BEYOND THE BEACH BODY: HOW GYM CULTURE INFLUENCES EATING DISORDER RECOVERY

by

DANIELLE KEELIE RAYMOND

Bachelor of Applied Arts (hons), Kwantlen Polytechnic University, 2012

Thesis
Submitted in Partial Fulfillment of the Requirements for
the Degree of

MASTER OF ARTS IN COUNSELLING PSYCHOLOGY

in the

FACULTY OF GRADUATE STUDIES

TRINITY WESTERN UNIVERSITY

December 2022

The following committee members attest to

The successful completion of this thesis

Janelle Kwee, Psy.D.,	Co-Supervisor
Marvin McDonald, Ph.D.,	Co-Supervisor
Faith Auton-Cuff, Ph.D.,	Second Reader
Andrea LaMarre, Ph.D.,	External Examiner

ABSTRACT

Eating disorders (ED) are serious illnesses. Those struggling with EDs often engage in gym exercise and may encounter or work with a variety of fitness professionals, placing both fitness professionals and gyms in a position to identify, intervene, and perhaps even help prevent EDs. Most fitness professionals in Canada do not receive formal education, training, or guidelines on how to identify EDs or on how to navigate issues that arise when faced with gym members who are struggling with these illnesses. This enhanced critical incident technique (ECIT) study interviewed 10 adult women in ED recovery to better understand which aspects of their gym experience helped their recovery and which aspects hindered their recovery. Participants were also asked to share "wish list" experiences, which reflect changes they would like to see happen. Participants supplied 115 incidents which were organized into one of 13 themed categories, including ED literacy, toxic interpersonal gym culture, numbers-based assessments, and healthy ambient gym culture. The results of this study will be used to inform education, training, and guidelines on EDs in the fitness industry.

Keywords: Eating disorders, gym, gym culture, fitness industry, exercise

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENTS

To the women who so openly shared their experiences with me for this study, thank you for your reflections and your trust. My greatest hope for this project is that your wisdom and insight will transcend it.

To my supervisory committee, thank you for the many hours you have invested in me and in this project. Dr. Janelle Kwee, you are everything I needed and could have hoped for in a supervisor and mentor. Knowing you has made me a better researcher and therapist. I am grateful beyond words for your encouragement, expertise, and leadership. Dr. Faith Auton-Cuff, you believed in me all this time. Your, support, advice, and humour were instrumental in helping me reach this milestone. It has been the privilege of my graduate training to learn from you both and to have you both on my committee.

To those who helped me complete the many credibility checks, thank you for volunteering your time and energy. You have helped elevate this project to a higher standard of scholarship.

To my mom, thank you for your unwavering support. Despite all that you and I have faced together, I got here, finally. You always did everything in your power to make sure of that. To my dad, I wish you were here to share in my excitement. And to my sister, Shannon, this was your wish for me, I think. It is another thing I will never get to show you or celebrate with you. I hope you would have been proud of me.

To my husband, Toby, whom I met in a gym, of all places. Some of our very first conversations together were about this project. You nurtured it back when it was just an idea. Your experience and reflections as a coach and trainer have been such an important part of

bringing this thesis to life. It has brought me so much joy to share this experience with you. I hope this is the first of many things we create together.

This study was supported by the Canadian Institutes of Health Research.

CHAPTER 1: INTRODUCTION

Over the past several decades, fitness has grown into a booming, multi-billion dollar global industry (Andreasson & Johansson, 2014). Commensurate with this growth are the many varieties of gyms and fitness centres commonly found in Western culture. Though the roots of today's commercialized gyms can be traced back to the bodybuilding subculture of the 1970s (Andreasson & Johansson, 2014), "working out" is now marketed to a much wider audience. For those looking to join a gym, there are many options available. Some gyms offer only the basics—that is, the space and equipment for members to perform their own workouts—whereas others may offer group-based classes, specialized activities, or branded workout programs. In addition to memberships, gyms may also sell products and services like personal training, weight loss coaching, supplements, and apparel, and many even have smoothie bars and restaurants on the premises.

The concept of gym exercise draws people for different reasons. Going to the gym may be a social activity, part of a training regimen for a sport, or a matter of convenience. My introduction to the gym gave me the impression that it was a place for managing the body. At age 16, I signed up for my first gym membership, which began with a fitness assessment. Such assessments are still very common, and although there are variations in terms of what they involve, they often follow a similar format. Mine involved having a trainer weigh me, calculate my body fat percentage, and offer an interpretation of what these numbers meant. This was the moment I became aware that there was a number associated with my body fat percentage; that the composition of my body had acceptable and unacceptable limits; and that, in addition to my weight, my body had yet another metric to track, monitor, and control.

In my mind, personal trainers, like the one who performed my fitness assessment, were authority figures on health and fitness. Coming from a trainer, these weight categories felt like rules, numbers, directives. Although I initially viewed my time at the gym as a health activity, this changed when I developed an eating disorder (ED). For those who struggle with EDs, the gym is often an environment fraught with messages that blur the lines between health and aesthetics, and fitness and weight loss. It is a place where trainers and other fitness staff may unwittingly reinforce ED behaviour by praising things like weight loss and excessive exercise because these are seen as evidence of health, success, dedication, and willpower.

Excessive exercise is a common feature of EDs, and people with these conditions often gravitate to fitness facilities where they may engage in unhealthy and even dangerous amounts of exercise. Indeed, research indicates that ED symptoms are elevated among gym attendees (McCabe & James, 2009; Prichard & Tiggemann, 2008). Because the fitness industry often frames fitness and exercise around weight loss, many gyms feature a prominent—if not aggressive—pro-weight loss, anti-fat culture. Regardless of their intention, gyms do engage in messaging and advertising that reinforces dominant cultural narratives about which bodies are good, healthy, and therefore acceptable. For women in Western culture, thin, toned bodies are portrayed as the pinnacle of health and fitness, and thus, desirability. When gyms conflate health and fitness with weight loss, this happens against a cultural backdrop that idealizes certain bodies over others. In fitness spaces, people with EDs are often lauded, their illness mistaken as enthusiasm for health and fitness.

Though there are certainly challenges associated with identifying EDs in fitness settings, gyms represent an untapped opportunity for intervention and prevention efforts. Fitness workers are in a unique position to assist people who may be struggling not only with ED symptoms, like

excessive exercise, but also with full-blown EDs. Not surprisingly, personal trainers and other fitness professionals often encounter exercisers with EDs (Bratland-Sanda & Sundgot-Borgen, 2015; Colledge et al., 2020; Manley et al., 2008; Wojtowicz et al., 2015). Studies involving various fitness workers indicate that those working in gyms feel responsible to take action when they encounter someone they think is struggling with an ED, yet many do not (Manley et al., 2008; Wojtowicz et al., 2015). Part of this reticence stems from a lack of education and training: Even though fitness professionals are likely to encounter exercisers with EDs, most of them lack basic knowledge about these illnesses, leaving them ill-equipped to intervene (Bratland-Sanda & Sundgot-Borgen, 2015; Manley et al., 2008; Wojtowicz et al., 2015; Worsfold & Sheffield, 2018a, 2018b).

Although research on EDs and fitness professionals is somewhat sparse, there have been repeated calls to address the lack of training, education, and guidelines on EDs for fitness professionals. Ethicists have also voiced concerns on this topic (Giordano, 2010). Multiple studies show that fitness professionals would like to receive training, education, and guidelines to help them navigate interactions with people who may have EDs (Colledge et al., 2020; Manley et al., 2008; Wojtowicz et al., 2015). The Academy for Eating Disorders has recently assembled a task force to address this problem as well. In some places, action has been taken: Fitness Australia and InsideOut Institute (2020) recently published a set of recommendations for exercise professionals and fitness businesses to help people working in the fitness industry meet the needs of gym exercisers with EDs.

Despite growing calls for the same, the Canadian fitness industry and its various professional associations have not yet responded in kind. Currently, there is no requirement that certified fitness professionals in Canada receive any formal education or training on EDs.

Further, fitness industry professional associations in Canada have yet to provide guidelines on how to handle the presence of these illnesses in gyms. EDs are serious and potentially deadly (Arcelus et al., 2011; Mehler, 2017), and it is a problem that fitness workers do not know what to do when faced with people who have—or are suspected to have—an ED. This project was inspired by a desire to address this problem.

As the principal investigator, it is my belief that, wherever possible, decisions about policies and guidelines should be made in consultation with the people said policies and guidelines intend to serve. The lack of education, training, and guidelines on EDs for fitness professionals mainly impacts two groups: those who work in the fitness industry and those who struggle with EDs. To the best of my knowledge, previous research on this topic, though sparse, has included the former but has excluded the latter.

In this study 10 women in ED recovery were interviewed about how fitness centre experiences have impacted their recovery. Using the enhanced critical incident technique (ECIT; Butterfield et al., 2009), these participants were asked about gym experiences that helped their recovery and experiences that hindered recovery. They were also asked to share any "wish list" experiences, which referred to things they wished would have happened. The interviews were transcribed verbatim and a total of 115 incidents were extracted: 28 of these were helping, 54 were hindering, and 33 were wish list items. After further analyses, the following 13 categories were created to organize and house these incidents according to their themes: ED literacy, toxic ambient gym culture, toxic interpersonal gym culture, numbers-based assessments, healthy ambient gym culture, recovery versus the ED, healthy interpersonal gym culture, gym friends and others in the gym, comparison behaviour, gym guidelines, co-ed versus women's only, staff intervention, and body diversity of staff.

This thesis contains five chapters. In this first chapter, an overview of the problem is provided, along with the purpose of the study and the specific research questions, followed by relevant conceptual definitions to further ground the study. Chapter 2 reviews the current literature on EDs, excessive exercise, and the presence of EDs in the fitness industry. Chapter 3 includes an overview of the critical feminist perspective of EDs, which is adopted in this study; a description of the ECIT research design, including sampling, data collection, analysis, and credibility checks; and details about the ethical and other important considerations of the study. Chapter 4 reports the conceptualized findings of the study. Lastly, Chapter 5 offers a discussion that situates and integrates the study's findings into the existing knowledge base. Chapter 5 also includes recommendations for fitness professionals and clinical practice, along with suggestions for future research. The thesis paper concludes with a summary of the study, a reference list, and appendices, all of which support understanding and rigour of the study.

As the principal investigator and author of this document, I alternate between active and passive voice throughout this thesis. This was done intentionally to allow me to take an active place when describing first person experiences, for example, and to create more distance in other sections, as required.

Key Terms

Eating disorder (ED)

The *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013) provides diagnostic criteria for several different EDs, not all of which are relevant to this study. Because excessive exercise is a key component of this research, it was necessary to focus on ED presentations that are most likely to include this behaviour. The *DSM-5* mentions excessive exercise as a feature of both anorexia nervosa and

bulimia nervosa (APA, 2013). As such, for the purposes of this study, the term EDs is used to refer primarily to these two diagnoses.[1]

The *DSM-5* lists the diagnostic criteria for anorexia nervosa, henceforth referred to as anorexia, as (a) a restriction of energy intake resulting in a significantly low body weight; (b) an intense fear of weight gain or becoming fat, or persistent behaviour that interferes with weight gain; and (c) a disturbance in the way one's weight or body shape is experienced, an undue influence of weight and/or shape on one's self-evaluation, or a persistent lack of recognition of the seriousness of having a low body weight (APA, 2013).

The *DSM-5* lists the diagnostic criteria for bulimia nervosa, henceforth referred to as bulimia, as follows: (a) recurrent episodes of binge eating where the individual eats an amount of food that is much larger than what most individuals would eat in a similar time period under similar circumstances and where a loss of control is experienced; (b) recurrent inappropriate compensatory behaviours intended to prevent weight gain, such as self-induced vomiting, misuse of laxatives or other medications, fasting, or excessive exercise; (c) the binge eating and compensatory behaviours occur at least once a week for three months; (d) undue influence of shape and weight on self-evaluation; and (e) these disturbances do not occur exclusively during episodes of anorexia nervosa (APA, 2013).

Excessive or Problematic Exercise

Many different terms have been used to describe problematic, ED-driven exercise. These are discussed in more detail in Chapter 2. Currently, there is no formal diagnostic criteria for

[1] This study focuses largely on anorexia and bulimia because excessive exercise is more common in these diagnoses; however, diagnostic crossover is common with EDs (Stice et al., 2012), and this author recognizes that people may meet diagnostic criteria for other EDs throughout their illness and recovery. This author further recognizes that not all people with EDs or disordered eating receive formal diagnoses and that some ED presentations are taken more seriously than others.

excessive exercise; however, the *DSM-5* provides that exercise is excessive when it "significantly interferes with important activities, when it occurs at inappropriate times or in inappropriate settings, or when the individual continues to exercise despite injury or other medical complications" (APA, 2013, p. 346). This is the definition used in this study, with the additional provision that the exercise is excessive or problematic when its purpose is primarily to influence weight and/or shape. In this thesis, the term problematic exercise is used interchangeably with excessive exercise.

Fitness Professional

There are many different terms that describe individuals who work in the fitness industry. Fitness professionals may be referred to as fitness workers, fitness employees, personal trainers, fitness instructors, group instructors, coaches, and yoga teachers, among others. In this study, fitness professional, fitness worker, and trainer are used interchangeably to describe individuals who work in these various fitness-related roles. The term "fitness staff" is used to encompass fitness professionals, as well others who work in the gym (i.e., front desk staff, managers, supervisors, owners, and operators).

Gym

The terms gym, fitness centre, and fitness facility are used interchangeably to describe businesses that provide, at a minimum, a space and equipment for exercising, while also acknowledging that many gyms provide additional services and products. Although community centres are referenced in the results, community and leisure centres are not considered interchangeable with gyms in this study. This is because these facilities are not typically part of the commercialized fitness industry; they offer many family-based and non-exercise related services and activities that distinguish them from commercialized gyms.

Recovery

The ED field lacks a standardized definition of recovery, which means there are many variations in how recovery is defined across the literature. This study uses an adapted[2] version of Bardone-Cone et al.'s (2010) transdiagnostic definition because it provides a robust and pragmatic conceptualization of ED recovery. It is as follows: (a) no longer meeting the *DSM-5* criteria for anorexia, bulimia, binge-eating disorder, or other specified feeding or eating disorder; (b) the absence of binge eating and compensatory behaviours, such as vomiting, misuse of medications, excessive exercise, and/or fasting, for the past three months; and (c) adequate symptom remission as self-reported by the individual.

[2] Bardone-Cone et al.'s (2010) original transdiagnostic definition of recovery included two criteria, one of which was removed, and one of which was adjusted for this study. Their criterion for body mass index was removed as body mass index was mentioned as hindering by several participants in this study and was not assessed as part of participation. The criterion requiring a score on the Eating Disorder Examination Questionnaire was converted to item (c) because participants in this study did not complete any formal ED measures.

CHAPTER 2: LITERATURE REVIEW

EDs are serious and insidious illnesses that compromise the physical and psychological health and well-being of those who suffer from them. As excessive exercise is a common symptom of EDs, sufferers often gravitate to fitness centres where the pro-weight loss, anti-fat culture may mask the gravity of their illness and inadvertently assist them in pursuing ED goals in the name of fitness and health. As such, those working in the fitness industry can expect to encounter both EDs and excessive exercisers, and indeed they do. To date, a small body of research has examined what happens when people with EDs are in gyms, how fitness workers handle these situations, and what improvements can be made to make gyms safer for people with these conditions.

The following section reviews the literature on EDs and the fitness industry with a particular focus on fitness workers' knowledge of, and experience with, EDs. This chapter concludes with an explanation of how this research makes a unique contribution in its attempt to learn how different aspects of the gym environment impact women's ED recovery.

A Brief Background on EDs and Treatment

EDs are debilitating conditions that wield incredible power over those who suffer from them. In addition to their emotional and psychological toll, they also have the unfortunate distinction of being among the deadliest of any psychiatric illness (Arcelus et al., 2011). The internal pain and unrest associated with EDs is manifested in and through the body, often in the form of serious medical issues. Individuals with anorexia may experience cardiac complications, reduced gastrointestinal function, disruptions in hormone function, loss of bone density, and osteoporosis (Mehler, 2017). Individuals with bulimia may experience potentially fatal electroylite imbalances, gastrointestinal complications, and dental erosion (Mehler, 2017).

Although some of these medical complications are reversible with treatment and weight restoration, others can be permanent (Mehler, 2017).

In addition to the increased risk of mortality and medical complications, people who struggle with EDs often face barriers to accessing effective treatment. In 2014, the Canadian Standing Committee on the Status of Women highlighted some of these barriers, which include a lack of treatment options, underfunded community-based programs, biased health care professionals, inadequate training of treatment providers, and lengthy waitlists. For those who manage to access high quality treatment, the journey to recovery often requires a substantial investment of time, energy, and finances. People with EDs may require hospitalization, inpatient care, intensive day programs, long-term outpatient support, and multidisciplinary treatment teams. And they may require a combination of these supports repeatedly and for extended periods of time.

Additionally, EDs can be disabling, and many people with these conditions are unable to work. In their review, van Hoeken and Hoek (2020) reported that in 2017, an estimated 3.3 million healthy life years were lost to ED-related disabilities. The nature and state of ED treatment coupled with the disabling nature of EDs means that many people with these illnesses end up having to rely on financial support from government programs, insurance providers, and/or family members (van Hoeken & Hoek, 2020). Further, the loss of earning potential that often accompanies disabling conditions like EDs reduces a person's ability to pay for private counselling or treatment, which many people need to get well.

EDs and Recovery

Although people with EDs often face barriers accessing treatment, many do recover. That said, ED recovery is a complicated and nuanced topic and area of research. Much of this is

because the ED field lacks a standardized definition for ED recovery. Several researchers have highlighted this problem, and some have proposed their own provisional definitions of recovery in hopes that a single definition might eventually be adopted by the field (see Bardone-Cone et al., 2010; Khalsa et al., 2017). Currently, however, not having an agreed-upon definition in place leaves researchers to operationally define recovery how they see fit. This, in turn, contributes to an abundance of many different definitions of recovery, confusing our collective understanding of what it means to be recovered, which treatments are the most effective, how possible it is to reach recovery, and so on. As Bardone-Cone et al. (2018) put it, depending on the source, recovery is either very promising or almost impossible.

In their systematic review, Khalsa et al. (2017) have highlighted some of the different operational definitions of recovery from anorexia that have been used in the literature. They found that articles generally define recovery from anorexia by focusing exclusively on one of the following: weight restoration, symptom reports, or diagnostic criteria. Although Khalsa et al.'s review focused specifically on anorexia, similar decisions on what criteria to use are also made with other EDs. In addition to which criteria should be used to define and assess recovery, researchers must also make decisions about how long one must have abstained from ED-related behaviours before they are considered recovered (Bardone-Cone et al., 2010). Such decisions all have important implications on the outcomes reported in the literature.

Other factors can also impact the long-term outcomes reported in the literature. For many people, EDs evolve into chronic, relapsing conditions that endure over many years (Wonderlich et al., 2012), making the length of follow-up another important factor to consider in recovery research. Because it can take many years to recover from an ED, some of the less favourable outcomes described in shorter term studies may be artifacts of shorter follow-up periods.

Longitudinal studies are therefore important to better understand the long-term course of EDs and the different ways in which people may move toward recovery.

Some longitudinal studies suggest that even those who have experienced an intractable course of illness for many years may eventually drift toward recovery over time. Few studies, however, have followed ED patients for significant lengths of time. A recent exception is Fichter et al.'s (2017) study, which followed a subset of 112 individuals with anorexia for a 20-year period. Though many of these participants showed improvements, a significant proportion did not achieve remission, which—in this study—was defined as not meeting the *DSM-IV* criteria for an ED for three months at follow-up. At the 20-year mark, 39.3% of the participants were in full remission and 3.6% were in partial remission. The remaining 57% still met criteria for anorexia (9.8%), bulimia (4.5%), or another ED (42.9%).

Another longitudinal study by Eddy et al., (2017) followed 246 women with diagnoses of either anorexia or bulimia. Of this initial cohort, some participants could not be contacted, some declined follow up, and 18 died,[3] leaving 176 who remained enrolled for the duration of the study. These participants were assessed in two waves, one at 9 years, and one at 20–25 years, with a mean follow-up of 22.1 years. In this study, recovery was operationally defined by participant psychiatric status rating scores of 2 for 52 consecutive weeks. Using this definition of recovery, approximately two-thirds of the participants had recovered at the final 22-year follow-up.

In addition to the different definitions of recovery described above, people with EDs may have their own definitions and ideas, and these may or may not align with the definitions that have been used in research and clinical circles. As LaMarre and Rice (2021) highlight, recovery

[3] The authors did not indicate whether these deaths were related to the participants' ED diagnoses.

is a highly contextual process, and people with EDs may understand and define it differently than researchers, treatment providers, and others who are in the position to create formalized definitions of recovery.

To summarize, several factors make the literature on ED recovery challenging to interpret. Without a standardized definition of recovery, it is difficult to accurately understand the trajectory and prognoses of these illnesses, compare findings across studies, and conduct meta-analyses (Khalsa et al., 2017). Additionally, when outcome studies using vastly different lengths of follow-up are combined with different recovery definitions, this can further confuse our understanding of the probability of recovery, the length of time it takes to recover, what kinds of therapies are most successful long-term, and so on. The results of the longitudinal studies above suggest that recovery is probable for some and possible for many; however, for others, recovery remains elusive, and the ED becomes a chronic and relapsing condition.

EDs and Excessive Exercise

Throughout the course of the illness, individuals with EDs may engage in a range of different behaviours to control or influence weight and/or shape. Of particular interest to this study is the problematic exercise behaviour that occurs in gyms. Though not listed as one of the primary diagnostic criteria, the *DSM-5* does mention excessive physical activity and excessive exercise as features of anorexia and bulimia (APA, 2013). Although excessive exercise seems to be featured less prominently in the literature than some other ED behaviours, it is a common ED symptom that carries important implications for treatment.

As with recovery, the ED field lacks an agreed-upon operational definition for problematic exercise (Mond & Gorrell, 2021). This has created confusion in scientific and clinical circles because it remains unclear what precisely constitutes problematic exercise

behaviour. As many have pointed out, the term "excessive," which is used interchangeably with "problematic" in this thesis, suggests a focus on the quantitative aspects of exercise. Unfortunately, the ED field also lacks standardized cutoffs for exercise duration, intensity, and frequency, rendering the difference between appropriate and excessive a matter of opinion. Not having cutoffs also raises important questions about what durations, intensities, and frequencies might be appropriate for people with EDs.

Similar to recovery, the absence of a standardized definition for excessive exercise has resulted in many different terms and operationalizations for it, including exercise dependence (e.g., Bratland-Sanda et al., 2011), obligatory exercise (e.g., Thome & Espelage, 2007), over-exercise (Smith et al., 2013), and compulsive exercise (Grave et al., 2008), among several others. Although these different terms are often used interchangeably, some researchers have parsed ED-driven exercise into distinct types, drawing qualitative distinctions between them.

In their study, Holland et al. (2014) observe that the many terms used to describe problematic exercise generally fall into one of three domains: excessive, which typically refers to the frequency and duration of exercise; compensatory, which typically refers to exercise that is intended to offset food intake; and compulsive (or obligatory), which typically refers to exercise used to reduce distress. Using survey items to approximate these aforementioned definitions, Holland et al. concluded that compensatory exercise was the best predictor of ED pathology. Others have also concluded the same, noting that the term compulsive is also suggestive of rigidity. Although this study uses the terms excessive and problematic exercise interchangeably, this author notes that exercise behaviour performed in service of an ED is often compulsive and rigid and may not be excessive in duration or intensity.

The prevalence of excessive exercise and its potential impact on health and treatment outcomes have been evaluated by a number of research studies. Grave et al. (2008) assessed the prevalence of compulsive exercise and its relationship to treatment outcome among 165 female inpatients. Participants were divided into two groups based on their responses to exercise-related questions on the Eating Disorder Examination. Of the entire sample, 45.5% were classified as compulsive exercisers; however, this reached 80% in those diagnosed with the restricting subtype of anorexia. In this study, lower amounts of recent exercise predicted improvements as measured by the Eating Disorder Examination. Interestingly, baseline levels of compulsive exercise appeared to have little effect on treatment outcomes, which is encouraging for those who are struggling with this behaviour upon entering recovery.

A high prevalence of excessive exercise was also found in a study authored by Shroff et al. (2006). These authors recruited a large sample of 1,857 female probands and their affected female relatives. Based on responses to exercise-related questions from a structured interview, 39% of the total sample were found to engage in excessive exercise. In addition to greater ED symptom severity, excessive exercise was also associated with earlier illness onset, perfectionism, and lower motivation to change. Shroff et al.'s study suggests that excessive exercise contributes to the maintenance of a low body mass index (BMI), which, in turn, has been linked with poor long-term outcomes (Löwe et al., 2001). Other studies assessing excessive exercise indicate it is associated with treatment dropout (El Ghoch et al., 2013), lengthier hospitalizations (Solenberger, 2001), suicidality (Smith et al., 2013), and lower health-related quality of life (Cook et al., 2014).

Interestingly, there appears to be a dearth of research assessing the medical consequences of excessive exercise in people with EDs. To this author's knowledge, the ways in which

excessive exercise might cause or exacerbate cardiac problems, electrolyte imbalances, injuries, and other medical issues have not been empirically evaluated. That said, when chronically undernourished individuals engage in excessive exercise, it places additional stress on the body and may increase the risk of cardiac problems, serious cardiac events, chronic pain, musculoskeletal injuries, and other medical issues (Swainson & Philip-Rafferty, 2018).

Sociocultural Influences on EDs: A Critical Feminist Perspective

Though there are some factors that can increase the risk profile for certain groups of people, no one is impervious to EDs. Furthermore, there are some populations (e.g., boys, men, and those identifying as other genders) who have been underrepresented, and in some cases, excluded, from the ED literature. That said, it is also true that girls and women account for the vast majority of ED diagnoses (Qian et al., 2022). Before reviewing the final area of the literature, it is important to note that the current study focuses on women's experiences and that it approaches EDs and related issues from a critical feminist perspective. This is discussed in further detail the next chapter.

Canadian Gym Culture and Fitness Workers: An Overview

Ostensibly, gyms provide a space and a service to help people achieve and maintain good health and fitness. Fundamentally, however, gyms are businesses that operate within the commercialized fitness industry. In the business of fitness, running a profitable gym means selling memberships. Looking at the broader sociocultural context in which gyms are situated, we see the dovetailing of firmly established, long-standing body dissatisfaction with public health messaging about the "war" on obesity (O'Hara & Gregg, 2006). However well-intentioned, public health messaging that emphasizes maintaining a "healthy weight" intersects

with the framing of obesity as a war. This foments a sense of moral panic and shame around the body, eating, and weight (Rich & Evans, 2005).

Importantly, weight-centric messaging also intersects with healthism, an ideology that frames health as a moral obligation over which people are assumed to have total control (O'Hara & Taylor, 2014). Under healthism, perfect health is achievable to those who try hard enough, therefore implying that we have only ourselves to blame if we become sick or unhealthy (O'Hara & Taylor, 2014). From the perspective of healthism, important social determinants of health (e.g., socioeconomic status, education level, pollution, ability to access health care, etc.) are deemphasized or ignored in favour of the view that people as individuals are solely responsible for pursuing and maintaining perfect health (Mansfield & Rich, 2013).

Although many scholars and researchers have challenged the prevailing weight-centric models of health, the claims that health is contingent on weight are also supported by our culture's narratives about aesthetics (Burns & Gavey, 2004; Rich & Evans, 2005). With such powerful discourses conflating health with weight, what emerges in our collective conscious is an internalized beauty aesthetic that we are told is supported by science. It is against this backdrop that the fitness industry uses weight and appearance-based marketing to leverage weight-based health concerns and body dissatisfaction into gym memberships. Public health and the fitness industry are far from the only sources of weight and appearance-based messaging, however. There are many other agencies and industries using marketing and spreading messages that conflate aesthetics with health and fitness. In fact, there are entire industries (e.g., fashion, cosmetics, etc.) whose profits are derived from convincing women that there is something wrong with the way they look. Too often, gyms are another voice spreading that dogma.

As Markula and Chikinda (2016) observe, the North American cultural context is one where health is intertwined with aesthetics. In the fitness industry, healthy and fit bodies are those that live up to a certain aesthetic. Such messages are ubiquitous and relentless, conveying to women the idea that there is a problem with how their bodies look, that their bodies are unhealthy *because* of how they look, and that they should "fix" their bodies. Once women have internalized the idea that there is something wrong with their body, it is easy to sell them products and services to fix these so-called problems. In this way, the fitness industry's positioning of health and fitness as a (thin) aesthetic perpetuates a collective body shame for which the solution on offer is weight loss via gym memberships.

The notion of health as an aesthetic is also endorsed and supported by those who work in the fitness industry. Personal trainers and other fitness professionals sit at the center of converging narratives about weight loss, exercise, nutrition, health, and aesthetics, not all of which are in agreement with each other (Donaghue & Allen, 2016). While sorting out these contradictory health narratives, fitness professionals must also try to stay aligned with the objectives of the commercialized fitness industry that employs them (Donaghue & Allen, 2016). This alignment is easier to achieve in gym settings where health, fitness, and exercise are conflated with, or obfuscated by, weight loss and aesthetics (Burns & Gavey, 2004; Donaghue & Allen, 2016).

When considering the role of fitness professionals, it is critically important to appreciate the power and influence they hold relative to those who seek their leadership, guidance, and services. As part of their job, fitness professionals interpret complex and often contradictory health information for clients, many of whom are in pursuit of a certain body aesthetic via weight loss. They are seen as knowledgeable authority figures on health, fitness, diet, and exercise, and

their opinions on these matters can influence their clients' goals and the methods by which they pursue these goals (Donaghue & Allen, 2016). As with other gym members, people with EDs may also seek and receive weight loss advice and support from fitness professionals. Such counsel is especially problematic because it can perpetuate EDs, potentially increasing the risk of medical and psychological complications (Worsfold & Sheffield, 2018a). Given these vulnerabilities, the impact that fitness professionals can have on people with EDs can be especially profound.

A recent thematic analysis by Donaghue and Allen (2016) explored how personal trainers interpret cultural messages about diet, exercise, weight loss, and the aesthetic value of weight loss. In semi-structured interviews with 12 personal trainers, Donaghue and Allen's study explored the trainers' views on clients' weight loss goals, whether the trainers thought these goals were realistic, and how they understood their role in helping clients achieve such goals. Toward the end of the interviews, the trainers were also informally introduced to, and asked for, their opinions about Health at Every Size (HAES). HAES is a weight-inclusive health paradigm that promotes body acceptance and challenges the dominant view that only bodies of a certain size are fit and healthy (see O'Hara & Taylor, 2014).

All 12 participants in Donaghue and Allen's (2016) study reported that weight loss was the main goal for the vast majority of their clients and that clients were motivated to lose weight largely for appearance-related reasons. Overall, analyses showed that trainers held favourable opinions on weight loss, and that they saw no issues with clients' aesthetic motivations to lose weight, their specific weight loss goals, or the achievability of these goals. In fact, most of the trainers indicated that they believed weight loss was equally achievable for everyone. Most also downplayed the influence of physiological factors—like genetics—on weight loss, believing

instead that losing weight was largely a psychological endeavour and its success was contingent primarily on factors like discipline and mindset. Further, because weight loss is important to so many clients, the trainers said they tend to go along with clients' weight loss goals without questioning or challenging the value and importance of them. After introducing the HAES perspective, however, most of the trainers agreed that some of the HAES principles had value in some situations. That said, many remained skeptical, viewing HAES as "an excuse for people to be lazy" (Donaghue & Allen, 2016, p. 54).

The fitness industry generally aligns itself with the dominant view that weight loss is good, healthy, and achievable, and fat is bad, unhealthy, and unsightly. Donaghue and Allen's (2016) study appears to be the first foray into fitness workers and their beliefs about weight loss, and as such, it makes an important contribution to the literature on this topic. It suggests that personal trainers tend to embrace the weight loss-as-health paradigm of the industry that employs them. That said, the authors acknowledged that their sample was small and that many participants were similar in age, experience, and background. The homogeneity in the participants' age and experience may mean that the themes and opinions shared by the participants are more reflective of younger, less experienced personal trainers rather than of the profession as a whole. Lastly, although the authors did not explicitly declare an epistemological position, they thoughtfully integrated culturally informed health discourses throughout the article.

When Someone has an ED in the Gym

To date, very few studies have focused on how gyms and fitness professionals approach EDs in gym members, whether they can detect EDs in members, and what they understand about these illnesses. The final section below reviews six studies published between 2008–2020 that

address these questions. The following review and discussion focuses on the questions and findings from these studies that are most relevant to the current research.

Recognition, Perspectives, and Perceived Ethical Issues

A 2008 study by Manley et al. explored British Columbian fitness workers' ability to identify anorexia and their understanding of the potential ethical issues when people with EDs are exercising in gyms. The study featured a vignette depicting "Mary"—a young female exerciser with visible symptoms of anorexia—followed by a brief survey. The primary objectives were to determine whether certified fitness instructors could correctly identify that Mary had anorexia, to understand what they would do in a similar situation, and to determine whether they thought there were any ethical issues with Mary exercising in the gym. The survey also asked the fitness instructors if they had ever encountered exercisers like Mary and if they thought guidelines for these kinds of situations would be helpful.

A total of 62 fitness instructor participants were recruited via email and/or a website post. To validate the Mary vignette, Manley et al. (2008) also recruited 56 pediatricians from a large conference to serve as a comparison group. Their version of the vignette was the same, but their survey differed in that they were only asked the initial diagnostic question about Mary and were not asked the follow-up survey questions about the ethical and legal issues pertaining to Mary exercising in the gym.

Only 32% of the fitness instructors in this study correctly identified that Mary presented with anorexia. An additional 21% indicated a potential ED, but said they lacked the information required to know this for certain. In contrast, 88% of pediatricians correctly identified anorexia, representing a significant proportional difference between the two groups ($X^2(3) = 36.2$, $p < .000$). Notably, most of the fitness professionals (67%) indicated having encountered an

exerciser like Mary, and 97% indicated ethical and liability concerns with allowing someone like Mary to exercise in the gym. In terms of what they would do if they encountered an exerciser like Mary, the majority of the participants said they would do one of the following: 35% said they would express their concerns to Mary, 28% said they would consult with a supervisor or colleague, and 26% said they would inform Mary of the risks and then allow her to make her own decision. Finally, 100% indicated their profession would benefit from having guidelines for these kinds of situations.

Even though the Mary vignette described several visibly obvious signs of anorexia, most of the fitness instructors failed to identify the presence of anorexia. This study's use of the pediatricians as a comparison group, coupled with the fact that 88% of the pediatricians correctly identified anorexia, supports the validity of the vignette. Manley et al. (2008) acknowledged that there are significant differences in training and education between pediatricians and fitness instructors; however, they argue that the high rate of detection among the pediatricians suggests that the vignette contained enough descriptive information to allow for the identification of anorexia. Manley et al. also acknowledged that, as a group, the fitness instructors were significantly younger than the pediatricians, and they also had fewer years of work experience compared to the pediatricians. It is therefore possible that these differences between the groups contributed to the fitness instructors' poor detection rate. Interestingly, this poor detection rate was coupled with the fact that most of the fitness instructors said they have encountered clients like Mary. This may suggest a prevalence of severe EDs in gyms which are not recognized as such by fitness instructors.

As Manley et al. (2008) acknowledge, the question of what to do when gym exercisers appear to have an ED is a complicated one that involves potential legal and ethical implications

(see Giordano, 2010, for an in-depth legal and ethical analysis). Certainly, making diagnoses is not part of the fitness instructor's role; however, as Manley et al. argue, fitness workers clearly have the capacity to recognize observable warning signs and symptoms of a chronic health condition, like an ED. Commensurate with their findings, Manley et al. suggest enhancing fitness instructor education on EDs and developing guidelines pertaining to EDs in gym settings.

Although Manley et al.'s study was from 2008, the fact that the fitness instructor participants were from British Columbia makes these findings particularly relevant to the current project. In terms of limitations, participants were recruited via convenience sampling, and there was a very low return rate for the fitness instructor group, with only 3% returning completed surveys. The authors also did not conduct a power analysis. Lastly, the authors did not explain how they developed the survey questions or vignette.

Several years after Manley et al.'s (2008) article, another Canadian study also assessed fitness professionals' perspectives on gym exercisers with anorexia. Wojtowicz et al.'s (2015) survey-based study sought to better understand fitness professionals' experiences with clients suspected of having anorexia and their opinions of the ethical and training issues related to such situations. Participation involved reviewing a brief description of anorexia and completing a 21-item survey. A total of 143 participants were recruited using email, web advertisements, phone calls, and personal contacts. Unlike Manley et al., Wojtowicz et al.'s study recruited several different kinds of fitness professionals: In addition to certified fitness instructors, other roles held by the participants included athletic trainers, exercise therapists, specialized instructors (i.e., martial arts, dance, yoga, etc.), and administrative staff (i.e., facility operators, managers, etc.).

The results of Wojtowicz et al.'s (2015) study provide a detailed overview of different fitness professionals' experiences with clients and other gym members suspected of having

anorexia. Sixty-two percent of the respondents indicated that they have encountered clients they thought had anorexia. Seventy-six percent indicated they thought fitness professionals were ethically obligated to intervene in such situations, but only 59% took some form of action. Interventions that were used by the participants included talking to the client or someone else about their concerns, providing information on support, talking to the client's parents, and/or prohibiting the client from continuing to exercise in the facility. Most of the fitness professionals who intervened indicated that they felt their attempts to help were ineffective. In addition, 75% said they had never received any training or instructions on how to handle gym exercisers with anorexia, 70% felt their ethics code did not adequately address this issue, and only 34% felt adequately prepared to handle these kinds of situations.

Unlike similar studies that focused only on fitness professionals who work directly with exercisers (i.e., personal trainers), Wojtowicz et al.'s (2015) inclusion of other fitness professionals is a strength of this study because it helps us understand the perceptions of others who are also positioned to notice EDs and intervene. As this and Manley et al.'s (2008) study both show, when fitness professionals have concerns, they often seek advice from other parties, including supervisors and managers. Thus, even though staff who work directly with clients (e.g., personal trainers) may be best positioned to notice an ED, interventions may also involve others who work in the gym.

Importantly, Wojtowicz et al.'s (2015) study also yields specific examples of the kinds of support fitness professionals would like to help them navigate situations where they suspect a client or gym attendee might have anorexia. Respondents were permitted to select multiple options from a list provided by the researchers. These items, and the percentage of respondents who selected them, are as follows: information about the most appropriate course of action to

take (90%), treatment information and community resources (88%), information on liability issues (68%), information about the risks of exercise for people who have anorexia (64%), how to identify clients who have anorexia (61%), and "other" (7%). This study also provides more detailed information about how fitness professionals have handled situations with individuals whom they suspected of having anorexia and how they understand their responsibilities in these situations.

As with Manley et al. (2008), Wojtowicz et al. (2015) advocate for the development of guidelines on EDs for fitness industry professionals, and they also recommend EDs be added to fitness education programs. Further recommendations include the development of position statements and policies regarding the management of gym attendees with EDs, which they suggest should be communicated to all gym members. Of special relevance to the current study, Wojtowicz et al. also suggest that it would be particularly valuable if future research included recommendations from individuals who have recovered from EDs.

In terms of limitations, Wojtowicz et al.'s (2015) study also focused solely on anorexia, missing an opportunity to understand more about fitness professionals' responses to clients with other EDs, subclinical EDs, and/or exercise behaviour. Although the authors collected information like the participants' education levels and length of time working in the fitness industry, this paper was descriptive in nature: The authors did not report any inferential statistics, and the only mention of statistical analyses was a short endnote that indicated there were no significant findings. Lastly, this study was published nine years after the data was collected. The authors argued that because Alberta's fitness industry has remained relatively unchanged, a replication study would likely yield similar results. Because of these limitations, readers are left to conceptually integrate the results and evaluate ranges of applicability.

Knowledge, Detection, and Literacy

Where Manley et al. (2008) and Wojtowicz et al. (2015) focused on identification, knowledge, and perceived legal and ethical issues related specifically to anorexia, a small body of other studies have included other EDs and related behaviours. In 2015, Bratland-Sanda and Sundgot-Borgen published a survey-based study on group fitness instructors' recognition, knowledge, and management of disordered eating in gyms. The overall aim of their study was to evaluate group fitness instructors' knowledge of disordered eating and to assess their level of confidence in approaching gym members who may be struggling with disordered eating.

A large sample of 837 group fitness instructors were recruited to participate via email invitations, which were sent to the three largest fitness centres in Norway. Participation was completed online in the form of a self-report survey. Participants were asked questions about how frequently they encountered exercisers whom they suspected were engaging in disordered eating, whether they (the instructors) had a history of an ED, their level of education and years of experience, their level of knowledge about disordered eating, and their confidence in discussing this issue with clients. Using open-ended questions, participants were also asked to list three symptoms of disordered eating to assess for discrepancies between self-reported knowledge and actual knowledge.

Binary logistic regression was used to test whether experience, education, or history of an ED influenced instructors' level of knowledge of disordered eating and identification and management of disordered eating. Of these variables, only higher level of exercise-specific education and self-reported ED history were significant explanatory variables of accurate knowledge of disordered eating symptoms $X^2(4) = 27.83$, $p < .01$, $R^2 = .04$ (Cox and Snell), $R^2 = .08$ (Nagelkerke).

Notably, Bratland-Sanda and Sundgot-Borgen's (2015) study revealed a large discrepancy between self-reported (89%) and actual (29%) knowledge of disordered eating symptoms, suggesting that group fitness instructors may be overconfident in their level of knowledge about disordered eating. Interestingly, few participants (20%) listed excessive or compulsive exercise as a symptom of disordered eating. In addition, almost half of the participants indicated they were currently concerned about an exerciser with disordered eating symptoms, and 22% said they were concerned about a colleague. Unfortunately, however, less than half of the participants (47%) indicated they felt confident about what to do with their concerns. In terms of the participants' personal experience with EDs, 29% reported having a history of an ED. This rate is considerably higher than the estimated rates of EDs in the general population.

This large sample study suggests that history of an ED and level of education predict knowledge of disordered eating among group fitness instructors. An important contribution of this study is that rather than focusing on a specific ED, Bratland-Sanda and Sundgot-Borgen (2015) assessed knowledge of disordered eating, setting their study apart from other similar studies. In addition to collecting instructors' self-reported knowledge, Bratland-Sanda and Sundgot-Borgen also assessed instructors' actual knowledge of disordered eating. Although the authors acknowledge that participants could have "cheated" by looking up symptoms on the internet, they argued that this was unlikely to have occurred given that only 29% of the participants demonstrated accurate knowledge of disordered eating.

Although their focus was on disordered eating, Bratland-Sanda and Sundgot-Borgen (2015) echo the recommendations made by Manley et al. (2008) and Wojtowicz et al. (2015) that call for improvements in fitness instructor education as well as the need to create specific guidelines. They also emphasize the somewhat concerning finding that few participants in their

sample listed excessive exercise as a symptom of disordered eating. As with Manley et al., Bratland-Sanda and Sundgot-Borgen also forestalled potential arguments against the need for recommendations by clarifying that identifying individuals who may have an ED or a related issue is within the purview of fitness professionals, as is following guidelines on how to manage such situations. Lastly, Bratland-Sanda and Sundgot-Borgen also argue for guidelines to be integrated into fitness training programs in other countries.

One important limitation of Bratland-Sanda and Sundgot-Borgen's (2015) study is that it focused on group instructors. Though group instructors may be able to identify those who attend an excessive number of classes or those with visibly obvious signs of an ED, they do not typically have one-on-one interactions with exercisers. The nature of teaching group fitness classes arguably reduces group instructors' opportunities to identify—and potentially intervene—in cases where someone may be struggling with disordered eating or an ED. As such, this study's exclusion of other fitness professionals represents a missed opportunity to understand more about the level of knowledge other kinds of fitness professionals might have about disordered eating. In terms of the survey, the authors acknowledged that they did not test or validate their survey items prior to launching their study. They also did not perform a power analysis or report family-wise error rates, leaving readers to assess such concerns within their own analytic framework. Lastly, the participants were drawn from only three fitness companies in Norway, making it possible that factors unique to these fitness centres could have influenced the results of this study.

More recently, Worsfold and Sheffield (2018a, 2018b) expanded on previous research by offering a more in-depth exploration of ED literacy among fitness instructors as compared to two other practitioner groups. Their study, which was published in two parts, was comprised of a

sample of 115 Australian participants, 35 of whom were registered psychologists, 50 of whom were natural therapists (i.e., naturopaths, herbalists, and nutritionists without dietetic training), and 30 of whom were fitness instructors (i.e., primarily personal trainers). Participants were recruited via email invitations and social media. Like Manley et al. (2008), Worsfold and Sheffield's design used a fictional vignette ("Sarah") followed by a survey. In contrast to the Manley et al. vignette, however, the Sarah vignette depicted a woman with a subthreshold, non-purging subtype of bulimia.[4] The review offered below focuses primarily on the first Worsfold and Sheffield (2018a) publication as the second publication is less relevant to the current study.

In part one of their study, Worsfold and Sheffield (2018a) sought to examine ED-related mental health literacy among psychologists, natural therapists, and fitness instructors. Their survey covered several domains, with the main research questions focusing on the practitioners' ability to detect a subthreshold ED (as depicted in the Sarah vignette), followed by their opinions about which referrals might be helpful for someone like Sarah, and their beliefs about prognosis, prevalence, severity, acceptability, and likelihood of discrimination for someone like Sarah.

ANOVAs and chi-square analyses were conducted to assess for differences between the practitioner groups, with Cramer's V used to measure effect sizes[5] in the chi-square analyses. Overall, ED detection was low among all groups, with only 38% of the entire sample correctly detecting the presence of an ED. Further, ED detection rate was dependent on practitioner group (p = .03, V = .36) with fitness instructors being the least likely to detect the presence of an ED. More specifically, only 23% of fitness instructors correctly identified the presence of an ED,

[4] The Sarah vignette was developed from a previously used vignette with formal diagnostic criteria drawn from both the *DSM-5* and version 10 of the *International Statistical Classification of Diseases and Related Health Problems*.

[5] For Cramer's V, the authors used V = .10, .30, and .50 represent small, medium, and large effect sizes, respectively.

versus 63% of psychologists and 30% of natural therapists. Almost half of the fitness instructors (47%) thought Sarah's main problem was that she had low self-esteem, compared with only 20% of psychologists and 38% of natural therapists who selected low self-esteem as Sarah's main problem. These group differences, however, were non-significant.

Significant group differences were also found in terms of the kind of professional the practitioners' deemed most helpful for Sarah, ($p < .001$, V = .62). Notable differences between fitness instructors and the other practitioner groups were found: Both psychologists and natural therapists indicated that psychologists would be the most helpful professional for someone like Sarah; conversely, most of the fitness instructors (30%) chose "personal trainer" as the best person to help Sarah, followed by psychologist (26.7%).[6] No participants in either the psychologist or natural therapist group selected personal trainer as the most helpful person for Sarah.

Also significant were the group differences regarding acceptability, which was assessed by the following question, "Have you ever thought it might not be too bad to be like Sarah, given she has been able to lose a fair amount of weight?" Responses to this question were also contingent on group membership ($p = .04$, V = .27), with fitness instructors differing from the other two groups: 37% of the fitness instructors selected either "occasionally," "often," or "always" in response to this question. Significant group differences were also detected in terms of incidence rates $F(2,110) = 13.64$, $p < .001$, with personal trainers rating the predicted incidence of Sarah's problem at 70% of women or higher. These incidence estimates were more than 1.5 times higher than those predicted by natural therapists (48%) or psychologists (39%).

[6] Worsfold and Sheffeild (2018a) note that the profession bias seen in fitness instructors was mirrored in the other two professionals: Most of the psychologists (94%) and natural therapists (46%) chose psychologists; 30% of the natural therapists chose naturopaths.

No significant group differences were detected with respect to ratings of severity (p = .45, V = .16) or likelihood of discrimination (p = .77, V = .16), both of which were rated similarly among all three groups. Further, no significant differences were found on items relating to prognosis or appropriate treatments.

Although Worsfold and Sheffield's (2018a) study involved three different practitioner groups, there are several key findings pertaining to fitness professionals that are of particular interest to the current study. Firstly, fitness instructors had the lowest ED detection rate of the three practitioner groups, with only 23% detecting the presence of an ED. This detection rate is similar to, albeit lower than, the detection rate of 32% yielded among the Canadian fitness instructors in Manley et al.'s (2008) study. Although the vignettes were different, the low detection rate among fitness professionals in both studies suggests that—as a group—most fitness professionals are unable detect EDs in gym attendees.

Also of interest to the current study is the finding that 30% of the fitness instructors indicated that a personal trainer would be the most helpful person for Sarah. Curiously, this was their most selected option, and they chose it over other options like psychologist, nutritionist, counsellor, or doctor. This raises concerns not only about their general knowledge of EDs but also about their awareness of the professionals to whom people with EDs should be referred. It also suggests that fitness instructors may lack an appreciation of the nature and severity of EDs.

Perhaps most alarmingly was the finding that almost 40% of the fitness instructor participants viewed Sarah's problem as somewhat desirable, given her weight loss. As Worsfold and Sheffield (2018a) observe, this is concerning and potentially dangerous for clients and gym attendees because it again suggests that fitness professionals lack an appreciation of the seriousness of these conditions, and it further suggests that a subset of them may even view ED

behaviour as desirable. Another concern raised by Worsfold and Sheffield is that fitness professionals could be providing harmful weight loss advice to gym attendees if they do not see EDs or ED behaviour as problematic or hazardous to people's health. This study also raises additional questions about what happens to people with EDs if fitness instructors see fit to refer them, not to psychologists or doctors, but to personal trainers.

The second part of Worsfold and Sheffield's (2018b) study used the same design and participants; however, their main purpose here was to evaluate service provision, assessment practices, and self-perceptions of knowledge and skills. Unfortunately, the authors did not break down participant responses to the service provision and assessment practice questions by practitioner group, making the fitness instructors' responses indiscernible from those of the natural therapists and psychologists. This rendered these results not relevant to the present study.

To assess for differences in self-perceived knowledge and skill, ANOVAs with Benjamin-Hochberg adjustments and Tukey's post-hoc tests were conducted. The key finding relevant to the current study is that fitness instructors rated themselves as lower on knowledge and skills than self-ratings provided by natural therapists and psychologists. That said, the purpose of these comparisons was to understand how fitness instructors compare to the other two practitioner groups, a question which is not of relevance to the present study. As such, a breakdown and discussion of the specific group comparisons is not provided here. Lastly, the other key finding of the Worsfold and Sheffield (2018b) study is that 70% of fitness instructors reported seeing clients with EDs.[7]

Although the Worsfold and Sheffield (2018a, 2018b) studies were not focused on fitness professionals per se, their findings highlight the importance of making improvements to ED-

[7] Seventy-four percent of psychologists and 88% of natural therapists reported the same, with a combined total of 93% among all the practitioners surveyed. Group differences on this item were non-significant.

related training and education for fitness instructors. Both studies discuss the strong potential of harm, however inadvertent, to people with EDs who attend gyms, especially if ED literacy is not improved. In fact, as Worsfold and Sheffield (2018a) observe, several factors inherent in fitness settings coalesce to create dangerous situations for people with EDs and those who are at risk of developing EDs. These factors include the weight-centric focus of gyms, the frequency with which people with EDs pursue weight loss, the seriousness and severity of EDs, the apparent poor ED detection rate among fitness instructors, and poor ED literacy among fitness instructors. Like the research previously reviewed, both Worsfold and Sheffield studies also propose improvements to training and education, emphasizing that curricula changes are ethically necessary and that ED literacy should be improved before fitness instructors enter the field.

As with the other articles covered in this review, the Worsfold and Sheffield (2018a, 2018b) studies also used convenience sampling, which—in a post-positivist framework—limits the generalizability of the findings. Worsfold and Sheffield (2018a) also acknowledge that although their survey items were adapted from existing surveys used in previous research, the items were not validated. With regards to the vignette, they acknowledge it is possible that describing a non-purging variant of bulimia made the ED more difficult to detect; however, this is a caveat rather than a limitation as it is important to evaluate detection and knowledge of different ED presentations.

In terms of the specific limitations of part two of the study, Worsfold and Sheffield (2018b) did not indicate how the fitness instructors knew they were working with someone with an ED. It is therefore unclear as to whether the figure of 70% is based on fitness instructors' own assessments of clients' EDs, if it refers to clients who disclosed an ED, or some combination thereof. Lastly, as mentioned, the responses to many of the items were pooled across practitioner

groups, rendering it impossible to parse fitness instructors' responses from those of psychologists and natural therapists.

Lastly, and most recently, is Colledge et al.'s (2020) study examining Swiss fitness centre employees' experiences with excessive exercise and EDs. In addition to assessing the prevalence of EDs and excessive exercise among gym attendees, Colledge et al. also sought to investigate whether fitness centre employees could distinguish between excessive exercise and EDs, what they did when they suspected someone of struggling with either of these conditions, and what they might like to see in terms of guidelines to help them navigate such situations.

A total of 99 participants were recruited by contacting various fitness centres and asking them to invite their employees to complete an online questionnaire. One-way ANOVAs, X^2, and multiple logistical regression analyses were conducted to examine if observing EDs and/or excessive exercise, likelihood of confronting, and awareness of guidelines were associated with gender, age, education, professional experience, or a previous history of an ED or excessive exercise.

Beginning with how many employees have observed gym attendees with either condition: 77% of participants reported having seen at least one gym attendee whom they suspected of having an ED. Of this group, the majority (64%) reported having suspicions about multiple attendees. A similar pattern is observed with excessive exercise, where 73% reported having seen at least one gym attendee whom they suspected of engaging in excessive exercise, and 68% had suspicions about multiple people. Age was a significant predictor, with older participants being more likely to report having suspected a client of having an ED ($F(1,98) = 4.735$, $p = 0.032$, $\eta 2 = 0.046$) or engaging in excessive exercise ($F(1,98) = 5.536$, $p = 0.021$, $\eta 2 =$

0.051). There was no relationship between any of the other variables and likelihood of suspecting attendees with either condition.

In terms of confronting clients about their suspicions, 63% indicated they had done so with suspicions about an ED and 60% had done so with suspicions about excessive exercise. Again, age was significant, with older participants being more likely to confront attendees with concerns about an ED ($F(1,82) = 6.576$, $p = 0.012$, $\eta 2 = 0.074$) and excessive exercise ($F(1,82) = 4.850$, $p = 0.031$, $\eta 2 = 0.058$). Length of time working in the fitness industry was also significantly related to likelihood of confronting attendees with concerns of an ED ($F(1,81) = 7.201$, $p = 0.009$, $\eta 2 = 0.082$) and excessive exercise ($F(1,79) = 6.485$, $p = 0.013$, $\eta 2 = 0.076$). There was no significant association between confrontation and the remaining variables. Participants reported a total of 233 confrontations about EDs, 32% of which resulted in the client admitting they had an ED, and 201 confrontations about exercise behaviour, 35% of which resulted in the client admitting they had a problem. Lastly, in terms of guidelines, almost half of the participants were aware that guidelines existed; however, 84% said that new or updated guidelines would be helpful for EDs, and 86% said new or updated guidelines would be helpful for excessive exercise.

There are several key contributions from Colledge et al.'s (2020) study that are relevant to the current research. Firstly, these findings add to the body of evidence showing that EDs and excessive exercise are indeed common in gym attendees and that participants would like to see new or updated guidelines. In terms of desired improvements to the content of the guidelines, concrete advice on how to start conversations with clients was the most requested piece of information. Also of interest is that most participants said that it was body shape and other physical signs that made them suspect the presence of an ED. This further supports the

importance of improvements to education and training as people with EDs very often do not exhibit noticeable physical changes. In cases where physical changes are observable, it is important to note that these individuals would likely have appeared healthy for a period of time while their health was actively deteriorating. It would therefore be prudent to teach fitness employees about EDs and warning signs so that interventions that are appropriate for fitness settings can be attempted before these illnesses progress to a point where the signs are visibly obvious.

As Colledge et al. (2020) acknowledge, it is possible that their study may have been of greater interest to those who have previously confronted exercisers with EDs. If true, this may have potentially influenced the results of this study. Colledge et al. therefore note that their study may be best understood as an assessment of how fitness professionals who have concerns about members handle said concerns.

Conclusion

Fitness professionals hold a title and embody a role that confers upon them a degree of power and influence over others. Collectively, we look to personal trainers, group fitness instructors, yoga teachers, and other fitness leaders as professionals with knowledge and expertise on fitness and health. As evidence strongly suggests, gyms are settings that attract people with EDs, and those who are at risk for developing them, and both are vulnerable groups. Fitness professionals are held up as leaders: We see them as prototypes of health and fitness, and we look to them for advice on healthy eating and exercise. Therefore, fitness professionals promote ideas and ideals of health and fitness, and they dispense advice from a place of power and influence. What they say and do, the kind of relationship with food and exercise they encourage, and the attitudes they have toward weight and shape can be health-promoting or

significantly damaging.

In Canada and other Westernized cultures, terms like “health” and “fitness” have been co-opted by businesses whose profits are derived largely from convincing people that only certain bodies are healthy and fit, and therefore, acceptable. The commercialized fitness industry, its gyms, and often, its fitness trainers reflect dominant cultural narratives that promote health as an aesthetic, achievable to all via weight loss. This is so ubiquitously marketed that aesthetics and weight loss easily masquerade as health and fitness, often to such an extent that they become indistinguishable to most people.

It perhaps comes as little surprise that those who work as fitness professionals tend to endorse ideas about weight loss and aesthetics that are espoused by the industry that employs them. In reviewing the literature on fitness professionals and EDs specifically, the picture that emerges confirms that fitness professionals regularly encounter people with EDs in gyms, but that there are considerable knowledge gaps with respect to their understanding of these illnesses. The literature also suggests that fitness professionals are largely unaware of their knowledge deficits and that their ability to detect EDs is poor.

Although EDs are serious, debilitating, often life-threatening illnesses, their presence in gyms has been overlooked, and perhaps even ignored, by those who work in and oversee the fitness industry. Despite this, fitness professionals are concerned about the ethical and liability issues that may apply when exercisers with EDs are using the gym. In terms of recommendations that address ED literacy, the studies reviewed here indicate that fitness professionals would like to have better training and education on EDs, as well as guidelines to help them navigate situations with clients and gym attendees who have EDs. All six studies reviewed on this topic made recommendations for the same.

Rationale for this Study

Though not a homogeneous group, people with EDs who exercise in gyms are more likely to have privileges that are inaccessible to many. Gym memberships cost money and working out in the gym requires time. People who can afford to spend money and time on the gym are more likely to be of a higher socioeconomic status, and are less likely to be unhoused, face food insecurity, or experience many of the other problems that disproportionately impact people of lower socioeconomic statuses.

EDs are serious, often disabling, and potentially life threatening. Exercise, which is typically regarded as a health behaviour, often becomes bound up in people's EDs. Gyms are often part of this. It is concerning that so many fitness professionals encounter clients with EDs, and that even after repeated calls for education, training, and guidelines, they still do not have these supports in place. These knowledge gaps present challenges for those who work in the fitness industry, for people with EDs, and for others who may be struggling with other subclinical EDs.

Purpose and Objectives of this Study

In British Columbia, the British Columbia Recreation and Parks Association is the professional association that oversees fitness professionals. Currently, they do not require fitness professionals to receive any training or education on EDs, and EDs are not covered in their fitness curricula. As is the case in many other locations in Canada and worldwide, fitness professionals in this province are entering a profession, where EDs are common, having received no basic training on EDs from their curricula. If the failure to address ED literacy in the fitness industry persists, it will be met with mounting pressure, supported by research, calling for change. Making changes to include EDs in the education and training programs of fitness

industry professionals is important, necessary, and long overdue. The same is true for the creation of a set of guidelines to help fitness professionals navigate situations with exercisers who have, or are suspected to have, EDs. These changes are aligned with repeated recommendations and the wishes of fitness professionals themselves whose voices are represented in the body of research on this topic.

This study was conducted in hope and anticipation that Canada will soon answer calls to develop training, education, and guidelines on EDs for the fitness industry. To this author's knowledge, all studies on this topic published thus far have excluded the voices and experiences of people with EDs. The current study remedies this by inviting women with EDs to this conversation so that we can learn directly from their experiences as opposed to making assumptions about their experiences. This knowledge can then be distilled into a set of deliverables that can be used to guide and inform long overdue changes not only in the fitness industry, but ideally, also in the hearts and minds of those who work in it.

The objectives of this study, therefore, are as follows: (a) to understand the specific gym-related incidents, experiences, and factors that help and hinder women's ED recovery; (b) to understand what women in ED recovery wished would have happened in gym settings; (c) to inform training and education on ED literacy for fitness professionals, fitness staff, and gym owner/operators; (d) to inform a set of guidelines on EDs for the fitness industry and its professional associations; (e) to advocate for the fitness industry to move away from weight-centric business and marketing strategies and move toward more sustainable, appearance neutral approaches that promote overall health, wellness, and holism; (f) to help counsellors and others working in the ED field better understand the role of exercise and gyms in EDs and ED recovery.

Using the ECIT (Butterfield et al., 2009), the author of this study interviewed 10 women

who identified themselves as being in ED recovery and for whom the gym played a significant role in their ED experience. The interviews were semi-structured and focused on three main research questions: What gym-related experiences, incidents, or factors helped recovery? What gym-related experiences, incidents, or factors hindered recovery? And lastly, what gym-related experiences, incidents, or factors would have been helpful for recovery?

CHAPTER 3: METHODOLOGY

This chapter begins with an overview of the paradigmatic framework of critical realism and a description of the critical feminist lens, both of which are philosophical foundations adopted in this project. The remainder of this chapter locates this author's position as the researcher and describes the ECIT methodology, inclusion and exclusion criteria, recruitment, data collection, analytic procedure, and rigour checks.

Paradigmatic Foundations and Research Design

Critical Realism

Critical realism is a pragmatic framework concerned with identifying underlying causal mechanisms and proposing practical solutions to address problems (Fletcher, 2017). Though it draws some of its philosophical assumptions from both post-positivism and constructivism, critical realism offers itself as a distinct paradigm that is not associated with a particular set of methods (Fletcher, 2017). That said, it is often used in qualitative inquiries especially if such inquiries seek to offer solutions for social change (Fletcher, 2017).

As a philosophy of science, a critical realist ontology holds that there is an intransitive "real world" that exists independently of our awareness of it. Though this true reality is not directly apprehendable, we may attempt to know and understand it by performing causal analyses. Epistemologically, then, critical realism holds that while the real world and our knowledge of it exist separately, our understanding of this true reality can evolve, ideally increasing in accuracy, as we gain knowledge that improves our interpretations of the unobservable parts of true reality (Cruickshank, 2003).

The fit of critical realism with this study is evident not only in the causal thrust of the research questions but also in the broader aims of this project. By applying critical realism to this

project, this author takes the stance that things like EDs (and power structures) are not merely subjective constructions; they are real. EDs are real even if they are culturally and contextually situated, even if we have different perspectives or ideas about them, and even if we created the labels and descriptions for them. Put another way, whether we have directly experienced them or not, EDs are real, and they cause real suffering. Similarly, the patriarchy and other harmful, oppressive systems are real power structures whether we have personally felt their impact or not. Thus, EDs and power structures are things about which we can attempt to gain knowledge. The questions posed by this study are designed to get as close as possible to understanding the ways in which fitness environments, which often transmit patriarchal, fat-phobic messages about women's bodies, are implicated in EDs and recovery.

Lastly, the fit of critical realism with this study is further exemplified by its fit with the discipline of counselling psychology. Research built on a critical realist framework is often interested in understanding causal mechanisms of a given problem in order to propose solutions to address that problem. Counselling psychology also shares an interest in advocating for social change, and advocacy is, in fact, a core value of the discipline. This project was designed in the spirit of advocacy, with its overall objective to make meaningful, concrete changes in people's lives. As the undergirding philosophy, critical realism dovetails with both the discipline of counselling psychology and the overall objectives of this study.

The Critical Feminist Lens

In addition to declaring a philosophy of science, qualitative researchers often articulate other theoretical lenses or models they are applying to their research. Before discussing the critical feminist lens, it is important to acknowledge that there are philosophical tensions between this and the different terms used in this thesis to describe EDs. Broadly speaking,

feminist perspectives tend to eschew language that implies that EDs are individual mental health problems. Terms like "illness" or "condition," for example, are often not used by feminist scholars, who tend to favour words like "distress" to describe EDs.

Throughout this thesis, this author refers to EDs using conventional, medicalized language that has been integrated with feminist concepts and vocabulary. Though this may seem contradictory, physicians, dieticians, counsellors, and other professionals in this field often conceptualize EDs multidimensionally, as doing so captures the complex and multilayered nature of EDs. Combining terms like disorder, illness, condition, and so on with concepts and vocabulary of internalized oppression, distorted social expectations, destructive values, and aesthetics reflects a sociogenic conceptualization of EDs. The both/and language used in this thesis recognizes that EDs are culturally situated responses to oppression, and that they can be deadly and disabling conditions with serious medical consequences.

Over the years, we have used many different models to understand EDs and the factors that coalesce to give rise to them. Brytek-Matera and Czepczor (2017) recently authored an overview of several ED models; among those covered was the transdiagnostic model, which posits that a dysfunctional cognitive schema is the core of ED psychopathology. It was this theory, together with the cognitive-behavioural model, that laid the groundwork for enhanced cognitive-behavioural therapy for EDs (Brytek-Matera & Czepczor, 2017). Also described in Brytek-Matera and Czepczor's overview is the reward-centred model of EDs, which highlights the role of different neurobiological and psychophysiological factors implicated in the development and maintenance of EDs.

Although these and other models have made important contributions to the field, the current research breaks from theories that tend to reduce EDs to their diagnostic features.

Although diagnostic labels can be useful, they most certainly do not tell the whole story. If we adopt the view that EDs are individual problems, we fail to appreciate what it is like not only to have an ED, but also what it is like to try to recover from one in a culture that applauds many of the beliefs, values, and behaviours that led to the ED in the first place. Although reductionistic conceptualizations of EDs may have some utility, it is this author's view that such perspectives sideline important systemic factors that foster and maintain EDs. Adopting a critical feminist view brings some of these systemic issues to the forefront.

Whether we see them or not, different forms of oppression are culturally, socially, and politically embedded into the fabric of our society and daily lives. Applying a critical feminist lens to EDs means naming and critiquing these influential, but often disregarded, systems of oppression and the ways in which they foment disturbed relationships with food, exercise, body, and self. It means recognizing that, in North American culture, we are subjected to a lifetime of repeated, ubiquitous, powerful messaging that portrays only certain bodies as desirable—that is, bodies that are young, thin, white, abled, and gender-conforming. Practically speaking, this means that individual people in our culture have little say in which bodies are deemed attractive or acceptable because our cultural, social, and political systems have already decided this for us.

In Western industrialized cultures, women have been taught that their worth as human beings lies in their appearance (Hesse-Biber et al., 2006; McBride & Kwee, 2019). Although men's bodies are sometimes the targets of harmful appearance-based messaging, women's bodies have been the focus of intense historical and ongoing sexualization, objectification, shame, and control (for examples, see Kilbourne, 1999). The net impact of growing up awash in a culture with so much appearance-based messaging is that women have learned that the most important thing about them is how they look. Women are also taught that social power may be

conferred upon them based on whether or not they meet a certain standard of appearance (McBride & Kwee, 2019). Upon closer reflection, we may realize that in North American culture, our largely unreachable, ever shifting appearance benchmark also seems to function as a prerequisite to success, love, health, and agency (Hesse-Biber et al., 2006).

For women, these constant and intense appearance-based expectations have become entangled with social power and personal dreams about love, happiness, and success. Though this may be normalized, it is not without serious consequences. Where EDs are concerned, it is not surprising that women and girls account for the vast majority of these diagnoses (APA, 2013; Qian et al., 2022). From a critical feminist perspective, this disproportionality in EDs can be understood in part by conceptualizing EDs not as a bizarre or unique pathology but as an understandable response to male power and dominance[8] (Bordo, 1993). In fact, feminist scholar and writer Susan Bordo (1993) argues that EDs are characteristic expressions of a sickness in our culture.

Bronfenbrenner's Ecological Systems Model

A critical feminist perspective also helps us conceptualize EDs from a systems lens. Bronfenbrenner's ecological systems model provides useful language to help explain the ways in which widely held views about women and their bodies are transmitted from larger cultural systems down to individuals. Bronfenbrenner (1977) describes human development as a process that occurs contextually, that is, in relation to the different systems with which we interact and are situated. These systems are comprised of hierarchical levels, each of which is nested within the next. Bronfenbrenner defines the microsystem as the individual and their immediate

[8] The patriarchy is not the only oppressive power system that contributes to EDs and fat phobia. In her book, *Fearing the Black Body,* author and sociologist Sabrina Strings (2019) illustrates the racial origins of fat phobia.

environment, the exosystem as the specific social structures that extend outward from the microsystem but that still encompass and impact the individual, and the macrosystem as the broader culture and its norms. Using these definitions, we can see the interconnectivity of the broader culture and its social and political systems (the macrosystem) with other environments and settings (exosystems) and how the impacts of these are felt by individuals (microsystem).

The Fitness Industry Through the Critical Feminist Lens and the Ecological Systems Model. As previously mentioned, the dominant paradigm in North American culture is that larger bodies are bad, unattractive, and unhealthy, and thin, toned bodies are desirable, attractive, and healthy. The gendered aesthetic that emerges from this is one that disproportionately targets women (Burns & Gavey, 2004). Importantly, it also has racial origins (Strings, 2019). In addition to the reverence of thinness as an aesthetic, women must also contend with public health messaging that emphasizes the importance of being under a certain weight. In their study on obesity, bulimia, and public health messaging, Burns and Gavey (2004) describe how public health's construction of obesity as "a health problem of epidemic proportions" (p. 550) impacts women by using health to reinforce the importance of having a thin body at any cost. They argue that such messaging, however well-intended, promotes an aesthetic (thinness) that is meaningful beyond whatever health benefits having such a body may actually confer. This added pressure from public health also provides women with medical justifications for engaging in harmful dietary and exercise practices (Burns & Gavey, 2004).

Although it is not part of the macrosystem, the fitness industry reflects these macrolevel ideas and values about women's bodies. Aesthetics, health concerns, and cultural narratives about women's bodies converge around the idea that, with enough effort and dedication, the body can be molded into something attractive, healthy, and acceptable. It is at this intersection of

public health and aesthetics where the fitness industry leverages health and appearance concerns into gym memberships. Under the guise of health, gyms can recast thinness from an aesthetic into evidence of dedication to health and fitness. For women with EDs, the gym often serves as a conduit for dangerous eating and exercise practices, which, after passing through the lens of health and fitness, start to look less disordered.

Researcher Position

Position statements are often part of how researchers demonstrate rigour in qualitative inquiries. Much of my position as a researcher has already been articulated throughout this chapter, but my personal connection to this topic has not. This project was inspired by my lived experience with an ED, and more specifically, by what I experienced when I joined a gym in the throes of my illness. What I share in this section is not intended to attribute blame to a particular gym or gyms as a whole; rather, my intention is to describe personal experiences that are relevant to this thesis.

At the time this study was conducted, I was a lower-middle class, white, able-bodied female graduate student with an invisible disability. Before sharing some of my story, it is important to clarify that the lived experience I bring to this project means I cannot claim to adopt a neutral stance about EDs, the harm they cause, or the factors that foster and maintain them. In this study, however, my intention has been to focus on the participants and to collect and share their experiences with as little of my own influence as possible. I hold this aim in tension with my belief that research is inherently value-laden. My decision to embark on this project reflects my desire to improve the lives of people struggling with EDs by advocating for changes in the fitness industry. This has been made explicit in the aims of this study. I did not structure this study around a specific agenda, nor did I impose my experiences on the participants. I have

consistently taken the utmost care to privilege and distill the participants' voices, insights, and experiences, without my influence. Though this section is about my story, it reflects my effort to clarify—and thus, separate—myself from the data. My hope is that sharing these personal experiences will increase transparency and enhance the rigour of this project.

It is hard to say precisely when I crossed the threshold into an ED. The before and after line is blurry, but a few months into my last year of high school, I knew I had crossed it. At the time, I saw my illness as the result of a series of seemingly inconsequential choices that led into the dark center of the ED. I told myself that I was okay and that I was in control, but I was not. I failed to appreciate that my ED developed in concert with (and was sustained by) many personal, familial, environmental, and cultural factors over which I had no control.

One might say that my risk factors placed me in the crosshairs of an ED for quite some time. As a young woman, I understood from my culture and environment that my appearance was all that mattered about me. Growing up awash in a constant barrage of messages and advertisements about appearance and weight loss—nearly all of which were directed solely at women—reinforced the idea that my worth as a human being was bound up in my body. Long before my ED, I had internalized the idea that there was a right and a wrong way for my body to look. There was no way for me to be in my body because it was a consumable. It was a thing for other people to look at and pick at. There was nowhere I felt this more acutely than in the gym.

I did many things in the service of my ED but joining the gym in the middle of it proved to be the most destructive. At 19 years old, I was two years into my illness, and I was chronically malnourished, miserable, and under-resourced. I was living for the ED; there was no room in my life for anything else. I felt trapped; I wanted a way out, but my ED and I were still holding onto

each other. Paradoxically, I remember thinking that getting a gym membership would somehow help me find balance living in the ED.

My second gym membership began much like my first one. The signup process included a fitness assessment: I filled out a short physical activity readiness questionnaire, and then I was weighed, my BMI was calculated, my goals were discussed, and I was given a workout program. During this assessment, I was asked a few cursory questions about different health conditions, but I was never asked any ED-related questions.[9] Being introduced to the gym through the scale—for the second time—emphasized the importance of monitoring and controlling weight. It centered working out in the gym as the means to achieve health, fitness, and the corresponding aesthetic. This all validated and normalized my ED.

Shortly after I signed up, the gym held a fitness competition. Its purpose seemed to be to increase attendance and promote weight loss. Even though I was already underweight, several staff members encouraged me to enroll in the competition. Every time I signed in, they would mention the competition and its talking points. This kept happening even though I repeatedly expressed a lack of interest. To the gym, the competition was a marketing strategy, but to me, it felt dangerous. Signing up for the gym was supposed to appease my ED, not further entrench it. I did not want to lose more weight or begin exercising obsessively. I did not want to draw attention to myself, and I certainly did not want to be in a competition that would likely give rise to all these things. But I felt worn down by the continued pressure to enroll. At some point, saying yes to the competition just seemed easier than being hassled about it.

Like many things in the gym, the competition was framed around health and fitness, but it was fundamentally about weight loss, tracking, monitoring, and comparing. I was interested in

[9] This is true of all gyms I have attended.

the additional body fat assessments I received as a competitor, but outside of that, I did not care about the competition. I ignored the chart on the wall and the fact that the gym was tracking and comparing me against other people. Even though it was not my intention, I began to schedule my life around the gym. My attendance crept up until I was there daily. My weight continued to drop during this time. One morning, I walked into the gym to I discover that I had won the competition. It was a confusing, unsettling moment. I knew I was supposed to be happy, but I felt something else instead. My name went up on the wall with the other winners. I saw it every time I dragged myself to the treadmill. I had wanted to be invisible at the gym. I was sure this attention, coupled with my recent weight loss, would unmask my ED, but it did not. Under the guise of fitness, the gym celebrated the nadir of my health. I won a competition based entirely on my descent into anorexia, and people admired and applauded me for it.

Truthfully, I believe I would have drifted toward excessive exercise on my own regardless of my involvement in the competition. Fundamentally, the competition was just another aspect of the pro-weight loss, anti-fat culture in the gym, blending together with the scales, advertising, diet food, and other things. Everything in the gym was fodder for my ED, but it was the running body commentary that rose above the background noise. The gym's collective celebration of my ED was loud and forceful. The praise and attention that came with winning the competition was unwanted, confusing, and harmful. It said to me *your body is not yours*.

Long after the competition, my health continued to visibly decline, yet I kept receiving compliments about my "dedication." I had not wanted to be a fixture or an obligatory exerciser, but I had already travelled too far past myself to turn back. I noticed others in the gym who were also there daily, who had become fixtures like I was. I forged superficial friendships with some of them. I knew I was not the only devout gym attendee struggling, but EDs were not something

that people in the gym talked about or asked about. I desperately wanted that kind of honesty, but it felt impossible and dangerous in a place that had so thoroughly normalized and encouraged my ED. It seemed that we were there to fix our bodies, just like everyone else. We pretended nothing was wrong, and so it seemed did everyone else.

The positive reinforcement I received for my ED was undoubtedly harmful but so was the notable lack of concern. I was not looking for someone to rescue me, but at the same time, it was confusing that no one said anything even though I was so obviously unwell. Every few months, I met with a trainer who gave me a free training session. They asked me questions about my goals, but they never asked about my relationship with my body, food, or exercise. Several trainers knew my weight and body fat percentage, but if they were worried, they did not say anything. No one ever brought up EDs, asked me if I was okay, or offered help. I took this to mean that I was fine, that my level of exercise was appropriate, and that my weight loss was not dangerous or concerning.

Eventually, I sought treatment.[10] A few years into my recovery, I stopped attending the gym altogether. This was a difficult decision because it felt like quitting. I missed the positive things I had enjoyed about the gym. I missed lifting weights and feeling strong. I wanted to make peace with exercise, but it was too hard to choose recovery in an environment where weight loss was masquerading as health and fitness. Going to the gym started to feel like walking up the down escalator; being there was pulling me in the wrong direction. It was still that place where everyone had admired my weight loss, though this admiration had soured. After I began

[10] I was incredibly fortunate to receive several years of government-funded outpatient treatment that included individual counselling, group counselling, nutrition therapy, and medical monitoring. At the time, this level of care is what was typically offered to outpatients in my region. Unfortunately, many of these programs have transitioned to shorter-term, groups-based models that no longer offer individual therapy to adults.

recovery, people at the gym openly criticized my body because I had gained weight. Ultimately, I realized that being there was bad for my health, recovery, and overall wellness. So I left.

There was nothing unique about the gym I attended when I was unwell. It was typical, and this highlights the reality that gyms need not be extreme places to harm people. I began my gym membership with a serious, life-threatening health condition that was directly relevant to the gym setting, but no one knew about it or asked about it. I ended my membership because the gym did not feel like a safe, health-promoting environment. So much about gym culture was harmful, but it was hard to see that when everything was ostensibly about health and fitness. The culmination of my experiences so thoroughly blurred the boundary between fitness and sickness that it took me years to tease these things apart. And I was not the only one: many staff, trainers, and other exercisers also could not differentiate an ED from dedication, or illness from health.

When I recovered, I realized that gyms are big mirrors that reflect the broader cultural messages about weight, health, fitness, and appearance. Gyms are supposed to be places we go to take care of our bodies and minds, but so many of us are hurting ourselves there instead. I believe people have the right to ask for a better, safer experience.

Research Design

The ECIT

The ECIT is a flexible qualitative research method capable of addressing a wide range of research questions across many disciplines. The history of the ECIT dates back several decades to Flanagan's (1954) critical incident technique, which was originally used to select and classify aircrew in the second world war. In the decades since, the ECIT has established itself as an effective, widely used qualitative research method (Butterfield et al., 2005). More recently, Butterfield et al. (2009) have added several enhancements to Flanagan's (1954) critical incident

technique, giving rise to the ECIT as a distinct version of its predecessor. These enhancements, which are described below, were designed to increase the trustworthiness of the method, provide contextual framing for the data, and introduce wish list (WL) items (Butterfield et al., 2009).

Often used as a foundational or exploratory tool to investigate under-researched areas or phenomena, the ECIT helps to identify critical incidents, events, or factors that promote or inhibit the performance of a particular activity or experience of interest (Butterfield et al., 2005). In ECIT vernacular, these incidents, events, and factors are called critical incidents (CIs). In addition to collecting CIs, one of the enhancements in the ECIT includes the addition of WL items; these refer to aspects of the participant's experience that did *not* occur but that—from the participant's perspective—would have been helpful had they occurred or been present (Butterfield et al., 2009). Although behavioural observations are sometimes used in ECIT, researchers typically collect CIs and WL items via retrospective self-reporting, as was the case in this study.

As mentioned, the intersection of EDs and the fitness industry is a critically important but significantly under-researched area. As such, the exploratory capacity of the ECIT makes it a well-suited method to elucidate gym-related factors and experiences that impact women's ED recovery. The collaborative nature of the ECIT also makes it an ideal choice for research that seeks to understand people's perspectives of their own experiences in relation to specific research questions. The helping, hindering, and WL items gathered from the participants in this study are anticipated to do more than add to the dearth of literature on this topic: They are expected to also inform a set of future guidelines on EDs for fitness professionals. Ideally, this project will also improve education and training on EDs for fitness professionals, encourage

gyms to shift away from appearance-based orientations to health and fitness, and provide useful information about the role of gym exercise to ED treatment providers.

Integration of ECIT with Critical Realism

The flexibility of the ECIT complements a critical realist perspective. Paradigmatically, this study's integration of ECIT with critical realism helps identify and challenge perspectives and practices that disproportionately impact women who are struggling with EDs. Through the holistic lens of counselling psychology, we see EDs not as individual problems, but rather, as expressions of distress inherent in our sociocultural landscape (Bordo, 1993). In addition to remediation, it is also the prerogative of those working in the field of counselling psychology to engage in advocacy, psycho-education, and prevention (Canadian Psychological Association, 2009). The complementarity between the ECIT method, critical realism, critical feminism, and counselling psychology provides a solid philosophical foundation for this project and its goal of transformative advocacy.

Participants

The study was reviewed and granted approval by Trinity Western University's Human Research Ethics Board prior to its commencement. To qualify for participation in this study, participants had to be adult women[11] with a previous or current ED. Because this study required a high degree of reflective dialogue, being in recovery was also a requirement for participation. Further, because of the potentially serious medical consequences of EDs, individuals who were very actively engaging in ED behaviours or who were receiving inpatient or hospital care for

[11] This author acknowledges that men and people of other genders also experience EDs. The decision to focus on women's experiences was made for two main reasons: Firstly, EDs are far more common in women than in men (APA, 2013; Qian et al., 2022). Secondly, in men, body dissatisfaction is often focused on a perceived lack of muscularity, and compensatory behaviours are usually focused on efforts to increase muscle mass (Grogan, 2017; Pope et al., 2000). As such, men's helping and hindering gym experiences would likely differ substantially from women's experiences.

their ED were not eligible for participation. Participants were also required to have been engaged in excessive or problematic exercise in a fitness facility at some point during their ED. Lastly, participants had to be fluent in English.

Ten adult women between the ages of 19 and 43 participated in the study. All were Canadian residents of British Columbia, Alberta, Ontario, or Quebec. Nine participants described themselves as White, and one participant described herself as White and Indigenous. At the time of their participation, eight participants were working, attending post-secondary, or both; and two participants were neither working nor attending post-secondary. Four participants had graduate degrees, two had undergraduate degrees, two were enrolled in undergraduate programs, one was enrolled in graduate studies, and one had completed some post-secondary. Six participants were single and four were married or common-law.

In terms of their ED diagnoses, eight participants had previously been formally diagnosed with an ED; the other two participants did not recall being formally diagnosed but described symptoms that were consistent with diagnostic criteria. At the time of their participation, five women were receiving outpatient support or individual counselling, two were receiving less frequent counselling that they described as not being entirely ED-focused, and the remaining three women were no longer receiving treatment or counselling for their EDs. All participants described themselves as being in recovery, with recovery durations ranging from 10 months–10 years. Some participants also indicated they had experienced relapses or had periods when they were less engaged with recovery. Additional information gathered about the participants' ED history is summarized in Table 1.

Table 1

Participant Diagnostic Information

Pseudonyms	Age at Interview	ED Diagnosis	Age at Onset	Recovery Duration	Treatment Type
Mara	28	BN	17	10 years	Outpatient
Lana	19	NFD	13	10 months	Individual counselling, ED groups
Emily	25	AN, BN	12	2 years	Outpatient
Sarah	30	NFD/BN	23	1 year	Individual counselling
Caroline	26	AN	13	1 year	Individual counselling
Polly	38	AN	17	1 year	Partial hospitalization, inpatient
Nancy	26	NS	21	3 years	Outpatient
Kim	23	NS	17	3 years	Outpatient
Trish	43	AN	11	5 years	Intensive day hospital
Ella	21	BED	18	10 months	Outpatient

Note. AN denotes anorexia, BN denotes bulimia, NFD denotes no formal diagnosis, NS denotes not specified.

All participants described a history of engaging in excessive exercise in the gym. Their exercise behaviour included solo workout routines, personal training, group classes, specialized sports training, additional exercise outside of the gym (e.g., running, sports, etc.), and combinations of these. Some participants described exercising outside in the morning and then attending the gym in the evening. Others attended group classes back-to-back or bookended group classes with solo workouts. More than one participant had multiple gym memberships at the same time and attended more than one gym in a day. Most participants had contact with trainers either by working with them one-on-one or by attending group classes. Only three participants disclosed their ED to staff, and no participants reported being asked any ED-related

screening questions. All participants reported that since being in recovery, and prior to COVID-19, they were attending a gym or other fitness facility (e.g., yoga studio or other specialized fitness activity) between 3-5 times per week.

Being in Recovery

As discussed, this study takes place in the midst of a larger discussion about ED recovery and how to define it. There are many complex issues surrounding the meaning, definition, and use of the term recovery that extend beyond the scope of this project (for a review of these issues, see LaMarre & Rice, 2021). The definition of ED recovery provided earlier in this thesis is intended to anchor the concept of recovery amid the many different definitions found in the literature. It is the opinion of this author that ED recovery involves much more than weight restoration and the cessation of observable ED behaviours.

Although a definition of ED recovery is provided in this thesis, the participants were not required to adhere to this definition, nor were they required to describe themselves as being "fully recovered." Rather, they were asked to share their own definitions of recovery. Though each participant defined recovery somewhat differently, similar themes are apparent across their definitions. For example, most of the participants said that even though their EDs were still present, recovery meant freedom from being controlled by the ED. They described recovery as having balance, awareness, and choices. Most participants acknowledged that their EDs might always be with them to some degree, but said that recovery meant enjoying and living life, knowing the difference between themselves and the ED, and being able to choose things for themselves, rather than feeling controlled by the ED.

Recruitment and Sampling

Participants were recruited using purposive sampling. Posters advertising the study (see Appendix A) were printed and—with permission—placed throughout Trinity Western University's Langley campus, on community bulletin boards, at fitness centres, and at coffee shops. A digital version of the poster was also shared on various social media platforms. Individuals who were interested in participating were invited to contact the principal investigator using the contact information provided on the advertisements. The principal investigator conducted a brief phone screening interview (see Appendix B) with all prospective participants. During this interview, prospective participants were provided with additional information about the study (including the fact that a brief, second interview would be involved) and were given an opportunity to ask any questions. Interview times were arranged with those who met the inclusion criteria and wanted to participate. Those who did not meet the inclusion criteria were thanked for their interest and provided with a list of community resources (see Appendix C).

Data Collection Procedure

The emergence of the COVID-19 pandemic coincided with the recruitment phase of this study, thus necessitating some adaptations in recruitment and data collection procedures. That said, data collection followed the same basic procedure outlined below regardless of whether participants were in person or virtual. After being screened in, an interview time and location was arranged between each participant and the principal investigator. Prior to the pandemic, interviews were conducted in person, and thus, participation was initially limited to the Greater Vancouver area. After the pandemic began, however, the interviews transitioned to a virtual platform, therefore opening participation to women residing in other Canadian provinces who

met the inclusion criteria. The first three interviews were conducted in person, and the remaining seven were conducted using a verified Zoom account.

The principal investigator conducted all 10 interviews, each of which began with an introduction, followed by a brief refresher about the study. The principal investigator then provided the informed consent form (see Appendix D) to the participants and reviewed the confidentiality limitations for the same. Throughout this process, participants were reminded both verbally and on the informed consent form that their participation was entirely voluntary; that, at any time, they could ask questions, pause, or stop the interview; and that, at any time, they could withdraw from the study without jeopardy or loss of compensation. After reviewing this information, participants were again invited to ask questions or raise concerns before signing the informed consent form. After the consent form was signed, demographic information was collected (see Appendix E) and then the ECIT interview commenced.

The ECIT interview was conducted using a semi-structured interview protocol (see Appendix F) that was based on an adaptation of Butterfield et al.'s (2009) interview guide. It included a contextual preamble to establish rapport with participants before transitioning to the ECIT questions. In the ECIT method, the quality of a data set—and of a study in general—is somewhat contingent on the skill of the interviewer. Because EDs are a sensitive topic, emotional attunement and trust are important not only for the participant's well-being and sense of safety, but also for eliciting high quality incidents. "ED thinking" can be highly nuanced and difficult to disentangle from health and fitness messages.

The ECIT portion of the interview focused on collecting and understanding the different gym experiences that helped and/or hindered participants' ED recovery.[12] When participants had

[12] Although recovery was the focus, it is also true that recovery is intertwined with the ED. The inverse of a question like, "What helped your recovery?" is, "What made recovery more difficult?" or, "What made the ED

no more helping or hindering experiences to share, they were asked to share WL items, if any. Follow-up questions were raised as needed to clarify specific aspects of the experiences being described. Most of the interviews were approximately 90 minutes in duration.

At the conclusion of the interviews, the principal investigator informally debriefed the participants, thanked them for their contribution to the study, and offered them their $20 Starbucks gift card. The principal investigator also provided each participant with a debriefing document containing the principal investigator's contact information, her supervisor's contact information, and supportive community resources (see Appendix G).

Security and Data Storage

To protect confidentiality, participants were assigned a unique participant number during the interview. These numbers were later replaced by pseudonyms chosen by the participants or, if directed, by the principal investigator.[13] All names and any other identifying characteristics of the participants or specific gyms were removed or altered to safeguard anonymity.

A password-protected master list with the participants' names and their numbers was created for convenience and stored on an encrypted password-protected external hard drive. This record connecting participant names with their numbers was retained throughout the study so that if any participant wished to revoke her data, she would be able to do so. Further to this, participants were made aware that after their anonymized data was integrated into the analyses, removing it would no longer be possible. None of the participants requested her data be removed.

---

worse?" Further, many of the participants were not necessarily in recovery when their helping and hindering gym experiences took place so it was helpful to offer these phrasings for some participants.

[13] One participant did not complete a second interview, so the principal investigator chose a pseudonym for this participant.

The principal investigator's personal mobile phone was used to record the audio of the three in person interviews. After the completion of these in person interviews, the audio recordings were transferred to a password-protected, encrypted external hard drive and deleted from the mobile phone. Also stored on this password-protected, encrypted external hard drive were the completed consent forms.[14] This password-protected external hard drive was stored in a secure location in the principal investigator's home office. The interview transcripts and completed electronic informed consent forms were kept in a password protected folder on the principal investigator's personal computer. Copies of the anonymized transcripts will be retained by the principal investigator for up to 10 years for follow up or future research purposes. Audio files will be deleted after the completion of the study.

Analytic Procedure

The principal investigator used the qualitative research analysis software, ATLAS.ti Mac (Version 8), to organize and facilitate the analytic process. Butterfield et al.'s (2009) guidelines recommend working from the transcribed interviews in the following general phases: determining the frame of reference, creating the CI and WL categories, and deciding category specificity. Rather than progressing in linear steps, these phases overlap during analyses and are sometimes performed repeatedly, as was the case in this study.

In this study, the frame of reference was informed by the eventual goal of this research, which is to inform a set of future guidelines on EDs for fitness industry professionals. As such, the frame of reference was gym-related CIs and WL items that impacted ED recovery. Thus, to be included in the frame of reference as a potential CI or WL item, the experience, incident, or factor had to have been directly related to the gym and/or had to have occurred in the gym. Items

[14] Paper copies of informed consent forms from the first three interviews were transferred to this password-protected, encrypted external hard drive.

falling outside of this frame of reference were not eligible for inclusion. Helping items were recovery-promoting experiences, incidents, or factors; hindering items were recovery-detracting experiences, incidents, or factors (sometimes described by the participants as things that worsened the ED); and WL items were experiences, incidents, or factors that the participants felt would have been recovery-promoting had they been present or occurred. Because WL items refer to things the participants wished would have happened, they are usually hypothetical in nature.

After determining this frame of reference, the principal investigator began reviewing transcripts for CI and WL items. The incident extraction process was streamlined by ATLAS.ti and thus, the steps differed from Butterfield et al.'s (2009) guidelines, which describe this process manually. Reviewing one transcript at a time, any items that appeared to be CIs were highlighted and coded in ATLAS.ti. In order to be considered an incident in the ECIT, participants must also have supplied supporting contextual information, including descriptions of the impact or importance of an item. This supporting contextual information for each CI was also highlighted and coded in ATLAS.ti. On occasion, the principal investigator identified some incidents that did not have enough supporting detail. These were noted for follow up in the second interview. All incidents were identified and coded by the principal investigator in consultation with her thesis supervisor as needed.

After all transcripts were reviewed and all potential CIs and WL items were identified, a category scheme was created. Again, the frame of reference was used to help structure the category scheme. This was done to ensure the participants' contributions to the project were fitted to categories that best represented the spirit of their experiences and that would translate into training and education for fitness industry professionals per the main purpose of this study. The CIs and WL items in each transcript were reviewed for common patterns or themes. Items

that appeared to share a common theme were tentatively placed into a category together. The CIs and WL items from each transcript were reviewed in this manner, with incidents sharing themes being placed together. Incidents that did not share commonalities with those in existing categories were placed in new categories or were temporarily put aside.

Using the procedure described above, categories were iteratively reorganized, renamed, adjusted as needed and in consultation with the principal investigator's thesis supervisor. This process continued until all transcripts had been reviewed and all CIs and WL items were categorized. Items that could potentially have been placed in more than one category were closely reviewed by the principal investigator and her supervisor, as needed. In such cases, transcripts were reread to ascertain the core theme of the incident in question to determine which category best captured what the participant was describing. Incident labels were also refined throughout the data analysis phase.

Per Butterfield et al.'s (2009) guidelines, the category scheme was reviewed and refined throughout this process to ensure the categories reached a suitable level of specificity. This was done by the principal investigator, and in consultation with her thesis supervisor, as needed. Operational definitions for each category were created and further refined to provide clarity and to ensure that all categories were adequately robust and sufficiently distinguishable from one another.

Credibility Checks

In the ECIT, methodological rigour is captured by nine credibility checks (Butterfield et al., 2009), many of which require the assistance of other individuals. In the context of this study, validity refers to the extent to which the categories capture the participants' experiences. Reliability refers to the extent to which an external reviewer agrees with the designation of

incidents, descriptions of categories, and sorting of incidents among categories. The degree of this agreement contributes to the quality and credibility of the results. According to Butterfield et al.'s (2009) guidelines, these and other markers of methodological rigour are demonstrated by the following nine credibility checks: recording the interviews, interview fidelity, independent extraction of CIs, exhaustiveness, participation rates, independent categorization, participant cross-checking (via the second interview), expert opinions, and theoretical agreement.

Audio Recording of Interviews

All 10 interviews were audio recorded and transcribed verbatim for accuracy. The principal investigator transcribed one interview, and the remaining nine were transcribed by professional transcriptionists. The transcriptionists were required to complete a confidentiality agreement (see Appendix H). After transcription was completed, the principal investigator audited all transcribed interviews to verify their accuracy.

Interview Fidelity

Adherence to the ECIT method and interview principles ensures the interviewer is sufficiently clarifying descriptions of incidents without leading the participants. This is referred to as interview fidelity. Its adherence is typically assessed by another individual who has experience using the ECIT method. To satisfy this credibility check, the principal investigator's thesis supervisor reviewed a subset of the interview transcriptions to assess adherence to the interview guide. In addition, the principal investigator also occasionally sought her supervisor's feedback to improve her (the principal investigator's) interview skills. In debriefing the interviews, the principal investigator's supervisor determined that the principal investigator was adhering to the interview guide. Some adjustments to the phrasing of follow-up questioning were suggested to help the principal investigator avoid prompting the participants.

Independent extraction of CIs

This credibility check supports reliability and validity of the ECIT. It involves the assistance of an independent evaluator whose role is to extract the CIs and WL items from a portion—Butterfield et al. (2009) suggests 25%—of the transcripts. These extractions are then compared against those obtained by the primary researcher to assess the level of agreement. A higher level of agreement is suggestive of greater validity and reliability. Discrepancies are resolved by in consultation between the evaluator and principal investigator. If no agreement can be reached, Butterfield et al. suggests removing the incident(s) in question.

A graduate student in Trinity Western University's Master of Arts in Counselling Psychology program volunteered to perform this credibility check. She was provided with three randomly chosen unmarked transcripts and instructed to extract what she thought were the CI and WL items. Her extractions were then compared against those extracted by the principal investigator. The vast majority of incidents were extracted by both parties; however, there were two incidents that were extracted by the principal investigator but not by the evaluator, and three that were extracted by the evaluator but not the principal investigator. After discussing the former two incidents, both parties determined that these met the frame of reference for the study and should be included in the dataset. Upon further review of the latter three incidents, the evaluator and principal investigator, confirmed that two were not incidents, and the third fell outside the frame of reference.

Some additional minor discrepancies were identified and resolved. These consisted of a few instances where the evaluator combined two items together into one incident, which was discordant with the principal investigator who had kept the same items separated as two different incidents. There were also a few instances where the evaluator coded an item as hindering but

the principal investigator had coded it as a WL item. These discrepancies were resolved in joint consultations with the evaluator and principal investigator.

Exhaustiveness

Exhaustiveness refers to data saturation and is achieved when further interviews yield no new categories. Per Butterfield et al. (2009) and Flanagan (1954), there is no predetermined number of participants commensurate with this credibility check. This is because it is the category formations, not sample sizes, that determine when exhaustiveness has been reached. In their critique on the use of the critical incident technique in the nursing field, Bradbury-Jones and Tranter (2008) highlight the presence of considerable differences in samples sizes of nursing studies using the critical incident technique.[15] They also provide examples of articles to illustrate that sample size does not necessarily correspond to the number of incidents yielded.

In the ECIT, exhaustiveness is demonstrated by tracking category formation: When no new categories are formed, saturation is said to have been reached, and no further interviews are necessary (Butterfield et al., 2009). ATLAS.ti automatically generates date stamps when new categories are created in the software by the user. This feature helped track exhaustiveness, which was reached at the conclusion of the eighth interview. After this point, no new categories were created, and all incidents from the final two interviews fit into the existing category scheme. The category scheme was further refined in consultation with the principal investigator's supervisor before it was finalized.

Participation Rates

Participation rates are used to help quantify categories by counting how many different participants offered CIs or WL items for each category. The participation rate refers to the

[15] Bradbury-Jones and Tranter's (2008) paper was published prior to Butterfield et al.'s (2009) guidelines on ECIT; the latter addresses much of what was highlighted in the former.

number of different participants who contributed one or more incidents to a given category. Categories are more robust and credible when they have the endorsement of a greater number of participants. Butterfield et al. (2005) recommend using 25% as the minimum participation rate; however, with a sample size of 10, this equates to 2.5 participants. In consultation with her supervisor, the principal investigator raised the participation rate to 30%. All 13 categories in this study were endorsed by at least three different participants, thereby meeting this credibility check.

Independent Categorization

Independent categorization requires the involvement of an independent judge whose role is to categorize a random selection of 25% of each category's CI and WL items using only the incident names, category titles, and the operational definitions of each category. The judge's categorizations are then compared to the primary researcher's and assessed for the level of agreement. A high rate of agreement between the independent judge and the researcher suggests that the CI and WL items appropriately fit the categories and that the category descriptions are sufficiently clear. Butterfield et al. (2009) suggests 80% as the minimum level of agreement that should be reached between the independent categorization judge and the researcher.

A graduate student from Trinity Western University's Master of Arts in Counselling Psychology program volunteered to perform this credibility check.[16] The principal investigator randomly selected approximately 25% of the CIs and WL items from each category, providing a total of 28 CIs and WL items to the independent judge. These 28 items, as well as the 13 category titles and their operational definitions were provided to this independent judge who then

[16] Not the same individual who performed the independent extraction.

categorized the items using the information provided. Her attempt resulted in an agreement of 68% which failed to meet Butterfield et al.'s (2009) recommendation of 80%.

Upon reviewing the discrepant items, it was clear that most discrepancies arose for one of two reasons: In some cases, the brevity of the incident titles led to confusion about the nature of the items in question. In other cases, discrepancies were the result of heterogeneity in perspectives and understandings about recovery and gym use. In cases where the 80% threshold is not met, Butterfield et al. (2009) suggest deferring to the participants' preferences about where to place their items. Because this already occurs as part of the cross-checking procedure during the second interview, which is discussed next, the primary investigator and independent judge elected to discuss the discrepancies together. This additional step was made in consultation with the principal investigator's supervisor, and it reflects a minor adaptation to Butterfield et al.'s guidelines.

The main purpose of engaging in further discussion with the independent judge was to better understand, and attempt to reconcile, the discrepant items. During these discussions, the independent judge identified items whose titles were vague or confusing. The principal investigator then offered clarifications for these items. Some items were recategorized by the independent judge, reducing discrepancies, but an 80% agreement was still not reached. The independent judge was then told how many items belonged to each category. At this point, the remaining discrepancies were identified and discussed together. Ultimately, a 96% agreement was reached.

Participant Cross-Checking

To cross-check the data, second interviews were conducted with the participants. Unlike the ECIT interview, the second interview is informal, often conducted over email or phone, and

is not usually recorded or transcribed. The main function of this second interview is to provide the participants with the opportunity to review their incidents together with the categories in which their incidents have been placed. This allows participants the opportunity to provide feedback on their CI and WL items, the categories, and the researcher's interpretation of their data. The other main purpose of the second interview is to allow the researcher to ask for clarification or additional information that was not provided during the ECIT interview.

To arrange the second interview, all participants were emailed a list of their incidents and the categories to which they belonged. Because some participants had a small number of items (1–3 items) requiring clarification or additional contextual information, the emails were tailored to each participant. In addition to the personalized lists of their items, all initial emails also contained an introduction; some refresher information about the second interview; instructions for completing the second interview; and an invitation to complete it over phone, email, or zoom. An example of one of these emails can be seen in Appendix I.

Nine of the 10 participants completed the second interview. Although the remaining participant indicated she may be able to accommodate the second interview, follow up attempts to arrange this were unsuccessful. Four of the five participants from whom additional contextual information was needed supplied this information. The fifth participant was the one with whom the second interview could not be arranged. After reviewing their incidents, all participants indicated that the items were accurate, and the categories made sense. Four participants requested minor adjustments: Two participants supplied one new item each, and one participant corrected an item as it had been mislabeled as a hindering item. These two new items were integrated into the data set, and the correction was made on the third item. These adjustments did not change the category scheme. Additionally, one participant emailed a new item but did not

provide enough supporting information to allow the new item to be created. Attempts were made to clarify this, resulting in the item being added as contextual information about recovery. No other items were adjusted, and no items were removed.

During the second interview, several participants also expressed how personally meaningful it had been for them to have participated in this project. One participant also shared the following, "Recently, when chatting with a personal trainer friend, they mentioned they actually ask if you have a history of eating disorders when people sign with them, which I thought was a good thing to ask!"

Expert Opinions

After completing the previous credibility checks, the category scheme is then reviewed by two or more experts who are asked to provide their feedback. In this study, Dr. Socholotiuk and Esther Naayer were the experts who assisted with this credibility check. Dr. Socholotiuk is a psychologist who has 17 years of experience providing community-based ED treatment to adolescents and their families. In addition to her clinical experience, Dr. Socholotiuk also conducts research in the field of EDs with a focus on parents' experiences implementing family-based treatment for anorexia. Esther Naayer is a registered clinical counsellor who has 12 years of clinical experience in the ED field.

Both Dr. Socholotiuk and Miss Naayer agreed the category scheme was useful. Dr. Socholotiuk provided additional feedback to improve the clarity of the operational definition of one category. Miss Naayer provided additional feedback concerning the gym guidelines category. She expressed that clients with EDs often see fitness staff as experts, and exercise guidelines provided by the gym may or may not align with treatment recommendations. This concern is addressed in further detail in the discussion portion of this thesis.

Theoretical Agreement

This final credibility check involves evaluating the theoretical agreement of the study with other published literature. This includes assessing the fit between this study's underlying assumptions and the category framework resulting from the analysis. The theoretical agreement of the categories yielded in this study is integrated with the discussion in Chapter 5 of this thesis. Most of the assumptions undergirding this study have been articulated throughout this thesis. They are summarized here as follows: EDs are serious, potentially deadly illnesses that disproportionately afflict women; EDs are multilayered and are best understood contextually rather than from individualized or medicalized perspectives; exercise is important to the formation and maintenance of EDs, likely to a greater extent than what has been acknowledged in research and clinical domains; people with EDs use gyms, and these settings can significantly impact EDs and recovery; gyms and fitness professionals typically employ weight-centric fitness models that harm people with EDs; with education and training, gyms and fitness professionals can support recovery and/or function as a site of ED intervention.

Ethical Considerations

This study was reviewed and approved by Trinity Western's Research Ethics Board prior to its commencement. Throughout the project, the principal investigator ensured that potential harm to the participants was minimal. Before each interview began, participants were advised about the risks associated with participation, namely that recalling and talking about ED experiences might be difficult. Participants were encouraged to raise any questions or concerns throughout their participation, and they were given contact information for the same. Participants were also reminded that their participation was entirely voluntary and that they could stop, pause, or withdraw their participation at any time without penalty. The principal investigator also

reviewed confidentiality and data storage procedures with each participant. At the conclusion of each ECIT interview, the principal investigator informally debriefed each participant and provided a list of community resources.

In terms of benefits, participants were given a $20 Starbucks gift card as a small token of appreciation; however, this was not the only benefit for participation. Several participants shared that sharing their experiences was personally meaningful to them and that they appreciated being able to talk about how their recovery has been impacted by gyms and exercise. One participant remarked that she felt this project was "shedding light on something that we don't talk about enough." Another shared this reflection,

> It's also cool to look back and see how far I have come, because sometimes in recovery it's like, "I don't feel like I've been making progress, but I've been at it for years." It can be like kind of down putting when you're like, "I've been trying so hard for so long" but then seeing where you started from and talking about that, [and] seeing where you are now, it's kind of nice.

CHAPTER 4: RESULTS

The main purpose of this ECIT study was to examine how fitness centre environments can impact women's ED recovery. Ten adult women who described themselves as being in recovery participated in this study. Semi-structured interviews were conducted with each participant to elucidate the different gym-related incidents, factors, and experiences that impacted their recovery. This section opens with some background information about the participants after which the results are presented.

Participant Background Information

Many of the participants expressed their enthusiasm and appreciation for the opportunity to share their thoughts, feelings, and insights as part of this project. As they spoke about their experiences, their reflections were shared with such energy and passion; it was almost as though they had been waiting for someone to ask them these questions. In addition to the ECIT questions, the women were also invited to share information about their EDs, treatment history, and exercise regimens. Some of this background information is presented below. All participants are represented by pseudonyms, and any potentially identifying details have been altered or removed to protect their anonymity.[17]

"Mara"

Mara is a 28-year-old woman who describes herself as Indigenous and White. She is currently working while completing post-secondary studies. Mara developed bulimia while she

[17] The participants' ages, the length of time they have been in recovery, and other demographics reflect information that was current at the time of the interview (interviews were conducted from December 2019–July 2020). Six of the participants (beginning with Sarah's interview) were interviewed just after the COVID-19 pandemic began. Because gyms were closed during this time, these six participants were asked to share their pre-pandemic gym regimens.

was in high school. She recalls that her ED "really got out of control" when she began university. For treatment, Mara attended a recovery group and received outpatient individual counselling.

During the acute phase of her ED, Mara said that she did "whatever [she] could do to exercise." At the gym, this included cardio workouts, weightlifting, and group classes. Mara did not disclose her ED to anyone at the gym.

Mara has been in recovery for 10 years. Although she says she still struggles "off and on," she is "a lot better." For her, recovery does not mean that the ED "goes away," rather, she describes recovery as being in a place where the ED no longer controls her life, and it does not keep her from doing what she wants to do. Since being in recovery, Mara attends the gym approximately 3–5 times per week.

"Lana"

Lana is a 19-year-old woman who describes herself as White. She is currently enrolled in post-secondary studies. Lana's ED began when she was approximately 13 years old, but she describes not being aware that she had an ED until recently. During her teenage years, she participated in a highly specialized sport, and some of her training for this sport overlapped with her ED. For treatment, Lana attended ED groups and individual counselling. She is still receiving individual counselling for her ED.

During the acute stages of her ED, Lana engaged in exercise at home and in various sports and extracurriculars. Lana also attended the gym approximately 3 times per week. She did not disclose her ED to anyone at the gym or to any of her athletic coaches.

Lana has been in recovery for almost 1 year. She describes recovery as having more awareness of "problematic behaviours" and being able to recognize that the negative way she

sometimes feels about herself does not reflect "a truth" about herself. Since being in recovery, Lana attends the gym approximately 3 times per week.

"Emily"

Emily is a 25-year-old woman who describes herself as White. She has a post-secondary degree and is working full time. Emily describes having "eating disorder tendencies" since she was in grade 7. Later, Emily was diagnosed with both anorexia and bulimia. She also describes having struggled with orthorexia. Emily sought treatment after a medical emergency that was related to her ED. She received outpatient individual counselling and medical support.

During the acute stages of her ED, Emily recalls being "obsessed with going to the gym." She remembers feeling like she "had to keep moving." She had two gym memberships and attended the gym every day. Her gym regimen consisted of 40–60 minutes of cardio, other exercise, and spin classes. She did not disclose her ED to anyone at the gym.

Emily has been in recovery for approximately 2 years. For Emily, recovery means living in the moment, being able to eat foods that were once forbidden, and being able to enjoy food on special occasions and with friends and family. Since being in recovery, Emily has tried out several different gyms before she found one that she liked. She attends the gym approximately 4 times per week.

"Sarah"

Sarah is a 30-year-old woman who describes herself as White. She has a post-secondary degree and is employed full-time. Sarah's ED began when she was in her early 20s. She remembers this being a time when she was using "extreme fitness as a means for weight loss." Sarah describes having struggled with orthorexia and bulimia. For treatment, she received individual counselling. She is still receiving counselling but is on a "gradual exit."

During the acute stages of her ED, Sarah would run several kilometers every morning. She was also attending the gym every afternoon, performing a combination of individual workout sessions, personal training sessions, and group classes. Sarah disclosed her ED to her personal trainer during their intake session. She says she was able to make this disclosure because she felt more committed to her recovery.

Sarah has been in recovery "on and off" for six years. She says she has become more engaged in recovery over the past year. For her, recovery means a "decrease of the day-to-day impact" of the ED. She further describes recovery as being in a place where the ED no longer has power over her and no longer dictates her life. Since being in recovery, Sarah attends a gym that is focused on a specialized activity 3 times per week.

"Caroline"

Caroline is a 26-year-old woman who describes herself as White. She has completed some post-secondary studies and is currently working. Caroline developed anorexia when she was approximately 13 years old. For treatment, she attended individual counselling.

Caroline attended the gym multiple times per day during the acute stages of her ED. She lifted weights in the morning, did cardio exercise in the afternoon, and returned to lift weights or perform more cardio in the evenings. Sometimes, she attended group classes as well. Caroline also worked with multiple personal trainers during this time. She did not disclose her ED to any trainers or gym staff.

Caroline has been in recovery for 1 year. She feels that even though the ED might always be there, recovery means being more aware and mindful and being able to respond differently to things that trigger the ED. Since being in recovery, Caroline attends the gym 3–5 times per week.

"Polly"

Polly is a 38-year-old woman who describes herself as White. She has a post-secondary degree and is self-employed. Polly's ED began when she was 17 years old. She was eventually diagnosed with anorexia. For treatment, Polly was admitted to a partial hospitalization program, and later, she was admitted as an inpatient. She is currently seeing a dietician and a counsellor.

During the acute stages of her ED, Polly had memberships at several different gyms, group class studios, and yoga studios. She recalls spending the whole day exercising, going from "gym to gym" each day so that she could exercise for hours without others knowing. She also performed other physical activity outside of the gym. Initially, Polly did not disclose her ED to anyone at any of the gyms she attended, but she did disclose her ED once she was in recovery.

Polly describes being in "quasi-recovery" for 15 years but says her current period of recovery began 1 year ago. For Polly, being in recovery means being able to express feelings without using her body, not acting on the ED voice, and having boundaries with herself and others. Since being in recovery, Polly attends yoga class 4 times per week.

"Nancy"

Nancy is a 26-year-old woman who describes herself as White. She has a post-secondary degree and is working full-time. Nancy's ED began when she was in her early 20s. For treatment, Nancy attended group therapy and a family-based treatment program. Nancy currently attends counselling, but the sessions are not always focused on ED-related issues.

During the acute stages of her ED, Nancy was attending the gym 5–6 days per week. Her workout regimen during this time included a combination of weight training and cardio exercise. She describes fitness-related experiences as being one of many "driving factors" in her ED. Nancy did not disclose her ED to anyone at the gym.

Nancy has been in recovery for at least 3 years. She describes recovery as a "present state" because it is "something you're always kind of working on." She also says that it means being able to "do normal life" without ED-related thoughts taking the time and energy they once did. Since being in recovery, Nancy attends the gym 4–5 days per week.

"Kim"

Kim is a 23-year-old woman who describes herself as White. She has a post-secondary degree and anticipates beginning full-time work in the near future. Kim's ED began when she was 17 years old. She remembers it starting with trying to be "healthy and fit" before it progressed into an ED. Kim is receiving outpatient counselling.

During the acute stages of her ED, Kim was attending the gym daily for 1–1.5 hours. She did a combination of individual exercise and group classes. Kim remembers attempting to broach the topic of her ED with one trainer, but because this trainer was so dismissive, Kim did not disclose her ED to this trainer or anyone else at the gym.

Kim has been in recovery for the past 3 years. She finds it difficult to define recovery because "we live in a culture that is very anti-recovery." She is unsure whether her ED thoughts will ever "not be part of [her] life," but says recovery means being able to manage the ED thoughts in a way that allows her to enjoy life, do the things she wants to do, and accomplish her goals. Since being in recovery, Kim attends the gym 3–4 times per week.

"Trish"

Trish is a 43-year-old woman who describes herself as White. She has a post-secondary degree. Trish's ED developed when she was approximately 10 or 11 years old. She was eventually diagnosed with anorexia. Trish says her ED has ebbed and flowed over the years, and

that she has been "quite unwell" at times. For treatment, Trish was admitted to a daytime intensive hospital program. She is receiving outpatient counselling.

During the acute stages of her ED, Trish used the treadmill and attended group classes at the gym. When her weight was low, she stopped attending classes and switched to running outside daily for 1.5–2 hours.

Trish has been in recovery for 5 years. She describes recovery as being in a state where the ED is no longer "taking over [her] entire life." She acknowledges that even though the ED thoughts and feelings are still there, her health is not at risk, and she is not "deteriorating." Since being in recovery, Trish attends the gym 3–4 times per week.

"Ella"

Ella is a 21-year-old woman who describes herself as White. She is currently enrolled in post-secondary studies. Ella's ED began when she was 18 years old. She was a competitive athlete during her high school years, so working out and exercise had always been a regular part of her life. After high school, Ella recalls going to the gym more often and wanting to eat "healthier." This led to other restrictive behaviours. Ella was eventually diagnosed with binge-eating disorder. For treatment, Ella attended an outpatient program. She is receiving individual counselling.

During the acute stages of her ED, Ella was attending the gym 4 times per week. Prior to recovery, Ella says she was quite focused on cardio exercise. She used a personal trainer, attended group classes, and did a combination of cardio and weight training. Ella disclosed her ED to her personal trainer during their intake session.

Ella has been in recovery for approximately 10 months. For her, recovery means "freedom." Ella says her relationship with food has improved; she no longer counts calories or

measures her food. Since being in recovery, Ella attends the gym 3–4 times per week. She exercises to "move [her] body," and she no longer prioritizes working out over other activities.

Summary of Results

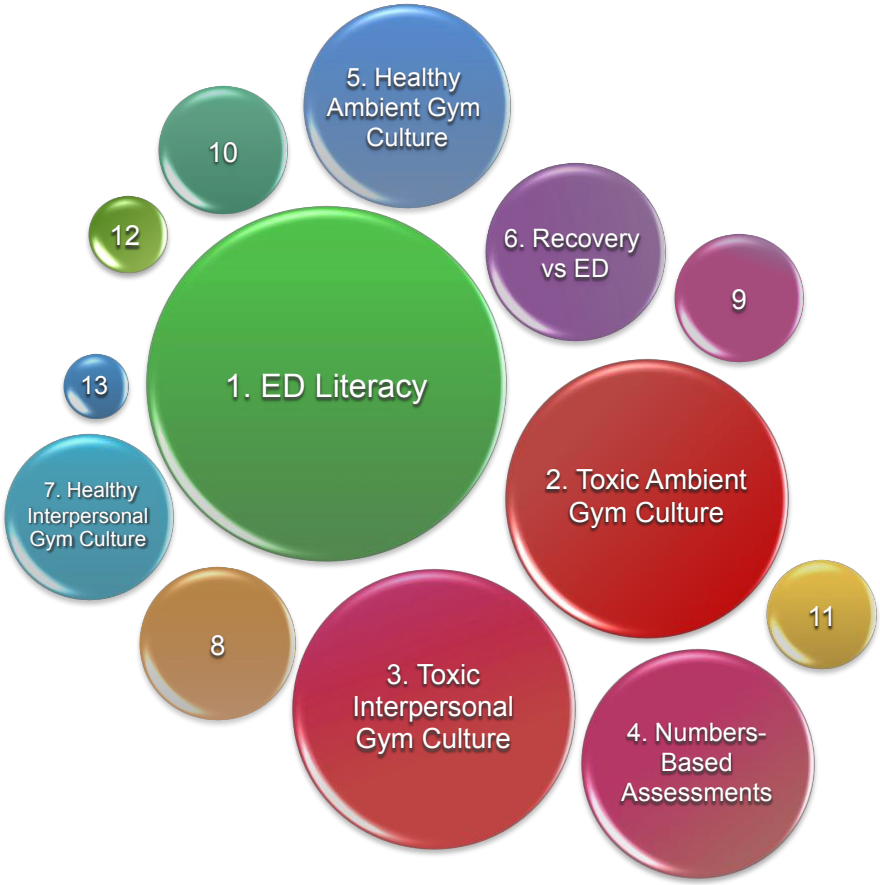
Upon reviewing and analyzing the transcribed interviews, the principal investigator extracted 28 helping CIs, 54 hindering CIs, and 33 WL items, yielding a total of 115 incidents (see Appendix J). Helping CIs were those that supported ED recovery, and hindering CIs were those that undermined ED recovery (sometimes described by the participants as things that worsened the ED). WL items were things the participants wished would have been different; these were expressed as the desire to add a helping factor that was absent or the desire to remove a hindering factor that was present. Each incident was thoroughly reviewed before being placed into one of 13 different themed categories. A pictorial representation of the category scheme depicting the participation and incident rates can be found in Figure 1.

The results are presented by category, in descending order. The categories are numbered according to their participation rates, followed by frequency (i.e., the number of incidents) in cases where participation rates were the same. Descriptions for each category and supporting quotations[18] are also provided in this section.

[18] To improve clarity, filled pauses and false starts were removed from some participant quotations. The meaning and content of quotations was not altered in this process.

Figure 1

Pictorial Representation of Categories



Note. The sizes of the bubbles represent participation rates. In cases where these were the same, then the number of incidents was used to adjust the sizes of the bubbles. The titles of bubbles 8–13 are as follows: 8) Gym Friends and Others in the Gym, 9) Comparison Behaviour, 10) Gym Guidelines, 11) Co-ed Versus Women's Only, 12) Staff Intervention, and 13) Body Diversity of Staff.

1. ED Literacy

With 12 items and a participation rate of nine, ED literacy was the most robust category. The three hindering CIs and nine WL items that comprise this category emphasize the need for fitness professionals to have formal education and training in EDs with some participants suggesting incorporating basic ED education into fitness education curricula. Also mentioned was the desire for gyms to ask ED-related screening questions, for trainers be aware of ED-related services and service providers to whom they can refer people (e.g., counsellors and nutritionists), and for gyms to be more connected to other health-related services.

Overall, participants emphasized the importance of providing fitness staff with sensitivity training and basic information about EDs. As Trish put it, trainers and other fitness professionals do not need to be "medical experts," but they should "have the basics covered, like [an] 'Eating Disorders 101' kind of thing." Some participants shared incidents that highlighted what can happen when staff lack basic ED literacy. Ella recalled the following experience,

> I specifically told [my personal trainer], "Hey, I have a history of an eating disorder. I don't want this to be about losing weight. I want this to be more about learning how to do more strength training exercises," but that was completely ignored, and he just said, "Hey, I'm not here to judge. You can step on the scale."

Kim also recalled an experience with a personal trainer who seemed to lack ED literacy, "It just hurt because I was trying to [exercise] in a healthy way and trying to recover and trying to sort things out, and she just really dismissed all that. Like, had no understanding of eating disorders at all."

Some participants also supplied incidents related to the lack of ED screening, which was experienced as unhelpful. Sarah shared that although her trainer asked her several health-related

questions, he did not ask any questions related to EDs. She reflected that she was grateful for being at a point in her recovery where she was able to take the initiative to disclose her ED; however, she shared concerns about what would have happened had she not taken it upon herself to make that disclosure:

> I always kind of get wary about if I hadn't said anything. Would I had been put on a scale right away? Would I have been asked to start meal planning? And how that could have been a very detrimental process for me.

Trish also said it would be helpful if gyms included ED screening questions as part of the sign-up process along with the other questions that are asked:

> That kind of question could open up a conversation of, “How would you know if you're coming here too much?” I think that would've been helpful for me to reflect on, like, "Okay, because of your history with an eating disorder, how would you know if you're using our gym too much, or how would you know if your exercise is becoming a problem here? . … What can we change here at the gym to have somebody make sure you're using this in a safe way?”

In terms of offering resources, Lana suggested that gyms could display pamphlets that provide accurate, weight-neutral information about nutrition and exercise so that gym members have access to information that is not tainted by diet culture. A few participants also pointed out that gyms market themselves as part of a broader health and wellness industry, yet they are siloed and disconnected from counsellors, dieticians, and other health-related services. Mara and Lana both shared that they thought it would be helpful for staff to know where to refer people who might need ED supports. Both women also said it would be helpful if gyms could somehow be more integrated with mental health and nutrition service providers. Lana pointed out that

sometimes the gym is "the place where you realize that you do have an eating disorder." She suggested,

> Instead of having different "well this is what my personal trainer is saying, this is what my dietician is saying," if they can come together and become more of a team, like just having a team of people regarding health, because that's what the gym is for, right?

2. Toxic Ambient Gym Culture

This category refers to macro-level elements of the gym environment that promote and emphasize weight loss, dieting, excessive exercise, and "fixing" the body. Eight participants endorsed this category, providing 13 hindering CIs and three WL items for a total of 16 items. Most of the hindering CIs in this category pertain to concrete, physical things in the gym environment that created a culture that was detrimental, or to use Nancy's word, "toxic." The CIs in this category include the presence of bodybuilding posters, weight loss promotions, advertisements featuring only "super fit" people, diet food, and calorie charts. The WL items in this category reflect participants' desire for advertisements and posters in the gym to be more positive and inclusive.

Overall, the participants felt similarly about seeing images of bodybuilders, super-fit people, and before-and-after advertisements. These images were experienced as intrusive, unavoidable, "discouraging," and "not beneficial." Emily and Caroline shared how seeing images of bodybuilders throughout the gym undermined recovery and fomented both problematic exercising and internal arguments with the ED. Emily said that constantly seeing these images "let those bad thoughts … seep in more." She expounded, "If I see those things constantly around me that's just what floods my mind. I can't combat them all the time." Emily

added that she eventually realized that kind of gym environment was unhelpful, so she left and took out a membership elsewhere.

Caroline shared how seeing bodybuilding images felt like "a huge hurdle for a lot of the trips to the gym." She also experienced an internal struggle when confronted with these images in the gym:

> I'm like, "I wanna look like that. I wanna be like that." And there were so many moments where I thought if I went back down the other route of not eating and over working out that I would eventually get there. So, it was a lot of fighting with myself about what was actually right and what was true.

In addition to bodybuilding posters, participants also shared the hindering impact of seeing before-and-after weight loss advertisements in the gym. Trish shared, "I seem to recall them on bathroom doors, like you close the bathroom stall, and then there's a before-and-after photo. So that's also kind of in-your-face advertising. It's hard to look away from that. So that wasn't helpful."

Sarah shared her impressions of similar promotional advertisements that focused on weight loss: "It's never about strength or about like, 'Oh, this woman is out rock climbing or hiking.' It's, 'This person started 60 pound heavier, look at where they are now.'" She described how seeing these images so often reinforced "quantity" as a value, which was unhelpful because it pressured her to spend more time at the gym:

> You're infiltrated with this idea that dedication means quantity in so many ways. It's the quantity of how much weight you're losing, it's quantity of how often you're at the gym, it's quantity in how much or how little you're eating.

In addition to images and advertisements, two participants supplied incidents related to the food for sale in onsite gym restaurants. Polly and Sarah both shared that the sale of diet food in the gym communicated to them that only certain foods are "approved." Both women also shared how seeing diet food for sale at the gym implied an important relationship between food and exercise. Sarah recalled, "If I wanted to get a smoothie, I looked at that calorie count, and I looked at whether or not it would be cancelled out by my workout." For Polly, seeing the gym promote and sell diet food reinforced the notion that "these certain foods are good and everything else is bad." She explained,

> My brain was making the connection that if you work out and you are burning all of these calories and really making your body … clean, then you can only eat clean afterwards. And that if you were to put something in your body after that is not clean, then it negates the whole workout.

Polly further indicated that this pressure to eat clean would continue all day because her workout could still be negated by eating that felt improper.

As mentioned, the WL items in this category reflect participants' desires for different, more positive, inclusive messaging. Instead of messages that are "body shaming," participants wished gyms would encourage acceptance, enjoyment, and taking care of your body. Caroline shared, "It would've been nice to have a variety of people [in advertisements], just because that's what our society has, rather than having this one look all over."

3. Toxic Interpersonal Gym Culture

This category concerns micro-level staff behaviour that was experienced by participants as hindering. Eight participants endorsed this category, providing eight hindering CIs and eight WL items for a total of 16 items. This and the previous category are the only two categories with

the same participation rates and incidents. Both of these categories are also tied for the highest number of CI and WL items. Most of the CIs in this category pertain to the different ways trainers would focus on weight loss, "pushing," and burning calories. Some participants also shared how much they trusted the trainers and thought of them as "the experts" and thus, they assumed that the trainers knew what was best. Participants also shared how the impact of these CIs pushed them further into their EDs, disconnected them from their bodies, and made them feel like their bodies needed "fixing." All eight WL items expressed the desire for trainers and staff to stop focusing on weight loss. In addition to expressing their desire for these harmful things to stop, some participants also provided examples of helpful, supportive things they wished would have happened instead.

Several participants described personal trainers giving them restrictive diet plans. Caroline recalled how she "really spiraled" when two different trainers gave her bodybuilding workout regimens and restrictive diet plans, even though she had never said that bodybuilding was her goal. She indicated that this happened during a time when she was already not eating very much, and the trust she had in her trainers made it difficult to recognize the harm: "I had so much trust with my first personal trainer, I didn't see the dangers of it . … I continued this unhealthy weight loss plan [but] I really shouldn't have been losing weight at that time." Several other participants also explained that they considered the trainers to be experts, and because of this, they trusted and listened to them much more than they trusted or listened to themselves. Looking back, Polly remembers feeling that her body was separate from her and that it needed fixing. Because she saw the trainers and instructors as experts, she trusted them to know what an ideal body was supposed to look like. She reflected, "I do believe that the gym really took me away from just loving my body the way it is."

Several women also described how group classes were experienced as unhelpful because of how instructors pressured them to push harder, burn more calories, work off certain foods, and compare themselves against other exercisers. Trish recalled, "There was definitely talk like, 'Burn many calories as you can!' Definitely an emphasis on pushing yourself to the absolute maximum." She reflected how this not only validated and reinforced her ED, but it also "made the ED seem more normal." Other participants also shared experiences where group class instructors framed exercise as compensatory. Kim summarized the impact this had on her:

> [I would think] like, "Oh God. Did I eat too many calories today? I hope this is burning off what I ate today. I have to make sure that after this, I don't eat too much." Straight up perpetuating the illness, a hundred percent.

Polly recalled classes where instructors would walk around and increase the resistance on people's equipment without asking. She also shared how the classes were focused on burning calories to the exclusion of other things: "There was very little talk about like, 'Just ride. Have fun. Calm your mind.' It was always about like, 'Work super hard so that after this you can go and eat what you want,' kind of thing." Mara echoed this; she recounted, "[The instructors] don't say, 'Are you happy here?' They just go, 'Are you losing weight?'"

In this category, the WL items cohered around participants' desire for gyms and staff to stop focusing on weight loss. In her WL item, Kim highlighted how gyms can harm people with and without EDs by "making exercise all about this exchange of calories [and] about weight loss." She also pointed out, "Tons of people who have either disordered eating or formal eating disorders use gyms" and that focusing on weight loss is not helpful for them or anyone else.

Two participants suggested it could be helpful if trainers questioned weight loss goals by asking people why they want to lose weight. Sarah said that asking people why they want to lose

weight could be "powerful" because it could open up a discussion that may encourage the person to focus on other things, like strength, as opposed to focusing only on numbers. Ella also suggested it would be helpful if instructors could encourage people to work out for reasons other than appearance and weight loss. And Emily pointed out, "There are different ways you can go to the gym," and instead of pressuring people to lose weight or build muscle, gyms could "support the people who do just go and walk on the treadmill for twenty minutes, like whatever. It's your own time there."

4. Numbers-Based Assessments

This category concerns the presence and use of scales, body fat assessments, and the BMI. It references not only participants' use of these measurements, but also their implementation by staff, often as part of fitness assessments. Seven participants endorsed this category, providing nine hindering CIs and four WL items for a total of 13 items. Some of these CIs and WL items share commonalities with those in categories 2 and 3; however, the items in the present category were focused specifically on scales and other numbers-based assessments. For this reason, these items were kept together and placed in a separate category. The participants who endorsed this category contributed items that expressed the harm of using numbers-based assessments. They also shared that they wished scales were removed or relocated as opposed to being out in the open or in change rooms.

Several participants described the scale and the power that numbers held over them using words like "unhelpful," "detrimental," "triggering," and "horrible." Mara recalled how after staff weighed her and calculated her BMI, she "became really obsessed with the numbers":

> I'd step on the scale and see that it was the exact same number as a day when I didn't exercise [and] I'd almost think, "Well what's the point?' Nothings working. The only

thing that's working for me is throwing up. [With] eating healthy and exercising, I'm not seeing the numbers change.

Other participants described how it impacted them to see scales throughout the gym. Here is Emily: "Even just seeing a scale can be triggering for eating disorder recovery. It's tempting to get on it, and it's also a lot of how EDs can start 'cause you get focused on the numbers." Ella also stated how, even though she did not weigh herself at the gym, seeing other people weighing themselves reinforced the idea that the gym is for weight loss, above all else. Nancy shared how the scale served as "a constant reminder" about the importance of weight, and that "there's nothing good that comes out of that." Like Ella, she also said that the presence of scales implied the importance of weighing yourself: "Obviously someone thought I should [weigh myself] because someone put it there. So on some level, there's that idea that, 'Of course you should, or else it wouldn't be there.'"

For Sarah, weighing yourself at the gym was normal. She recalled, "There was nothing stopping me from weighing myself every single time I went in. There was nothing that said, 'Don't do this every single day.'" She recalled the impact of one scale that dispensed a printed summary: "[It] said, 'below-average fitness' and I had just run a half marathon. I was like, 'Oh God.' So that of course just spirals you down into this idea that you need to lose weight 'cause everything is number-based."

Several participants said that staff also took their weight and/or used body fat assessments. The women who had these experiences shared how the process of being assessed further entrenched their obsession with weight and numbers and reinforced the notion that certain numbers were good, and others were bad. Polly described how her body fat assessment introduced her to "the idea that your body can be good or bad, or fit or unfit, based on how much

body fat the fitness test says you have." She also indicated that for her, the fitness test was about more than body fat: "It felt like they were measuring my worth … based on how much fat I had on my body."

In terms of the WL items, Mara said it would be helpful if staff used other means of assessing people's fitness that focused more on how people felt rather than on numbers. Other participants shared WL items related specifically to the presence of scales. Sarah and Emily both acknowledged that gyms may not want to get rid of their scales, but they said it would be helpful if the scales were moved into offices or placed behind desks as opposed to having them out in the open or in change rooms. Emily pointed out that not having scales out in the open could help "build the culture that the gym just isn't just about weight loss." Sarah also gave an example of a gym that had a staff-run scale. She said that being unable to weigh herself at the gym helped her "shift the purpose of being there," which, in turn, helped her enjoy her time at the gym.

5. Healthy Ambient Gym Culture

This category refers to macro-level elements of the gym environment that were described as creating a healthy, recovery-promoting ambient culture. Six participants endorsed this category, providing six helping CIs and three WL items for a total of nine items. Participants described healthy gyms using words such as "welcoming," "encouraging," and "supportive." Some women also said it was helpful when the gym felt like a "community." Overall, these gyms were experienced as healthier, more enjoyable, and recovery-promoting largely because they did not focus on weight loss, dieting, or calories. The WL items included in this category expressed participants' desire for gyms to be more holistic and to encourage more rest and balance.

Most participants who provided CIs for this category did so by contrasting the helpful gyms they attended with the ones that felt unhelpful. Sarah explained how the energy and tone of

her specialized gym was different because it was oriented not around weight loss, but around training for a certain activity. Polly said she loved that her yoga gym was diverse because it made her feel that everyone was worthy of being there. She also said that it helped that "the intention is less on what can our bodies do as opposed to how can we be in our bodies." For Mara, the sense of community at her judo gym was important, helpful, and "what we need as a people." She described her experience at her judo gym this way:

> When I go to work out for judo and stuff, I have a way better time when I go. My friends are there … you get to also meet that emotional part of you where you feel connected, you feel loved, you get to see your friends, and you know the coaches.

Gyms did not need to be oriented around a sport or activity to be experienced as healthy or helpful. Trish enjoyed her community centre gym because it was focused on health and wellness and not on weight loss or having a "perfect body." She also provided other examples of what made her community centre gym a healthy environment, including the fact that it had friendly staff, diverse clientele, and no before-and-after or weight loss photos. She summarized the overall difference between her community centre gym and other gyms in terms of ED and recovery: "When I think of joining the more commercialized gyms, it's like the eating disorder mind as opposed to recovery mind."

Emily and Lana also described helpful gyms that were not related to a specific sport or activity. Lana said that welcoming staff members increased her sense of belongingness in the gym, which was helpful because it increased her confidence and lowered her self-consciousness. For Emily, a healthy gym was one that was welcoming, had "a sense of community," and was not focused on weight loss:

> There isn't the focus just purely on weight loss, or building muscles, or bodybuilding. It's more of a focus on your general well-being. I guess it goes back to that sense of being cared for . … And people pay attention to you, and you're not just someone who goes to the gym. It's like, "We actually want to take care of our members here."

Several other women also said that it was helpful when gyms were places that cultivated a feeling of being connected to the self and others. Polly mentioned feeling connected to others in her yoga class on a more spiritual level. Sarah defined health as being physical, mental, and spiritual. Mara brought up spirituality in connection to her WL item:

> In First Nation culture, we've got something called the medicine wheel that we really believe in. The idea is … you've got four quadrants, your physical self, your emotional self, your mental self, and your spiritual self. And if you're flat on one side, the wheel's not going to run very well. You've got to be whole to really get moving anywhere. So if you find that you're feeling stuck, it's usually 'cause part of you isn't being nurtured.

For Mara, it would be helpful if gyms were more holistic and focused on overall health and wellness because this would make the gym a place where people would nurture more than just their physical bodies.

The other two WL items concerned participants' wishes that gyms did more to encourage rest and balance. Sarah said that being encouraged to take rest days would have helped her give herself permission to do the same, and it would have also emphasized the importance and value of taking time off to rest.

6. Recovery Versus the ED

This category concerns the intrapersonal struggle participants experienced between recovery and their EDs. It is one of two categories where many of the items reflect factors

internal to the participants. Five participants endorsed this category, providing eight helping CIs and three hindering CIs, for a total of 11 items. The items in this category illustrate the ways in which participants wrestled internally with how to exercise and be at the gym in the midst of their EDs. Most of the helping CIs in this category involved insight and making recovery-oriented choices in the gym. The hindering CIs in this category described excessive or obligatory exercising.

Several women said they recognized that they were unable to limit exercise on their own. Emily said that she had "no idea" that going to the gym could be part of her ED. She recalled, "I thought you could go to the gym for hours and it'd be fine. I had no idea." She shared how learning that her exercise behaviour was connected to her ED helped to change her perspective and showed her how to listen to her body:

> I remember one time being on the treadmill and just sprinting and being so out of breath. I was exhausted. I couldn't stand straight afterwards and that's when I realized like, "Okay, I actually am tired. I don't want to be here." . … I've slowly learned that it's okay, if I don't want to go to the gym, I don't have to. If I want to just go walk on the treadmill then that's fine, if I want to just do yoga stretches at the gym, then that's fine too.

Ella also recalled how it helped her when she changed her mindset and started listening to her body:

> Once I started to change my mindset that exercise isn't for punishment, exercise isn't to earn food; exercise is to move your body because yes, it's healthy to move your body within limits. And also listening to my body. If I'm tired, then I'm not gonna push myself as hard or I'm not gonna work out at all.

Two participants also found that switching to group classes helped curtail excessive exercise. Here is Emily again: “I could justify going for an hour workout in my mind and be like, ‘No you can actually get a good workout in. This is what we’re going to commit to.’ Instead of spending hours [at the gym].” Ella also found group classes helpful. She described the difference between exercising alone versus in group classes this way:

> I'm working out because I get this hour to myself and I'm having fun, and I would leave that class feeling energized. I would leave that class feeling happier. It felt like a break versus before when I would work out and … I would leave the gym sometimes like, upset. Or I would leave the gym feeling unaccomplished because I wasn't able to push for five more minutes, and I wasn't having fun, and it was more like I had to work out versus I wanted to work out.

Finally, two of the participants said that they hired personal trainers to help them shift their exercise behaviour away from cardio, weight, and calories. Sarah stated that she hired a personal trainer to help shift her exercise behaviour away from weight loss and cardio because without a personal trainer, she “would just run on the treadmill or do the elliptical.” Ella also said that she hired a personal trainer with the goal of building her level of confidence in the weight section. She shared that hiring a personal trainer to help her learn strength training helped her feel stronger and “more empowered.” Nancy did not mention hiring a trainer, but she described a similar positive experience with weightlifting, “There is always something good about feeling that you physically can do something, that, you can physically take care of yourself, and you don't always need people to help you because you know you're physically capable.”

The hindering CIs in this category pertained to excessive and obligatory exercise. Nancy described how confusing it was trying to reconcile “doing something that's good for your body,

but also quite bad." Here is how she described her inner process of trying to reconcile the benefits of exercise with feeling like she had to be at the gym:

> I feel generally crappy, and I can't make any of my own decisions, and I'm only [at the gym] because I have to be in here. No one is putting a gun to my head and saying, "You have to go," but everything is worse if I don't.

The final two CIs were related to the hindering impact of having more than one gym membership at a time. Emily recalled how having two memberships did not help because she began signing up for back-to-back classes, which she performed in addition to her other workouts. Polly described a point in time when she had over five different gym memberships:

> The purpose of [all the memberships] was that so nobody would catch me on these behaviors of spending too long at a gym. So I would do a spin class at one gym, I would leave that gym. I would do a yoga class at one studio, leave there. Go for a run, stop my run, go to another gym to do weights. And everybody thought that I was just in each gym for an hour, but really, I was spending my day going from gym to gym.

7. Healthy Interpersonal Gym Culture

This category concerns micro-level staff behaviour that supported and encouraged recovery and that, in some cases, also challenged the ED mindset. Five participants endorsed this category, providing nine helping CIs. As with category five, participants said it was helpful when staff did not comment on their weight and did not emphasize, or focus on, weight loss and calories. The participants who endorsed this category also noted that it was helpful when trainers were supportive and encouraging. One of the participants disclosed her ED to the trainer she referenced in this category; the remaining four participants did not disclose their EDs to the staff referenced in this category.

The participants who endorsed this category described several things trainers and group instructors did or said that were experienced as helpful. Mara noticed that it was helpful when staff and trainers were "good role models" as opposed to trainers who were "disciplinarian." She shared how it was also helpful when she could connect with trainers who felt human, who talked about enjoying food, and who modelled balance with food and exercise. She also said that it was helpful when coaches framed fitness and exercise around "real life" by talking about how exercise relates to activities people want to do, rather than framing exercise around the need to "be a certain weight and look a certain way."

Other participants also worked one-on-one with personal trainers who helped them in different ways. Caroline recalled it being helpful when personal trainers were supportive and encouraging, rather than "perfectionistic." She described how her trainers' encouragement helped her realize that her body needed rest and that it was okay to not force herself to work out when she was tired or did not feel like it. Caroline also shared how her helpful personal training experiences translated into experiential insights around listening to her body and understanding the relationship between exercise and food intake:

> I think realizing that I also need to listen to my body. I feel also there were days where I hadn't been eating but I was still going as hard as I could, and realizing, "Okay, wow, if I eat this, I'm able to do a lot more." I think I slowly began to realize that, "Okay, I actually need to feed my body to give as much [at the gym] as I want to be able to."

As mentioned in the previous category, Sarah hired a personal trainer specifically to help her shift her relationship with exercise and the gym. She described a number of helpful experiences with her trainer, several of which were echoed by other participants who also endorsed this category. In addition to encouraging rest and focusing on things other than weight

and calories, Sarah said that her trainer helped her shift her relationship not just with exercise, but also with food. He did this by encouraging her to not limit food and by role modeling enjoyment and balance with food. She also highlighted the power this had because it came from someone who was working as a personal trainer in the fitness industry:

> To have someone in that industry that was working so closely with me be able to dialogue about food without adding those quantitative values or limitations, that was something that I really began to value and really played a part in me starting to eat again. Especially eating foods that were ones that I typically would have purged . … And he is living in this world of fitness, and for him to establish that that was okay and normal, I think made it that much more meaningful versus someone who wasn't in that industry.

Some participants also found group exercise classes helpful when the instructors were encouraging, welcoming, and not focused on weight loss or calorie burning. Participants used words like "empowering" and "fun" to describe these classes. Kim said it was amazing and that it reinforced recovery when group instructors were positive and focused on strength, mood, or endorphins instead of weight loss and calories. She shared that it was "so much more helpful for everyone" when group class instructors reminded people, "It doesn't matter what fitness level you're at, just do … what your body wants to do today and to your level." Trish also said it was helpful going to classes where the instructors welcomed people of all levels and where the focus and goal of the class was just to "do what you can and have a good time."

8. Gym Friends and Others in the Gym

This category concerns the influence of gym friends and other people in the gym who were in a position to observe and make comments about participants' exercise behaviour and/or

bodies. [19] Five participants endorsed this category, providing one helping CI and six hindering CIs for a total of seven items. Most of the CIs in this category pertain to the impact of unhelpful commentary from people in the gym. Some participants also described the impact of friendships they had developed with other exercisers and staff. These friendships were experienced differently depending on their nature and depth.

The helping CI in this category refers to the positive impact of supportive friends. Caroline shared the helping impact of a group of friends she met at the gym who made her feel accepted and cared about, regardless of her appearance, weight, or fitness level. She said that these friendships helped her see herself in a different way: "I started realizing that, 'Okay, people enjoy being around me. People want to get to know me more, and it's not for anything. It's just for the sole purpose of being around me.'"

The other participants who endorsed this category all contributed hindering CIs, most of which pertained to unhelpful comments directed at their bodies and level of exercise. Lana recalled a time when she was doing her workout and someone she did not know interrupted her to offer unsolicited advice about exercise and weight loss:

> This girl was like, "Oh, HIIT workouts are better because you lose weight faster." And I just thought "Okay, but I've spent the last three months coming here telling myself that I'm only doing it … because of my heart health and my lung health, as opposed to losing weight, because if I come here to lose weight, I'm going to always feel disappointed in myself." And she kind of just shattered everything I worked up towards.

[19] In many cases, staff were among those who praised participants' weight loss and exercise. This kind of commentary from staff is included in this category rather than in Toxic Interpersonal Gym Culture because the staff's comments were enmeshed with those from other gym exercisers. Thus, placing staff commentary here is a better fit with the theme of this category.

Lana said that the impact of this comment lowered her confidence, made her feel like she did not belong in the gym, and increased her awareness of and sensitivity toward people watching and evaluating her.

All participants said that comments about their bodies and perceived "dedication" to exercise were unhelpful and further fueled their ED. Nancy shared how often she was praised for being "hardcore" at the gym. She reflected, "There's always an expectation of more, and the more is definitely praised and valued. Like, 'Oh my God, good for you, you're here again,' or, 'You're here still.' None of that felt helpful to me." Nancy also echoed the impact of unwanted and unhelpful personal body comments, "*That* always bothered me because I never asked for [their] commentary, and even though in the moment I liked it, looking back, I'm not of the belief that [it's] a good thing."

Other participants highlighted how their EDs liked the praise and fed off the attention, but they acknowledged that these comments were damaging because people were not praising dedication, health, or fitness, they were praising the ED. Sarah recalled,

> I was being praised for weight loss and for being as active as I was. A lot of it was like, "Wow, that's so great! You go to the gym so much, you look fabulous!" Because they didn't know that they were complimenting the bulimia.

These kinds of comments also conflicted with messages of concern from family, care providers, and others outside the gym. Emily shared how tiring it was arguing with herself as she tried to reconcile so many "mixed messages":

> A friend would be like, "Oh how do you do it? How do you go to the gym? You're so fit." And then [I'd be] sitting in my therapist's office, and she'd be telling me, "No, you're going to have to give up going to the gym or not go as often." And it's like, how am I

> supposed to listen to one person that's helping me but then my friends that I know better, in a sense.

The impact of gym friends and being friends with staff was also influential. Polly and Nancy both talked about how it felt to have gym friends who felt like friends but were not. Nancy reflected how she would go back and forth in her mind about her feelings: "This is so comfortable to be here. I hate that I'm forcing myself to be here. All of my friends are here, and these people are not really my friends." Polly shared how she had to mourn the loss of her friendships with people in the gym because of how they had encouraged her ED:

> There was one of the nurses who said, "Those people don't even know you, they know your eating disorder. They know how much you could push. They know that you're the fastest runner. They don't know you." And I was like, "Wow, it's true." And that was a really hard moment actually for me to accept that all of these people that I was going around saying, "I have these amazing friends" and "I made so many new friends in the studio and in the gym," and looking back, those weren't friends.

9. Comparison Behaviour

This category concerns internal, self-critical evaluative comparisons and body-checking behaviour. Four participants endorsed this category, providing five hindering CIs. Most of the incidents in this category were related to participants making upward comparisons to other exercisers that resulted in them feeling sad, stressed, and bad about themselves. They also described how their tendency to compare themselves to others made them think that others were watching and evaluating them as well.

Three of the participants who endorsed this category said that comparison was a significant aspect of their ED. For Kim, seeing people shirtless or wearing sports bras in the gym

triggered comparisons and negative self-evaluations. She mentioned attending one gym that required people to wear t-shirts. Though she acknowledged that this rule was not popular with everyone, for her, it was "amazing" because it reduced her ability to make comparisons that triggered her ED, which in turn, made the gym a more comfortable place to be.

Nancy described comparison behaviour that focused on what other people were doing and how long they were spending working out. For her, this created a sense of being in competition with others in the gym: "There's always the idea that like, 'Oh, look at this person, staying here forever. Look at them. Look at this person, doing this,' so then, 'You should probably do the same thing.'" Lana described feeling impacted by the idea that, because she was engaging in comparisons, others were observing and evaluating her too, "I can't run without feeling like the other person is staring, which they're probably not. And I know that in my head they're probably not, but you can't help it. You get stuck in this cycle of comparison."

10. Gym Guidelines

This category concerns the safe and prudent use of the gym. Four participants endorsed this category, providing two hindering CIs and three WL items for a total of five items. Participants endorsing this category said that they did not know how much time to spend at the gym or what to do while there. They indicated that beginning their very first gym memberships without this information created problems because they had little notion of healthy or sensible limits of exercise. This reduced their confidence and made them worry that they were not exercising enough or "correctly." Some of the participants said that they turned to the internet and social media for direction on how much time to spend at the gym. In searching for this guidance, they found content that was highly weight loss-focused, which shaped their gym behaviour and pressured them to exercise excessively.

Confusion, uncertainty, and guilt were prominent in this category. Participants expressed anxiety around what to do at the gym, how to use it properly, and, most prominently, how much time to spend there. These things were especially difficult when participants were purchasing their very first gym membership. They shared that not having a concept of the limits or ranges of healthy exercise challenged their ability to set limits on exercise. They also described experiencing guilt, self-consciousness, and confusion. Ella described her experience this way:

> The aspect of time, like how long you should be spending in the gym. There were days where I didn't really want to go to the gym, but I also felt like shit that day, and I knew that if I moved my body, I'd feel a little bit better. But I would just want to go for 20 minutes, but then I'd spend 20 minutes at the gym and be like, "I can't leave now, I just got here, everyone's gonna be like, "She just got here."

Lana said she viewed the gym staff as experts on fitness, and therefore, as accurate sources of information on exercise. She said she wished gym staff would give people a general idea of how to use the gym in a way that supports and maintains health. She emphasized that it would be important for gym staff to also tell people, "You don't need to look a certain way to be at the gym." Emily's wish was similar; she wished gyms would give people a "beginner program" so that they would have an idea of what to do at the gym and how much time to spend there. She also said it is important for the gym to impress upon people that the gym is their time, and they should not force themselves go, or force themselves to exercise a certain way or for a certain length of time.

Some participants also expressed the desire for gyms to offer shorter, less intense workouts and for the gym to normalize and encourage workouts of all varieties and lengths of time. Trish said it would be helpful if gyms offered people more variation in the length of group

classes. This way, instead of having only one-hour classes from which to choose, people could have the option of attending a 30-minute class, for example.

11. Co-ed Versus Women's Only

This category concerns participants' experiences in co-ed sections versus women's only sections of gyms. Four participants endorsed this category, providing one helping CI and three hindering CIs for a total of four items. This category holds some variation in that some participants' CIs pertained to differences between exercising in the co-ed section versus the women's only section, whereas other participants only addressed exercising around men. Most of the participants who endorsed this category described feeling "unwelcome" in the co-ed weight section of the gym because these areas were typically dominated by men.

Ella provided the one helping CI in this category. She explained that she experienced the women's only section as helpful in comparison to the co-ed section, the latter of which caused her to feel anxious because it felt like a more physique-focused exercise experience. Here is how she contrasted the two spaces:

> [In the co-ed section], I felt like I was more looked at by the men in the gym, whereas in the women's section, girls don't care. So I found that if I worked out for 20 minutes in the girls section, then that's okay, but if I work out 20 minutes in the co-ed section, then it's like, "She doesn't belong in the gym."

Trish and Nancy also described similar hindering experiences working out around men. Trish indicated that at one gym she attended, the weight area was "overrun by these men who were working with weights. So I didn't feel very safe or comfortable if I wanted to do weights." Nancy described feeling awkward being "the only girl" in the male-dominated areas of the gym. This gave her a sense that the men were watching her:

> It was like, okay, well, you have to prove your worth or they're going to think like, "Why is she wasting space here?" Because there's only so much space, and if you're in this area, someone else could be there and you're taking their spot, so you'd better be doing something good because you're using equipment, right? There's only so much equipment, so … you better be using it and not just doing some girly thing.

Sarah's hindering CI spoke to a gendered experience of the gym in a different way. She described the different equipment and "vibe" in the women's only section versus the rest of the gym. For her, this felt connected to how men and women are treated differently in the gym in that men are steered towards weightlifting and women are steered toward cardio and weight loss. She said, "I never worked out in the female section because I hated that they didn't have the same kind of equipment that the men did."

12. Staff Intervention

This category concerns staff interventions when warning signs of an ED were observable in the gym environment. Although some participants used different phrasing, the word "intervene" is used to describe staff expressing concerns, making suggestions, and/or setting limits on excessive exercise. Three participants endorsed this category, providing two helping CIs, one hindering CI, and two WL items for a total of five items. All three participants who endorsed this category said staff intervention was helpful when it occurred and unhelpful when it was clearly needed and did not occur. Participants also said that they wished more trainers would intervene and that staff should not be afraid to say something if they are concerned about someone.

Emily and Sarah both described helpful staff interventions when they were exercising excessively in the gym. Emily shared an experience of a group instructor who intervened after

she noticed that Emily was doing back-to-back classes and was losing weight. Emily recalled how this instructor told her she was no longer allowed to do two classes in a row. Although she acknowledged that it felt awkward in the moment, Emily said the care and concern this instructor expressed stayed with her. She also said it made her realize her ED was serious, and that she should start taking therapy more seriously.

Sarah's experience of an intervention involved a personal trainer to whom she had previously disclosed her ED. She recalled that when her personal trainer recognized that her exercise was becoming problematic, he cancelled one of their sessions and had a discussion with her. She said, "That was good. I needed that. I needed someone to almost hold me accountable to recovery." Sarah recalled how his support of her recovery continued after this intervention as well; he sent her "reminders" like, "I better not see you in the gym today. You worked out with me yesterday."

Participants also said they wished that more staff would intervene if they were concerned about someone. Although Emily did have a staff member intervene, she expressed that it would be helpful if more staff would say something when they are concerned about someone. She remarked,

> Even if they just said like, "Hey, I'm concerned about you." I feel like that resonates more deeper with people versus, "Hey, yeah, keep coming, keep going, keep doing it!" That can motivate the eating disorder. I'll remember those comments, but they're not something that's going to live with me forever, whereas I can pinpoint exactly … the people who've pointed out [their] concern to me.

For Polly, it was hindering that staff did not intervene when it was apparent that she was too unwell to be at the gym:

> I wish I actually would have been sent home many times where I was not in a position to be able to exercise and it was evident, such as crutches and a boot on my leg. That's pretty evident. Or times where I had to sit down and put my head between my legs because I was so dizzy, and they would be like, "Okay, take a breath. And then when you're ready, you'll come back and continue." That would have been like a really good time for someone to be like, "It's possible that you're not feeding yourself well, and that's why you feel like you're gonna pass out. Maybe stop the class for today."

Such interventions did not happen in Polly's case, however. In reflection, Polly said that when she was clearly unwell, the silence of trainers at the gym communicated to her that,

> "It doesn't matter if your body is injured. What matters is that you still show up to your exercise class." That was the message I took. Or, "It doesn't matter if you're in pain, or hurt, or your body's giving you the message that it can't exercise that day. What matters is that you push through and ignore the message that your body is giving you."

13. Body Diversity of Staff

This category concerns the presence and representation of certain body types over others among fitness professionals. Three participants endorsed this category, providing one helping CI, one hindering CI, and one WL items for a total of three items. This was the smallest category in the study. All three items in this category cohered tightly around the fact that it was helpful for participants to see fitness trainers with different body types. Participants also expressed that they wish gyms would have more instructors of all different sizes.

All three women said that it would be helpful for them to see more instructors of different body shapes and sizes, and that the typical uniformity in trainers' body types was unhelpful. Mara shared how most instructors are "very fit, muscular, toned" looking women so it was

helpful and exciting when she saw someone whose body was different. She recalled, “I remember being like, ‘Oh that’s awesome!’ I never see like yoga instructors who aren’t super thin, so that was really cool for me.”

Similarly, Trish shared how the lack of body diversity was unhelpful: “A lot of the instructors were very fit and had a standard North American beauty kind of body. So there wasn't a lot of diversity in terms of curvy women or women that look like an average person.” Polly said, “I wish instructors would come in bodies that are all different sizes actually. And to promote that you can be healthy in a body that is any size.”

Summary and Conclusion

The 10 women who were interviewed for this study shared a total of 115 gym-related incidents, factors, and experiences that impacted their ED recovery. These incidents were organized into one of 13 themed categories, with all categories achieving a minimum participation rate of 30%. In terms of the breakdown of the incidents, 47% were hindering, 29% were WL items, and 24% were helping. The hindering CIs and WL items show that there are many different aspects of the gym experience that undermine recovery. Although there are far more hindering than helping CIs, the helping items show that many gyms and fitness professionals are already doing positive things that support and encourage recovery.

CHAPTER 5: DISCUSSION

This ECIT study aimed to understand the different gym-related incidents, factors, and experiences that helped and/or hindered women's ED recovery. Overall, the participants' experiences of gyms as helping or hindering was contingent largely upon whether they used a weight-centric business model and high pressure weight loss messaging. This chapter opens with a summary of the findings, followed by a discussion on how this study fits with relevant scholarly literature. Also discussed in this chapter are the contributions of this study, implications for the fitness industry and clinical practice, and strengths and limitations. This thesis concludes with recommendations for future research.

General Summary of Findings

Overall, gyms and fitness professionals supported recovery when they framed exercise around movement, having fun, relieving stress, building confidence, and honouring one's limits. Helpful, recovery-promoting gyms were described by participants as supportive, welcoming, encouraging, holistic, and community-minded. Conversely, gyms and fitness professionals hindered recovery (and worsened participants' EDs) when they framed exercise around weight loss, calorie burning, dieting, pushing, and ignoring one's bodily signals. These gyms made it challenging for participants to stay in a recovery mindset. WL items converged around similar factors, with participants wishing for gyms and staff to stop focusing on weight loss, calorie burning, and pushing. The most frequently mentioned WL items pertained to the importance of ED-related knowledge and training for fitness professionals.

The role of fitness professionals was particularly evident across several categories. Based on the results of this study, it is clear that what fitness professionals say, promote, teach, and model are highly relevant to ED recovery. Whether they realize it or not, fitness professionals

have tremendous power and influence. Many participants shared how profoundly they were influenced by trainers, even in brief interactions. Some participants spoke directly to the level of trust they had in fitness professionals, often ignoring their own fitness goals and bodily signals because of something a trainer said. Participants also described how they looked to trainers as experts not only on exercise, fitness, and health, but also on physical appearance. This influence cut both ways, however: Trainers caused harm when they admired and encouraged ED behaviours, and when they focused on pushing, calorie burning, and fat loss. They also held tremendous power to interrupt the ED when they modeled balance, encouraged rest, and focused on exercising for reasons other than appearance and weight loss.

Using a systems framework, we can see how gyms tend to reflect and reinforce the messages and values of our larger cultural macrosystem, and in so doing, gyms also function as systems in their own way. To illustrate this, qualitative distinctions were made between ambient (macro) and interpersonal (micro) levels of influence in four of the categories (toxic ambient and interpersonal, and healthy ambient and interpersonal). In these categories, the macro and micro levels describe separate but interrelated aspects of the gym culture. These macro-micro distinctions illustrate how implicit beliefs about things like bodies, health, and appearance set the tone and culture in a given gym.

To illustrate, we see that when gyms approach health and fitness from a weight-centric lens, they invariably organize their marketing, physical space, attitudes, and values around weight loss and body transformation. This creates a culture within the gym that emphasizes the perceived importance of weight loss, toning, calorie burning, and dieting. The physical space of gyms like this will likely be furnished with the things participants named as hindering, like weight loss advertisements, posters of only super fit bodies, scales, and diet food. The trainers

who work in these kinds of gyms will likely do many of the things the participants named as hindering, including giving diet plans, praising ED behaviour, and encouraging weight loss and pushing. In this example, a toxic gym creates its own cyclical feedback loop where ED behaviours are praised; recovery is undermined; and weight loss—often at any cost—is seen as important, admirable, and healthy.

By integrating the critical feminist lens to this discussion, we can situate the results of this study in their broader context. Understanding how seemingly disparate gym experiences are connected allows us to see how the incidents and categories of this study emerge from oppressive power structures that disadvantage women. The critical feminist lens also invites us to consider and critique the ways in which gyms adopt cultural narratives that foster and maintain EDs. It is through this broader, contextual lens that we are better positioned to make informed recommendations that might someday facilitate impactful changes.

The commercialized fitness industry sits at the intersection of many converging weight-centric narratives about health, bodies, and aesthetics. In addition to the positioning of thinness and weight loss as universally good (Rich & Evans, 2005), prevailing public health discourses would have us believe that good health exists within a fairly narrow weight range, that being above this range is dangerous, and that weight gain is bad and should be avoided (Burns & Gavey, 2004). Such ideas are easily commodified by gyms that generate a profit from the embodied shame and anxiety women feel as they struggle to reach societal expectations that are, by design, unreachable. As such, the experiences shared by the participants of this study are best understood, not as isolated incidents that occurred at individual gyms, but as enactments of the aforementioned narratives and the power structures that underpin and perpetuate them.

In the gym, the healthy body is recast as the fit body, which is then judged to be fit or unfit based on its appearance (Markula & Chikinda, 2016). The reality, however, is that pursuing the fit body is very often at odds with the health benefits that toiling for it and achieving it supposedly confer. As Frew and McGillivray (2005) observe, gyms are often sites of aesthetic masochism where members engage in supposed health behaviours that are, in fact, anything but healthy. Gyms and fitness professionals may believe that pressuring weight loss is aligned with members' fitness goals, public health narratives, and their own business interests, but their use of appearance and weight-based messaging is not innocuous. On the contrary: Such messaging is harmful both in its own right, and because it occurs within a patriarchal power system that seeks to limit and oppress women.

When gyms construct fitness as an aesthetic, they reveal themselves, not as sites of health promotion, but as conduits for oppressive standards of femininity and feminine beauty. Furthermore, by conflating aesthetics with health, gyms pressure women to obediently discipline themselves through diet and exercise as they continue to strive for the impossible ideal body (Markula & Chikinda, 2016). Fisher et al. (2018) note how gyms use messaging, much of which is fat-phobic, to communicate to women that if they just pushed more or tried harder, they could easily attain the "ideal" feminine body. The women in this study noticed how they felt pressured by these messages as well: They described before-and-after weight loss advertisements, images of fat-free bodies, and "motivational" quotations that peppered the gyms they attended, and they shared how these images and quotations were disempowering and confusing because they were at odds with balance, rest, and other true health behaviours. In addition, the participants also shared how these messages pressured them to exercise excessively and obsessively, and then blamed and shamed them when they did not push themselves hard enough. Instead of improving

health—as these messages claimed to be doing—they undermined both health and recovery, while also making the participants' EDs seem "more normal."

Although objectification and surveillance were not categories, these were also common themes noted in the participants' experiences. As Frew and McGillivray (2005) point out, new gym memberships usually begin with consumers consenting to their own objectification and surveillance by having gym staff performing various assessments (e.g., weight, body fat, BMI, etc.). Very often, however, surveillance and objectification extend long past the initial fitness assessment. The women in this study offered many examples illustrating how, under the guise of health and fitness, gyms encouraged and pressured them to engage in various forms of surveillance and objectification. In addition to monitoring weight and fat percentages, participants were encouraged, or directed, to track (and restrict) their caloric intake and to track (and increase) their caloric expenditures. Several participants described group classes as especially high pressure because of the way they framed exercise as compensatory and aggressively pushed members to burn more calories and push past their limits. Some classes also encouraged widespread surveillance by displaying members' calories burned, speed, resistance, and other metrics for all to see.

For some of the participants, surveillance and objectification were most salient in the presence of men in the gym. Although the commercialized fitness industry is not the architect of our culture's gendered expectations or power dynamics, it does create spaces that reproduce them. This is often subtle, and perhaps unintended, as illustrated by the creation of co-ed and women's only spaces in gyms. The creation of a separate space for women removes both the male presence and the male gaze, making the gym feel supportive and accessible for women who would not otherwise use it (Fisher et al., 2018). Indeed, several of the women in this study

described feeling uncomfortable, unsafe, and/or unwelcome in the co-ed section because it was "overrun" by men. One participant recalled how "super fit" men would use the weight section in a way that gave the impression that they had claimed that area for themselves. Several participants also noted that when men were present, they felt awkward, watched, and disembodied. One participant described how she felt pressured to use the co-ed area in a particular way or she would be "wasting" the space doing something that the men perceived as "girly."

It is clear that many women rely on the safety of women's only spaces in gyms; however, as Fisher et al. (2018) point out, these divisions might also be regarded as a quick fix because they do not address the problems that necessitated women's only spaces in the first place. They further argue that these divisions can serve to recreate the power dynamics they are trying to disrupt, and they can further alienate women from male-dominated areas in the gym. Lastly, women's only spaces are often set up differently and in a way that further perpetuates gendered power. One participant described how she did not like the women's only section because it emphasized weight loss by offering more cardio machines and less weightlifting equipment. She further noted that the weightlifting equipment that was available in the women's only section was not of the same quality as what was available in the co-ed section.

Fit with Literature

As part of the theoretical agreement credibility check, Butterfield et al. (2009) recommends comparing the emergent categories from the current study with relevant scholarly literature. The purpose of this final credibility check is to determine the extent to which the categories from the current study are supported by the extant literature. In performing this credibility check, support was found for all 13 categories, with the issues raised in some of the

categories having been more thoroughly researched than others. Direct support was found for 11 categories, with some categories supported by numerous studies. Tangential support from studies on similar topics was found for the remaining two categories. To this author's knowledge, there are no studies that contradict any of the categories.

As Butterfield et al. (2009) point out, the ECIT is an exploratory method, and the absence of support for one or more categories does not necessarily indicate the category is invalid. It is also possible that other directly relevant supporting articles exist but were simply not located by this author during the course of this credibility check. Further, because this is a credibility check, the studies cited here are examples drawn from relevant literature on each category and do not necessarily reflect seminal articles on these topics. Some of the studies reviewed for this final credibility check may appear to overlap with the current study; however, such overlaps are highlighted here to offer evidence in support of the current study's category scheme, and they do not imply that aspects of the current study are a replication of previous research.

As discussed in Chapter 2, very few studies have examined fitness instructors' knowledge of EDs or the impact of gym environments on women's EDs. An extensive search of the literature yielded only six studies that examined fitness professionals' understanding of EDs (Bratland-Sanda & Sundgot-Borgen, 2015; Colledge et al., 2020; Manley et al., 2008; Wojtowicz et al., 2015; Worsfold & Sheffield, 2018a; Worsfold & Sheffield, 2018b). All six studies revealed that, as a group, fitness trainers lack an adequate understanding of EDs. Furthermore, all six studies recommended training, education, and/or guidelines on EDs for fitness professionals. This body of literature provides significant support for the current study's ED literacy category and staff intervention categories. These studies also speak to the harmful impacts of fitness

professionals not understanding EDs, which offers support for the toxic interpersonal culture and numbers-based assessments categories

Numerous studies on fitness centre environments provide support for the toxic ambient culture and healthy ambient culture cateogries. Three examples are Prichard and Tiggemann (2008), D'Abundo (2007), and Donaghue and Allen (2016). The former found that time spent in fitness centres was related to increases in self-objectification, disordered eating, and focus on weight loss. These results were not found in women who engaged in more holistic forms of exercise, such as yoga. D'Abundo's exploration of health messages communicated to participants of women's aerobics classes argued for classes to be less appearance-focused and more balanced, holistic, and wellness-oriented.

Donaghue and Allen's (2016) integration of HAES into their critical examination of personal trainers and health aesthetics also supports both the toxic ambient culture and healthy ambient culture cateogries. Their study also highlights the fitness industry's focus on weight loss and personal trainers' passive absorption and active endorsement of the same, which supports the micro and macro level distinctions in four of the current study's categories. Donaghue and Allen also emphasize the power and influence trainers hold in their roles, acknowledging that personal trainers "have a more powerful voice than most others, and speak from a closer range" (p. 55). Although personal trainer power and influence was not its own category in the current study, it was an important finding from the perspective of the participants.

Though they did not focus on fitness centre environments, Brunet et al.'s (2021) study on physical activity in women with EDs supports the importance of the recovery versus the ED category. Their results affirm that changing problematic exercise attitudes and behaviours is a complex and taxing process for people with EDs. Brunet et al. also made several

recommendations, many of which were for ED care providers; however, some are also relevant to gym settings. For example, they recommended encouraging non-ED reasons for exercise (e.g., fun, socialization, mental health, etc.), removing devices that track calorie expenditures, and fostering an inclusive environment. These suggestions also support the healthy ambient gym culture and healthy interpersonal gym culture categories.

Numerous studies have evaluated comparison both in and out of fitness contexts. Direct support for the comparison behaviour category is evident in Wasilenko et al.'s (2007) experimental study on social comparison. Research confederates that were either “fit” or “unfit” exercised at a gym in the presence of women who were later surveyed about their body satisfaction. The results showed that exposure to the fit peer reduced the time the women spent in the gym and increased their body dissatisfaction.

The gym guidelines category includes two slightly different but overlapping aspects. Firstly, the participants of this study expressed not knowing how much time to spend at the gym and the desire to have had some guidance around this. That being said, because of potential medical complications, ED treatment programs often discourage or ban exercise. Several studies highlight the problems associated with exercise abstinence approaches, one of which is that it leaves people without the support needed to address and remedy problematic exercise (Brunet et al., 2021; Quesnel et al., 2018). There are, in fact, many studies that support integrating safe levels of exercise for people with EDs who are medically stable (Cook et al., 2016). Therefore, the importance of offering exercise guidance to people with EDs is supported by the research, with the caveat that the studies cited here do not address the role that gyms and fitness professionals might potentially play.

The second aspect of the gym guidelines category involves not knowing what to do at the gym and the desire to have had a beginner program and/or a more thorough orientation. In their narrative inquiry on women's gym experiences, Fisher et al. (2018) offer a detailed analysis of gendered power dynamics, highlighting the unique challenges women face as gym users. In addition to not knowing how to use the gym, some of the women in Fisher et al.'s study also described a lack of support from staff. This undermined their confidence and resulted in feelings of isolation and frustration. Like the participants in the current study, Fisher et al. also recommend that gyms offer more support and guidance for women who are beginner gym users to help them build confidence in fitness settings.

Although several articles have been published on co-ed versus women's only spaces in gyms, we continue with Fisher et al. (2018) as their study offers direct support for this category as well. By placing gendered power dynamics at the forefront of their study, Fisher et al. show how oppressive patriarchal norms are reproduced and reinforced in gym settings, and how the presence of women's only sections can reify gender barriers. Like some of the participants in the current study, Fisher et al. highlight how gyms are organized around cardio or weightlifting, with women being steered towards the former, and men the latter. Although the participants in the current study described seemingly disparate experiences of the co-ed and women's only sections, fundamentally, their CIs reveal how gendered power dynamics are enacted in fitness spaces: More than one participant described feeling unwelcome and hesitant to take up space in what seemed like the "men's section." As Fisher et al. also observe, it requires significant confidence for women to use male-dominated areas of the gym, and for some, the women's section is the only place that feels accessible and welcoming, even if its presence does reinforce gendered norms and power dynamics.

Many of the items in the gym friends and others in the gym category revolved around relationships and comments that encouraged—or in one case, interrupted—the ED. There are many studies assessing the predictive validity of negative body comments on the development of EDs. There are also studies assessing the impact of positive body comments on non-clinical populations. To this author's knowledge, however, there are no studies examining how other people in the gym may influence already established EDs or ED behaviour through comments. That said, there are studies that offer tangential support for this category. As evidenced by Donaghue and Allen (2016) and others, the fitness industry and its personal trainers tend to reinforce and center the importance of weight loss to health. Weight loss is also highly important to gym attendees, including those with EDs. Worsfold and Sheffield (2018a) underscore the reality that many people with EDs join gyms and hire personal trainers to assist them with weight loss goals. Thus, although it would appear that no studies have directly assessed the impact of others in the gym, we can infer from these—and other similar studies—that when people lose weight, this is likely admired and encouraged by others who attend the gym, regardless of whether an ED may be present.

Direct support for the body diversity of staff members category was not found in the literature. Though there are studies assessing fitness professionals' body capital (e.g., Hutson, 2013) and EDs among fitness professionals (e.g., Bratland-Sanda et al., 2015), to this author's knowledge, there are no studies that evaluate the meaning and impact of fitness professionals in larger bodies from the perspective of people with EDs. The studies available suggest that personal training clients prefer trainers that have so-called ideal physiques (Boerner et al., 2019; Hutson, 2013). This makes sense given that weight loss tends to feature highly on the list of clients' goals (Donaghue & Allen, 2016). That said, the participants of those studies were not

women with EDs. For the participants in the current study, seeing trainers with other body types was important, as expressed by the CIs comprising this category. One survey of undergraduates' perceptions of personal trainers' body types acknowledged that trainers whose physiques do not meet societal standards of perfection may be preferred by niche populations, though people with EDs were not specifically mentioned (Boerner et al., 2019).

Contributions to Literature

In an ideal world, people with EDs would exercise in supportive environments under the care of specialized professionals, but in the real world, they go to the gym (Giordano, 2010). EDs can pose serious health consequences, and these do not go away if we avoid confronting them. Questions around how to handle the presence of people with EDs in gyms have been raised, but not directly addressed, by the research. Thus far, this is an issue that has been largely ignored in scientific, clinical, and professional circles. In addition to drawing attention to an under-researched area, this study makes several important contributions to the literature. It includes the perspectives and experiences of women with EDs, and in so doing, it gives them a voice and a say in something that directly impacts them. This study extends the literature by highlighting harmful and helpful gym situations, elements, behaviour, and practices that are important not only to people with EDs and fitness professionals, but also to others who use gyms and who work in administrative roles within the fitness industry. Finally, and perhaps most importantly, this study offers actionable and practical recommendations that have the potential to improve the lives of people with EDs.

The problems associated with an absence of ED literacy for fitness professionals have been clearly established in the literature. Prior to this study, however, we understood these issues from only the perspective of fitness professionals. This study extends the literature by inviting

women with EDs to a discussion that was principally about them, but from which they had been excluded. To this author's knowledge, this is the first study based on the perspectives of people with lived experience. The addition of their voices, experiences, and suggestions triangulates and expands our understanding of how gym environments can impact the lives and health of people with EDs. This study also makes a novel contribution through the ECIT: The rigour and comprehensiveness of this qualitative data adds detail, nuance, and heft to an emerging area of research that has been dominated by quantitative inquiry.

The main findings of this study underscore several important points. As mentioned, fitness professionals hold extraordinary power and influence in the lives of people with EDs. As others have argued, fitness professionals' lack of basic ED knowledge is harmful, potentially dangerous, and may pose ethical and liability issues (Giordano, 2010; Worsfold & Sheffield, 2018a, 2018b). This study reinforces the need for those working in the fitness industry to receive ED-related training, education, and guidelines. Other main findings describe healthy, recovery-promoting gyms and staff; how they are different; and how other gyms can shift away from weight loss and appearance and toward holism and overall health and wellness.

Although it was a smaller category, some clarification around the gym guidelines category is necessary. This category reflects WL items and hindering experiences around not knowing how to use the gym and not knowing how much time to spend there, with the majority of incidents focusing on the latter point. At its core, the gym guidelines category is about providing weight-neutral, unbiased information about healthy exercise behaviour. It asks the gym to normalize shorter, low intensity workouts, and to give people permission to listen to what their bodies say about how much time to spend at the gym, and to honour their own preferences for what to do there. The caveat with this category is that any guidance or information given by

gyms and fitness professionals has the potential to contradict treatment recommendations. This caveat again highlights the importance of ED literacy for gyms and fitness professionals, and it also invites ways to create multidisciplinary collaboration (or at least, communication) with fitness industry professionals.

Implications and Recommendations for Gyms and the Fitness Industry

EDs are severe, potentially deadly illnesses that are directly relevant to gym settings. Although the number of people with EDs may be relatively low in the general population, evidence suggests that this is not the case in gyms (McCabe & James, 2009; see also Colledge et al., 2020; Bratland-Sanda & Sundgot-Borgen, 2015; Manley et al., 2008; Wojtowicz et al., 2015; Worsfold and Sheffield 2018a, 2018b). The 10 women who were interviewed for this study shared over 100 incidents, experiences, and suggestions for staff, trainers, and gyms. Some of these are examples of supportive things that gyms and fitness professionals are doing well, some are examples of harmful things that need to be addressed, and some are expressions of what the participants wished would have happened. People with EDs want to use the gym without it chafing against their health and recovery. They are deserving of a safer and better experience.

In fulfillment of its central aims, this thesis has consolidated participants' contributions into recommendations for the fitness industry and individuals who work within it (see Appendix K). These evidence-based recommendations cover several domains, and they are tailored according to professional role (i.e., trainers, management and owners, or professional associations). Importantly, these recommendations are also concrete, actionable, and pragmatic, which distinguishes them from other guidelines that are helpful but less concrete (e.g., Fitness Australia & InsideOut, 2020). These recommendations do not suggest or advocate for gyms or fitness staff to assume or perform the role of counsellors, dieticians, or other roles outside of

their purview or expertise, nor do they shift recovery responsibilities onto gyms or fitness staff. They do, however, aim to address the health needs of people with EDs, recognizing them as an overlooked (and likely overrepresented) subset of exercisers who are at risk for serious medical complications.

Many of these recommendations are small adjustments that individual trainers or business owners can make (e.g., not making group classes about calorie burning). Some are actionable as policy or operational changes (e.g., asking screening questions). Other changes can be made at the business level (e.g., hiring trainers with different body types). Lastly, some are broader changes that would apply largely to professional associations (e.g., adding content about EDs to fitness training programs). It is critically important to underscore that EDs are symptoms of systemic issues and are best addressed at multiple levels. Furthermore, basic ED literacy would ameliorate many of the hindering experiences described by the participants of this study. In the absence of this, there are many other things gyms and fitness professionals can do to support people with EDs. Some of the central themes of the recommendations are grounded with participant quotations and expounded upon below.

Trainers as Helpers and Recovery Allies

> It was very different when he said it versus when my mom said it.
>
> —Sarah, on the meaning of her trainer's perspective

As mentioned throughout this thesis, what trainers say, do, and promote carries tremendous influence, and that influence can be encouraging, or it can be damaging. All fitness professionals should be aware that most EDs are not detectable based on someone's appearance. As illustrated in this study, trainers can use their power and influence to support recovery, and because they are seen as experts, their encouragement is more persuasive than the same

messages coming from any other individual. Group class instructors should be aware that people may use classes as a way to curtail excessive exercise. Instead of framing exercise and calories as a transactional exchange, instructors can make classes supportive by focusing on fun, enjoyment, doing one's best, relieving stress, building strength, learning new movements, and so on.

Personal trainers should be aware that clients with EDs will hire them, and that not all clients will disclose their ED, especially if they are not asked about it. People with EDs may hire trainers specifically to work toward recovery-based exercise goals that they feel unable to reach on their own. Others may want to hire trainers, but concerns about being pushed towards weight loss may prevent them from doing so. Personal trainers can help clients by not weighing them, not talking about weight or dieting, and not giving food plans. Trainers should refer clients who request this guidance to a dietician. Personal trainers should not assume everyone wants to lose weight, and they should not encourage, compliment, or pressure weight loss. Trainers can also help by encouraging rest and non-weight loss reasons for exercising.

Create a Different Space and Culture

Overall, gyms are really, really hard to use.

—Kim, on using gyms while struggling with an ED

For medically stable individuals, exercise can be a beneficial part of recovery (Cook et al., 2016). Access to first aid and the presence of other people can make gym exercise safer than exercising alone or outdoors. But as this, and many previous studies, point out, there are many aspects of the gym that can make it unsafe, and a number of these are related to the messaging in the gym environment. There are many things management and facility owners can do to improve this. Some examples include removing the following items: scales, BMI charts, posters of super

fit people, before-and-after weight loss photos and/or advertisements, “motivational” quotations that pressure people to overexercise, diet food, calorie counts, and emails that pressure people to come to the gym. Many of these things can be replaced with weight-neutral or positive messaging.

Several participants gave examples of other things gyms can do to create a better, more positive, and safer environment. Here are some suggestions: Make the gym more holistic and community-oriented, hire trainers with different body types, provide weight-neutral information about health and exercise, offer classes that are less than one hour in length, display information on ED warning signs, and provide resources or referrals to dieticians and counsellors when needed.

Scales

There’s nothing good that comes out of that.

—Nancy, on using scales

Of all the recommendations, removing scales from the gym floor is perhaps the easiest adjustment for gyms to make. Displaying scales on the gym floor sends the message that monitoring and tracking weight is important. It also says that, above all else, the gym is for weight loss. These messages are already prevalent and do not need to be reinforced with the presence of scales. Removing scales from the gym floor, or better yet, removing them altogether, is a cost-effective, risk-free adjustment. It sends the message that the gym can be about health and fitness without being about weight. Removing scales also encourages people to focus on having fun, building strength and confidence, relieving stress, training for sport, preventing injuries, socializing, and so on.

Staff Interventions

> Even if they just said, "Hey, I'm concerned about you."
>
> —Emily, on the importance of staff interventions

As Emily's quote illustrates, staff interventions can take many different forms. In this study, two participants had staff intervene by stopping or limiting exercise. One participant's personal trainer intervened by stopping a workout session and by holding her accountable to her own previously stated recovery goals. The other participant had a group instructor tell her she was no longer permitted to do back-to-back classes. This latter instructor had no previous rapport with this participant and did not know about her ED. Interventions can also be staff members expressing concerns and making suggestions.

Even if the person brushes it off or becomes defensive, the impact of saying something reverberates long past that one interaction. The impact of not saying something can be powerful too because it is experienced as tacit approval. With practice and improved training and education, staff can build confidence approaching people with these concerns.

ED Screening

> They should ask people if they have a history of an eating disorder.
>
> —Trish, on staff asking ED screening questions

The addition of an ED screening question is another small adjustment that has significant potential to support many other positive interactions and experiences. As part of the sign-up process, gyms already require new members to complete paperwork and answer generic health questions. Adding a simple yes/no ED screening question to the existing sign-up process provides people with the opportunity to disclose an ED. As this study shows, people often want to make this disclosure, in part because they want the gym's support to remedy problematic

exercise behaviour; however, they also understand that such a disclosure, especially if made spontaneously, might be handled poorly.

Although not everyone with an ED will disclose it if asked, the presence of a screening question facilitates disclosures. It signals to people with EDs that it is safe to make such a disclosure. It creates an opportunity for them to consider their needs and limits, and to consider how these may differ from other gym members. It is an invitation to ask for the gym's help to create a safer experience, which, in turn, also provides the opportunity to claim the gym as part of recovery, rather than as part of the ED. It gives the trainer, or whomever is completing the membership paperwork, the opportunity to ask if there are any guidelines from health care providers (and this can open up another conversation). It activates a different intake decision tree by letting staff know that this is not a client who should be weighed or tracked with numbers. And these are just examples from this one single recommendation.

Summary

Though they are intended primarily to help people with EDs, these recommendations are for everyone. From a business perspective, body shaming does not motivate people to keep their gym membership. At the time of this study, all participants were still actively attending gyms, but several participants said that they left gyms that were toxic and undermined their recovery. Membership retention may be improved by heeding some of the suggestions these women have made. Implementing even some of these recommendations can create positive changes in people's lives and may segue into other positive changes with minimal additional effort from gym staff.

Clinical Implications

Although geared primarily towards the fitness industry, the participants offered many valuable insights that are directly relevant to those working in treatment settings. The participants of this study supplied CIs explaining how they shifted their perspectives and changed their exercise behaviour. Such CIs are valuable to therapists who are helping clients who are struggling with this very common ED symptom. This study also speaks to treatment program administrators who are hesitant to create programming that addresses exercise. This study also shows the value of working towards interdisciplinary collaboration with fitness professionals. Lastly, counsellors, psychologists, physicians, and other treatment providers are encouraged to deepen their understanding and appreciation of the role and significance of exercise and the gym environment in clients' lives, a sentiment that is also underscored in other recent research (see Nahman & Holland, 2022).

Therapists who are working with clients who have EDs should ascertain whether exercise is contraindicated for any reason. Conversations about exercise should be approached with extreme caution in order to avoid unwittingly giving clients the impression that they should exercise more. Treatment providers working in this field should make efforts to understand clients' exercise behaviour, how it might be related to their ED, and what support they may need to address exercise behaviour. Clients may underreport their activity level, they may have multiple gym memberships, and they may engage in additional physical activity outside of the gym. Because of positive messaging linking health to exercise and weight loss, clients who exercise excessively may not be aware that their exercise behaviour is dangerous or problematic. As the results of this study indicate, some people do not have a relationship with exercise outside of their ED, and they may need help understanding when exercise is problematic; how it can be

enjoyable; what healthy, balanced exercise looks like; and how recovery-oriented exercise might fit into their lives.

Although the weight loss culture inherent in most gyms can undermine recovery, people with EDs may still choose to exercise in these spaces. Importantly, this study also shows that certain gyms and gym experiences can promote recovery. The recovery versus ED category, in particular, includes several examples of important shifts that translated into changed behaviour. One participant hired and set boundaries with a personal trainer who happened to be highly ED literate. This participant described her trainer as being instrumental in helping her move toward recovery. Some participants found it helpful to switch to group classes (provided the classes were supportive) because it was a way to make exercise fun and to limit the amount of time spent in the gym. Others said it was helpful to set specific goals that were unrelated to weight loss. One participant enlisted the support of friends who were also fellow gym members. In terms of internal shifts, some participants mentioned that it was helpful learning how to attune to their bodies and respect their body's needs and limits. Finally, some women accepted that certain gyms were just toxic, so they left and found other settings that were more positive and enjoyable. For some of the participants, this meant switching to an activity-focused gym (like yoga, judo, etc.). For others, it meant finding a gym that felt like a community. Clinicians and other professionals supporting people with EDs may find it useful to integrate these findings into their work with clients.

Importantly, this study also highlights the failure of programs to wrap exercise into treatment along with nutrition and medical monitoring. Exercise is a significant driver of EDs, but there is a longstanding aversion to addressing it in treatment settings. Much of this stems from legitimate concerns around potential medical complications; however, previous studies

have demonstrated the value of integrating *safe* levels of exercise into treatment (e.g., Cook et al., 2016). Other studies have pointed out that not addressing exercise as part of treatment leaves people unsupported (Brunet et al., 2021; Nahman & Holland, 2022; Quesnel et al., 2018). Still, many treatment programs ignore exercise altogether, or they leave this component to therapists to address. The problem with shunting exercise onto therapists is that clients do not see therapists as knowledgeable purveyors of fitness. People with EDs are much more likely to respect, believe, and follow exercise advice if it comes from someone whom they perceive to be an expert. Therefore, treatment providers, treatment program administrators, and those who are working in ED prevention should look for opportunities to create interdisciplinary relationships with fitness professionals and others in relevant fields.

Strengths and Limitations

The participation rates, robustness of the categories, coherence with the literature, and practical applications of this project are strengths of this study. To this author's knowledge, this study was the first to invite women with lived experience to share their insights about gym exercise. One of the greatest strengths of this study, then, is that it asked women in recovery questions that no one has yet asked them. By privileging the experiences, wisdom, and suggestions of women with lived experience, this study helps us understand the gym and exercise from the perspective of those who are trying to navigate this particular set of recovery hazards.

Another strength of this study is its specific focus on the gym environment. With few exceptions, most of the research conducted on excessive exercise has treated exercise uniformly without considering or examining the settings in which the exercise takes place. This study offers a thorough evaluation of gym exercise in relation to EDs and recovery. In so doing, it also

highlights several key areas that have previously been overlooked or unaddressed, and it offers numerous footholds for follow up inquiries.

The ECIT is different from other qualitative methods because of the way it is focused on collecting only the pieces of a person's experience that are relevant to the research question. As such, the strengths of the ECIT may also be critiqued as weaknesses because what the ECIT provides in terms of precision and pragmatism can come at the expense of the holism and depth that is more typical of qualitative methods. As the author, I have made attempts to bring the women into this thesis, to anchor what they have shared, and to allow readers to have a sense of them as people.

This study has several limitations. Nine of the 10 participants in this study described themselves as White, making the homogeneity of this sample a limitation of this study. There is a perception that EDs mainly afflict White women; much of the research on EDs has tacitly assumed this to be true, using White women as a template upon which knowledge has been built and is assumed to be transferable to other groups. Racial bias can impact the ability of women of colour to recognize the presence of an ED and to have others recognize an ED as such. This can reduce access to treatment and/or delay treatment-seeking. In their articles on feminist approaches to EDs, LaMarre et al. (2022a, 2022b) highlight the ways in which the ED field, and thus, our knowledge about EDs, have been shaped by assumptions and power systems. Although the homogeneity of the participants in this study was not the result of any exclusionary recruitment tactics, it is a result of the larger systemic biases that have conveyed the idea that only certain people have EDs and that only certain EDs are legitimate.

Although it is very commonly used in the ECIT, retrospective self-report is another limitation of this study. That said, at the time of their participation, all participants had been

actively, or very recently, exercising in gym environments several days per week. In addition, most participants entered recovery relatively recently, and seven women were still receiving some form of treatment or counselling for their EDs. From this, we can infer that their retrospective self-reports are likely to be accurate.

Future Research Directions

This study joins several others in pointing out that ED literacy training and best practice guidelines for fitness professionals are clearly needed. Future research may consider using the results of this study to create, implement, and evaluate such programming. Based on the results of this study, it is clear that not all gyms and fitness environments are the same in terms of their impact on recovery. Some gyms (e.g., "chain" gyms and branded workouts) seem more likely to use weight loss in their marketing, and more likely to pressure weight loss and dieting in the gym. Other gyms (e.g., community centre gyms and gyms that are framed around a sport or activity) seem much less likely to focus on weight. Further, several participants found that attending group classes were helpful, but others shared that group classes, many of which were branded workouts, were harmful. Future research could examine how different types of exercise and fitness environments might differentially impact EDs, body image, disordered eating, and related issues.

Future research exploring gym experiences of women of colour who have EDs is important and necessary. Additionally, in light of the different appearance pressures and manifestations of body dissatisfaction, future research that assesses gym experiences of cis men, trans men or women, and non-binary individuals with EDs is also warranted.

In addition, exercise programming for medically stable people with EDs appears to be a growing area of interest. It is becoming commonplace to see fitness centres integrated with

various allied health services: Gyms are beginning to offer physiotherapy, registered massage therapy, acupuncture, and counselling services. Some business owners are shifting towards holistic approaches to fitness and exercise. These shifts touch on WL items mentioned by a few of the participants. If gyms are opening counselling offices within their facilities, this may be an opportunity to create and evaluate different models of interdisciplinary collaboration between treatment providers and gyms.

Lastly, future research may also consider addressing a number of other issues raised in this study. For example, objectification and disembodiment were implicated in aspects of the participants' experiences. For several participants, reconnecting with the body provided a buffer against excessive exercise and other ED thoughts and behaviours. Further research may evaluate ways to facilitate embodiment in exercise and movement, especially in ED treatment settings. Many of the participants also expressed how having others compliment weight loss was harmful because it added pressure to maintain a certain weight, appearance, and level of activity. Although some studies have evaluated the predictive validity of negative body commentary on the development of EDs, to this author's knowledge, studies have not evaluated the impact of weight loss "compliments" on ED behaviour. Future research could examine the impact of such commentary and its relationship to EDs.

Conclusions

In the gym, the body is constructed as malleable, as separate from us, as a thing to fix. Its limits are meant to be pushed; its pain, ignored. We strive for the kind of willpower that transcends hunger and exhaustion because there is a vague and flimsy promise that something resembling happiness and contentment waits for us on the other end of our efforts. In the gym,

we see signs of an ED as dedication, not distress. When we do not know better, we will continue to admire and feed dangerous behaviour, ideas, and illnesses that we are confusing with health.

EDs are serious, debilitating, and potentially deadly. Excessive exercise is highly prevalent among people with these conditions, with many individuals using gyms to perform workouts in the service of their EDs. While there, they may encounter a variety of people, features, and situations that undermine their recovery, worsen their illness, and further compromise their health. The presence of people with EDs in gyms is an issue that has been overlooked, at best. At worst, it has been ignored. It is not going to go away.

Since as early as 2008, researchers in Canada and elsewhere have been recommending education, training, and guidelines on EDs for fitness professionals. To date, none of these recommendations have been implemented in the Canadian fitness industry. The continued failure of professional associations to incorporate any ED content into training programs has negative consequences for fitness professionals, gym owners, and most especially, for people with EDs. The results of this study move us toward addressing this lack of training and education by providing the data with which to build ED literacy programming for the fitness industry. In addition, this study makes several other important recommendations that are consistent not only with what has been suggested in the literature, but also with what has been suggested by other professionals and working groups that have been organized to address this topic. Where possible, business owners and fitness industry professionals are strongly encouraged to review and implement these recommendations.

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association.

Andreasson, J., & Johansson, T. (2014). The fitness revolution. Historical transformations in the global gym and fitness culture. *Sport Science Review*, *23*(3–4), 91–112.

Arcelus, J., Mitchell, A. J., Wales, J., Nielsen, S. (2011). Mortality rates in patients with anorexia nervosa and other eating disorders: A meta-analysis of 36 studies. *Archives of General Psychiatry*, *68*(7), 724–731. https://doi.org/10.1001/archgenpsychiatry.2011.74

Bardone-Cone, A. M., Harney, M. B., Maldonado, C. R., Lawson, M. A., Robinson, D. P., Smith, R., & Tosh, A. (2010). Defining recovery from an eating disorder: Conceptualization, validation, and examination of psychosocial functioning and psychiatric comorbidity. *Behaviour Research and Therapy*, *48*(3), 194–202. https://doi.org/10.1016/j.brat.2009.11.001

Bardone-Cone, A. M., Hunt, R. A., & Watson, H. J. (2018). An overview of conceptualizations of eating disorder recovery, recent findings, and future directions. *Current Psychiatry Reports*, *20*(79). https://doi.org/10.1007/s11920-018-0932-9

Boerner, P. R., Polasek, K. M., True, L., Lind, E., & Hendrick, J. L. (2019). Is what you see what you get? Perceptions of personal trainers' competence, knowledge, and preferred sex of personal trainer relative to physique. *The Journal of Strength and Conditioning Research, 35*(7), 1949–1955.

Bordo, S. (1993). *Unbearable weight: Feminism, western culture, and the body.* University of California Press.

Bradbury-Jones, C., & Tranter, S. (2008). Inconsistent use of the critical incident technique in

nursing research. *Journal of Advanced Nursing*, *64*(4), 399–407. https://doi.org/10.1111/j.1365-2648.2008.04811.x

Bratland-Sanda, S., Martinsen, E. W., Rosenvinge, J. H., Rø, Ø., Hoffart, A., & Sundgot-Borgen, J. (2011). Exercise dependence score in patients with longstanding eating disorders and controls: The importance of affect regulation and physical activity intensity. *European Eating Disorders Review*, *19*(3), 249–255. https://doi.org/10.1002/erv.971

Bratland-Sanda, S., Nilsson, M. P., & Sundgot-Borgen, J. (2015). Disordered eating behavior among group fitness instructors: A health-threatening secret? *Journal of Eating Disorders*, *3*(22). https://doi.org/10.1186/s40337-015-0059-x

Bratland-Sanda, S., & Sundgot-Borgen, J. (2015). "I'm concerned – What do I do?" Recognition and management of disordered eating in fitness center settings. *International Journal of Eating Disorders*, *48*(4), 415–423. https://doi.org/10.1002/eat.22297

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, *32*(7), 513–531. https://psycnet.apa.org/doi/10.1037/0003-066X.32.7.513

Brunet, J., Del Duchetto, F., & Wurz, A. (2021). Physical activity behaviors and attitudes among women with an eating disorder: A qualitative study. *Journal of Eating Disorders*, *9*(20). https://doi.org/10.1186/s40337-021-00377-w

Brytek-Matera, A., & Czepczor, K. (2017). Models of eating disorders: A theoretical investigation of abnormal eating patterns and body image disturbance. *Archives of Psychiatry and Psychotherapy*, *19*(1), 16–26. https://doi.org/10.12740/APP/68422

Burns, M., & Gavey, N. (2004). "Healthy weight" at what cost? "Bulimia" and a discourse of weight control. *Journal of Health Psychology*, *9*(4), 549–565. https://doi.org/10.1177/1359105304044039

Butterfield, L. D., Borgen, W. A., Amundson, N. E., Maglio, A.-S. T. (2005). Fifty years of the critical incident technique: 1954–2004 and beyond. *Qualitative Research, 5*(4), 475–497. https://doi.org/10.1177/1468794105056924

Butterfield, L. D., Borgen, W. A., Maglio, A.-S. T., & Amundson, N. E. (2009). Using the enhanced critical incident technique in counselling psychology research. *Canadian Journal of Counselling*, *43*(4), 265–282.

Canadian Psychological Association. (2009, November). Definition of counselling psychology. CPA. https://cpa.ca/sections/counsellingpsychology/counsellingdefinition/

Colledge, F., Cody, R., Pühse, U., & Gerber, M. (2020). Responses of fitness center employees to cases of suspected eating disorders or excessive exercise. *Journal of Eating Disorders*, *8*(8). https://doi.org/10.1186/s40337-020-0284-9

Cook, B., Engel, S., Crosby, R., Hausenblas, H., Wonderlich, S., & Mitchell, J. (2014). Pathological motivations for exercise and eating disorder specific health-related quality of life. *International Journal of Eating Disorders*, *47*(3), 268–272. https://doi.org/10.1002/eat.22198

Cook, B. J., Wonderlich, S. A., Mitchell, J. E., Thompson, R., Sherman, R., & McCallum, K. (2016). Exercise and eating disorders treatment: Systematic review and proposal of guidelines. *Medicine and Science in Sport and Exercise*, *48*(7), 1408–1414. https://doi.org/10.1249/MSS.0000000000000912

Cruickshank, J. (2003). Introduction. In J. Cruickshank (Ed.), *Critical realism: The difference that it makes* (pp. 1–14). Routledge.

D'abundo, M. L. (2007). How "healthful" are aerobics classes? Exploring the health and wellness messages in aerobics classes for women. *Health Care for Women International*,

28(1), 21–46. https://doi.org/10.1080/07399330601001428

Donaghue, N., & Allen, M. (2016). "People don't care as much about their health as they do about their looks": Personal trainers as intermediaries between aesthetic and health-based discourses of exercise participation and weight management. *International Journal of Sport and Exercise Psychology*, *14*(1), 42–56. https://doi.org/10.1080/1612197X.2015.1016086

Eddy, K. T., Tabri, N., Thomas, J. J., Murray, H. B., Keshaviah, A., Hastings, E., Edkins, K., Krishna, M., Herzog, D. B., Keel, P. K., & Franko, D. L. (2017). Recovery from anorexia nervosa and bulimia nervosa at 22-year follow-up. *Journal of Clinical Psychiatry*, *78*(2), 184–189. https://doi.org/10.4088/JCP.15m10393

El Ghoch, M., Calugi, S., Pellegrini, M., Milanese, C., Busacchi, M., Battistini, N. C., Bernabè, J., & Dalle Grave, R. (2013). Measured physical activity in anorexia nervosa: Features and treatment outcome. *International Journal of Eating Disorders*, *46*(7), 709–712. https://doi.org/10.1002/eat.22140

Fichter, M. M., Quadflieg, N., Crosby, R. D., Koch, S. (2017) Long-term outcome of anorexia nervosa: Results from a large clincal longitudinal study. *International Journal of Eating Disorders, 50*(9), 1018–1030. https://doi.org/10.1002/eat.22736

Fisher, M. J. R., Berbary, L. A., & Misener, K. E. (2018). Narratives of negotiation and transformation: Women's experiences within a mixed-gendered gym. *Leisure Sciences*, *40*(6), 477–493. https://doi.org/10.1080/01490400.2016.1261744

Fitness Australia & InsideOut Institution. (2020). *Eating disorders: Recommendations for the Fitness Industry*. https://insideoutinstitute.org.au/assets/fitness-recommendations_final.pdf

Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin, 51*(4), 327–358.

Fletcher, A. J. (2017). Applying critical realism in qualitative research: Methodology meets

method. *International Journal of Social Research Methodology*, *20*(2), 181–194. https://doi.org/10.1080/13645579.2016.1144401

Frew, M. & McGillivray, D. (2005). Health clubs and body politics: Aesthetics and the quest for body capital. *Leisure Studies, 24*(2), 161–175. https://doi.org/10.1080/0261436042000300432

Giordano, S. (2010). *Exercise and eating disorders: An ethical and legal analysis*. Routledge.

Grogan, S. (2017). *Body image: Understanding body dissatisfaction in men, women, and children* (3rd ed.). Routledge. https://doi.org/10.4324/9781315681528

Grave, R. D., Calugi, S., Marchesini, G. (2008). Compulsive exercise to control shape or weight in eating disorders: Prevalence, associated features, and treatment outcome. *Comprehensive Psychiatry, 49*(4), 346–352. https://doi.org/10.1016/j.comppsych.2007.12.007

Hesse-Biber, S., Leavy, P., Quinn, C. E., & Zoino, J. (2006). The mass marketing of disordered eating and eating disorders: The social psychology of women, thinness and culture. *Women's Studies International Forum*, *29*(2), 208–224. https://doi.org/10.1016/j.wsif.2006.03.007

Holland, L. A., Brown, T. A., & Keel, P. K. (2014). Defining features of unhealthy exercise associated with disordered eating and eating disorder diagnoses. *Psychology of Sport and Exercise*, *15*(1), 116–123. https://doi.org/10.1016/j.psychsport.2013.10.005

Hutson, D. J. (2013). "Your body is your business card": Bodily capital and health authority in the fitness industry. *Social Science and Medicine*, *90*, 63–71. https://doi.org/10.1016/j.socscimed.2013.05.003

Khalsa, S. S., Portnoff, L. C., McCurdy-McKinnon, D., & Feusner, J. D. (2017). What happens after treatment? A systematic review of relapse, remission, and recovery in anorexia

nervosa. *Journal of Eating Disorders*, *5*(20). https://doi.org/10.1186/s40337-017-0145-3

Kilbourne, J. (1999). *Can't Buy My Love*. Touchstone.

LaMarre, A., Levine, M. P., Holmes, S., & Malson, H. (2022a). An open invitation to productive conversations about feminism and the spectrum of eating disorders (part 1): Basic principles of feminist approaches. *Journal of Eating Disorders*, *10*(54). https://doi.org/10.1186/s40337-022-00532-x

LaMarre, A., Levine, M. P., Holmes, S., & Malson, H. (2022b). An open invitation to productive conversations about feminism and the spectrum of eating disorders (part 2): Potential contributions to the science of diagnosis, treatment, and prevention. *Journal of Eating Disorders*, *10*(55). https://doi.org/10.1186/s40337-022-00572-3

LaMarre, A., & Rice, C. (2021). Recovering uncertainty: Exploring eating disorder recovery in context. *Culture, Medicine, and Psychiatry*, *45*, 706–726. https://doi.org/10.1007/s11013-020-09700-7

Löwe, B., Zipfel, S., Buchholz, C., Dupont, Y., Reas, D. L., & Herzog, W. (2001). Long-term outcome of anorexia nervosa in a prospective 21-year follow-up study. *Psychological Medicine*, *31*(5), 881–890. https://doi.org/10.1017/s003329170100407x

Manley, R. S., O'Brien, K., & Samuels, S. (2008). Fitness instructors' recognition of eating disorders and attendant ethical/liability issues. *Eating Disorders*, *16*(2), 103–116. https://doi.org/10.1080/10640260801887162

Mansfield, L., & Rich, E. (2013). Public health pedagogy, border crossings, and physical activity at every size. *Critical Public Health, 23*(3), 356–370. https://www.tandfonline.com/doi/abs/10.1080/09581596.2013.783685

Markula, P., & Chikinda, J. (2016). Group fitness instructors as local level health promoters: A

Foucauldian analysis of the politics of health/fitness dynamic. *International Journal of Sport Policy 8*(4), 625–646. https://doi.org/10.1080/19406940.2016.1220407

McBride, H. L., & Kwee, J. L. (2019). Understanding disordered eating and (dis)embodiment through a feminist lens. In H. L. McBride & J. L. Kwee (Eds.), *Embodiment and eating disorders: Theory, research, prevention, and treatment* (pp. 17–34). Routledge.

McCabe, M. P., & James, T. (2009). Strategies to change body shape among men and women who attend fitness centers. *Asia-Pacific Journal of Public Health*, *21*(3), 268–278. https://doi.org/10.1177/1010539509335498

Mehler, P. S. (2017). Medical complications of anorexia nervosa and bulimia nervosa. In S. Agras & A. Robinson (Eds.), *The oxford handbook of eating disorders*. https://doi.org/10.1093/oxfordhb/9780190620998.013.29

Mond, J., & Gorrell, S. (2021). "Excessive exercise" in eating disorders research: Problems of definition and perspective. *Eating and Weight Disorders*, *26*, 1017–1020. https://doi.org/10.1007/s40519-020-01075-3

Nahman, C., & Holland, J. (2022). Incorporating interventions for unhealthy exercise into eating disorders treatment: A survey of attitudes in those with lived experience of an eating disorder. *Sports Psychiatry*, *1*(3), 100–106. https://doi.org/10.1024/2674-0052/a000020

O'Hara L. & Gregg, J. (2006). The war on obesity: A social determinant of health. *Health Promotion Journal of Australia, 17*(3), 260–263. https://doi.org/10.1071/he06260

O'Hara, L. & Taylor, J. (2014). Health and every size: A weight-neutral approach for empowerment, resilience, and peace. *International Journal of Social Work and Human Services Practice, 2*(6), 272–282. https://doi.org/10.13189/ijrh.2014.020611

Pope, H. G., Phillips, K. A., & Olivardia, R. (2000). *The Adonis complex*. Touchstone.

Prichard, I., & Tiggemann, M. (2008). Relations among exercise type, self-objectification, and body image in the fitness centre environment: The role of reasons for exercise. *Psychology of Sport and Exercise*, *9*(6), 855–866. https://doi.org/10.1016/j.psychsport.2007.10.005

Qian, J., Wu, Y., Liu, F., Zhu, Y., Jin, H., Zhang, H., Wan, Y., Li, C., & Yu, D. (2022). An update on the prevalence of eating disorders in the general population: A systematic review and meta-analysis. *Eating and Weight Disorders*, *27*, 415–428. https://doi.org/10.1007/s40519-021-01162-z

Quesnel, D. A., Libben, M., Oelke, N. D., Clark, M. I., Willis-Stewart, S., & Caperchione, C. M. (2018). Is abstinence really the best option? Exploring the role of exercise in the treatment and management of eating disorders. *Eating Disorders The Journal of Treatment and Prevention*, *26*(3), 290–310. https://doi.org/10.1080/10640266.2017.1397421

Rich, E. & Evans, J. (2005). "Fat ethics" – The obesity discourse and body politics. *Social Theory and Health, 3*, 341–358. https://doi.org/10.1057/palgrave.sth.8700057

Shroff, H., Reba, L., Thornton, L. M., Tozzi, F., Klump, K. L., Berrettini, W. H., Brandt, H., Crawford, S., Crow, S., Fichter, M. M., Goldman, D., Halmi, K. A., Johnson, C., Kaplan, A. S., Keel, P., LaVia, M., Mitchell, J., Rotondo, A., Strober, M. … Bulik, C. (2006). Features associated with excessive exercise in women with eating disorders. *International Journal of Eating Disorders*, *39*(6), 454–461. https://doi.org/10.1002/eat.20247

Smith, A. R., Fink, E. L., Anestis, M. D., Ribeiro, J. D., Gordon, K. H., Davis, H., Keel, P. K., Bardone-Cone, A. M., Peterson, C. B., Klein, M. H., Crow, S., Mitchell, J. E., Crosby, R. D., Wonderlich, S. A., le Grange, D., & Joiner, T. E. (2013). Exercise caution: Over-exercise is associated with suicidality among individuals with disordered eating. *Psychiatry Research*, *206*(2–3), 246–255. https://doi.org/10.1016/j.psychres.2012.11.004

Solenberger, S. E. (2001). Exercise and eating disorders: A 3-year inpatient hospital record analysis. *Eating Behaviors*, *2*(2), 151–168. https://doi.org/10.1016/S1471-0153(01)00026-5

Standing Committee on the Status of Women (2014). Eating disorders among girls and women in Canada. https://www.ourcommons.ca/DocumentViewer/en/41-2/FEWO/report-4

Stice, E., Marti, C. N., & Rohde, P. (2012). Prevalence, incidence, impairment, and course of the proposed DSM-5 eating disorder diagnoses in an 8-year prospective community study of young women. *Journal of Abnormal Psychology*, *122*(2), 445–457. https://doi.org/10.1037/a0030679

Strings, S. (2019). *Fearing the black body: The racial origins of fat phobia*. New York University Press.

Swainson, Y., & Philip-Rafferty, S. (2018). Management of over activity and compulsive exercise in the treatment of people with eating disorders. In J. Morris & A. McKinlay (Eds.), *Multidisciplinary management of eating disorders* (pp. 143–158). Springer. https://doi.org/10.1007/978-3-319-64131-7_8

Thome, J. L., & Espelage, D. L. (2007). Obligatory exercise and eating pathology in college females: Replication and development of a structural model. *Eating Behaviors*, *8*(3), 334–349. https://doi.org/10.1016/j.eatbeh.2006.11.009

van Hoeken, D., & Hoek, H. W. (2020). Review of the burden of eating disorders: Mortality, disability, costs, quality of life, and family burden. *Current Opinion in Psychiatry*, *33*(6), 521–527. https://doi.org/10.1097/YCO.0000000000000641

Wasilenko, K. A., Kulik, J. A., & Wanic, R. A. (2007). Effects of social comparisons with peers on women's body satisfaction and exercise behavior. *International Journal of Eating Disorders*, *40*(8), 740–745. https://doi.org/10.1002/eat.20433

Wojtowicz, A. E., Alberga, A. S., Parsons, C. G., & von Ranson, K. M. (2015). Perspectives of Canadian fitness professionals on exercise and possible anorexia nervosa. *Journal of Eating Disorders*, *3*(40). https://doi.org/10.1186/s40337-015-0074-y

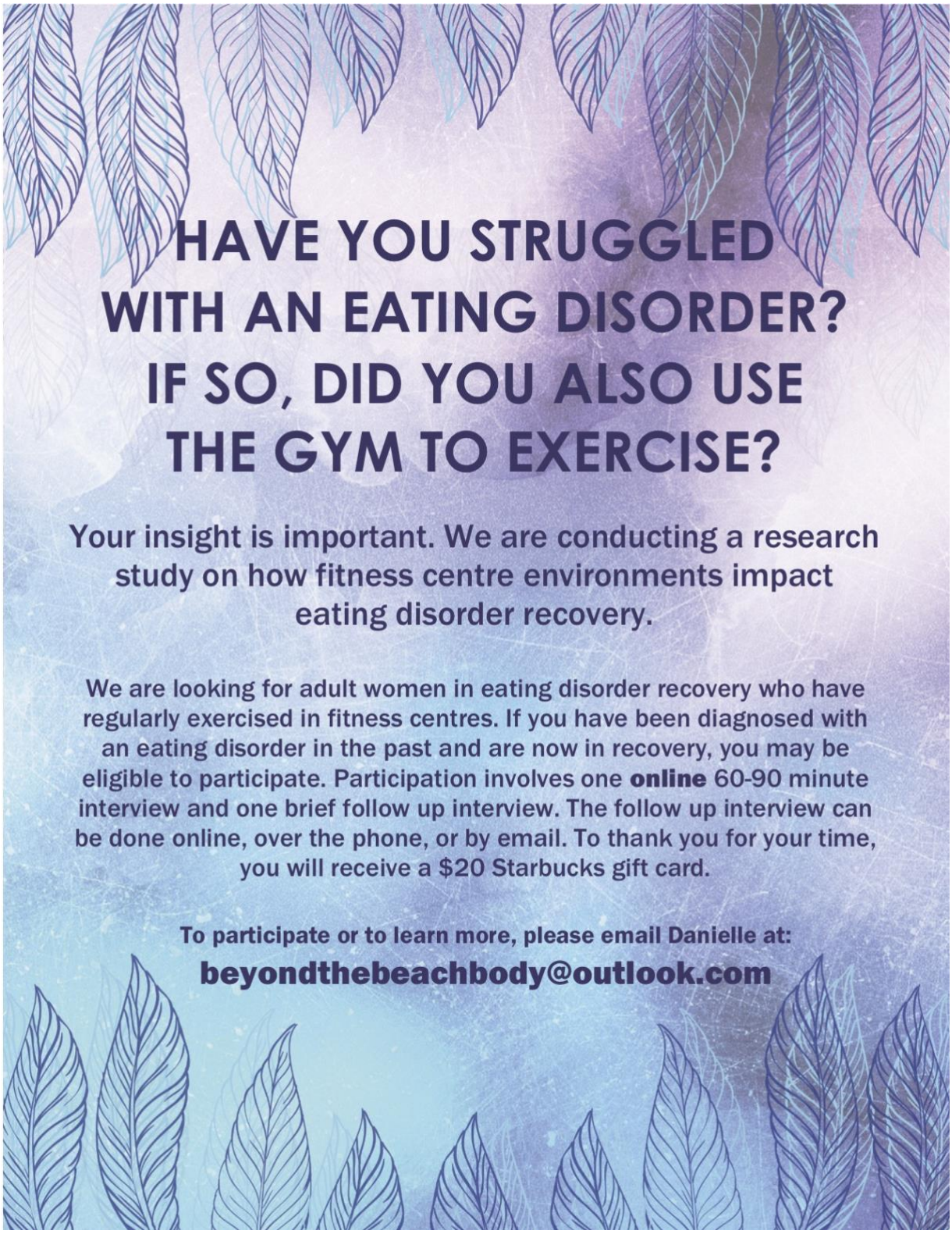
Wonderlich, S., Mitchell, J. E., Crosby, R. D., Myers, T. C., Kadlec, K., Lahaise, K., & Schander, L. (2012). Minimizing and treating chronicity in the eating disorders: A clinical overview. *International Journal of Eating Disorders*, *45*(4), 467–475. https://doi.org/10.1002/eat.20978

Worsfold, K. A., & Sheffield, J. K. (2018a). Eating disorder mental health literacy: What do psychologists, naturopaths, and fitness instructors know? *Eating Disorders*, *26*(3), 229–247. https://doi.org/10.1080/10640266.2017.1397420

Worsfold, K. A., & Sheffield, J. K. (2018b). The perceived knowledge, skill and clinical practice of psychologists, naturopaths and fitness instructors when working with eating disorders. *Early Intervention in Psychiatry*, *13*(5), 1019-1289. https://doi.org/10.1111/eip.12764

APPENDIX A

Recruitment Poster



APPENDIX B

Phone Screening Interview

Introduce self as a master's student in counselling psychology from Trinity Western University.

- Briefly explain the study and its purpose.
- Explain that participation will involve a 60-90 minute interview and later on, a brief follow-up interview that may take place in person, by email, or over the phone.
- Explain that I am looking for adult women who are in ED recovery and who have had experiences in the gym or fitness environment that impacted their ED (positively or negatively) that they would be willing to share.

Explain that I just need to ask a few screening questions to see whether or not they are a fit for this study:

- Have you ever been diagnosed with anorexia or bulimia? How long ago was this?
- How long have you been in recovery?
- Are you currently receiving any inpatient or medical support of any kind?
- Are you currently in any outpatient treatment programs or individual counselling for your ED?
- When your ED was at its worst, did you exercise in a gym or fitness centre of some kind? What did your exercise routine look like? Did you use or interact or work with a personal trainer, fitness instructor, or another kind of fitness professional?
- Are you willing to commit to a 60-90 minute interview, and a brief follow-up interview?

If they are a fit:

- Let them know they are a fit; ask them if they are still interested in participating, and if they have any questions.
- Thank them for their time and arrange next steps to set up an interview.

If they are not a fit:

- Thank them for their interest and explain that because the parameters of this research are strict, many interested participants fall outside the scope of this project
- Offer them a copy of the Community Resources list

APPENDIX C

Community Resources

Thank you for your interest in this study.

If you are experiencing distress and are in need of resources or support, there are some local resources listed below.

BC Crisis Line: 604-872-3311

Kelty Eating Disorder Crisis Line: 310-6789

Fraser River Counselling
604-513-2113
www.fraserrivercounselling.ca

Langley Community Services
604-534-7921
info@lcss.ca
https://www.lcss.ca

If you have any questions or concerns about this research project, please do not hesitate to contact Danielle Raymond or her supervisor, Dr. Janelle Kwee.

Danielle Raymond: [redacted]
Dr. Janelle Kwee: [redacted]

You may also contact Elizabeth Kreiter in the Office of Research at Trinity Western University at [redacted]

If you are in need of resources and none of the above resources work for you, please contact Danielle Raymond at the contact information listed above, and she can direct you to additional resources.

Thank you again for your interest in this study.

APPENDIX D

Participant Informed Consent Form: In-Person Version

Study Title: Beyond the Beach Body: How the Fitness Industry Can Help Gym Members with Eating Disorders

Principal Investigator: Danielle Raymond, M.A. student in Counselling Psychology, Trinity Western University. Contact number [redacted]

Faculty Supervisor: Janelle Kwee, PsyD, Faculty of Graduate Studies, Counselling Psychology, Trinity Western University. Contact number [redacted]

Purpose: The purpose of this study is to investigate women's eating disorder recovery in the context of the fitness centre environment. Specifically, this study aims to better understand the helping and hindering factors related to gym exercise and the impact of these factors on eating disorder recovery.

Procedures: The method chosen to conduct this research places value on the unique experience and input of each woman. To be eligible to participate, you must be an adult woman who has been previously diagnosed with anorexia, bulimia, or a subclinical eating disorder. You must be medically stable and in recovery. Lastly, you must have had experience being engaged in excessive or problematic exercise in a fitness centre environment. You will be asked to participate in one audio-taped interview where you will be asked questions about any helpful and unhelpful experiences you have had exercising in a gym environment. This interview will last approximately 1 to 1.5 hours and will occur at a Trinity Western University's Langley campus or at a different mutually agreeable location. Once your interview has been transcribed and organized into themes, you will be asked to participate in a short (15-30 minute) follow-up interview that can occur in person, over the phone, or via email. The purpose of this is to give you a chance to change, add, or remove any of the content of your interview. Your responses will be made anonymous, labelled only with your participant number, and will be compiled with the responses of all other participants. In addition, some basic demographic information about each participant will be collected, as well a "scaling" question where we ask you to rate an aspect of your experience. This data will also be stored under your participant number and will never be connected to your name or other probable identifying information. The results of this study will be made available to you upon completion.

Potential Risks and Discomforts: Participating in this study may cause you to experience some emotional discomfort while discussing some of the challenging aspects of your eating disorder experience. If you are experiencing emotional distress, you will be treated in an emotionally supportive manner and will be offered referrals to a clinical counsellor, if desired. You also can skip questions, pause, or take breaks at any time during the interview.

Potential Benefits to Participants and/or to Society: Participating in this study will help researchers and those who work in the fitness industry better understand what aspects of the gym/fitness experience are helpful and unhelpful to women struggling with eating disorders, disordered eating, body image dissatisfaction, and related issues. Having a better understanding of the relationship between eating disorders and exercise will help inform and guide personal trainers, group fitness instructors and others working in the fitness industry. In addition, women may find sharing part of their eating disorder story to be a helpful and informative experience.

Confidentiality: Any identifying information about you that is obtained in this study will remain confidential. Only non-identifying information will be reported in the final analysis. Exceptions to maintaining confidentiality are if there is reasonable belief that you are a threat to yourself or others, if you disclose abuse of children or vulnerable adults, or if a court orders the release of information. A participant number will be assigned to you when you sign this consent form, and all of the data collected will be associated only with your participant number. Audio recordings and transcripts will be kept in a password protected folder on the researcher's computer. Paper copies of transcripts will be kept in a locked filing cabinet, which is located in the researcher's locked office. Upon completion of the study, the researcher will retain copies of the anonymized transcripts for follow up or future research purposes. Audio files will be deleted after the analyses are complete.

Remuneration/Compensation: To thank you for your time, you will be provided with a $20 Starbucks gift card. Should you decide to withdraw partway through your participation in the study, you may still keep the gift card.

Contact for information about the study: If you have any questions or desire further information with respect to this study, you may contact Danielle Raymond [redacted] or Dr. Janelle Kwee [redacted]

Contact for concerns about the rights of research participants: If you have any concerns about your treatment or rights as a research participant, you may contact Elizabeth Kreiter in the Office of Research, Trinity Western University at [redacted]

Consent: Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy or loss of compensation. If you wish to withdraw your data at any time during the data analysis process, you may contact the principal investigator, Danielle Raymon [redacted], or Dr. Janelle Kwee [redacted] After your interview has been integrated into the full dataset, it may no longer be removed; however, transcripts and audio recordings may still be destroyed upon your request.

Signatures

Your signature below indicates that you have had your questions about the study answered to your satisfaction and have received a copy of this consent form for your own records. Your signature indicates that you consent to participate in this study and that your

responses may be put in anonymous form and kept for further use after the completion of this study.

_____ _____

Research Participant Signature Date

_____

Printed Name of the Research Participant signing above

Participant Informed Consent Form: Online Version

Study Title: Beyond the Beach Body: How the Fitness Industry Can Help Gym Members with Eating Disorders

Principal Investigator: Danielle Raymond, M.A. student in Counselling Psychology, Trinity Western University. Contact numbe [redacted]

Faculty Supervisor: Janelle Kwee, PsyD, Faculty of Graduate Studies, Counselling Psychology, Trinity Western University. Contact numbe [redacted]

Purpose: The purpose of this study is to investigate women's eating disorder recovery in the context of the fitness centre environment. Specifically, this study aims to better understand the helping and hindering factors related to gym exercise and the impact of these factors on eating disorder recovery.

Procedures: The method chosen to conduct this research places value on the unique experience and input of each woman. To be eligible to participate, you must be an adult woman who has been previously diagnosed with anorexia, bulimia, or a subclinical eating disorder. You must be medically stable and in recovery. Lastly, you must have had experience being engaged in excessive or problematic exercise in a fitness centre environment. You will be asked to participate in one video recorded interview where you will be asked questions about any helpful and unhelpful experiences you have had exercising in a gym environment. This interview will last approximately 1 to 1.5 hours and will take place over Zoom or another mutually agreed upon online platform. Once your interview has been transcribed and organized into themes, you will be asked to participate in a short (15-30 minute) follow-up interview that can occur via an online video conferencing platform, phone, or email. The purpose of this second interview is to give you a chance to change, add, or remove any of the content of your first interview. Your responses will be made anonymous, labelled only with your participant number, and will be compiled with the responses of all other participants. In addition, some basic demographic information about each participant will be collected, as well a "scaling" question where we ask you to rate an aspect of your experience. This data will also be stored under your participant number and will never be connected to your name or other probable identifying information. The results of this study will be made available to you upon completion.

Potential Risks and Discomforts: Participating in this study may cause you to experience some emotional discomfort while discussing some of the challenging aspects of your eating disorder experience. If you are experiencing emotional distress, you will be treated in an emotionally supportive manner and will be offered referrals to a clinical counsellor, if desired. You also can skip questions, pause, or take breaks at any time during the interview.

Potential Benefits to Participants and/or to Society: Participating in this study will help researchers and those who work in the fitness industry better understand what aspects of the gym/fitness experience are helpful and unhelpful to women struggling with eating disorders,

disordered eating, body image dissatisfaction, and related issues. Having a better understanding of the relationship between eating disorders and exercise will help inform and guide personal trainers, group fitness instructors and others working in the fitness industry. In addition, women may find sharing part of their eating disorder story to be a helpful and informative experience.

Confidentiality: Any identifying information about you that is obtained in this study will remain confidential. Only non-identifying information will be reported in the final analysis. Exceptions to maintaining confidentiality are if there is reasonable belief that you are a threat to yourself or others, if you disclose abuse of children or vulnerable adults, or if a court orders the release of information. A participant number will be assigned to you when you sign this consent form, and all of the data collected will be associated only with your participant number. The recordings and transcripts will be kept in a password protected folder on the researcher's hard drive. Paper copies of transcripts will be kept in a locked filing cabinet, which is located in the researcher's locked office. Upon completion of the study, the researcher will retain copies of the anonymized transcripts for follow up or future research purposes. Audio and video files will be deleted after the analyses are complete.

Remuneration/Compensation: To thank you for your time, you will be provided with a $20 Starbucks gift card. Should you decide to withdraw partway through your participation in the study, you may still keep the gift card.

Contact for information about the study: If you have any questions or desire further information with respect to this study, you may contact Danielle Raymond [redacted] or Dr. Janelle Kwee [redacted]

Contact for concerns about the rights of research participants: If you have any concerns about your treatment or rights as a research participant, you may contact Elizabeth Kreiter in the Office of Research, Trinity Western University at [redacted]

Consent: Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy or loss of compensation. If you wish to withdraw your data at any time during the data analysis process, you may contact the principal investigator, Danielle Raymond [redacted] or Dr. Janelle Kwee [redacted] After your interview has been integrated into the full dataset, it may no longer be removed; however, transcripts and audio recordings may still be destroyed upon your request.

Signatures

Typing your name below or supplying a digital signature in lieu of a handwritten signature indicates that you have had your questions about the study answered to your satisfaction and have received a copy of this consent form for your own records. Your typed or digital signature indicates that you consent to participate in this study and that your responses may be put in anonymous form and kept for further use after the completion of this study.

_____ _____

Research Participant Signature Date

_____

Printed Name of the Research Participant signing above

APPENDIX E

Demographic Questionnaire[20]

1. What is your age? _____

2. What is your ethnic origin?

- White
- Black
- Hispanic or Latin American
- Asian
- Indigenous
- Arab or West Indian
- South Asian
- Other, please specify _____

3. What is the highest level of education you have completed?

- Some high school
- Grade 12
- Diploma or certificate
- Some college/university
- Trade or technical school
- Associate degree
- Bachelor's degree
- Master's degree
- Doctoral degree
- Professional degree

4. What is your marital status? _____

5. Who lives in your household? _____

6. What is your employment status? _____

7. Do you currently exercise in a fitness centre or similar environment? _____

If so, how often? _____

[20] The language and questions researchers use in the collection of demographic data often change over time. Although this demographic questionnaire was created using guidance that was current when this study was designed, it is possible that some aspects of this demographic questionnaire may eventually be considered outdated.

APPENDIX F

ECIT Interview Guide: Gym Experiences and Eating Disorder Recovery Semi-Structured Interview Protocol

Participant #: _____ Date: _____

Interview Start Time: _____

1. Contextual Component
Preamble: As you know, I am investigating experiences you have had at the gym that impacted your eating disorder recovery. The purpose of this interview is to collect information about these experiences (whether they were positive or negative) so that we can better understand how the fitness centre environment—and exercise in general—impacts the process of recovering from an eating disorder.

a) As a way of getting started, perhaps you could share with me a little bit about your experience with your eating disorder.

b) On a scale of 0 – 10, where 10 is having no eating disorder thoughts/behaviours, 5 is doing okay, and 0 is still struggling a lot with eating disorder thoughts/behaviours, where would you place yourself?

0 1 2 3 4 5 6 7 8 9 10

c) You volunteered to participate in this study because you identified yourself as being in recovery from an eating disorder. What does "recovery" in the context of an eating disorder mean to you?

d) What role has exercise played in your eating disorder? Have you always exercised this way?

2. Critical Incident Component (Helpful and Hindering Incidents)
Transition to Critical Incident questions:

a) (Helping): What about exercising at the gym has helped you in your recovery? (Alternate: What happened that has helped you exercise in a healthy way?)

Probes:
- What was the incident/factor?
- How did it impact you?
- How is it helping?
- Can you give me a specific example where it helped?
- What was the outcome?

Helpful Factor & What it Means to Participant: What do you mean by ...?	Importance: How did it help? Tell me what it was about … that you find so helpful?	Example: What led up to it? What was the outcome of incident?

b. (Hindering): What sort of things have happened in the gym that have made your eating disorder worse?

Probes:

- What was the incident/factor?
- How did it impact you?
- How is it helping?
- Can you give me a specific example where it helped?
- What was the outcome?

Hindering Factor & What it Means to Participant: What do you mean by ...?	Importance: How did it hinder? Tell me what it was about … that you find so unhelpful?	Example: What led up to it? What was the outcome of incident?

c. Summarize what has been discussed up to this point with the participant as a transition to the **WL question**: We've talked about the gym experiences that have helped support your recovery (name them), and some of the things that have made it more difficult for you (name them). I wonder what else might have been helpful to you that you have not had access to? (Alternate question: Are there other things/experiences that you did not get that would have helped your recovery?)

Wish List Item & What it Means to Participant: What do you mean by ..?	Importance: How would it help? Tell me what it is about .. that you would find so helpful?	Example: In what circumstances might this be helpful?

Adapted from Tracking Guide provided in Butterfield, L., Borgen, W., Maglio, A., & Amundson, N. (2009). Using the Enhanced Critical Incident Technique in Counselling Psychology Research. Canadian Journal of Counselling, 43(4), 265-282. Retrieved from ERIC database.

APPENDIX G

Debriefing Form for Residents of British Columbia

At this time, we wish to thank you for your participation in the study titled 'Beyond the Beach Body: How the Fitness Industry Can Help Gym Members with Eating Disorders.' We have greatly appreciated the opportunity to learn from your experiences. We believe that your input in this study will eventually help people who work in the fitness industry understand how to help those who they suspect might have an eating disorder. We believe that your input in the study may also help those who work in the eating disorder field better understand how gym exercise and the gym environment can impact eating disorders.

If you would you like to receive a summary or full report of the findings when the study is completed, please contact Danielle Raymond using the contact information listed below. If you have any questions about the research or your participation, please contact Danielle Raymond or Dr. Janelle Kwee using the contact information listed below.

Danielle Raymond [redacted]
Dr. Janelle Kwee [redacted]

If you have any questions about your treatment or rights as a research participant, you may contact Elizabeth Kreiter in the Office of Research at Trinity Western University a [redacted]

If you are experiencing distress at a later time and are in need of resources or support, there are some local resources listed below.

BC Crisis Line: 604-872-3311

Kelty Eating Disorder Crisis Line: 310-6789

Fraser River Counselling
604-513-2113
www.fraserrivercounselling.ca

Langley Community Services
604-534-7921
info@lcss.ca
https://www.lcss.ca

If you are in need of resources and none of the above resources work for you, please contact Danielle Raymond at the contact information listed above, and she can direct you to additional resources.

Thank you again for your participation.

Debriefing Form for Residents of Ontario

At this time, we wish to thank you for your participation in the study titled 'Beyond the Beach Body: How the Fitness Industry Can Help Gym Members with Eating Disorders.' We have greatly appreciated the opportunity to learn from your experiences. We believe that your input in this study will eventually help people who work in the fitness industry understand how to help those who they suspect might have an eating disorder. We believe that your input in the study may also help those who work in the eating disorder field better understand how gym exercise and the gym environment can impact eating disorders.

If you would you like to receive a summary or full report of the findings when the study is completed, please contact Danielle Raymond using the contact information listed below. If you have any questions about the research or your participation, please contact Danielle Raymond or Dr. Janelle Kwee using the contact information listed below.

Danielle Raymond: [redacted] Dr. Janelle Kwee: [redacted]

If you have any questions about your treatment or rights as a research participant, you may contact Elizabeth Kreiter in the Office of Research at Trinity Western University at [redacted]

If you are experiencing distress at a later time and are in need of resources or support, there are some resources listed below.

Toll-Free NEDIC Helpline: 1-866-NEDIC-20

NEDIC online chat (available through their website): https://nedic.ca

Canadian Mental Health Association (Ontario):
https://ontario.cmha.ca/documents/understanding-and-finding-help-for-eating-disorders/

Crisis lines (searchable by province) can be found here:
https://www.crisisservicescanada.ca/en/looking-for-local-resources-support/

If you are in need of resources and none of the above resources work for you, please contact Danielle Raymond at the contact information listed above, and she can direct you to additional resources.

Thank you again for your participation.

Debriefing Form for Residents of Other Provinces

At this time, we wish to thank you for your participation in the study titled 'Beyond the Beach Body: How the Fitness Industry Can Help Gym Members with Eating Disorders.' We have greatly appreciated the opportunity to learn from your experiences. We believe that your input in this study will eventually help people who work in the fitness industry understand how to help those who they suspect might have an eating disorder. We believe that your input in the study may also help those who work in the eating disorder field better understand how gym exercise and the gym environment can impact eating disorders.

If you would you like to receive a summary or full report of the findings when the study is completed, please contact Danielle Raymond using the contact information listed below. If you have any questions about the research or your participation, please contact Danielle Raymond or Dr. Janelle Kwee using the contact information listed below.

Danielle Raymond: [redacted] Dr. Janelle Kwee: [redacted]

If you have any questions about your treatment or rights as a research participant, you may contact Elizabeth Kreiter in the Office of Research at Trinity Western University a [redacted]

If you are experiencing distress at a later time and are in need of resources or support, there are some resources listed below.

Toll-Free NEDIC Helpline: 1-866-NEDIC-20

NEDIC online chat (available through their website): https://nedic.ca

Crisis lines (searchable by province) can be found here:
https://www.crisisservicescanada.ca/en/looking-for-local-resources-support/

If you are in need of resources and none of the above resources work for you, please contact Danielle Raymond at the contact information listed above, and she can direct you to additional resources.

Thank you again for your participation.

APPENDIX H

Confidentiality Agreement for Transcribers

GENERAL CONFIDENTIALITY AND NONDISCLOSURE AGREEMENT

WHEREAS, representatives of the Graduate Program in Counselling Psychology (CPSY) at Trinity Western University (TWU) agree to furnish _____ certain confidential information for the purpose of engaging in a professional psychology graduate training placement as a visiting clinical scholar in the CPSY program at TWU.

WHEREAS, _____ agrees to review, examine, inspect or obtain such confidential information only for the purposes described above, and to otherwise hold such information confidential pursuant to the terms of this Agreement.

BE IT KNOWN, that representatives of CPSY at TWU have or shall furnish to _____ certain confidential information and may further allow _____ the right to discuss or interview representatives of CPSY at TWU on the following conditions:

1. _____ agrees to hold confidential or proprietary information or trade secrets ("confidential information") in trust and confidence and agrees that it shall be used only for the contemplated purposes, shall not be used for any other purpose, or disclosed to any third party.

2. No copies will be made or retained of any written information or prototypes supplied without the permission of the Graduate Program in Counselling Psychology at Trinity Western University

3. At the conclusion of any discussions, or upon demand by the Graduate Program in Counselling Psychology at Trinity Western University, all confidential information, including written notes and electronic files, shall be returned to the Graduate Program in Counselling Psychology at Trinity Western University and deleted from personal records.

4. Confidential information shall not be disclosed to any employee, consultant or third party unless they agree to execute and be bound by the terms of this Agreement, and have been approved by the Graduate Program in Counselling Psychology at Trinity Western University.

5. This Agreement and its validity, construction and effect shall be governed by the laws of British Columbia.

AGREED AND ACCEPTED BY:

Date:_____

By_____ Witness:_____

Title:_____

By_____Witness:_____

Title: Site Supervisor and Placement Coordinator

APPENDIX I

Second Interview Email

Thank you so much for your patience and participation in this research project. I hope you and your loved ones are well during these difficult times.

I am emailing you today about the second interview. This is the final part of your participation in this research project. There are two main reasons for this final interview: 1) It gives you the opportunity to review (and if necessary, revise or clarify) the incidents/factors from your first interview, and 2) It helps me clarify any pieces of information provided during your initial interview.

Attached to this email is a PDF with the incidents/factors you provided in your interview and the categories they have been placed in. The titles are in point form, and I know your interview took place quite some time ago, so please feel free to ask for clarification if you're unsure about anything.

After you've had a chance to review your incidents/factors and the categories into which they've been placed, there are some questions to answer below, most of which are likely to be quick yes or no responses. You are absolutely welcome to provide additional details if you'd like.

1) Are the helping, hindering, and wish list items correct?
2) Is there anything missing or that needs revising?
3) Do you have any other comments?
4) Do the category headings make sense to you?
5) Do the category headings capture your experience and the meaning that the incident/factor had for you?
6) Are there any incidents/factors in the categories that, from your perspective, do not appear to fit? If so, where do you think they belong?

I also have one quick question for you pertaining to one of your incidents/factors that I was hoping to clarify. With your permission, I can either send that question via email or if you'd like to send me a few dates and times, I can call you over the phone (or zoom) and we can go over it that way.

And lastly, two final things: Would you like to be sent a copy of the research when it is complete? And what would you like your pseudonym to be?

Please let me know if you have any questions. Looking forward to hearing back from you at your earliest convenience.

With gratitude,

Danielle

APPENDIX J

List of Categories with CIs and WL Codes

Green denotes helping CIs, red denotes hindering CIs, and purple denotes WL items.

ED literacy (n=9)
No ED screening
Personal trainer was dismissive/not knowledgeable about ED
Personal trainer took weight and body fat percentage after ED was disclosed
Have nutritionist/ED resources in gym
Offer ED support, accurate nutrition info
Information on warning signs of EDs/excessive exercise
Be careful with personal trainer referrals (don't funnel everyone to bodybuilder personal trainers)
Staff should complete training on their own biases regarding EDs
ED awareness/sensitivity training for staff
They should ask if there's a history of an ED
Staff should have training on EDs (and policies on how to handle this)
Mandatory education/training on EDs for personal trainers and staff

Toxic Ambient Gym Culture (n=8)
Constant pressure to work out
Gym focused on "fixing" body
Bodybuilding posters/ads in gym
"Before-and-after" promotional ads in gym
Diet food/smoothies sold in gyms
Posters of "super fit" bodies in gym
Weight loss promotions/contests in gym
Diet food sold in gym
Advertising diet food in gym
Gym sending emails about diets and fat burning
Gym website displayed calories burned in each class
"Before-and-after" photos in gym
Ads in gym/social media pushing overexercising
More inclusive, more positive messaging
Show different body types on posters/ads
More positive messages

Toxic Interpersonal Gym Culture (n=8)
Personal trainer gave food plan
Personal trainers didn't humanize themselves
Personal trainers gave restrictive meal plan, pushed bodybuilding
Gym and group trainers emphasized pushing/burning calories
Personal trainers gave diet plan/advice
Staff praised ED behaviour
When group trainers focused on calories /diet talk

When group trainers focused on pushing/burning calories
Ask why when someone says they want to lose weight
Be sensitive to cultural and food needs/don't give diet plans
Don't push/assume weight loss
Ask why when weight loss is the person's goal
Don't encourage comparing/pushing (listen to body instead)
Don't focus on weight loss/"fixing" body
Don't focus on weight loss, be mindful of comments
Don't focus on weight loss (preach mental aspect of exercise)

Numbers-Based Assessments (n=7)
Staff weighed me on scale
Use of BMI
Presence of BMI charts
Presence of scale
Scale gave print out of body fat percentage
Body fat scan/assessment
Bootcamp with body fat and weight assessment
Fitness assessment focused on "fixing" body
Presence of the scale
Don't focus on numbers
Move scale to an office
Move scale or have staff provide access
Wish there was no scale

Healthy Ambient Gym Culture (n=6)
Judo gym gave sense of community
When the gym staff are welcoming
Moved to a more welcoming/caring gym
No weight loss culture at specialized activity gym
Being in a healthier gym that focused on yoga/embodiment
Being at gyms that weren't weight loss-focused
Would be good if gyms were more holistic (overall health/mental health)
Should encourage rest (don't use emails to pressure)
Should encourage balance and rest

Recovery Versus the ED (n=5)
Group class curtailed excessive exercise
Started to listen to my body
Realizing excessive exercise is part of ED
Hired and set boundaries with a personal trainer (to help with excessive exercise)
Feeling strong and capable
Changed my mindset and started listening to my body
Group classes curtailed calorie counting during exercise and made exercise fun
Personal trainer taught me weight lifting and injury prevention
Multiple daily workouts at more than one different gym

Multiple daily workouts spread out over several different gyms and yoga studios
Obligatory exercise (felt physically strong, mentally weak)

Healthy Interpersonal Gym Culture (n=5)
When coaches talked about functional fitness
When staff were good role models
Personal trainer encouraged rest
Personal trainer helped redefine my relationship with exercise and health
Personal trainer shifted my narrative around food
Classes were helpful when group trainers were welcoming and encouraging
When personal trainers were encouraging (not perfectionistic)
When group trainers didn't focus on calories and fat
When classes weren't centered on weight loss and were supportive/fun

Other Gym Exercisers/Gym Friends (n=5)
Supportive friends at gym
Unsolicited comment: "HIIT workouts are better because you lose weight faster"
People complimenting and praising fitness/exercise
Praise and comments for weight loss and exercise (from staff and others)
Staff/gym people were "friends with ED"
Gym friends were not real friends
Comments on body/exercise

Comparison Behaviour (n=4)
Comparing self to other exercisers (e.g., "others are more fit than me")
Comparing self to other exercisers (e.g., "they stayed longer so I should too")
Comparing self to other exercisers (dress code helped)
Comparing self to other exercisers (e.g., "made me want to push harder")
Mirrors and body checking

Exercise Guidelines (n=4)
Felt unequipped, didn't know how to use gym, how long to exercise
Didn't know how long to spend at the gym
A guide to the gym (health-related fitness guidance)
"Beginner program": what to do/how much time to spend there
Offer classes <1hr long

Co-ed Section Versus Women's Only Section (n=4)
Women's section felt less physique-focused than co-ed section
Weight loss emphasized for women (different equipment in women's section)
Objectification/proving self (especially around men)
Feeling unwelcome in "men's section"

Staff Intervention (n=3)
Instructor intervened
Personal trainer intervened

Staff didn't intervene when they should have
Staff could intervene (don't be afraid to say something)
Staff should intervene (“I wish I would have been sent home”)

Body Diversity of Staff Members (n=3)
When fitness staff had different body types
All instructors had same "fit" body type
Have instructors of all different sizes

APPENDIX K

Recommendations for Gyms, Staff, and Professional Associations

The following recommendations for gyms, staff, and professional associations are based on the data from this study. It may also be useful for all parties to also review Fitness Australia and InsideOut's (2020) guidelines entitled *Eating Disorders: Recommendations for the Fitness Industry*.

Recommendations for Staff and Fitness Professionals

1. Working With Clients: DOs and DON'Ts

a) **DO** screen your clients for eating disorders. This can be done during the first session simply by adding a yes/or question (e.g., "Do you have a previous or current eating disorder?") to the other health questions that you already ask new clients.

b) **DO** consider challenging clients' stated weight loss goals instead of accepting these at face value. For clients who are committed to weight loss, consider encouraging them to also add a non-weight, non-appearance goal.

c) **DO** say something if you have concerns about someone. Although this may feel awkward, not saying something conveys indifference, or worse, approval.

d) **DO** model and encourage balance and rest.

e) **DO** talk about benefits of exercise that are not related to weight or appearance (e.g., mood boosting, more energy, feeling strong, injury prevention, enjoyment, training for a sport, learning something new, etc.).

f) **DO** seek additional training and information on eating disorders, weight bias, and fat phobia. Be aware of your own biases about weight and body size, and do not impose these on clients.

g) **DON'T** frame exercise around calorie burning, appearance (e.g., toning), weight loss, or compensation for eating "bad" food.

h) **DON'T** compliment weight loss, and do not compliment people for attending the gym more frequently or excessively.

i) **DON'T** give food or diet plans to clients or gym members.

j) **DON'T** automatically weigh people, test their body fat percentages, or calculate their BMI on intake or at any other time.

Recommendations for Gym Owners, Operators, and Supervisory Staff

1. Policies and Procedures

a) Screen *all* members for eating disorders. This can be done several ways, one of which is by adding a yes/or question (e.g., "Do you have a previous or current eating disorder?") to the other health questions that are already asked when someone purchases a membership.

b) Hire and retain trainers and staff of all sizes.

c) Offer classes that are less than one hour.

d) Do not use email reminders to pressure people to attend the gym.

e) Offer new members basic information about how to use the gym and the equipment. Emphasize using the gym safely and not excessively. Normalize less intense forms of exercise and shorter workouts.

f) Do not frame intakes for new members around weight loss goals.

g) Encourage staff to intervene if they are concerned about someone. Develop a set of procedures on how such situations should be handled (i.e., who can staff ask for support and help with approaching a member, etc.).

2. Physical Space and Advertisements

a) Remove or relocate scales. If you do not want to remove the scales, consider moving them into an office or behind the front desk.

b) Remove or reduce the number of posters and images that glorify and promote bodybuilders and "super fit" looking people. Instead, use (or add) images of people who look different and who are in bodies of all shapes and sizes.

c) Do not use before-and-after weight loss images or advertisements. Use images of real people playing sports or doing other activities they enjoy.

d) Do not display quotes or images that encourage pushing to the max, ignoring bodily signals or pain. Instead, display more positive, inclusive messaging that encourages having fun, honouring limits, appreciating and respecting one's body, etc.

e) Remove calorie counts from classes and food items.

3. Referrals and Health Information

a) Display, or make available, general, weight-neutral information about exercise, nutrition, and health that does *not* endorse dieting, food restriction, or weight loss.

b) Display, or make available, general information about warning signs of eating disorders and excessive or problematic exercise.

c) Create or procure a referral list of counsellors, dieticians, and supportive websites to give to people who disclose an eating disorder, disordered eating, excessive exercise, or other related issues. Consider displaying this information on the gym's website and social media pages.

4. General Culture

a) Do not frame your business around weight loss and appearance. Use non-weight loss reasons to attract and retain gym members (e.g., building strength, boosting mood, increasing energy, overall health, etc.).

b) Remove diet food items or de-emphasize the "diet" or "health" aspects of food items that are for sale in the gym. Consider adding "regular" or non-diet food items to menus.

c) Approach people and fitness holistically. Frame fitness and exercise as part of overall wellness.

d) Encourage rest and balance. Discourage pushing to the max, and discourage exercising through pain, or while sick, injured, or tried.

e) Train staff to be welcoming and encouraging towards all members.

f) Make efforts to create a sense of community at your gym.

g) If your gym has a women's only space, consider how this is set up (e.g., does the space emphasize cardio? Is there a wide variety of weightlifting equipment?) Similarly, consider ways in which male-dominated areas might be made more welcoming for women and others who may want to use those spaces.

Recommendations for Professional Associations

1. Integrate basic eating disorder literacy into all existing training certification programs. This should include an overview of the types of eating disorders, warning signs, how eating disorders may manifest in the gym setting, and common myths about eating disorders.

2. Create continuing education courses with the same for trainers who are already working in the field.

3. Provide basic guidelines on what to do if a member is (or may be) struggling with an eating disorder (e.g., encourage having someone approach the person over ignoring the problem).

4. Evaluate and update training and education programming. Ensure education and training does not promote weight bias.

5. Keep an updated list of community referrals, resources, and websites for gyms and fitness professionals to consult and/or to offer to their members.