et al., 2010). This research

demonstrates that the relationship between obesity and a number of physical health conditions is complex and not well understood. Although many reports claim that obesity leads to decreased physical health, more research is needed before drawing definitive conclusions.

### **Psychological Outcomes Associated with Obesity**

A common assumption is that obesity is related to emotional complications and psychological disorders. For instance, studies have found associations between higher body weight and binge eating disorder (BED), disordered eating, lower self-esteem, body dissatisfaction and depression (PHSA, 2013). However, research suggests that obesity by itself does not appear to be systematically associated with these psychopathological outcomes (Fabricatore & Wadden, 2004). In other words, there are no psychological disorders that are a result solely from having a larger body. However, researchers argue that higher body weight people experience weight-related stressors that have a negative impact on their psychological well-being and mood. Of these factors, the most damaging is the prejudice and discrimination that people with larger bodies experience as a result of their weight (Hayward, Vartanian, & Pinkus, 2018). The impacts of weight stigma and discrimination will be explored further in chapter three.

Other factors that affect the psychological health and well-being of higher body weight individuals include perceived impairments in self-care activities and work-related tasks, and chronic pain. For instance, Forhan, Law, Vrkljan and Taylor (2010) found that individuals with obesity were restricted in their ability to participate in different activities because of physical limitations due to their weight and size, obesity-related complications, and limited choices for self-care, productivity, and leisure occupations. Moreover, the study found that obesity challenged participant's ability to participate in activities identified as meaningful in their lives.

In addition, many individuals with obesity experience chronic pain such as fibromyalgia, headaches, osteoarthritis, abdominal pain, and lower back pain. Stone and Broderick (2012) found that relative to normal weight people, individuals with class I obesity reported 68% greater rates of recurring pain, and the rates increase to 136% for people with class II obesity, and 254% for people with morbid obesity. Chronic pain among individuals with obesity has been shown to lead to increased psychological distress and functional impairment (Okifuki & Hare, 2015)

### **Etiology of Obesity**

The causes of obesity are complex and not well understood. The general public and some health care professionals attribute the cause of overweight and obesity to be lifestyle choices and personal failings. However, research has demonstrated that the causes of obesity are much more complex than previously assumed.

The simplest explanation for weight gain is that it is the body's natural physiologic response that occurs when energy intake exceeds energy expenditure (Standing Senate Committee on Social Affairs, 2016). An individual's food and beverage consumption is the primary method of energy gain. Conversely, the body's basic metabolic requirements and daily physical activity will dictate an individual's energy expenditure. If an individual has a positive energy imbalance for a sustained period of time, the individual will gain weight which can eventually develop into obesity.

It appears that the causes of obesity are more complex than this simple equation may suggest. Obesity is the result of a complex relationship between different biological, genetic, cultural, social and environmental factors that interact to influence the body's ability to store fat and accumulate weight (Freedhoff & Sharma, 2010). Some of these factors will be explored below.

## **Biological Factors**

The biological basis of obesity is currently not well understood. However, experts have proposed one theory- the set-point theory - to explain why weight appears to be maintained at a relatively stable range for a long period of time (Farias, Cuevas, & Rodriguez, 2011). Set point theory suggests that the body has an internal control mechanism, known as the set point, which regulates metabolism to maintain weight at a predetermined level. The set point can detect environmental factors, such as diet or temperature, which affects the body's energy balance. To counteract these environmental factors, the set point will promote feedback mechanisms to maintain the body's fat stores (Farias, Cuevas, & Rodriguez, 2011). The mechanisms include appetite, hormones, metabolic rate, or neurotransmitters that interact with one another to maintain the bodies fat stores.

According to set point theory, it is much easier to gain weight than it is to lose weight (Hill, 2006). Rat studies have shown that weight loss from calorie restriction leads to rapid weight gain once the animals are returned to their normal diet (Farias, Cuevas, & Rodriguez, 2011). One proposed explanation for this finding is that an adaptive energy conservation mechanism lowers the resting metabolic rate to compensate for the negative energy balance. Studies have also shown that an adaptive increase in energy expenditure occurs in rats when they are over-fed (Hill, 2006). However, overfeeding results in fewer compensatory changes in energy expenditure than food restriction. It appears that organisms are better at protecting themselves against weight loss than weight gain. This finding is consistent with the evolutionary perspective that our bodies have adapted to efficiently use food stores when food resources are scarce.

**Medical Factors**

Different endocrine disorders have been associated with obesity such as hypothyroidism, cushing syndrome, growth hormone deficiency and pseudohypoparathyroidism (Gurnani, Birken, & Hamilton, 2015). Of these disorders, hypothyroidism is the most common cause of endocrine-related weight gain. Endocrine related disorders typically lead to weight gain because they impair the body's ability to regulate leptin, a hormone that helps the body maintain its weight (Mantzoros, 1999). Leptin is secreted from fat cells that interact with the hypothalamus to control appetite and energy expenditure (Mantzoros, 1999). However, endocrine disorders can impair the hypothalamus' sensitivity to leptin, which can lead to reduced satiety and weight gain.

**Genetic Factors**

Research indicates that an individual's genetic predisposition can increase one's susceptibility to becoming overweight or obese. Heritability studies suggest that approximately one third of the variance in BMI may be due to genetic factors (Jebb, 2004). In addition, over 20 genes have been linked to body fat in humans (Wyatt et al., 2006). Although it appears there is a genetic component to obesity, the mechanisms by which these genes produce physiological effects on the body and their interaction with environmental factors remain unknown.

There are specific genetic mutations that result in specific clinical syndromes that are directly linked to obesity. For instance, monogenetic mutations in the leptin gene and the melanocortin system have been shown to cause obesity (Jebb, 2004). Other genetic syndromes such as Prader-Willi and Bardet-Biedl typically lead to a phenotype with obesity (Jebb, 2004). However, cases of specific genetic mutations are rare and typically manifest from a relatively young age.

### **Social and Environmental Factors**

There are numerous social and environmental factors linked to obesity such as poverty, mental health, trauma, and environmental surroundings. These factors are not readily controlled by the individual and can both lead to and be the result of social inequality and social injustice. Unfortunately, social inequalities are significant determinants of poor mental, physical health, and obesity (PHSA, 2013). Although there has been a steady rise in obesity in all genders, ages, and races, it appears that the highest increases in the rates of obesity have occurred among the most disadvantaged groups.

Research has shown that one important variable linked to obesity is socioeconomic status (SES). Obesity is more common in individuals and families with low levels of education, low income and low social class (Jebb, 2004). Although the relationship is complex, it appears that obesity generally follows the social gradient and more directly affects minority groups in disadvantaged areas (Puhl & Heuer, 2010).

There are numerous variables that mediate the relationship between lower SES and obesity; these variables can be sorted into two categories - individual and area level determinants (Janssen, Boyce, Simpson, & Pickett, 2005). Individual determinants are individual characteristics such as family affluence and education level. Area determinants are environment factors such as the neighbourhood's access to grocery stores and or the neighbourhood's number of parks. Janssen et al., (2005) found that both individual and area level variables work independently and together to impact obesity, unhealthy eating and physical activity. Individual determinants have been shown to negatively impact physical activity level. For example, adolescents from families with lower SES have less opportunity to participate in sports and other physical activities because of barriers such as cost and lack of parental support. Examining area

level determinants demonstrated that lower SES neighbourhoods have more access to unhealthy eating and physical activity because of the high density of fast-food establishments and low density of parks and other recreational areas.

This section explored some of the different factors that interact with one another to cause obesity. As this section demonstrated, the relationship between these different factors and obesity are complex and not well understood. The complex and misunderstood etiology of obesity can partially explain why there is much debate on how our society views obesity prevention and treatment. Four of the main paradigms on how to approach obesity will be explored in the sections below.

### **Weight Related Paradigms**

The four weight related paradigms illustrate different streams of thought on how public health policy, health care, and the general public should respond to obesity. Paradigm One and Two emphasize weight loss and the reduction of obesity as the major goal. Paradigm Three takes a holistic approach to obesity and believes the goal should be on improving physical health and mental well-being at the individual level. Finally, Paradigm Four suggests reacting to the increase in obesity by creating environments that promote positive mental and physical well-being and tackle the social determinants of health at the population level.

#### **Paradigm One**

Paradigm One focuses on weight loss by changing individual behaviour. This paradigm describes the earliest response to obesity and can be found throughout Canada's current health care system (PHSA, 2013). Paradigm One makes four main assumptions. First, this paradigm assumes that excess weight leads to morbidity and premature mortality. Therefore, weight loss is essential to improve health for individuals with obesity. The second assumption is that

individuals have control over their weight. Third, this paradigm assumes that weight loss can be achieved by restricting calories through dieting and expending more energy through physical activity. Finally, this paradigm assumes that achieving a “normal” weight is a desired and realistic goal that will improve health for every higher body weight individual.

There is ample research evidence that contradicts the assumptions made by Paradigm One. For instance, the first assumption claims that excess weight leads to morbidity and premature mortality. As we have already explored previously in this chapter, there is ample research evidence indicating a strong link between higher body weight and health problems, but many experts caution that the link is only correlational (Logel et al., 2015). Experts warn that conclusions cannot be drawn without adequate long term experimental studies that adequately control for confounding variables. Other variables that are often implicated in the link between obesity and poor health outcomes include SES, sedentary life styles and social determinants of health (for example, poor social support, stress) (PHSA, 2013). Therefore, evidence suggests that it is premature to conclude that obesity is a cause of morbidity and premature mortality.

The second questionable assumption that Paradigm One makes is that individuals have control over their weight. There is a growing body of research indicating that approaches aimed at individual behaviour change are insufficient to produce sustained weight loss (Puhl & Heuer, 2010). As discussed above, obesity is the result of many complex and interactive factors that surpass an individual’s control. Approaches that emphasize individual responsibility and ignore the multiple factors outside of an individual’s control perpetuate weight discrimination and inequality (Puhl & Heuer, 2009).

Contrary to Paradigm One’s third assumption, there is ample research indicating that calorie restrictive diets and intensive exercise are not only ineffective for long term weight loss,

but can be harmful (Curioni & Lourenco, 2005; Andres, Muller, & Sorkin, 1993; Pamuk, Williamson, Serdula, Madans, & Byers, 1993). Multiple meta-analyses of randomized control trials have demonstrated that weight loss programs do not produce any more than 10% weight loss at one and two year follow ups (Mann et al., 2007). The vast majority of people who participate in calorie restrictive diets end up gaining more weight than they lose on their diets. In addition, restrictive dieting can lead to obsessive thoughts about food and eating, increased appetite sensations, overeating, and increased risk of depression. Moreover, the fluctuations in body weight that is common to dieters has been associated with increased cardiovascular risk, including insulin resistance and dyslipidemia (Montani, Vievelli, Prevot, & Dulloo, 2006).

Moreover, Paradigm One assumes that weight loss is achievable and desired by everyone and will improve health. As discussed above, set-point theory illustrates that our bodies natural physiology protects against weight loss. Individuals who are able to lose more than 10% for a long period of time is rare and the only treatment that has been shown most effective for long term weight loss is bariatric surgery (Livhits et al., 2012). For this reason, many health experts have shifted away from focusing on weight loss. For example, the American Dietetic Association (2012) states that “the failure to produce lasting weight loss and the reduction of self-esteem that often accompanies repeated failures have led some health care professionals to focus on optimizing psychological and physical health rather than weight loss” (p. 72). This shift recognizes that individuals can make behavioural changes that improve health, without having to lose weight.

Finally, Paradigm One assumes that having a body that fits in the “normal” BMI category is the only healthy and desirable body to have. This notion does not acknowledge the natural diversity of body types and that many people enjoy having a larger body size. For instance,

critics argue that BMI tables are based on Caucasian body types and do not consider the genetically distinct body types of people of colour (Bradley University, n. d.). To challenge the notion that there is an “ideal” body size, the fat acceptance movement promotes body diversity and the acceptance of all body types (Webb, Vinoski, Bonar, Davies, & Etzel, 2017). This grassroots, feminist-grounded social movement’s goal is to end the stigma of larger bodies in our fat-phobic society and to empower people to accept themselves the way that they are. Part of this movement is reclaiming the term “fat” so that it is no longer seen as a negative term. Finally, the fat acceptance movement believes that when people are empowered to love and accept their bodies, they will find an improvement in their sense of self-confidence, well-being and health (Bradley University, n. d.).

### **Paradigm Two**

Paradigm Two shifts the perception of obesity being a biomedical issue perpetuated by individual lifestyle and behaviour choices, to a complex societal issue (PHSA, 2016). The second paradigm focuses on combatting obesity by focusing on environmental factors that create an “obesogenic environment”- defined as “the sum of influences that the surroundings, opportunities or conditions of life have on promoting obesity in individuals and populations” (Swinburn, Eggar, & Raza, 1999, p. 564). An obesogenic environment is a combination of interacting elements such as physiology, social psychology, food production, and the physical activity environment. Specific examples of these elements include portion sizes in restaurants, the walkability of a living environment, and the price of different types of food.

The goal of this paradigm shift is to reduce the overall prevalence of obesity in the population. Supporters of this paradigm believe that efforts to reduce obesity should be addressed as a societal and economic issue. Furthermore, efforts to reduce obesity should address

different levels of society including the individual, family, community, and nation. This paradigm recognizes that efforts directed solely at the individual will not adequately impact the prevalence of obesity.

Paradigm Two has become evident in public health policy in Canada. The Standing Senate Committee on Social Affairs (2016) has issued a report on Obesity in Canada that takes a “whole-of-society approach” (pg. 1). This report holds the obesogenic environment of Canada responsible for the rising levels of obesity over the past few decades, and makes numerous policy recommendations to Health Canada and the Canadian government. For example, the report recommends that the federal government prohibit companies from advertising food and beverages to children. Another example is the report’s recommendation to increase the affordability of “healthy foods” through subsidies and implementing taxes on sugar-sweetened and artificially sweetened beverages.

Unlike Paradigm One, this approach goes beyond individual behaviour change. Paradigm Two does not rely on a number of questionable assumptions regarding individual behaviour. Instead, it takes an ecological approach and focuses on changing the obesogenic environment at multiple levels and over extended periods of time. By framing obesity as a complex problem, this paradigm recognizes that efforts to address obesity will need adequate time, a variety of approaches, and systemic change.

However, Paradigm Two has several limitations. First, taking a whole-of-society approach to reducing obesity is extremely difficult and has currently not been achieved by any nation. Second, this approach focuses on weight and pathology to the point of excluding mental well-being from its consideration. By taking a weight-focused approach to health, this approach fails to account for the potential weight stigma and discrimination that may stem from its

messaging. Messages about how problematic obesity is to individuals' health and how costly obesity is to our economy can lead to weight stigma (PHSA, 2013). In order for this approach to be more effective, it must focus on promoting good health for everyone, rather than just trying to eradicate obesity.

### **Paradigm Three**

Paradigm Three focuses on helping individuals to find their best weight, while promoting psychological and physical health (PHSA, 2013). This paradigm promotes health at the individual level by emphasizing personal health practices and coping strategies.

Three guiding principles characterize this paradigm. First, this paradigm focuses on mental well-being rather than weight loss. Mental well-being refers to the emotional, psychological and social well-being of individuals, rather than just the absence of mental illness (PHSA, 2013). Therefore, this approach empowers individuals to prioritize their mental health and encourages individuals to focus on life satisfaction, happiness and self-acceptance.

Furthermore, the approach is “weight-neutral” and “non-dieting” because it does not believe weight loss is the only possible way to improve health. Instead, this approach encourages individuals to adopt healthy behaviours that are sustainable and enjoyable. For example, people are encouraged to move away from strict diets and exercise regimes to find more intuitive eating practices and leisure activities that they enjoy.

Finally, Paradigm Three shifts the goal of obesity treatment from weight loss to weight management. Weight management is about “improving health and well-being and not simply reducing the numbers on the scale” (Freedhoff & Sharma, 2010, pg. 9). Everyone is encouraged to find their best weight, which is whatever weight they can achieve while living a healthy

lifestyle that they enjoy. This approach empowers individuals to define what healthy looks like to them and prioritizes the individual's life satisfaction over weight loss.

An example of an approach that would fall under Paradigm Three is the Health at Every Size (HAES) Movement (Bombak, 2014). HAES does not view weight as an adequate indicator of health (Bacon & Aphramor, 2011). Instead, HEAS promotes a multi-dimensional view of health and well-being by promoting intuitive eating and allowing internal cues of hunger and satiety to guide food choices. It supports active living, rather than structured exercise regimes. Finally, HAES advocates for the respect and acceptance of all body sizes and shapes. Research has provided support for the HEAS approach and clinical trials using HAES have been associated with improvements in physiological measures, health behaviours, and psychosocial outcomes.

Although Paradigm Three seems to be better equipped at approaching obesity than the previous two paradigms, there are still limitations. For instance, critics have argued that a “weight-neutral” approach can neglect the health of higher body weight individuals because of the strong link between obesity and disease. Another limitation of this approach is that it does not adequately address the socio-environmental factors that limit people from achieving good mental and physical health (Bacon & Aphramor, 2011). The approach focuses primarily on the individual and does not adequately address structural factors that promote weight stigma and discrimination.

#### **Paradigm Four**

Paradigm Four uses a socio-environmental model that focuses on the promotion of health and well-being by addressing the social determinants that relate to weight and health (PHSA, 2013). Paradigm Four shares many of the same guiding principles as Paradigm Three, only

Paradigm Four focuses on the promotion of health and well-being within a broader context. Similar to Paradigm Two, Paradigm Four addresses multiple sectors and levels of society. This approach does not only address determinants of health that are related to obesity, but addresses the full spectrum of health determinants. Examples of health determinants include, education, housing, economic development, social supports, and culture. This approach assumes that by addressing the broad determinants of health and well-being, many different issues can simultaneously be addressed within the society. For example, if social inequalities and poverty are addressed, then a range of health problems and diseases can also be prevented, including obesity.

Changing health determinants at multiple levels across different sectors is no small feat. Therefore, the greatest limitation of this approach is its feasibility. It is extremely difficult to coordinate action across multiple sectors and levels of society without running into barriers such as financial constraints and political agendas. Determining responsibility and allocating resources are two key challenges. However, this remains the only paradigm that adequately addresses social health determinants such as social justice and equality, and has the possibility to positively impact multiple health issues including obesity.

### **Summary**

Obesity is a chronic disease with a global prevalence that has tripled since the 1980s. Typically, obesity has been associated with negative economic impacts, various health outcomes, and psychological disorders. However, the relationship between obesity and these different economic and health outcomes is complex, and more research is needed before drawing definitive conclusions. The etiology of obesity is a highly researched yet not well understood area. Some factors that affect whether an individual develops obesity include their genetics,

different medical conditions, individual metabolism, and their social situation and environment (Wyatt et al., 2006). Moreover, there are different perspectives on how to approach obesity from a public health perspective. Paradigm One assumes that the etiology of obesity is simple and the health benefits of weight loss are clear. On the other hand, Paradigm Two assumes the etiology of obesity is less clear, but the health benefits of weight loss are. Paradigm Three questions the health benefits of weight loss and focuses on optimizing mental and physical health and well-being. Finally, Paradigm Four makes a different assumption about the etiology of obesity, claiming that social injustices are associated with all health-related problems, including obesity. Therefore, the focus of this paradigm is promoting health and well-being through structural change at the level of the population.

The most common classification system for obesity is based on BMI. However, BMI is a simple measurement tool that has led to an over-simplified view of obesity. It was originally developed to measure characteristics for large population studies, rather than the health of an individual. Because BMI ignores factors such as genetics, body shape, and more, it can be argued that it has contributed to a very simple view of the causes of obesity. Essentially, using BMI to classify obesity has led to the belief that obesity has a simple cause of consuming more calories than one burns.

A more complete classification system of obesity may lead to a more nuanced and complex view of the condition and its causes. Unfortunately, the widespread use of the BMI classification system seems to be linked to over-simplified views of obesity treatment, such as the views expressed in Paradigm One. These treatments focus almost exclusively on individuals changing their behaviour and these treatments have been shown to be ineffective. However, this

simple view of obesity has other and more profoundly damaging negative consequences, which will be explored in the following chapter.

## Chapter Three: Weight Stigma and Discrimination

*Fat people already are ashamed...No further manpower needed on the shame front...My question is, what if they try and try and try [to lose weight] and still fail? What if they are still fat? What if they are fat forever? What do you do with them then? Do you really want millions of teenage girls to feel like they're trapped in unsightly lard prisons that are ruining their lives, and on top of that it's because of their own moral failure, and on top of that they are ruining America with the terribly expensive diabetes that they don't even have yet?*

- West (2011, para. 6)

As the number of people who are overweight or obese rise in North America, so do the rates of discrimination they face. People who are overweight or obese tend to carry a stigma due to negative stereotypes, and are ostracized and discriminated against. Weight stigma refers to the “social devaluation and denigration of people perceived to carry excess weight” (Nolan & Eshleman, 2015, p. 15) and is the overarching term that includes both weight bias and weight discrimination. Weight bias refers to the negative weight-related attitudes, beliefs, assumptions and judgement toward individuals who are overweight and obese (Ciao & Latner, 2011). Weight bias stems from harmful stereotypes that higher body weight people are mean, stupid, ugly, unhappy, less competent, sloppy, lazy, socially isolated, and lacking in self-discipline, motivation, and personal control (Puhl & Heuer, 2009). Whereas weight bias encompasses negative attitudes and beliefs, weight discrimination is the manifestation of weight bias into unjust behaviour towards higher body weight people. Discrimination takes many forms such as verbal comments, bullying, physical aggression and victimization.

The stigma and the subsequent discrimination that higher body weight individuals experience is arguably one of the most debilitating aspects of being overweight or obese (PSA, 2013). Society discriminates against people with higher body weight in multiple areas of their lives, including employment settings, health care facilities, educational institutes, the media, and their families (Puhl & Heuer, 2009). The most commonly reported types of discrimination higher body weight people experience are receiving negative comments from children, encountering physical barriers and obstacles, and receiving inappropriate comments from physicians and family members (Puhl & Brownell, 2006).

Current research suggests that almost all individuals who are overweight or obese experience some sort of stigma, with the degree of stigma increasing with BMI (Puhl & Heuer, 2009). From 1988-1996, rates of weight discrimination increased by 66%, likely due to the sharp increase in media coverage and the emphasis on obesity being a personal responsibility (Andreyeva, Puhl & Brownell, 2008). The widespread prevalence of weight discrimination has been compared to the prevalence of racial discrimination in America (Puhl, Andreyeva, & Brownell, 2008). Although the negative implications for weight discrimination have been well documented (Puhl & Heuer, 2009), weight based discrimination typically goes unchallenged. Even when challenged, individuals typically justify this behaviour by suggesting that people with obesity are personally responsible for their weight and that shaming higher body weight persons for their bodies may motivate them to adopt healthier lifestyles (Puhl & Heuer, 2010). Because many forms of weight discrimination remain socially acceptable, weight discrimination has been called “one of the last socially acceptable forms of discrimination” (Hobbes, 2018, p. 1).

This chapter will review recent literature on the topic of weight stigma to explore how higher body weight people are vulnerable to unfair treatment, social injustice and impaired

quality of life. First this chapter will explain the concept of weight stigma and explore the different physical and mental health outcomes associated with it. Next, this chapter will identify the different areas in which weight discrimination is prominent. Subsequently, this paper will set out how weight stigma impacts children and youth. Finally, the chapter will briefly explore how individuals internalize weight bias.

### **Weight Stigma**

According to Alberga et al. (2018), “weight stigma, weight bias, weight prejudice, weight discrimination, body shaming, and anti-fat discrimination are synonymous terms used to describe negative attitudes, beliefs, and behaviours towards individuals who have been classified as overweight or living with obesity” (pg. 2). Weight stigma can be implicit (unconscious), explicit (conscious), and/or internalized (applied to the self) (Alberga et al., 2018). Moreover, weight stigma can take many forms, and can be enacted through verbal abuse, physical abuse, or relational victimization and/or unequal treatment. Its impacts are felt at an individual, community, and societal level.

Attribution theory is the most popular and widely studied theoretical framework used to explain why higher body weight people are stigmatized and ascribed negative attributes (Weiner, Perry, & Magnusson, 1988). There are two important factors that influence the negative attributions of obesity: beliefs surrounding the cause of the disease and beliefs attributing responsibility for it (DeJong, 2003). A study that looked at numerous health problems, including obesity, found that there were greater degrees of social rejection of the health problem the more an individual was thought to have caused the problem or contributed to its severity (Weiner, Perry & Magnusson, 1988). In another study, Crandall and Moriarty (1995) demonstrated that the more a disease was perceived as under the individual’s control, the more it became

stigmatized. These findings provide a rationale for why obesity has become highly stigmatized- obesity is generally seen as the result of an individual's behaviour and it is seen as their responsibility to manage it (Sikorski et al., 2011).

### **Discrimination in Different Areas of Life**

Weight stigma has become a pervasive and far-reaching phenomenon and weight discrimination is a common experience for higher body weight people. Some of the most common contexts in which high body weight people experience weight-discrimination will be explored in the following section.

#### **Discrimination in the Workplace**

Research suggests that higher body weight people experience prejudice and discrimination in employment settings. Examples include being the targets of derogatory humour and comments from coworkers, being disadvantaged in hiring, being denied promotions or fired because of their weight, and receiving less wages (Puhl & Heuer, 2009). One study using data from a nationally representative sample of 2838 adults found that respondents who were overweight were 12 times more likely, respondents who were obese were 37 times more likely, and respondents who were severely obese were 100 times more likely than normal-weight respondents to report enduring some form of employment discrimination (Roehling, Roehling, & Pichler, 2007). Another study found that among individuals who reported being discriminated against based on their weight, almost 60% had experienced this mistreatment an average of four times during their lifetime (Puhl, Andreyeva, & Brownell, 2008). Moreover, it appears that individuals who are very obese and work in professional jobs compared to nonprofessional jobs are more likely to report employment discrimination (Carr & Friedman, 2005). Taken together, these findings demonstrate that workplace weight discrimination is common and widespread.

This weight based discrimination can lead to a loss of wages, disadvantages in hiring and promotions, and termination for higher body weight people (Puhl, Andreyeva, & Brownell, 2008). For instance, after controlling for other variables, one study found that wages were 0.7 to 3.4% lower for men who were obese and 2.3 to 6.1% lower for women who were obese compared to their non-obese counterparts (Baum & Ford, 2004). Another study found that for white females, an increase of 64 pounds above average weight was associated with a 9% decrease in wages (Cawley, 2004). Moreover, other studies have found that overweight job applicants and employees were evaluated more negatively and had negative employment outcomes compared to non-overweight applicants and employees (Roehling, Pilcher, Oswald & Bruce, 2008). Higher body weight people encounter harmful stereotypes that they are less conscientious, less agreeable, less emotionally stable, and less extraverted than their normal weight counterparts (Puhl & Heuer, 2009). The overwhelming amount of research suggests that being overweight or obese is a general barrier to employment, to certain professions, and professional success, and can lead to unequal treatment in the workplace.

### **Discrimination in Health Care Settings**

Many healthcare providers in a range of specialty areas hold strong negative attitudes and stereotypes about people with obesity (Puhl & Heuer, 2009). One study found that over half of primary-care physicians perceived patients who were obese as awkward, unattractive, ugly and noncompliant and one third of these physicians also viewed obesity as a behavioural problem caused by physical inactivity and overeating (Foster et al., 2003). Similar studies have demonstrated a strong anti-fat bias and negative attitudes towards higher body weight individuals among nurses, medical students, fitness professionals and dietitians (Puhl & Heuer, 2009).

Such findings are problematic because these attitudes influence person-perceptions, judgment, interpersonal behaviour and decision-making (Phelan et al., 2015). For example, a study found that physicians spent less time providing health education to patients with obesity and spent more time providing health education to patients who had better physical health and higher economic status (Bertakis & Azari, 2005). Another study found that less than 50% of physicians they sampled felt competent in prescribing weight loss programs and only 14% believed they could be successful in helping a patient with obesity lose weight (Foster et al., 2003). This research also indicates that healthcare providers, who are often looked to for professional guidance on obesity management, feel ill-equipped to help their patients with obesity and spend less time with them.

Negative attitudes and unsatisfactory patient-care practices impact how higher body weight individuals experience health care. One study found that 69% of women reported experiencing weight stigma from a doctor, 46% experienced weight stigma from nurses, 37% experienced weight stigma from dietitians, and 21% from a mental-health professional (Puhl & Brownell, 2006). Another study of dietetic outpatient clinics in the United Kingdom found that 84% of participants felt that clinic staff blamed their weight for most of their medical problems (Thompson & Thomas, 2000). Patients with obesity who experience stigma can experience stress, avoid health care, mistrust doctors and have poor adherence to medical regimes (Phelan et al., 2015). Taken together, these findings indicate that higher body weight individuals encounter ambivalence and unsatisfactory treatment in health care that can have serious implications on their health as a result of weight bias.

### **Discrimination in Interpersonal Relationships**

Studies have examined if weight stigma also plays a role in interpersonal relationships. 72% of participants in a study by Puhl and Brownell (2006) reported family members as being a source of stigma. Parents were the most common source of stigmatization and in the form of weight-based teasing, name calling, and inappropriate comments. Moreover, friends and spouses were also common sources of weight stigma, experienced by 60% and 40% respectively of survey respondents. Weight stigma also impacts dating relationships, as one study found that body weight was negatively correlated with relationship satisfaction and women who were overweight were less likely to be dating than their normal weight peers (Sheets & Ajmere, 2005). These findings suggest that higher body weight individuals endure weight stigma in a range of interpersonal relationships.

### **Weight Bias in the Media**

The media is a stark representation of how socially acceptable weight stigma has become in our modern society. The media acts as a tool that influences, reflects and reinforces attitudes, beliefs and social norms about weight. Critics believe the media perpetuates weight bias by idealizing thin body types and the under-representation and stereotyping of characters that are overweight or obese (Thompson & Ata, 2010).

Individuals who are overweight or obese are severely under-represented in television; 13% of females and 24% of males on television are overweight or obese compared to the 51% and 59% of females and males in the general U.S. population (Greenberg, Eastin, Hofschire, Lachlan & Brownell, 2003). In contrast, underweight female characters are over-represented, being a third of all female characters while only 5% of women in the general population are underweight (Greenberg, Eastin, Hofschire, Lachlan & Brownell, 2003).

Unfortunately, when characters in television shows and movies are overweight or obese, they are typically targets of anti-fat humour and stigmatization. In a study examining fat-related commentary and humour in television shows and movies between 1984 and 2004, researchers found that weight stigmatization and humour was often verbal and direct (Fouts & Burggraf, 2000). The study found that individual targets were most likely to be adults, with males receiving negative commentary 49% of the time and females receiving negative commentary 45% of the time (Fouts & Burggraf, 2000). Another study found that the heavier the female character, the more negative comments she received from male characters (Fouts & Burggraf, 2000). In addition, the negative comments directed towards the heavier female characters were typically reinforced by audience laughter (Fouts & Burggraf, 2000).

Weight loss programs and product advertisements are other sources of weight stigma in the media. While their primary goal may be to sell products, weight loss advertisements also serve to promote weight-related stereotype and perpetuate the belief that weight is controllable. Many of these advertisements emphasize the message that weight is easily modifiable and that successful weight loss is a simple matter of personal effort or the right product (Puhl & Heuer, 2009). A study found that the “before and after” photos common in these advertisements promote the stereotype that overweight women are unhappy and unattractive (Geier, Schwartz, & Brownell, 2003). Moreover, the study found that the “before and after photos” were associated with negative attitudes towards the women pictured who were obese and the belief that weight is easily controllable (Geier, Schwartz, & Brownell, 2003).

Weight bias is also present in media directed towards children and youth. Many studies have shown that children’s television shows, movies and books are full of negative stereotypes about higher body weight individuals (Ata & Thompson, 2010). The findings in a study looking

at cartoon characters from the 1930's-1990's indicated that overweight characters were three times more likely to be classified as unattractive compared to normal-weight or underweight characters. Moreover, they were significantly more likely to be depicted as less intelligent, less loving, and more physically unhealthy. In addition, they were more commonly unemployed, unhappy and angry (Klein & Shiffman, 2006). Research also shows that the stigmatizing content found in media directed toward children has an effect on children's attitudes towards their overweight and obese peers. Latner, Rosewall, and Simmonds (2007) found that children who report greater media consumption demonstrate greater stigmatization of overweight and obese children than their peers.

Together, this research shows the media is a powerful contributor to the promotion of unjust and prejudicial attitudes towards higher body weight people. These inaccurate representations of body size distort people's expectations for realistic body weights and promote negative attitudes towards higher body weight people. Given the mass consumption of media in our culture, it is important to emphasize the effect that weight bias in the media has on public attitudes and behaviours (Puhl and Heuer, 2009).

### **Health Consequences of Weight Stigma**

There is a popular perception that stigma can be used as a motivational tool to incentivize higher body weight people to lose weight. For instance, in 2010, the British Public Health Minister urged health-care providers to tell patients with obesity that they were "fat" rather than "obese" to help motivate them to lose weight (Martin, 2010). However, there is little or no evidence that stigma is effective in modifying behaviour and has fueled harmful discriminatory actions (Nolan & Eshleman, 2016; Puhl & Heuer, 2010)

Rather than motivating individuals to lose weight, evidence suggests weight stigma may actually interfere with efforts to improve health and potentially increase behaviours that reinforce obesity (Puhl & Suh, 2015). Studies have linked the stigma attached to being overweight to several adverse health outcomes such as binge eating, increased food consumption, avoidance of physical activity, physiological stress, weight gain, and impaired weight loss outcomes. These outcomes will be explored below.

### **Weight Gain and Obesity**

Research into how stigma affects weight gain has confirmed that it impacts a range of different health behaviours that are related to weight gain and obesity. Sutin and Terracciano (2013) conducted a study using self-report data from a nationally representative longitudinal study of 6157 U. S. residents. The study found that participants who reported experienced weight discrimination and were approximately 2.5 times more likely to become obese four years later than participants who were obese at baseline and were three times more likely to remain obese after four years. These findings were true regardless of baseline BMI and were only true for weight discrimination and not other forms of discriminations such as race or sexual orientation. Other research has shown that in response to weight stigma, individuals with obesity are more likely to over eat and avoid dieting (Vartanian & Smyth, 2013). These findings demonstrate that weight discrimination is more likely to contribute to weight gain, rather than motivate individuals to lose weight.

### **Disordered Eating**

Research has demonstrated that weight stigma is significantly associated with disordered eating behaviours such as emotional eating, uncontrolled eating, and loss-of-control during eating (Pearl & Puhl, 2018). For instance, a literature review by Vartanian and Porter (2016)

found that more experiences of stigma in daily life was associated with decreased motivation to diet and with less healthy eating behaviours.

One area of research that is particularly interesting is the role that weight stigma plays with BED. There have been several studies documenting high rates of weight bias internalization among individuals with BED (Kessler et al., 2013). To help explain this relationship, researchers found that weight stigma is a meaningful and unique predictor of BED, compared to other established risk factors (Almeida, Savoy & Boxer, 2011). Moreover, it appears that self-stigma is a specifically strong predictor for BED among individuals with obesity, even more so than experiences of weight stigma by others (O'Brien et al., 2016). One example of a study demonstrating this finding was performed by Puhl, Moss-Racusin, and Schwartz (2007) that looked at individuals who were members of a weight-loss support group. The study found that participants that believed weight-based stereotypes to be true, reported more frequent binge eating compared to the participants who reported the stereotypes to be false.

### **Psychological Health and Well-being**

There is a common assumption that obesity leads to psychological disorders such as depression or low self-esteem. However, several lines of research indicate that the weight stigma associated with obesity, rather than the weight itself, is a stronger predictor of impaired psychological well-being (Puhl & Heuer, 2009). For instance, Hayward, Vartanian, & Pinkus (2018) found that the more frequently an individual with overweight or obesity experienced weight stigma and internalized weight bias, the more likely they were to engage in maladaptive coping behaviour such as negative self-talk, withdrawal, and avoidance. Subsequently, these maladaptive coping responses and the distress that results from weight stigma can increase an

individual's vulnerability to depression, low self-esteem, poor body image and other psychiatric disorders (Puhl & Heuer, 2009).

There is ample evidence implicating weight stigma as a risk factor for depression among overweight and obese individuals. For example, one study found that over 40% of individuals with a BMI of over 40 kg/m<sup>2</sup> reported being mistreated due to their weight, and found that this mistreatment was significantly associated with impaired mood. Analysis of the data showed that it was not the obesity itself that was associated with impaired mood, but the interpersonal mistreatment that was a result of their obesity (Carr & Friedman, 2007). Moreover, a study that looked at 9327 obese persons found that the amount of weight discrimination they perceived was significantly associated with a current diagnosis of a mood and anxiety disorder, and with use of mental health services (Hatzenbuehler, Keyes, & Hasin, 2009).

Weight stigma also impacts self-esteem and body image, especially among women with obesity. The most common explanation for this observed gender difference is the importance that society places on physical beauty and thinness that disproportionately affects women and girls (Weinberger, Kersting, Riedel-Heller, & Luck-Sikorski, 2017). One study measured experiences of discrimination, such as being called names because of their weight and not being to find clothes that fit, using a self-report questionnaire. The study found that more frequent experiences of stigmatization was positively correlated with lower self-esteem among women (Annis, Cash & Hrabosky, 2004). Moreover, another study found that individuals with obesity, reported lower levels of self-acceptance compared to normal-weight individuals, and this finding was mediated by perceptions of weight discrimination (Carr & Friedman, 2005). Studies looking at experiences of weight stigma and body image found that weight stigma was positively associated with body dissatisfaction among individuals with obesity, especially for women (Weinberger et al., 2017).

Taken together, these findings indicate that weight stigma is negatively impacting how higher body weight individuals feel about themselves and their bodies, and this inordinately affects women.

### **Physical Activity**

Physical activity level is a strong predictor of health and well-being (Penedo & Dah, 2005), however there is a growing body of research suggesting that weight stigma reduces the physical activity undertaken by higher body weight people (Puhl & Heuer, 2009). For instance, one study found that the awareness and internalization of weight stigma negatively impacted the participants perceived competence and willingness to participate in physical activity, regardless of their objective body weight (Schmalz, 2010).

Although weight stigma affects the level of physical activity of all individuals, there is ample evidence demonstrating that the attitude and behaviour of youths towards physical activity is highly impacted by weight stigma. One study found that 73% of adolescents who were enrolled in a weight loss camp reported being teased or bullied about their weight in a school gym class or sports practice. Moreover, 42% reported that a physical education teacher or sports coach had teased them or bullied them about their weight (Puhl, Peterson & Luedicke, 2012). In addition, research has found a strong association between weight-based teasing and decreased physical activity for youth. For example, Puhl and Luedicke (2012) found that youths who reported more negative affect in response to weight-based teasing were more likely to cope by avoidance of physical activity and gym class. Taken together, this evidence suggests that stigma has a negative impact on the enjoyment and engagement of physical activity on high body weight youths and adults.

## **Stress Responses**

Previous studies have found that racial and ethnic discrimination can trigger a negative internal physiological stress response by stigmatized individuals (Wagner, Lampert, Tennen, & Feinn, 2013). Researchers have also examined the physiological stress response that is induced when individuals experience weight discrimination. An experiment evaluating blood pressure exposed women to weight stigma and were told that their bodies were either visible or invisible to others. The results of the experiment found that higher BMI was associated with increases in blood pressure only when participants were told their bodies were visible to others (Major Eliezer, & Rieck, 2012). Additionally, studies have investigated how weight discrimination affects C-reactive protein (CRP), a biomarker of systemic inflammation that is a predictor for cardiovascular disease and type 2 diabetes (Sutin, Stephan, Luchetti, & Terracciano, 2014). One study that examined 7394 overweight and obese adults found that the association between weight discrimination and CRP varied as a function of BMI (Sutin et al., 2014). Greater experiences of weight discrimination were associated with higher levels of circulating CRP for individuals who were overweight or had class I and II obesity (Sutin et al., 2014). However, the association disappeared for individuals with class III obesity. Interestingly, the researchers found that these findings were specific to discrimination related to weight and physical ability, but not to discrimination related to age or race (Sutin et al., 2014). Another study examined the stress-response of the hypothalamic-pituitary-adrenal axis as a response to weight discrimination by measuring cortisol reactivity (Himmelstein, Incollingo Belsky, & Tomiyama, 2015). The results showed the participants who perceived themselves as heavy exhibited sustained cortisol elevation after being exposed to weight stigmatization, compared with individuals who did not experience weight stigma (Himmelstein et al., 2015). Moreover, cortisol did not change in

response to weight stigma exposure for participants who perceived themselves as average weight (Himmelstein et al., 2015). These findings are alarming because of the positive association that stress and cortisol have been shown to have on negative health outcomes, over-eating, and abdominal adiposity.

### **Weight Stigmatization of Children and Youth**

Children and youth are especially impacted by weight discrimination. One study looking at the amount of stigmatization faced by different populations found that children with obesity have the highest rate of stigmatizing attitudes in the general public (Sikorski, Luppá, Brähler, König, & Riedel-Heller, 2012). Moreover, research has shown that higher body weight children and youth experience discrimination from their peers, educators, health care professionals and parents (Pont, Puhl, Cook, & Slusser, 2017).

These findings are concerning because childhood and adolescence is a period of identity formation and a time when the social evaluation of others is particularly salient. Stigma experienced during this time can hinder the child's emotional, social and academic development, as well as having all the negative impacts on mental and physical health and well-being outlined above. Therefore, children and youth may be especially vulnerable to weight stigmatization and its consequences (Puhl & Latner, 2007).

### **Weight-Related Teasing and Bullying in Youth**

The most common way that youth experience weight stigma is through teasing and bullying (Pont et al., 2017). Children learn weight bias at an early age. A study looking at preschoolers revealed that weight bias was present in three-year-old children and intensified by the age of five (Cramer & Steinwart, 1998). This means that students can experience weight-

based bullying from their peers as early as elementary school (Jendrzyca & Warschburger, 2016).

A study by Puhl, Luedicke, and Heuer (2011) found that high-school students reported the most common form of peer harassment was being teased about their weight. The study also found that one third of girls and one quarter of boys reported being teased about their weight by peers. The incidence of weight-based teasing increased to 60% for students with higher body weights. The types of bullying and victimization that students reported included being ignored, avoided, excluded from social activities, having negative rumours spread about them, verbal threats, and physical harassment. Unfortunately, peers are not the only ones who tease youth about their weight. Research has shown that educators, coaches, and parents are also a source of weight based victimization toward higher body weight youth (Pont et al., 2017).

Higher body weight children and adolescents are socially marginalized from their peers. One of the key developmental tasks of childhood and adolescents is building a clear sense of self and personal identity (PHSA, 2013). An important part of this process includes building friendships and gaining the acceptance of peers. A large part of gaining the acceptance of peers during childhood is based on appearance, body image and physical fitness. Being overweight may negatively affect peer acceptance and explain why higher body weight youth are more socially isolated and peripheral to social networks compared to lower body weight peers (Strauss & Pollack, 2003). This social marginalization may explain some of the consequences related to weight-based victimization and stigma.

Weight-based teasing, bullying, and victimization can have numerous health consequences for young people. For instance, teasing during youth has been shown to be risk factor for unhealthy weight control practices, body dissatisfaction, and disordered eating

(Eisenberg, et al., 2003). The psychological consequences of weight-based bullying and victimization include a heightened vulnerability to depression, anxiety, lower self-esteem, low self-confidence, loneliness due to social isolation and exclusion, body dissatisfaction, poor image, self harm and suicidal thoughts and behaviour (Puhl, 2011; Griffiths & Page 2008). These consequences are independent of weight or BMI, suggesting that they may be directly related to being bullied rather than a result of their body size or weight.

One of the most alarming consequences that weight-based bullying and victimization has on youth is its affect on suicidality. Research has shown that victims of weight-based bullying are two to three times more likely to engage in suicidal thoughts and behaviour than their peers of similar body size who are not the targets of bullying (Puhl, 2011; Eisenberg, et al., 2003).

The negative consequences of weight-based teasing do not end in adolescence, and can follow an individual into adulthood. In a longitudinal study conducted by Puhl et al. (2018), weight-based teasing by peers and family members in adolescence predicted higher BMI and obesity 15 years later. For women, the impacts of weight-based teasing were especially impactful and predicted binge eating, unhealthy weight control, eating to cope, poor body image and recent dieting 15 years later. These findings demonstrate that weight-based teasing in adolescence predicts adverse eating behaviours and health outcomes well into adulthood. This study also highlights a gender-based difference, where women experience more negative outcomes from weight-based teasing compared to men.

### **Weight Bias Internalization**

In addition to experiencing negative behaviour from others, higher body weight individuals may internalize the societal stigma directed toward them. This form of stigma is referred to as “weight bias internalization” and occurs “when individuals apply negative weight

stereotypes to themselves and self-derogate because of their body weight” (Pearl & Puhl, 2018, p. 1141). One study by Puhl, Himmelstein, and Quinn (2018) found that 52% of their sample of adults with obesity endorsed high levels of weight bias internalization, demonstrating the pervasiveness of this issue.

Weight bias internalization is associated with numerous negative mental and physical health outcomes (Latner, Durso, & Mond, 2013). In fact, some research has found that weight bias internalization is a stronger predictor of poor mental and physical health than experiences of stigmatization alone (Pearl & Puhl, 2016). These findings have led some researchers to believe that weight bias internalization is the mechanism through which experiences of weight stigma exacerbate adverse health behaviours (Puhl, Himmelstein, et al., 2018). For instance, it is well documented that the appraisal of stressful life events – in other words, how people experience and perceive an event – is more predictive of emotional reactions and adverse outcomes than the actual event itself (Lazarus & Folkman, 1984). Therefore, if an individual experiences weight-based discrimination and believes they deserve this mistreatment because of their weight, they are more likely to suffer emotional and psychological consequences than an individual who perceives the experience of discrimination as undeserved and an act of prejudice. Therefore, it is the “agreeing with weight-based stereotypes and negatively evaluating oneself due to weight [that] could generate more negative emotional responses and critical self-evaluation overall” (Pearl & Puhl, 2016).

Weight based internalization can have negative health impacts. Physical health outcomes associated with weight bias internalization include metabolic syndrome, elevated triglycerides, and weight cycling (Pearl et al., 2017; Puhl, Quinn, Weisz, & Suh, 2017). Mental health outcomes associated with weight bias internalization include impaired mood, body

dissatisfaction, depression, anxiety, and stress (Durso & Latner, 2008; Hayward et al., 2018).

Finally, research has also demonstrated that weight bias internalization affects different health behaviours such as binge eating, dieting, and motivation for physical activity (Puhl et al., 2007; Himmelstein, Puhl, & Quinn, 2017, O'Brien et al., 2016). These findings demonstrate that weight bias internalization poses a serious threat for the health and well-being of individuals who perceive themselves to have excess body weight.

### **Summary**

Chapter two described a variety of different paradigms for how obesity treatment should be approached. However, by far the most prevalent view in our society is the simplest - that obesity treatment is a matter of modifying individual behaviour – to eat less and exercise more. It seems there is a clear link between this view and the belief that if someone is obese, it is because of their personal failings. In this view, someone who is obese it believed to lack the self-discipline, motivation, or self-control to be healthy.

The rise in the prevalence of obesity has been followed by a rise in weight-based stigma and discrimination. As a result, higher body weight people are subjected to discrimination in a variety of contexts including the media, educational institutions, employment settings, the health care system, and inside their own homes. The consequences of this pervasive and far-reaching phenomenon are severe. Weight stigma has serious effects on the health and well-being of individuals and has been associated with a number of medical conditions and deleterious consequences. Although weight stigma affects individuals of all ages, the affects are particularly distressing among children and youth. Therefore, finding ways to address weight stigma are particularly important. Moreover, the negative consequences of stigma are intensified when the stigma becomes internalized and directed towards the self. Higher body weight people are in

danger of believing that they are obese because they are morally flawed human beings and are the cause of their misfortune, therefore deserving the discrimination they face.

One way of dealing with this stigma would be to change society's perception of obesity. However, because weight stigma and discrimination are so widespread and socially accepted, the elimination of weight stigma would require millions of individuals to change their assumptions about higher body weight people (Wong, Knee, Neighbors, & Zvolensky, 2019). Although necessary, changing wide-spread perceptions would require coordination between many different sectors of society and would need a great deal of time, money and planning (PHSA, 2013). Therefore, higher body weight individuals would benefit from psychotherapeutic interventions that address the stigma they face and mitigate its impacts in the present moment, while advocates push for society-wide changes that reduce weight bias in society. The next chapter will explore how self-compassion can be used as an intervention for coping with weight stigma and as a possible mechanism to change the damaging beliefs that occur when weight stigma is internalized.

#### Chapter 4: Self-compassion as an Alternative Approach to Obesity Treatment

*Being human is not about being any one particular way; it is about being as life creates you—with your own particular strengths and weaknesses, gifts and challenges, quirks and oddities.*

-Neff, (2011, p. 49)

Self-compassion is uniquely suited to help higher body weight people cope with the challenges associated with obesity because it offers an alternative and healthy way of relating to oneself in times of suffering. A growing body of research has shown self-compassion to be consistently associated with psychological well-being and positive outcomes such as happiness and life satisfaction (Zessin, Dickhauser, & Garbade, 2015). Moreover, this research suggests that self-compassion protects against negative outcomes such as anxiety and depression (MacBeth & Gumley, 2012). Interestingly, clinicians have examined how they can use self-compassion as a resource for helping those experiencing public stigma and protecting them from self-stigma (Hilbert et al., 2015; Wong, Mak, & Liao, 2016).

This chapter will examine why clinicians may use self-compassion as a psychological resource for treating higher body weight individuals. First, this chapter will explore the concept of self-compassion and its different components. Subsequently, this chapter will review the literature on self-compassion to discuss how self-compassion may benefit the psychological and physical health of higher body weight individuals. Finally, this chapter will examine how self-compassion can buffer against the negative impacts of stigma and can protect against weight bias internalization.

### **Understanding Self-Compassion**

The concept of self-compassion has a long history which originates from Buddhist teaching and tradition (Neff & Davidson, 2016). However, the concept of self-compassion was reintroduced in secular terms by Kristin Neff in 2003 after she reconceptualized the construct within scientific literature (Neff, 2003a; Neff, 2003b). Since 2003, self-compassion has become a growing area of research in the field of psychology with over 200 journal articles and dissertations being published on the topic (Neff & Dahm, 2015).

To better understand the concept of self-compassion, it is helpful to explore the more familiar concept of compassion first. Compassion involves being sensitive to the suffering of others, paired with the desire to alleviate that suffering (Goetz, Keltner, & Simon-Thomas, 2010). In other words, to be compassionate towards someone else means being touched by their suffering and being open to their pain, without avoiding and disconnecting from it (Wispe, 1991). It also entails a desire to heal the other person's suffering through kindness and to share their experience of pain. Compassion also recognizes that part of the shared human condition is to be imperfect and to make mistakes, yet extending that same acceptance and kindness during these times of failure (Neff & Davidson, 2016).

Just as we can feel compassion towards the suffering of others, we can extend that compassion towards our own suffering. Self-compassion involves "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (Neff, 2003a, p. 86). This means being non-judgemental of our own pain, inadequacies, and failures and recognizing our experience of suffering as part of the larger human experience (Neff, 2003a). Meeting our suffering with

compassion gives us the opportunity to enhance our own well-being, resilience, and ability to cope with difficult thoughts and emotions (Neff & Davidson, 2016).

According to Neff (2003a), self-compassion is comprised of three main components: self-kindness, common humanity, and mindfulness. These three components will be explored below.

### **Self-Kindness**

In Western culture, emphasis is placed on being kind to others, yet we rarely think about being kind to ourselves (Neff & Davidson, 2016). In fact, the majority of people report that they are kinder to others than they are to themselves (Neff, 2003b). When we make a mistake or fail, we often judge ourselves harshly and criticize our inadequacy. Our internal dialogue will often use critical and harsh language like, “how can I be so stupid” or “I am so disgusting.” The thoughts and words we think and say to ourselves are often so mean that we would never repeat them to a friend or even a stranger. Even when we find ourselves in difficult circumstances that are outside of our control, we often do not extend the same kindness and sympathy to ourselves that we would show another person in a similar situation (Neff & Dahm, 2015).

In contrast, self-kindness occurs when we embrace our imperfections with warmth, understanding and acceptance. We no longer avoid or resist our failures and short-comings, but recognize that inadequacies and difficulties are a natural part of life. When we practice self-kindness, we replace the harsh voice of the inner critic with gentle and encouraging dialogue (Neff & Dahm, 2015). In addition, when we find ourselves in difficult circumstances, we take the time to reflect on the emotional toll of the situation and nurture our own suffering.

### **Shared Humanity**

One of the most debilitating aspects of suffering is feeling alone. When thinking about our personal failings, our self-judgment often pushes us to feel separate and isolated from others.

We often think that there is something wrong with us, and irrationally believe that everyone else is perfect or better than us. In addition, when things go wrong in our lives outside of our control, we tend to believe that we are being treated unfairly and that everyone else has an easier go of things. It is during these times of despair and self-pity that we forget that difficulty and suffering are a normal part of life that everyone experiences.

The common humanity component of self-compassion prompts us to see our suffering as part of a broader human experience. According to Neff and Davidson (2016), the common humanity component of self-compassion “recognizes that all people fail, make mistakes, and feel inadequate in some way” (p. 4). In this way, our shortcomings and imperfections no longer make us feel alone or different, but turn into reasons for connection. For this reason, self-compassion is different than self-pity because people who experience self-pity become so immersed in their own suffering that they become oblivious to the pain of those around them.

On the other hand, when we experience self-compassion, we recognize that we are never truly alone in our suffering because we become aware that people around us are experiencing similar problems (Neff & Dahm, 2015).

### **Mindfulness**

The mindfulness component of self-compassion entails a non-judgemental awareness of thoughts and emotions in the present moment (Kabat-Zinn, 1994). This means being aware of our negative and difficult emotions without trying to judge, repress, or avoid them. This is important because we cannot be compassionate towards our own suffering until we are first able to recognize that we are experiencing pain (Neff & Davidson, 2016). Often when things go wrong, we have a tendency to move straight into problem-solving mode without taking the time to acknowledge our internal experience and the difficult emotions we may be experiencing.

Moreover, when the harsh voice of our inner-critic brings us pain, we rarely remember to acknowledge this as a moment of suffering, even though it is self-inflicted. Mindfulness allows us to acknowledge our difficult emotions so that we can nurture and comfort ourselves during these times.

Mindfulness also helps us avoid over-identifying with our negative thoughts and emotions (Neff, 2003a). When we over-identify with our negative thoughts and emotions, we get carried away with our aversive reactions and start to believe our negative ruminations about ourselves and our situations (Bishop et al., 2004). This clouds our self-concept and causes us to lose sight of the reality of the situation. However, practicing mindfulness provides us with the mental space we need to recognize that our thoughts and feelings are transitory experiences that do not define us. Being mindful allows us to gain perspective and clarity on ourselves and the situations in which we find ourselves in, even during times of difficulty, failure, and inadequacy.

### **The Interconnected Parts of Self-Compassion**

According to Neff (2003a), these three components are conceptually distinct, but are also interconnected and enhance one another. For example, mindfulness fosters feelings of acceptance which helps to decrease self-judgement and encourages self-kindness. Moreover, mindfulness also creates the mental space we need to understand that our negative experiences are shared by others, therefore increasing feelings of interconnectedness. Finally, when we understand that our imperfections and inadequacies are shared by many, it is easier to be kind to ourselves. These examples of how the different components interact with one another help us to see that self-compassion is best understood as a single experience composed of different but interconnected parts (Neff & Dahm, 2015).

### **How Self-Compassion can be Useful for Higher Body Weight People**

The empirical research on self-compassion demonstrates self-compassion has beneficial effects on a wide range of outcomes (Rahimi-Ardabili et al., 2017; MacBeth & Gumley, 2012; Trompetter, de Kleine, & Bohlmeijer, 2016). The research shows that self-compassion benefits both the health and well-being of those who incorporate self-compassion into their daily life. Moreover, the findings suggest that self-compassion can help a variety of demographics with a range of presenting concerns.

Specifically, self-compassion can help higher body-weight individuals cope with physical and psychological issues associated with obesity. As discussed in chapter two, there are a number of concerns that are associated with being overweight or obese. Self-compassion may help higher body weight individuals cope with some of these concerns, such as disordered eating, lower self-esteem, body dissatisfaction, chronic pain, cardiovascular disease and depression. (PHSA, 2013).

Finally, one of the most challenging aspects of having a larger body is the stigma and discrimination higher body weight individuals experience from others and themselves (Hayward, Vartanian, & Pinkus, 2018; Pearl & Puhl, 2016). Although research has documented numerous detrimental health effects that result from experiences of weight stigma and discrimination (Pearl & Puhl, 2018; Puhl & Heuer, 2010), there have been few strategies proposed about what individuals can do to cope with the stress of stigma. Self-compassion again offers a unique approach to protect against some of the pernicious effects of weight stigma and discrimination.

The remainder of this chapter will explore how self-compassion can be an effective psychological resource for higher body weight individuals to cope with different concerns associated with obesity. First, this chapter will illustrate how self-compassion may be

particularly effective in coping with weight stigma and how it may protect against weight bias internalization. Next, this chapter will explore how self-compassion can increase motivation and promote health-related behaviours. Subsequently, this chapter will describe how self-compassion can protect against disordered eating and improve body image. Finally, this chapter will explore how self-compassion can lead to improved general psychological health and well-being.

### **Weight Stigma and Discrimination**

Higher body weight people could benefit from resources to help cope with stigma. In chapter three, this thesis explored the widespread stigmatization of obesity, fat, and higher body weight individuals. This thesis reviewed the significant amount of literature documenting the deleterious effects on health and well-being that weight stigma and discrimination have on impacted individuals. These findings emphasise the need for effective interventions that reduce stigma. According to Mittal et al. (2012), there appears to be two types of approaches in reducing stigma: changing stigmatizing beliefs and attitudes, and enhancing stigma coping skills. Self-compassion is a stigma-reduction strategy that focuses on helping individuals increase their coping skills for dealing with stigma.

In a study looking at multiple forms of stigma, Wong et al. (2019) suggest that self-compassion may buffer against the effects of different forms of stigma and associated negative outcomes through several cognitive, emotional, and social mechanisms.

Some of these cognitive mechanisms are intrinsic self-affirmation, stress appraisal, and benefit finding (Wong et al., 2019). Intrinsic self-affirmation refers to focusing on valued intrinsic parts of the self such as core values or talents (Arndt, et al., 2002). Self-compassion can lead to intrinsic self-affirmation by decentering the stigmatized part of an individual's identity and taking a more balanced, and global sense of the self (Wong et al., 2019). This is important

for higher body weight people who experience weight bias internalization, as they may view themselves as having little self-worth because of their weight. However, intrinsic self-affirmation allows the individual to focus on other aspects of themselves, rather than their weight, therefore increasing self-worth.

Stress appraisal refers to how the individual perceives the demands of the stressor compared to the resources that the individual has to cope with those demands (Lazarus & Folkman, 1984). Self-compassion can help decrease the stress appraisal of stigma by teaching individuals to soothe and nurture themselves during difficult situations (Neff 2003a) and thus reducing how stressful they find the situation. Self-compassion can also help reduce stress appraisal by fostering numerous interpersonal and intrapersonal resources (Brodar, Crosskey, & Thompson, 2015; Neff & Dahm, 2015; Sirios, 2015), therefore providing individuals with more resources to cope with stigma.

Finally, self-compassion may serve as a mechanism for benefit-finding, or in other words, a way in which people can find meaning and strength from negative experience (Wong et al., 2019). Self-compassion may facilitate benefit finding by providing a more balanced perspective to individual's experiences of stigma, helping them to see that stigma is not only a negative experience but an opportunity for personal growth and shared connection.

Aside from cognitive benefits, self-compassion also has emotional benefits. Self-compassion may buffer against stigma by strengthening individuals' ability for emotional processing— the active attempt to acknowledge and understand one's emotions. Researchers have found that emotional processing is an adaptive process when dealing with stressful experiences like stigma (Stanton et al., 2000). Self-compassion increases emotional processing because it

emphasizes bringing mindful awareness to all emotions, without attempting to suppress or avoid difficult emotions (Neff, 2003a; Wong et al., 2019).

In addition, self-compassion can help individuals regulate their emotions. Encountering stigma on a regular basis is a chronic stressor, which can exhaust individuals' emotional regulation capacities and impair an individual's ability to regulate difficult emotions (Cicchetti and Toth, 2005). Research has demonstrated that repeated exposure to weight discrimination can lead to chronic stress for impacted individuals (Puhl & Suh, 2015). However, self-compassion improves emotional regulation by encouraging individuals to bring awareness to painful stigma-related thoughts and emotions, and approach their suffering with kindness, acceptance, and a sense of shared humanity.

Finally, self-compassion fosters social mechanisms, such as social support and forgiveness, which can buffer against stigma (Wong et al., 2019). Having adequate social support is a valuable resource for coping with stigma and self-compassion can help individuals recognize this resource (Wong et al., 2019). Research has shown that higher body weight youth are socially marginalized from their peers (Strauss & Pollack, 2003). Therefore, these social mechanisms may be particularly valuable to higher body weight youth in coping with weight stigma. One of the key components of self-compassion is taking a balanced perspective to suffering by embracing a sense of shared humanity (Neff, 2003a). By giving individuals a shared sense of humanity, self-compassion can help stigmatized individuals feel less isolated when experiencing stigma by recognizing that stigma and discrimination are experiences shared by many. In addition, self-compassionate individuals tend to have higher levels of perceived social support, a greater sense of community, and lower levels of loneliness (Akin, 2010; Akin and Akin 2015; Brodar et al. 2015).

In addition to increasing social supports, Wong et al. (2019) suggests that another way in which self-compassion buffers against stigma is through forgiving discriminatory acts. Because feelings of resentment are associated with negative outcomes, it has been suggested that forgiveness may provide physical and mental health benefits (Riek and Mania 2012; Worthington and Scherer 2004). Self-compassion emphasizes that all individuals deserve care and warmth, therefore self-compassionate people may be more likely to take a more compassionate perspective towards transgressors of stigmatizing acts.

### **Weight Bias Internalization**

People are especially harmed by stigma once it becomes internalized. In chapter three, this thesis discussed the pervasive nature of weight bias internalization and the many negative outcomes associated with it. People with larger bodies are taught that being overweight is their fault. Some research suggests that weight bias internalization is a stronger predictor of poor mental and physical health than experiences of stigmatization alone (Pearl & Puhl, 2016). For this reason, finding effective strategies to protect against weight bias internalization is important.

There has been promising research suggesting that self-compassion may be a useful resource in protecting higher body weight individuals from internalizing weight bias. In a study looking at self-compassion as a resource to protect against self-stigma (weight bias internalization), Hilbert et al. (2015) surveyed 1158 individuals who were overweight or obese. Using self-report surveys, the study measured self-compassion, self-stigma, and different mental and physical health symptoms such as BMI, depression, somatic symptoms, and health status. The study found that self-compassion lowered the predictive effects of self-stigma on depression, somatic symptoms, and health status/quality of life by approximately one-third. The authors concluded that “self-compassion has the potential to act as a buffer against the mental and global

health detriments of self-stigma in overweight and obesity” (Hilbert et al., 2015, p. 299).

Moreover, the study found the positive effects of self-compassion were based on low levels of self-isolation, low levels of self-judgement, and low levels of over-identification with negative thoughts and emotions. These findings suggest that practicing self-compassion has the ability to decrease engagement in the dysfunctional cognitive processes that are a result of weight bias internalization.

### **Motivation and Health-Related Behaviours**

One important aspect of improving health is increasing health-related behaviours such as exercising, maintaining a healthy diet, and decreasing alcohol consumption. As discussed in chapter two, obesity medicine experts agree that increasing health-related behaviours can have many positive effects on the health and well-being of higher body weight people, regardless of weight loss (Freedhoff & Sharma, 2010). A significant barrier to increasing health-related behaviours that many individuals experience is a lack of motivation. Therefore, self-compassion can enhance motivation and improve health-related behaviours which may be particularly beneficial to higher body weight individuals.

One of the most common arguments against self-compassion is the belief that it undermines motivation and encourages overindulgence (Gilbert, McEwan, Matos, & Ravis, 2011). Often people believe that their self-critical tendencies keep them accountable for their behaviour and motivate them to reach their goals. They believe that if they replace their self-critical tendencies with self-compassion, they would become over-indulgent and lazy, and avoid taking responsibility for their actions.

However, research indicates that self-compassion is a useful tool in enhancing motivation. In a correlational study, Neff et al. (2007) found that self-compassion was positively

associated with the desire to reach one's goal. Moreover, an experimental study by Breines and Chen (2012) found that participants who had been prompted to feel self-compassion for their personal failures and weakness exhibited greater motivation to change for the better, try harder to learn, repair past harms, and avoid repeating past mistakes compared to the control group. Finally, Sirois (2014) found that students high in self-compassion were less likely to engage in self-handicapping strategies like procrastination.

Neff and Davidson (2016) explain that self-compassion motivates us because it is fueled by self-love. Where self-criticism may motivate us in order to avoid harsh self-judgement, it can also decrease our motivation to take risks and try new things because we are scared of the self-judgement that occurs if we fail. On the other hand, self-compassion helps us to take risks and try new things because we feel safe- we know that we will be kind to ourselves if we fall short. Self-compassion motivates us to do what is needed in the short-term in order to achieve our long term goals and desires. When we care and love ourselves, we will do what is best for our overall health, happiness, and well-being.

Changing our sources of motivation may explain why self-compassion has been shown to positively impact health-related behaviours. For instance, Kelly, Zuroff, Foa, and Gilbert (2009) examined if self-compassion had an effect on smoking reduction and cessation. The researchers found that when participants were trained to show themselves compassion about the difficulties of giving up smoking, participants reduced their cigarette intake to a greater extent than the control group. Moreover, the self-compassion training was especially effective in reducing smoking among participants who were highly self-critical and resistance to change. Magnus, Kowalski, & McHugh (2010) conducted a study of women who had set personal goals for exercising. This study found that self-compassionate women had more intrinsic rather than

extrinsic motivation to exercise. Moreover, participants also reported less anxiety regarding social evaluations of their body and felt more comfortable while exercising. Finally, a study that surveyed young adults found that levels of reported self-compassion were positively associated with the intentions to engage in health-promoting behaviours, individual's perceived control over health, and current practices of wellness and health related behaviours (Sirios, 2015).

These findings suggest that self-compassion can change the reason why higher body weight people choose to engage in health-related behaviours. Many times, the reason that higher body weight people have for exercising or modifying their diet is to satisfy external pressure to lose weight. Instead, self-compassion moves away from the need to change ourselves, to focusing on loving and accepting ourselves the way we are. Healthy eating and physical activity are no longer seen as behaviours to lose weight, but can become ways to show ourselves compassion. Therefore, the motivation to make healthy changes comes from the internal desire to be kind to ourselves and to engage in behaviours that we know will make us feel good in the long term.

### **Disordered Eating and Body Image**

Obesity, disordered eating, and body dissatisfaction have a complex and interconnected relationship with one another. People who are overweight and obese are at a higher risk of disordered eating and poor body image (PHSA, 2013). In addition, youth and adults who diet and use unhealthy weight control practices such as fasting, vomiting and laxatives are more likely to develop obesity over time (PHSA, 2013). Moreover, body dissatisfaction during adolescence is correlated with binge eating and lower levels of physical activity which can contribute to the development of obesity (Neumark-Sztainer, et al., 2007). Finally, weight stigma is highly associated with disordered eating and fat-phobic public health messages about reducing the

prevalence of obesity may lead to an increased rise in the prevalence of eating disorders and disordered eating (PHSA/BCMHAS, n.d.).

Self-compassion offers a unique approach that may positively impact how individuals relate to their bodies and the food they eat. Research suggests that self-compassionate people tend to be less critical of their bodies, have fewer body image concerns and exhibit less eating disorder symptomology (Neff & Davidson, 2016; Taylor, Daiss, & Krietsch, 2015). Moreover, there is also research suggesting that interventions aimed at developing self-compassion skills can help promote positive body image and healthy eating behaviours (Rodgers et al., 2017). One study trained participants to do a self-compassion meditation for three weeks (Albertson, Neff, & Dill-Shackleford, 2014) and found that participants gained greater self-compassion and experienced significant reductions in body dissatisfaction and body shame compared to the control group (Albertson, Neff, & Dill-Shackleford, 2014).

One important application of self-compassion may be its effectiveness in treating BED. BED is a prevalent eating disorder among individuals with obesity. According to de Zwaan (2001), BED affects 2-5% of people with obesity and up to 30% of individuals who are overweight or obese and seeking weight-loss treatment. Given this prevalence, weight-loss treatment providers need interventions for higher body weight people that can help with and protect against BED. There is growing evidence that interventions focused on self-compassion are effective in treating BED. For instance, Pinto-Gouveia et al., (2016) studied whether group interventions that incorporated psychoeducation, mindfulness, and self-compassion were effective for treating for individuals with BED. The results found that their intervention diminished BED symptoms and lowered levels of eating psychopathology. Pinto-Gouveia et al.

(2016) suggest that the reduction in BED symptoms was mediated by the diminishing of external shame and self-criticism through an increase in self-compassion and self-reassurance.

### **Psychological Health and Well-being**

Although obesity itself does not lead to psychopathology, higher body weight individuals experience a number of weight-related stressors that can have a negative impact on their psychological health and well-being (Fabricator & Wadden, 2004). Many people who are overweight or obese have stressors such as chronic pain, impairment in daily functioning, sleep difficulties, physical illness, and stigma (Jebb, 2004; Okifuki & Hare, 2015; Puhl & Heuer, 2009). For this reason, certain individuals with obesity are at a greater risk of psychopathology, especially depression (Fabricator & Wadden, 2004). Therefore, higher body weight individuals may benefit from interventions, like self-compassion, that protect against psychological impairment and improve emotional well-being.

Self-compassion may be particularly effective in treating depression and anxiety that is often comorbid with obesity. One particularly strong finding from the research on self-compassion is that greater self-compassion is linked to less psychopathology (Barnard & Curry 2011). In fact, MacBeth and Gumley (2012) performed a meta-analysis and found a large effect size for the link between self-compassion and stress, anxiety, and depression. One explanation for these findings is that increasing self-compassion decreases the amount an individual will self-criticize (Neff, 2003a). This is important because self-criticism is an established predictor for anxiety and depression (Blatt, 1995), and self-criticism has been linked to obesity (Hilbert et al., 2015).

Besides reducing self-criticism, self-compassion could also mitigate against depression and anxiety by reducing rumination. Neff (2003b) found that people high in self-compassion

tend to ruminate much less than individuals low in self-compassion. Moreover, Raes (2010) found that rumination mediated the association between depression and anxiety, suggesting decreased rumination may be an important psychological health benefit of self-compassion.

A third way self-compassion may protect against depression and anxiety is by emphasizing weakness as a shared human experience. A study by Neff, Rude, and Kilpatrick (2007) found that participants were less likely to experience anxiety when describing their weakness in a mock job interview. Participants who tended to be more self-compassionate also made more social references to friends and family, and used more connected language such as first person plural pronouns such as “we” (Neff et al., 2007). These findings suggest that one-way self-compassion may protect against anxiety is through emphasizing weaknesses as a shared human experience.

These studies demonstrate that self-compassion can be a useful resource in coping with negative life events by changing the ways in which individuals react and adjust to them. This may be particularly useful in helping higher body weight people cope with experiences of prejudice and discrimination. It is well documented that experiences of prejudice and discrimination are highly stressful (Miller & Major, 2000), yet how stressful the individual finds the event has been shown to be more dependant on the individual’s appraisal of the experience, rather than the experience itself (Lazarus & Folkman, 1984).

Aside from its effect on depression and anxiety, another way in which self-compassion may benefit higher body weight individuals is by increasing resilience. Given the wide spread discrimination against higher body weight people, this population may benefit from fostering resilience. Empirical research on self-compassion suggests that self-compassion facilitates resilience by moderating people’s reactions to negative life events (Germer & Neff, 2013). For

instance, a study examining adjustment to marital separation found that participants who were self-compassionate when thinking about their breakup displayed better psychological adjustment at the time of the initial study and nine months later during a follow-up (Sbarra, Smith, & Mehl, 2012). Another study by Leary, Tate, Batts Allen, and Hancock (2007) examined how self-compassion impacts the ways in which people deal with negative life events. The study's findings indicated that participants with higher levels of self-compassion demonstrated less negative emotions, less extreme reactions, less isolation, more accepting thoughts, and had a greater tendency to put their problems into perspective. The study also found that priming self-compassion increased the likeliness of participants taking responsibility for their role in past negative events.

It is important to note that self-compassion is not about pushing away negative emotions, by only focusing on positive ones. In fact, individuals who are self-compassionate are less likely to suppress unwanted thoughts and emotions than those lacking self-compassion (Neff, 2003a). Self-compassion incorporates the practice of embracing negative emotions that can in turn help generate positive emotions. This may explain why self-compassion is associated with numerous positive psychological strengths such as happiness, wisdom, optimism, curiosity, and emotional intelligence (Heffernan, Griffin, McNulty, & Fitzpatrick, 2010; Hollis-Walker & Colosimo, 2011).

### **Summary**

There are numerous health challenges associated with increased body weight. In the past, conventional approaches to obesity treatment have focused on weight loss as the main goal to reduce health risks (PHSA, 2013). However, these conventional weight management interventions typically have poor long-term outcomes (Efhag and Rossner, 2005) and increase

stigmatization (O'Hara & Taylor, 2018; Sharma, 2009). Approaches that focus on weight loss have been shown to increase the pressure to achieve an ideal weight, dieting, and weight discrimination which can lead to problems like eating disorders, anxiety and depression, and other barriers to achieving optimal mental health and well-being (PHSA, 2013). This inadvertent trade-off between weight loss and mental-well-being has led to a shift towards more holistic approaches that address the psychological factors linked to health-related behaviours.

This chapter has explored how self-compassion can be used as a unique approach to helping higher body weight people. Although self-compassion can be beneficial to everyone, this chapter has explored how it may be particularly beneficial for coping with the specific challenges of obesity that were outlined in the two preceding chapters. Rather than focusing on weight loss, self-compassion focuses on improving the psychological well-being of individuals who are overweight or obese.

Self-compassion can be an effective resource in coping with experiences of weight stigma and may protect individuals from weight bias internalization. It has been shown that society's simple view of obesity has contributed to weight-based stigma. Society's prevailing view is that the individual's failure to modify their behaviour is the cause of their obesity and that people with obesity are lazy, unmotivated, and lack self-control. Facing this stigma can lead to stress for high body weight people. Even worse, weight stigma can be internalized and higher body weight people may believe that they are overweight because of their moral failings. Self-compassion allows higher body weight people to reject these harmful messages from society and to accept themselves as they are, regardless of what society says they should weigh.

The empirical research on self-compassion suggests that self-compassion is all around beneficial to health and well-being (Neff, 2011) and can deal with some of the

psychopathologies associated with being overweight/obese that are not linked to stigma or discrimination. Research has shown that self-compassion can benefit individuals by reducing psychopathology, increasing positive psychological strengths and emotions and increase health related behaviours (MacBeth & Gumley, 2012; Zessin et al., 2015).

There is still an urgent need to push for macro-level changes in our society in order to promote the health and well-being of all individuals. Moreover, there is still a crucial need to advocate against weight stigma and discrimination to promote a society that celebrates and accepts bodies of all shapes, sizes, and diversities. Hopefully, while these positive changes are gradually made over time, self-compassion can be an effective resource to help higher body weight individuals live healthy and meaningful lives in a systemically unjust and oppressive society.

## Chapter 5: Discussion

*The curious paradox is that when I accept myself just as I am, then I change*

-Rogers, (1995, p. 17)

This thesis contributes to the existing discussion surrounding the way in which our world currently perceives obesity and obesity treatment. This was done by exploring the concept of self-compassion as a tool for helping people with obesity cope with some of the unique challenges they face as a result of living in a larger body. In order to do this, a review of the literature was conducted on the topics of obesity, weight stigma, and self-compassion through a critical theory lens. In chapter two, this thesis explored the topic of obesity and examined its prevalence, consequences, etiology and treatments. In chapter three, this thesis explored the topic of weight stigma and analyzed how it presents in different areas of life and the mental and physical health outcomes associated with it. Next, this thesis explored the topic of self-compassion and analyzed the research literature on the topic to find ways in which it may benefit higher body weight individuals. This concluding chapter reviews the clinical implications of this research, explores the limitations of this thesis, makes recommendations for future research, and discusses the author's personal reflections on the process of conducting this thesis.

### **Clinical Implications**

One of the goals of this thesis was to provide mental-health practitioners with information on obesity and weight stigma, and to make recommendations for incorporating self-compassion into their work with higher body weight clients. This thesis argues that mental-health practitioners should actively resist weight stigma and be aware of how anti-fat bias impacts their work with clients. To do this, clinicians can first educate themselves on the complex relationship between weight and health, and on the various causes of obesity. Clinicians should promote more

awareness around this topic and build it into their work with clients. Counselling practices should incorporate principles from the Health at Every Size Movement by encouraging body acceptance, supporting intuitive eating and encouraging active embodiment (Penney & Kirk, 2015) and they should refrain from engaging in weight loss counselling (McHugh & Kasardo, 2012). Next, clinicians should reflect on their own anti-fat bias and how this may impact the ways in which they engage with higher body weight clients. This may include clinicians reflecting on how anti-fat bias may be impacting the relationship they have with their own bodies and persons in their lives. Clinicians can become more aware of their implicit weight bias by using tools such as the Harvard Implicit Association Test (Implicit Association Test Corporation, n. d.). Moreover, clinicians can acknowledge their client's experiences of anti-fat bias and oppression and address how these experiences harm them. Furthermore, clinicians can encourage higher body weight clients to become familiar with body positive literature, resources, advocates and communities as a way to promote connection and to provide a different perspective to the dominant discourse. Finally, clinicians should ensure their therapeutic spaces are welcoming and comfortable for people of all sizes by refraining from using small chairs or narrow passage ways and having reading materials and images with diverse representations of all body shapes, sizes, colours, and abilities.

Based on the findings of this thesis, self-compassion may be a beneficial approach to working with higher body weight clients. There are several ways that clinicians can incorporate self-compassion into their work. First, clinicians can incorporate therapeutic approaches that use self-compassion. For instance, self-compassion has been found to be one of the key components of Mindfulness-Based Cognitive Therapy (Germer & Neff, 2013), a therapeutic approach that incorporates the principles and practices of mindfulness with cognitive therapy (Germer & Neff,

2013; Kuyken et al., 2010). Another therapeutic approach that incorporates self-compassion is acceptance and commitment therapy (ACT), a third wave behavioural therapy that applies functional contextualism and relational frame theory (Hayes, Strosahl, & Wilson 2011). In addition, Neff and Germer (2013), two leaders in the field of self-compassion, have developed their own Mindful Self-Compassion (MSC) program to teach self-compassion skills to the general population. The MSC program teaches a variety of meditations (e.g. affectionate breathing, love and kindness meditation) and informal practices for daily life (e.g. soothing touch, compassionate letter writing) (Neff and Germer, 2013). Clinicians can incorporate and adapt the principles and practices of the MSC program into their own clinical practice.

### **Limitations**

This thesis has several limitations. First, a systematic review of the academic literature pertaining to all of the topics of interest in this paper was not in the scope of this thesis. Rather, the author identified key themes and arguments suggested by the reviewed literature based on their analysis. Secondly, there are many therapeutic approaches and theoretical models for work involving higher body weight people and this thesis does not review them all. Self-compassion is only one possible therapeutic approach and other models that have been omitted from this thesis should also be considered (Cia & Latner, 2011; Lillis, Hayes, Bunting, & Masuda, 2009). Finally, original empirical research was not performed for this thesis. Therefore, this work does not include the voices and perspective of higher body weight people. However, attempts were made to include a broad range of literature that incorporates the perspectives and experiences of this population. Moreover, at the time this thesis was written, limited empirical research has been done looking at the efficacy of self-compassion to work with higher body weight individuals.

### **Recommendations for Future Research**

The application of self-compassion in coping with obesity and weight stigma has a strong theoretical foundation, but remains an understudied topic. Limited empirical studies have explicitly examined the association between self-compassion and weight stigma (Hilbert et al. 2015). Therefore, the mechanisms underpinning how self-compassion can mitigate some of the negative outcomes of weight stigma can be explored. Moreover, there is a lack of research on how self-compassion can be integrated into obesity care and management. Experimental research designs can be used to determine the efficacy of self-compassion training on reducing some of the negative outcomes associated with obesity and weight stigma. The studies can also provide clarification on the directionality of the association between self-compassion and weight bias internalization. Finally, longitudinal studies can be used to determine if self-compassion interventions have lasting effects.

### **Personal Reflections**

I was inspired to write about this topic from the time I spent working at an obesity medicine clinic. While learning about the complex medical components that make up obesity, I also learnt about the many psychological, social, and emotional aspects of it. I realized that there was a strong focus on the medical treatment for obesity, yet there was a lack of resources that addressed the psychological challenges.

I learned that one of the greatest challenges people with obesity faced was the weight stigma that they experienced everyday. Growing up with a slender frame, I was oblivious to the challenges that people with larger bodies have and the stigma they experienced on a daily basis. Once I became aware of what weight bias was, I began to see it all around me. I realize now that I cannot go through a day without seeing examples of weight bias. I see it on public transit and in

restaurants, where seats are small and spaces are unaccommodating to larger bodies. I see it on TV, where there are countless advertisements for weight loss supplements or workout programs promoting diet culture. I see it on social media, as I scroll past weight loss transformation pictures, celebrating people's new thinner bodies. I hear it in the way those around me speak about people with larger bodies, calling them lazy, unhealthy, and unattractive. Finally, I recognize the weight stigma in the way that I looked at the world and the ways in which I relate to my own body.

One of the most challenging aspects of writing this thesis was reflecting on my own weight bias. While writing this thesis, I had to confront many of the biases I held about obesity and what it means to be healthy. Although I considered myself educated on the topic, I realized that I still held many false beliefs about weight and health, and had let many of the messages from our thin-obsessed, fat-phobic culture impact how I felt about my own body and health. Therefore, writing this thesis was also an internal process of letting go of some of those harmful beliefs and being more accepting of all bodies and versions of health, especially my own.

Roxanne Gay, a feminist writer and fat-positive activist said that, "my body is not a problem to be fixed" (n.d.). This quote resonated with me, because we too often forget that our bodies are not just objects of our health or carriers of disease. Our bodies are the ways in which we experience the world. They allow us to move and dance, they allow us to sing and make music, and they allow us to laugh and to embrace. Our bodies cannot just be defined by what is wrong with it, but must be embraced and celebrated for all our bodies allow us to do.

Another reason this quote resonated with me is because too often in our society we become defined by our bodies. The labels we give our bodies become our identities, we become the "thin girl", the "fat man", the "unhealthy woman". When we become defined by our bodies,

it becomes too easy to lose sight of the person to whom the body belongs - we forget that we are so much more than our bodies. I believe that this point too often gets overlooked in the discussion surrounding obesity prevention and treatment. Too often physical health is favoured over the mental health and well-being of the individual. When approaching discussions on obesity treatment, I believe it is important to remember that we are treating an individual, not a disease. Furthermore, the conversation needs to be shifted away from how to deal with problematic bodies, to how can we deal with the unjust and problematic ways in which the world reacts, judges and treats people because of their bodies.

When I learned about self-compassion, I was particularly struck by the alternative approach that self-compassion offered to relating to ourselves. I believe that we internalize the message from society that we need to criticize and judge ourselves harshly. Too often we look into the mirror and focus on our flaws. We tell ourselves that we are not good enough- we need to be prettier, we need to be smarter, we need to be more successful. We feel the constant pressure to be perfect. For women especially, there is no aspect of ourselves that receives more scrutiny than our bodies. In my experience, it is commonplace to openly discuss the parts of your body you hate or want to change, but I rarely hear women discussing what they love about their bodies. Therefore, self-compassion helps us realize that we do not need to scrutinize our flaws and gives us the opportunity for a new way of speaking to ourselves. In this way, self-compassion gives us permission to be kind to ourselves and to accept ourselves as we are.

In the opening quote for this chapter, Carl Rogers (1995) states “the curious paradox is that when I accept myself just as I am, then I change” (p. 17). I chose this quote because it speaks to how radical and transformative self-acceptance can be. I believe that self-compassion is a particularly revolutionary concept for higher body weight individuals because it inherently

denies the fat-phobic messages from our society. It is a courageous act of resistance to say “I am worthy of love and acceptance just as I am” in a world that tells you that you are not worthy, good enough, and wrong. Therefore, recognizing our worthiness can lead to a cascade effect where an individual can act and make changes in their life that align with their own values and self-respect.

Finally, I believe that being compassionate towards the self can create more space to be compassionate towards other people. According to Brown (2010), love can only be shared with other people, once we have love for ourselves first. In this way, we can only extend compassion and acceptance towards others as much as we cultivate it within ourselves first. Therefore, being self-compassionate can create a cycle of compassion- we are kinder and more accepting of ourselves and therefore have more space to be kinder and more accepting of others. Finally, when an individual with a stigmatized identity is self-compassionate, they send a message to other stigmatized individuals that they too are worthy of love and acceptance. I believe this sentiment is eloquently summarized in this poem by Marianne Williamson (1992):

Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us. We ask ourselves, Who am I to be brilliant, gorgeous, talented, fabulous? Actually, who are you not to be? You are a child of God. Your playing small does not serve the world. There is nothing enlightened about shrinking so that other people won't feel insecure around you. We are all meant to shine, as children do. We were born to make manifest the glory of God that is within us. It's not just in some of us; it's in everyone. And as we let our own light shine, we unconsciously give other people permission to do the same. As we are liberated from our own fear, our presence automatically liberates others (pp. 190-191).

### **Executive Summary**

Obesity is a complex and multi-faceted condition that affects over 650 million individuals across the world (WHO, 2016). In the last 30 years, the prevalence of obesity has increased by 300% (Twell et al., 2014) and has been labeled an “epidemic” (International Obesity Taskforce, 2010). Accompanying this increase in prevalence, we have witnessed a rise in the concern for the economic, psychological and physical health impact of obesity. Although the specific causes and effects of obesity are still under debate, the dominant discourse views weight as being under the control of the individual and places the responsibility on the individual to maintain a “healthy weight”. This problematic messaging has led to a shadow epidemic of increased weight bias and discrimination. Weight bias and discrimination has been associated with numerous negative outcomes and has been argued to be more harmful to individuals’ health than obesity itself (Puhl & Heuer, 2016). One of the most damaging aspects of weight bias is when it becomes internalized by higher weight individuals. When individuals internalize weight bias, they are more likely to experience a range of physical and psychological health conditions such as depression, anxiety, and metabolic syndrome (PHSA, 2013).

Now that the damaging effects of weight stigma have been well documented, there has been a growing shift away from weight-centered approaches, to approaches that focus on the overall health and well-being of the individual. Self-compassion is a unique approach to helping individuals with obesity and consists of three main elements: kindness, a sense of common humanity, and mindfulness. These components work together to create a self-compassionate frame of mind that offers a healthy approach to relating to oneself. Based on the literature reviewed, self-compassion may be a beneficial tool in helping higher body weight individuals cope with challenges of obesity. Hopefully, self-compassion can be incorporated into an

approach to obesity that looks beyond numbers on a scale, and addresses the mental and physical health and well-being of the whole individual.

## References

- Adams, C. E., & Leary, M. R. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of social and clinical psychology, 26*(10), 1120-1144.
- Akin, A. (2010). Self-compassion and Loneliness. *International Online Journal of Educational Sciences, 2*(3), 702-718.
- Akin, U., & Akin, A. (2015). Examining the predictive role of self-compassion on sense of community in Turkish adolescents. *Social Indicators Research, 123*(1), 29-38.
- Albertson, E. R., Neff, K. D., & Dill-Shackleford, K. E. (2015). Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness, 6*(3), 444-454.
- Almeida, L., Savoy, S., & Boxer, P. (2011). The role of weight stigmatization in cumulative risk for binge eating. *Journal of clinical psychology, 67*(3), 278-292.
- American Dietetic Association. 1997. Position of the American Dietetic Association: Weight management. *Journal of the American Dietetic Association, 97*(1), 71-74.
- Andres, R., Muller, D. C., & Sorkin, J. D. (1993). Long-term effects of change in body weight on all-cause mortality: a review. *Annals of Internal Medicine, 119*(7\_Part\_2), 737-743.
- Andreyeva, T., Puhl, R. M., & Brownell, K. D. (2008). Changes in perceived weight discrimination among Americans, 1995–1996 through 2004–2006. *Obesity, 16*(5), 1129-1134.
- Annis, N. M., Cash, T. F., & Hrabosky, J. I. (2004). Body image and psychosocial differences among stable average weight, currently overweight, and formerly overweight women: the role of stigmatizing experiences. *Body image, 1*(2), 155-167.

- Arndt, J., Schimel, J., Greenberg, J., & Pyszczynski, T. (2002). The intrinsic self and defensiveness: Evidence that activating the intrinsic self reduces self-handicapping and conformity. *Personality and Social Psychology Bulletin*, 28(5), 671-683.
- Ata, R. N., & Thompson, J. K. (2010). Weight bias in the media: A review of recent research. *Obesity Facts*, 3(1), 41-46.
- Bacon, L., & Aphramor, L. (2011). Weight science: evaluating the evidence for a paradigm shift. *Nutrition journal*, 10(1), 9.
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of general psychology*, 15(4), 289-303.
- Baum, C. L., & Ford, W. F. (2004). The wage effects of obesity: a longitudinal study. *Health economics*, 13(9), 885-899.
- Bertakis, K. D., & Azari, R. (2005). The impact of obesity on primary care visits. *Obesity Research*, 13(9), 1615-1623.
- Bishop, S. R. (2004). Mindfulness: A Proposed Operational Definition. *Clinical Psychology: Science and Practice*, 11(3), 230-241.
- Blatt, S. J. (1995). Representational structures in psychopathology. In D. Cicchetti & S. Toth (Eds.), *Rochester symposium on developmental psychopathology: Emotion, cognition, and representation* (pp. 1-34). Rochester, NY: University of Rochester Press.
- Boero, N. (2007). All the News that's Fat to Print: The American "Obesity Epidemic" and the Media. *Qual Sociol*, 30, 41-60. <https://doi.org/10.1007/s11133-006-9010-4>
- Bombak, A. (2014). Obesity, health at every size, and public health policy. *American journal of public health*, 104(2), e60-e67.
- Bradley University (n. d.) *Fat Acceptance*. Retrieved from

- <https://www.bradley.edu/sites/bodyproject/fatism/acceptance/>
- Bray, G. A. (2004). Medical consequences of obesity. *The Journal of Clinical Endocrinology & Metabolism*, 89(6), 2583-2589.
- Breines, J. G., & Chen, S. (2012). Self-compassion increases self-improvement motivation. *Personality and Social Psychology Bulletin*, 38(9), 1133-1143.
- Brodar, K. E., Crosskey, L. B., & Thompson Jr, R. J. (2015). The relationship of self-compassion with perfectionistic self-presentation, perceived forgiveness, and perceived social support in an undergraduate Christian community. *Journal of Psychology and Theology*, 43(4), 231-242.
- Brown, A. P., Marquis, A., & Guiffrida, D. A. (2013). Mindfulness-Based Interventions in Counseling. *Journal of Counseling & Development*, 91(1), 96-104.
- Brown, B. (2010). *The gifts of imperfection: Let go of who you think you're supposed to be and embrace who you are*. Hazelden Publishing.
- Brown, P. J., & Konner, M. (1987). An anthropological perspective on obesity. *Annals of the New York Academy of Sciences*, 499(1), 29-46.
- Carr, D., & Friedman, M. A. (2005). Is obesity stigmatizing? Body weight, perceived discrimination, and psychological well-being in the United States. *Journal of health and social behavior*, 46(3), 244-259.
- Carr, D., Friedman, M. A., & Jaffe, K. (2007). Understanding the relationship between obesity and positive and negative affect: the role of psychosocial mechanisms. *Body image*, 4(2), 165-177.
- Cawley, J. (2004). The impact of obesity on wages. *Journal of Human resources*, 39(2), 451-474.

- Ciao, A. C., & Latner, J. D. (2011). Reducing obesity stigma: the effectiveness of cognitive dissonance and social consensus interventions. *Obesity, 19*(9), 1768-1774.
- Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. *Annu. Rev. Clin. Psychol., 1*, 409-438.
- Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The self-stigma of mental illness: Implications for self-esteem and self-efficacy. *Journal of social and clinical psychology, 25*(8), 875-884.
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin?. *Journal of applied developmental psychology, 19*(3), 429-451.
- Crandall, C. S., & Moriarty, D. (1995). Physical illness stigma and social rejection. *British Journal of Social Psychology, 34*(1), 67-83.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California: Sage Publications.
- Curioni, C. C., & Lourenco, P. M. (2005). Long-term weight loss after diet and exercise: a systematic review. *International journal of obesity, 29*(10), 1168.
- Daye, C. A., Webb, J. B., & Jafari, N. (2014). Exploring self-compassion as a refuge against recalling the body-related shaming of caregiver eating messages on dimensions of objectified body consciousness in college women. *Body Image, 11*(4), 547-556.
- DeJong, W. (1980). The stigma of obesity: The consequences of naive assumptions concerning the causes of physical deviance. *Journal of health and social behavior, 75-87*.
- De Zwaan, M. (2001). Binge eating disorder and obesity. *International Journal of Obesity, 25*(S1), S51.
- Durso, L. E., & Latner, J. D. (2008). Understanding self-directed stigma: development of the weight bias internalization scale. *Obesity, 16*(S2), S80-S86.

- Eknoyan, G. (2006). A History of Obesity, or How What Was Good Became Ugly and Then Bad. <https://doi.org/10.1053/j.ackd.2006.07.002>
- Elfhag, K., & Rössner, S. (2005). Who succeeds in maintaining weight loss? A conceptual review of factors associated with weight loss maintenance and weight regain. *Obesity reviews*, 6(1), 67-85.
- Fabricatore, A. N., & Wadden, T. A. (2004). Psychological aspects of obesity. *Clinics in dermatology*, 22(4), 332-337.
- Farias, M. M., Cuevas, A. M., & Rodriguez, F. (2011). Set-Point Theory and Obesity. *Metabolic Syndrome and Related Disorders*, 9 (2) 85-89.
- Flegal, K. M., Graubard, B. I., Williamson, D. F., & Gail, M. H. (2007). Cause-specific excess deaths associated with underweight, overweight, and obesity. *Jama*, 298(17), 2028-2037.
- Forhan, M., & Gill, S. V. (2013). Obesity, functional mobility and quality of life. *Best Practice & Research Clinical Endocrinology & Metabolism*, 27(2), 129-137.
- Foster, G. D., Wadden, T. A., Makris, A. P., Davidson, D., Sanderson, R. S., Allison, D. B., & Kessler, A. (2003). Primary care physicians' attitudes about obesity and its treatment. *Obesity research*, 11(10), 1168-1177.
- Fouts, G., & Burggraf, K. (2000). Television situation comedies: Female weight, male negative comments, and audience reactions. *Sex roles*, 42(9-10), 925-932.
- Freedhoff, Y., & Sharma, A. M. (2010). *Best weight: a practical guide to office-based obesity management*. Canadian Obesity Network.
- Friedman, K. E., Reichmann, S. K., Costanzo, P. R., Zelli, A., Ashmore, J. A., & Musante, G. J. (2005). Weight stigmatization and ideological beliefs: relation to psychological functioning in obese adults. *Obesity research*, 13(5), 907-916.

- Garvey, W. T. (2019). The diagnosis and evaluation of patients with obesity This review comes from a themed issue on Frontiers in Obesity. *Current Opinion in Endocrine and Metabolic Research*, 4, 50–57.
- Germer, C. K., & Neff, K. D. (2013). Self-Compassion in Clinical Practice. *J. Clin. Psychol: In Session*, 69, 856–867. <https://doi.org/10.1002/jclp.22021>
- Germer, C. K., & Neff, K. D. (2015). Cultivating self-compassion in trauma survivors. *Mindfulness-oriented interventions for trauma: Integrating contemplative practices*, 43-58. Retrieved from [https://ahangoverfreelife.com/wp-content/uploads/2016/10/Germer.Neff\\_.Trauma.pdf](https://ahangoverfreelife.com/wp-content/uploads/2016/10/Germer.Neff_.Trauma.pdf)
- Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory, research and practice*, 84(3), 239-255.
- Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: an evolutionary analysis and empirical review. *Psychological bulletin*, 136(3), 351.
- Greenberg, B. S., Eastin, M., Hofschire, L., Lachlan, K., & Brownell, K. D. (2003). Portrayals of overweight and obese individuals on commercial television. *American journal of public health*, 93(8), 1342-1348.
- Guh, D. P., Zhang, W., Bansback, N., Amarsi, Z., Birmingham, C. L., & Anis, A. H. (2009). The incidence of co-morbidities related to obesity and overweight: a systematic review and meta-analysis. *BMC public health*, 9(1), 88.
- Gurnani, M., Birken, C., & Hamilton, J. (2015). Childhood Obesity Causes, Consequences, and Management. *Pediatric Clinics*, 62(4), 821–840.
- Hatzenbuehler, M.L., Keyes, K.M., & Hasin, D.S. (2009). Associations between perceived

- weight discrimination and the prevalence of psychiatric disorders in the general population. *Obesity*, *17* 11, 2033-9.
- Hayes, L., Pearce, M. S., Firbank, M. J., Walker, M., Taylor, R., & Unwin, N. C. (2010). Do obese but metabolically normal women differ in intra-abdominal fat and physical activity levels from those with the expected metabolic abnormalities? A cross-sectional study. *BMC public health*, *10*(1), 723.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guilford Press.
- Hayward, L. E., Vartanian, L. R., & Pinkus, R. T. (2018). Weight Stigma Predicts Poorer Psychological Well-Being Through Internalized Weight Bias and Maladaptive Coping Responses. *Obesity*, *26*(4), 755–761.
- Heffernan, M., Quinn Griffin, M. T., McNulty, S. R., & Fitzpatrick, J. J. (2010). Self-compassion and emotional intelligence in nurses. *International journal of nursing practice*, *16*(4), 366-373.
- Hilbert, A., Braehler, E., Schmidt, R., Löwe, B., Häuser, W., & Zenger, M. (2015). Self-compassion as a resource in the self-stigma process of overweight and obese individuals. *Obesity facts*, *8*(5), 293-301.
- Hill, J. O. (2006). Understanding and addressing the epidemic of obesity: an energy balance perspective. *Endocrine reviews*, *27*(7), 750-761.
- Himmelstein, M. S., Puhl, R. M., & Quinn, D. M. (2017). Intersectionality: an understudied framework for addressing weight stigma. *American journal of preventive medicine*, *53*(4), 421-431.
- Hollis-Walker, L., & Colosimo, K. (2011). Mindfulness, self-compassion, and happiness in non-

- meditators: A theoretical and empirical examination. *Personality and Individual Differences*, 50(2), 222-227.
- Implicit Association Test Corporation (n. d.). Implicit Association Test. Retrieved from <https://implicit.harvard.edu/implicit/canada/>
- International Obesity Taskforce (2010) *The Global Epidemic*. London: International Association for the Study of Obesity.
- James, W. (1890). *Principles of Psychology*. Chicago: Encyclopedia Britannica.
- Janssen, I., Boyce, W. F., Simpson, K., & Pickett, W. (2006). Influence of individual-and area-level measures of socioeconomic status on obesity, unhealthy eating, and physical inactivity in Canadian adolescents. *The American journal of clinical nutrition*, 83(1), 139-145.
- Jebb, S. (2004). Obesity: causes and consequences. *Women's health medicine*, 1(1), 38-41.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion.
- Karusu, S. (2013) *The Controversy Over Obesity as a Disease: What Psychiatrist Should Know*. Retrieved from <https://doi.org/10.1176/appi.pn.2013.9a19>
- Kelly, A. C., Zuroff, D. C., Foa, C. L., & Gilbert, P. (2010). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology*, 29(7), 727-755.
- Kessler, R. C., Berglund, P. A., Chiu, W. T., Deitz, A. C., Hudson, J. I., Shahly, V., ... & Bruffaerts, R. (2013). The prevalence and correlates of binge eating disorder in the World Health Organization World Mental Health Surveys. *Biological psychiatry*, 73(9), 904-914.

- Klein, H., & Shiffman, K. S. (2006). Messages about physical attractiveness in animated cartoons. *Body image*, 3(4), 353-363.
- Klein, S., Burke, L. E., Bray, G. A., Blair, S., Allison, D. B., Pi-Sunyer, X., ... & Eckel, R. H. (2004). Clinical implications of obesity with specific focus on cardiovascular disease: a statement for professionals from the American Heart Association Council on Nutrition, Physical Activity, and Metabolism: endorsed by the American College of Cardiology Foundation. *Circulation*, 110(18), 2952-2967.
- Komaroff M. (2016). For Researchers on Obesity: Historical Review of Extra Body Weight Definitions. *Journal of obesity*, 2460285. doi:10.1155/2016/2460285
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R. S., Byford, S., ... & Dalglish, T. (2010). How does mindfulness-based cognitive therapy work?. *Behaviour research and therapy*, 48(11), 1105-1112.
- Kyle, T. K., Dhurandhar, E. J., & Allison, D. B. (n.d.). Regarding Obesity as a Disease: Evolving Policies and Their Implications. <https://doi.org/10.1016/j.ecl.2016.04.004>
- Latner, J. D., Barile, J. P., Durso, L. E., & O'Brien, K. S. (2014). Weight and health-related quality of life: The moderating role of weight discrimination and internalized weight bias. *Eating Behaviors*, 15(4), 586-590.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer Publishing Company.
- Leary, M. R., Tate, E. B., Adams, C. E., Batts Allen, A., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: the implications of treating oneself kindly. *Journal of personality and social psychology*, 92(5), 887-904.
- Lehnert, T., Sonntag, D., Konnopka, S., Riedel-Heller, S., Konig, H. (2013). Economic costs of

- overweight and obesity. *Best Practice & Research Clinical Endocrinology & Metabolism*, 27, 105–115.
- Lillis, J., Hayes, S. C., Bunting, K., & Masuda, A. (2009). Teaching acceptance and mindfulness to improve the lives of the obese: A preliminary test of a theoretical model. *Annals of Behavioral Medicine*, 37(1), 58–69.
- Livhits, M., Mercado, C., Yermilov, I., Parikh, J. A., Dutson, E., Mehran, A., ... & Gibbons, M. M. (2012). Preoperative predictors of weight loss following bariatric surgery: systematic review. *Obesity surgery*, 22(1), 70-89.
- Logel, C., Stinson, D. A., & Brochu, P. M. (2015). Weight Loss Is Not the Answer: A Well-being Solution to the Obesity Problem. *Social and Personality Psychology Compass*. <https://doi.org/10.1111/spc3.12223>
- Luo, W., Morrison, H., de Groh, M., Waters, C., DesMeules, M., Jones-McLean, E., ... & Mao, Y. (2007). The burden of adult obesity in Canada. *Chronic Dis Can*, 27(4), 135-44.
- MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical psychology review*, 32(6), 545-552.
- Magnus, C. M., Kowalski, K. C., & McHugh, T. L. F. (2010). The role of self-compassion in women's self-determined motives to exercise and exercise-related outcomes. *Self and identity*, 9(4), 363-382.
- Major, B., Eliezer, D., & Rieck, H. (2012). The psychological weight of weight stigma. *Social Psychological and Personality Science*, 3(6), 651-658.
- Mann, T., Tomiyama, J. A., Westling, E., Lew, A. M., Samuels, B., & Chatman, J. (2007). Medicare's Search for Effective Obesity Treatments: Diets Are Not the Answer.

- American Psychologist*, 62(3), 220–233.
- Mantzoros, C. S. (1999). The role of leptin in human obesity and disease: a review of current evidence. *Annals of internal medicine*, 130(8), 671-680.
- Martin, D. (2010). *Obese? Just call them fat: plain-speaking doctors will jolt people into losing weight, says minister*. Retrieved from <https://www.dailymail.co.uk/news/article-1298394/Call-overweight-people-fat-instead-obese-says-health-minister.html>
- McHugh, M. C., & Kasardo, A. E. (2012). Anti-fat prejudice: The role of psychology in explication, education and eradication. *Sex Roles*, 66(9-10), 617-627.
- Miller, C. T., & Major, B. (2000). Coping with stigma and prejudice. *The social psychology of stigma*, 243-272.
- Mittal, D., Sullivan, G., Chekuri, L., Allee, E., & Corrigan, P. W. (2012). Empirical studies of self-stigma reduction strategies: A critical review of the literature. *Psychiatric Services*, 63(10), 974-981.
- Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2, 85–102
- Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and identity*, 2(3), 223-250.
- Neff, K. D. (2009). Self-compassion. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 561–573). New York: Guilford Press.
- Neff, K. D., & Dahm, K. A. (2015). Self-compassion: What it is, what it does, and how it relates to mindfulness. In M. Robinson, B. Meier & B. Ostafin (Eds.), *Handbook of mindfulness and self-regulation* (pp. 121-137). New York, NY: Springer.
- Neff, K., & Davidson, O. (2016). *Self-Compassion: Embracing Suffering with Kindness*.

Retrieved from <http://self-compassion.org/wp-content/uploads/2016/07/Neff-and-Davidson.2016.pdf>

Neff, K. D., Long, P., Knox, M. C., Davidson, O., Kuchar, A., Costigan, A., ... Breines, J. G. (2018). The forest and the trees: Examining the association of self-compassion and its positive and negative components with psychological functioning. *Self and Identity*, *17*(6), 627-645.

Neff, K. D., & Mcgehee, P. (2010). Self-compassion and Psychological Resilience Among Adolescents and Young Adults. *Self and Identity*, *9*(3), 225–240.  
<https://doi.org/10.1080/15298860902979307>

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of research in personality*, *41*(4), 908-916.

Neumark-Sztainer, D., Wall, M., Haines, J., Story, M., & Eisenberg, M. E. (2007). Why does dieting predict weight gain in adolescents? Findings from project EAT-II: a 5-year longitudinal study. *Journal of the American Dietetic Association*, *107*(3), 448-455.

Nolan, L. J., & Eshleman, A. (2016). Paved with good intentions: Paradoxical eating responses to weight stigma. *Appetite*, *102*, 15-24.

O'Hara, L., & Taylor, J. (2018). What's Wrong with the 'War on Obesity?' A Narrative Review of the Weight-Centered Health Paradigm and Development of the 3C Framework to Build Critical Competency for a Paradigm Shift. *SAGE Open*, *8*(2), 1-28.

Okifuji, A., & Hare, B. D. (2015). The association between chronic pain and obesity. *Journal of pain research*, *8*, 399–408. doi:10.2147/JPR.S55598

Pamuk, E. R., Williamson, D. F., Serdula, M. K., Madans, J., & Byers, T. E. (1993). Weight loss

- and subsequent death in a cohort of US adults. *Annals of Internal Medicine*, *119*(7\_Part\_2), 744-748.
- Pearl, R. L., & Puhl, R. M. (2018). Weight bias internalization and health: a systematic review. *Obesity Reviews*, *19*(8), 1141–1163. <https://doi.org/10.1111/obr.12701>
- Penedo, F. J., & Dahn, J. R. (2005). Exercise and well-being: a review of mental and physical health benefits associated with physical activity. *Current opinion in psychiatry*, *18*(2), 189-193.
- Penney, T. L., & Kirk, S. F. L. (2015). The Health at Every Size Paradigm and Obesity: Missing Empirical Evidence May Help Push the Reframing Obesity Debate Forward. *Public Health*, *105*, 38–42.
- Peterson, J. L., Puhl, R. M., & Luedicke, J. (2012). An experimental investigation of physical education teachers' and coaches' reactions to weight-based victimization in youth. *Psychology of sport and exercise*, *13*(2), 177-185.
- Pinto-Gouveia, J., Carvalho, S. A., Palmeira, L., Castilho, P., Duarte, C., Ferreira, C., ... & Costa, J. (2019). Incorporating psychoeducation, mindfulness and self-compassion in a new programme for binge eating (BEfree): Exploring processes of change. *Journal of health psychology*, *24*(4), 466-479.
- Provincial Health Services Authority and BC Mental Health and Addiction Services. (n. d.). *Disordered eating and obesity. Working together to promote the health of British Columbians*. Retrieved from [http://bit.ly/disordered\\_eating\\_and\\_obesity\\_briefing\\_document](http://bit.ly/disordered_eating_and_obesity_briefing_document)
- Provisional Health Services Authority. (2013). *Technical report: From weight to well-being: Time for a shift in paradigms?* Retrieved from <http://www.phsa.ca/population-public->

health-site/ Documents/W2WBTechnicalReport\_20130208FINAL.pdf

- Puhl, R. M., Andreyeva, T., & Brownell, K. D. (2008). Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America. *International journal of obesity*, 32(6), 992.
- Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: a review and update. *Obesity*, 17(5), 941-964.
- Puhl, R. M., & Luedicke, J. (2012). Weight-based victimization among adolescents in the school setting: Emotional reactions and coping behaviors. *Journal of youth and adolescence*, 41(1), 27-40.
- Puhl, R. M., Peterson, J. L., & Luedicke, J. (2013). Motivating or stigmatizing? Public perceptions of weight-related language used by health providers. *International Journal of Obesity*, 37(4), 612–619. <https://doi.org/10.1038/ijo.2012.110>
- Puhl, R. M., Quinn, D. M., Weisz, B. M., & Suh, Y. J. (2017). The role of stigma in weight loss maintenance among US adults. *Annals of Behavioral Medicine*, 51(5), 754-763.
- Puhl, R. M., & Suh, Y. (2015). Health consequences of weight stigma: implications for obesity prevention and treatment. *Current Obesity Reports*, 4(2), 182-190.
- Raes, F. (2010). Rumination and worry as mediators of the relationship between self-compassion and depression and anxiety. *Personality and Individual Differences*, 48(6), 757-761.
- Rahimi-Ardabili, H., Reynolds, R., Vartanian, L. R., McLeod, L. V. D., & Zwar, N. (2018). A systematic review of the efficacy of interventions that aim to increase self-compassion on nutrition habits, eating behaviours, body weight and body image. *Mindfulness*, 9(2), 388-400.
- Riek, B. M., & Mania, E. W. (2012). The antecedents and consequences of interpersonal

- forgiveness: A meta-analytic review. *Personal Relationships*, 19(2), 304-325.
- Rodgers, R. F., Franko, D. L., Donovan, E., Cousineau, T., Yates, K., McGowan, K., ... Lowy, A. S. (2017). Body image in emerging adults: The protective role of self-compassion. *Body Image*, 22, 148–155.
- Rogers, C. R. (1995). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin Harcourt.
- Roehling, M. V., Pilcher, S., Oswald, F., & Bruce, T. (2008). The effects of weight bias on job-related outcomes: a meta-analysis of experimental studies. In *Academy of Management Annual Meeting*.
- Roehling, M. V., Roehling, P. V., & Pichler, S. (2007). The relationship between body weight and perceived weight-related employment discrimination: The role of sex and race. *Journal of Vocational Behavior*, 71(2), 300-318.
- Sbarra, D. A., Smith, H. L., & Mehl, M. R. (2012). When leaving your ex, love yourself: Observational ratings of self-compassion predict the course of emotional recovery following marital separation. *Psychological science*, 23(3), 261-269.
- Schmalz, D. L. (2010). 'I Feel Fat': Weight-Related Stigma, Body Esteem, and BMI as Predictors of Perceived Competence in Physical Activity. *Obesity facts*, 3(1), 15-21.
- Sharma, A. M. (2009). *Is weight loss advice unethical?*. Retrieved from <http://www.drsharma.ca/obesityis-weight-loss-advice-unethical.html>
- Sharma, A. M. (2015). *Canadian Medical Association Declares Obesity A Chronic Disease*. Retrieved from <http://www.drsharma.ca/canadian-medical-association-declares-obesity-a-chronic-disease>
- Sharma, A. M., & Kushner, R. F. (2009). A proposed clinical staging system for

- obesity. *International journal of obesity*, 33(3), 289.
- Sheets, V., & Ajmere, K. (2005). Are romantic partners a source of college students' weight concern?. *Eating behaviors*, 6(1), 1-9.
- Sirois, F. M. (2014). Procrastination and stress: Exploring the role of self-compassion. *Self and Identity*, 13(2), 128-145.
- Sirois, F. M. (2015). A self-regulation resource model of self-compassion and health behavior intentions in emerging adults. *Preventive medicine reports*, 2, 218-222.
- Sobal, J. (2001). *Social and Cultural Influences on Obesity*. Retrieved from <https://pdfs.semanticscholar.org/abec/4a844dfc7c3385bf9ad2065b8c52a1305a07.pdf>
- The Standing Senate Committee on Social Affairs (2016). Obesity in Canada: A whole-of-society approach for a healthier Canada. Retrieved from <https://doi.org/http://dx.doi.org/10.1007/s00223-003-0083-8>
- Stanton, A. L., Kirk, S. B., Cameron, C. L., & Danoff-Burg, S. (2000). Coping through emotional approach: scale construction and validation. *Journal of personality and social psychology*, 78(6), 1150.
- Statistics Canada (2014) *Overweight and Obesity Adults (Self-Reported), 2014*. Retrieved from <https://www150.statcan.gc.ca/n1/pub/82-625-x/2015001/article/14185-eng.htm>
- Stone, A. A., & Broderick, J. E. (2012). Obesity and pain are associated in the United States. *Obesity*, 20(7), 1491-1495.
- Sutin, A. R., Stephan, Y., Luchetti, M., & Terracciano, A. (2014). Perceived weight discrimination and C-reactive protein. *Obesity*, 22(9), 1959-1961.
- Sutin, A. R., & Terracciano, A. (2013). Perceived weight discrimination and obesity. *PloS one*, 8(7), 1-8.

- Swinburn, B., Egger, G., & Raza, F. (1999). Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Preventive medicine, 29*(6), 563-570.
- Taylor, M. B., Daiss, S., & Krietsch, K. (2015). Associations among self-compassion, mindful eating, eating disorder symptomatology, and body mass index in college students. *Translational Issues in Psychological Science, 1*(3), 229.
- Thompson, R. L., & Thomas, D. E. (2000). A cross-sectional survey of the opinions on weight loss treatments of adult obese patients attending a dietetic clinic. *International Journal of Obesity, 24*(2), 164.
- Tomiya, A. J., Carr, D., Granberg, E. M., Major, B., Robinson, E., Sutin, A. R., & Brewis, A. (2018). How and why weight stigma drives the obesity “epidemic” and harms health. *BMC Medicine, 16*(1), 1–6. <https://doi.org/10.1186/s12916-018-1116-5>
- Trompetter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2017). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive therapy and research, 41*(3), 459-468.
- Twells, L. K., Gregory, D. M., Reddigan, J., & Midodzi, W. K. (2014). Current and predicted prevalence of obesity in Canada: a trend analysis. *CMAJ Open, 2*(1), E18–E26. <https://doi.org/10.9778/cmajo.20130016>
- Vartanian, L. R., & Porter, A. M. (2016). Weight stigma and eating behavior: A review of the literature. *Appetite, 102*, 3-14.

- Wagner, J., Lampert, R., Tennen, H., & Feinn, R. (2015). Exposure to discrimination and heart rate variability reactivity to acute stress among women with diabetes. *Stress and Health, 31*(3), 255-262.
- Webb, J. B., Vinoski, E. R., Bonar, A. S., Davies, A. E., & Etzel, L. (2017). Fat is fashionable and fit: a comparative content analysis of Fatspiration and Health at Every Size® Instagram images. *Body image, 22*, 53-64.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of personality and social psychology, 55*(5), 738.
- Williamson, M. (1992). *A Return to Love: Reflections on the Principles of "A Course in Miracles"*. HarperOne.
- Wispe, L. (1991). *The psychology of sympathy*. New York: Plenum.
- Wong, C. C., Mak, W. W., & Liao, K. Y. H. (2016). Self-compassion: A potential buffer against affiliate stigma experienced by parents of children with autism spectrum disorders. *Mindfulness, 7*(6), 1385-1395.
- World Health Organization (2018). *Obesity and Overweight*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
- Worthington, E. L., & Scherer, M. (2004). Forgiveness is an emotion-focused coping strategy that can reduce health risks and promote health resilience: Theory, review, and hypotheses. *Psychology & Health, 19*(3), 385-405.
- Wyatt, S. B., Winters, K. P., & Dubbert, P. M. (2006). Overweight and obesity: prevalence, consequences, and causes of a growing public health problem. *The American journal of the medical sciences, 331*(4), 166-174.

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being*, 7(3), 340-364.