Examining the maintaining factors of anorexia nervosa

by

Petrina Aberdeen

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ABSTRACT

EXAMINING THE MAINTAINING FACTORS OF ANOREXIA NERVOSA

Petrina Aberdeen
University of Guelph, 2013

Advisor: Dr. John Dwyer

This thesis is a qualitative investigation of the factors which maintain anorexia nervosa (AN) according to the transdiagnostic theory of eating disorders (Fairburn et al., 2003). AN is difficult to treat and continues to evade complete understanding. The present study aimed to promote further understanding of food restriction and physical activity in relation to the constructs of clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties. Twenty females with self-reported AN were recruited from Guelph, Ontario and participated in semi-structured interviews. Thematic analysis revealed eight major themes for clinical perfectionism, five for core low self-esteem, five for mood intolerance, and six for interpersonal difficulties. The in-depth emotional accounts and details of food restriction and physical activity in relation to the four constructs examined in this study may contribute to further appreciation of AN, informing practitioners and family members, promoting empathy, and improving treatment options.
Acknowledgements

It is difficult to express what this thesis – and these past three years of my life – have meant to me. So many things happened throughout the course of this project, both in my academic life and personal life. When I reflect on the countless hours spent toiling; the tears, the frustration, the doubt, the desperation, the hopelessness...I realize what a tremendous accomplishment this thesis is for me. It is a symbol of internal strength, of rising up against adversity and inner turmoil, of redirecting negative energy to produce something that may make a difference in the world. I hope that this thesis will promote understanding and awareness of a disorder that I will always hold close to my heart.

I would like to thank my thesis advisor, Dr. John Dwyer, for making this research project possible and for his ongoing assistance and contributions. I would also like to thank my committee member, Dr. Michèle Preyde, for her invaluable insights throughout the course of this project, and Dr. Andrea Buchholz, the chair of my thesis defence, for establishing such a wonderful and relaxed environment.

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To my participants...I could not have done this without your courage. From the bottom of my heart, I thank you for coming forward and revealing what I know to be a very intimate and personal experience. Your strength and eagerness will not be forgotten.

Lastly, to those struggling with this demon: there is always hope. Even at the brink of destruction, the body and the mind can find a way to conquer this terrible affliction. Please, don’t give up. You are not alone.
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1.0. Introduction

In the year 1940, a young woman was brought into a clinic for observation as a result of having rather bizarre eating practices. As it turned out, she had experienced extreme pressure from her family to uphold “proper” eating habits, as well as feelings of guilt for having sexual desires whilst having been brought up in a family that firmly forbade any kind of sexual behaviour. The patient reacted to unpleasant emotions, such as guilt, with episodes of overeating followed by episodes of starvation and abdominal complaints. This patient also reported having disturbed relationships (Waller, Kaufman, & Deutsch, 1940). While not fully understood, the behaviours and cognitive distortions within this case study are quite evident and are, in fact, prominent in sufferers of anorexia nervosa.

1.1. Definition of Anorexia Nervosa (AN)

According to the Diagnostic and Statistical Manual of Mental Disorders IV-Text Revision (DSM-IV-TR), anorexia nervosa (AN) is defined as the refusal to sustain a healthy body weight for one’s age and height (less than 85% of what is considered to be normal), possessing a dreadful fear of becoming fat despite being underweight, demonstrating distorted perceptions of one’s body or self, and, for females, experiencing a loss of one’s menstrual periods (American Psychiatric Association, 2000). There are two separate subtypes of AN, which are determined by the means through which patients attempt to lower their weight. The first is called restrictive AN, which is characterized by weight loss through excessive food restriction. The second subtype is labelled binge-eating/purging type and is defined by episodes of gorging on disproportionate amounts of food at one given time and following it with a form of purging, such as vomiting or the use of laxatives (American Psychiatric Association, 2000). AN is only one eating
disorder presented in the DSM-IV-TR. The others are bulimia nervosa (BN), which is categorized by incidences of uncontrollable bingeing (eating large quantities of food at one given time) proceeded by purging behaviours, such as the over-use of laxatives or self-induced vomiting; and eating disorders not otherwise specified (EDNOS), which are eating disorders that contain certain elements from either AN or BN or both but not enough to achieve full diagnoses of either disorder (American Psychiatric Association, 2000).

There are certain difficulties in diagnosing individuals with AN according to the diagnostic criteria in the DSM-IV-TR. At the time of the present study, included in the proposed alterations for the DSM-5 was the elimination of amenorrhea (loss of menstrual periods) as a diagnostic criterion for AN due to its limiting effect on who may be diagnosed. Patients with AN may vary in the occurrence of menstruation but this may be due to the differences in their dietary levels rather than their psychological statuses (Attia & Roberto, 2009). Another proposed change was to further operationalize the cognitive constituents of both AN and BN to promote better understanding and increase identification of these disorders in individuals since their exact nature continues to evade complete understanding (Becker, Eddy, & Perloe, 2009).

Presently, the new DSM-5 has eliminated the word “refusal” from the first diagnostic criterion for AN due to the fact that it insinuates intention and may be difficult to ascertain. The criterion of amenorrhea has also been removed, indeed due to its limiting effect on who might be diagnosed, particularly males, females who do not have menstrual periods for reasons other than low weight, and those who display all symptoms of AN but still experience menstruation (American Psychiatric Association, 2013).
Furthermore, the DSM-5 has modified the diagnostic criteria for BN, decreasing the frequency of bingeing and purging that was described in the DSM-IV-TR. Lastly, the DSM-5 has introduced Binge Eating Disorder (BED), previously included in EDNOS, as its own unique eating disorder. According to the DSM-5, BED is characterized by persistent episodes of eating larger amounts of food than other people would normally eat, often accompanied by feelings of guilt, embarrassment, and/or being out of control (American Psychiatric Association, 2013).

As a broad statement, eating disorder advocates often attribute the development of AN to the thin ideals of Western culture. While it is important to acknowledge this additional pressure on young females in North America, there is reason to believe that a greater emphasis should be placed on the existence of AN independently of social influence. To elaborate, societal pressures should be acknowledged but the cognitive components of AN should be a primary object of examination. The problem with blaming the development of AN on North America’s “drive for thinness” is that this society has not always promoted the allure of a thin body, yet accounts of self-starvation and mysterious emaciation of young girls have existed across time. There are historical records of self-starving behaviours dating back to ancient times, which, back then, were explained by a variety of reasons. These reasons ranged from religious fasting to demonic possession. Furthermore, there are accounts of women in the Victorian era that carried irrational fears of food for reasons that, if expressed in the present day, may have been linked to cognitive distortions (Brumberg, 1988). In acknowledging the presence of AN throughout history, a logical conclusion is that AN may have been mislabelled and misconstrued over the years, accounting for its seemingly low prevalence in the past. As
such, it is very important to examine AN as an entity that is separate from the body image issues and media influences of today.

1.2. Prevalence of AN

This section examines the prevalence rates of AN. Overall, there is a general view that eating disorders are principally a female phenomenon. For instance, in a national study based out of the United States, it was estimated that the lifetime prevalence of AN (that is, the occurrence of the disorder at any given point in a person’s life) is currently 0.9% in women and 0.3% in men. In fact, the lifetime prevalence rates of all eating disorders are higher amongst women than men at the present time. According to this study, the lifetime prevalence rate of BN is 1.5% for females and 0.5% for males and the lifetime prevalence rates of BED for females and males are 3.5% and 2.0%, respectively (Hudson, Hiripi, Pope, & Kessler, 2007). A large study of a cohort of 31,406 Swedish twins born between 1935 and 1958 also revealed a higher lifetime prevalence of AN among females as compared to males, with rates of 1.2% and 0.9%, respectively (Bulik, Sullivan, Tozzi, Furberg, Lichtenstein, & Pedersen, 2006).

Researchers who conducted a review of the medical literature in the United States and Western Europe estimated that, within the female population, the average prevalence rate of AN is 0.3%, while the average prevalence rates for BN and BED are 1% and at least 1%, respectively (Hoek & van Hoeken, 2003). Conversely, an Australian study of a community sample of 1002 female twins revealed the lifetime prevalence of AN and “partial AN” (which is described by the authors as meeting all of the DSM-IV criteria except for amenorrhea) to be 1.9% and 2.4%, respectively. Within this study, higher lifetime prevalence rates were found for BN and EDNOS as well, which were 2.9% and 8.2%, respectively (Wade, Bergin, Tiggemann, Bulik, & Fairburn, 2006).
Favaro, Ferrara, and Santonastaso (2003) examined a community sample of 934 females living in an urban area in Italy. Lifetime prevalence rates of AN, BN and EDNOS were also higher in this study compared to clinical samples, and were estimated to be 2.0%, 4.6%, and 5.3%, respectively. These community findings indicate that there may be a greater prevalence of eating disorders in the general community that may slip through the cracks of clinical diagnoses.

Interestingly, cross-cultural studies on the prevalence of eating disorders have shown that prevalence rates of AN are significantly low or even non-existent in some cultural groups. For instance, researchers who conducted a two-stage study on eating disorder prevalence in female Mexican university students estimated prevalence rates of 0.14% for BN and 0.35% for EDNOS in 1995, and 0.24% for BN and 0.91% for EDNOS in 2002. However, even for sample sizes of 522 (1995) and 880 (2002) females, not a single case of AN was reported (Mancilla-Diaz, Franco-Paredes, Vazquez-Arevalo, Lopez-Aguilar, Alvarez-Rayon, & Tellez-Giron, 2007). Moreover, a national survey examining the prevalence of eating disorders in Latinos living in the United States found lifetime prevalence rates of 0.12% for AN, 1.91% for BN, and 2.31% for BED in a sample of 1,427 females. Additionally, participants who had been living in the United States for extended periods of time were at greater risk for having an eating disorder (Alegria, Woo, Cao, Torres, Meng, & Striegel-Moore, 2007). Furthermore, Taylor, Caldwell, Baser, Faison, and Jackson (2007) conducted a study on African-American and Caribbean-Americans living in the United States and estimated lifetime prevalence rates to be 0.14% for AN, 1.90% for BN, and 2.36% for BED in a sample of 607 females. Given these low prevalence rates of AN in cross-cultural samples, it is logical to
conclude that there may be cultural or racial influences affecting one’s development of the disorder.

While the prevalence estimates for AN are not exactly high compared to the other eating disorders, it remains of growing concern due to its association with other disorders identified in the DSM-IV, such as anxiety disorders, mood disorders, impulse control disorders, and substance abuse (Hudson et al., 2007). Furthermore, while it is somewhat rare, AN has the highest mortality rate of any psychiatric disorder, suicide being the leading cause of death in patients with AN (Birmingham, Su, Hlynisky, Goldner, & Gao, 2005). This in itself is indicative of the severity of the disorder and the psychological distress that exists among individuals with this disorder.

1.3. Negative Health Outcomes Associated with AN

AN is also related to a variety of negative health outcomes. Even when patients have undergone a thorough recovery process, medical complications may linger. Unhealthy eating behaviours that may be displayed in AN are associated with gastrointestinal complications such as constipation, gastric dysfunction, and colitis. Prolonged starvation is also associated with cardiovascular complications, including a range of abnormalities in heart function, the strain placed on the heart at times being life-threatening. Other medical complications resulting from AN include extremely reduced bone density, as well as metabolic and nutritional regulation issues (Mitchell & Crow, 2006). As such, AN is both psychologically and physically damaging.

Considering the high mortality rate and the adverse outcomes associated with AN, it is important to develop effective treatment. Unfortunately, treatment outcomes for AN are generally seen as poor (Fairburn, 2005). Low acceptance of treatment in combination
with high drop-out rates and high relapse rates continue to be challenges in treating this disorder (Halmi et al., 2005).

Overall, AN is a complex disorder. Not only are there adverse health outcomes and a high mortality rate associated with this disorder, it is also quite difficult to treat. As such, it is clear that more research is needed in order to gain a greater understanding of AN, particularly the mechanisms that contribute to the development and maintenance of it. The next chapter will provide an overview of the existing theories on the development and maintenance of AN, finishing with the theory that will provide the foundation for the present study.
2.0. Literature Review

2.1. Theoretical Frameworks for the Development and Maintenance of AN

While researchers and clinicians have done their utmost to understand the etiology and maintenance of AN, no single theory can suffice in explaining this complex disorder. However, a variety of theories have been developed which, in combination with each other, are quite rich in their descriptions of both potential risk factors and maintaining factors of AN. In compiling multiple theories, it becomes quite evident that there may be common personality traits and cognitive particularities that, when met with the social pressures that exist in the Western world, predispose young females to developing AN. The present author holds the cognitive-behavioural models of AN with high regard due to the extended history of AN dating back to before the “thin ideal” of Western civilization. This indicates the predominant role of cognitions in the development of the disorder as opposed to social influences. However, there is no denying that (a) AN currently affects a disproportionate number of females compared to males and (b) there exists a great deal of social pressure on females within Western society that must be taken into account on some level. Furthermore, many of the prevalence studies included in an earlier section suggest that race and culture may play a role in the development of the disorder. As such, it is necessary to address the importance of the interplay between social processes and cognitive processes in the development and maintenance of AN.

The following section will explore theories that describe the contribution of social influences to this disorder and finish with theories that address the cognitive characteristics involved in the development and maintenance of AN.
2.1.1. Social psychological theories.

2.1.1.1. Self-determination theory.

Self-determination theory posits that human beings are inherently motivated to achieve a state of psychological well-being, including autonomy, competence, and relatedness (Deci & Ryan, 1985; Ryan & Deci, 2000). However, social contexts and processes either hinder or promote this motivation (Ryan & Deci, 2000). Furthermore, with the sub-theory of organismic integration, extrinsically-regulated behaviours are associated with the lowest level of autonomy, as individuals who are extrinsically motivated perceive that behaviour is externally controlled or regulated (Ryan & Deci, 2000). Particularly interesting is the level of extrinsic motivation known as “introjected regulation”, in which individuals undergo externally regulated behaviours but do not completely accept them as their own (Ryan & Deci, 2000). Individuals may undergo these behaviours for the purpose of avoiding failures, demonstrating high ability, and increasing feelings of self-worth (Ryan & Deci, 2000). Components of self-determination theory may play a vital role in both the development and maintenance of AN.

2.1.1.2. Social comparison theory.

Another principal theory used to explain the onset of eating disorders like AN is Festinger’s (1954) social comparison theory. This theory asserts that individuals possess an innate need to appraise both their opinions and personal abilities. Constant verification of these is a highly adaptive function, since the presence of erroneous opinions and false evaluations of one’s abilities may lead to undesirable consequences in life. Festinger (1954) also proposed that people have the tendency to compare themselves to others who are similar but the presence of self-uncertainty increases one’s
tendencies to engage in comparisons with others regardless of dissimilarities. In the context of eating disorders, social comparison of one’s appearance to the appearance of others may contribute to the development of eating pathology.

2.1.1.3. Objectification theory.

Objectification theory (Fredrickson, 1997) hypothesizes that women in various cultures are often looked upon by males as mere instruments for sexual intercourse. Consequently, a great deal of emphasis is placed on women’s appearances and there is pressure to be viewed as physically attractive. As such, women may internalize ideals for beauty and begin to see themselves as mere objects. While this sexual objectification occurs on a variety of fronts, Fredrickson (1997) indicates that the sexualization of women is particularly prominent in American media. The fact that this phenomenon is so paramount in Western culture suggests that it is virtually impossible for women to escape its effects, which can result in a wide variety of mental distress, including eating disorders (Fredrickson, 1997).

To summarize, it appears that while all women are exposed to the same ideals for beauty in Western civilization, cognitive attributes make certain women more vulnerable to the development of eating disorders, such as AN. Therefore, it is important to consider how the social influences may intertwine with the cognitive factors to produce eating disorders such as AN. The following section will explore cognitive-behavioural theories of AN.

2.1.2. Cognitive-behavioural theories.

Cognitive-behavioural theory of eating disorders including AN has undergone extensive evolution in the past few decades. This section reviews such theories and
provides empirical evidence for the most up-to-date version of cognitive-behavioural theory and treatment.

2.1.2.1. Bruch’s “primary AN”.

Perhaps the most prominent figure in the cognitive-behavioural study of AN is Hilde Bruch. Bruch’s (1973) work *Eating disorders: Obesity, AN, and the person within* provides very early and compelling accounts of individuals with AN. These records include her clinical observations of typical personality and cognitive traits that occur in what she classifies as “genuine or primary AN” (Bruch, 1973, p. 251). According to Bruch, an individual with true AN has a desperate desire for control and identity. Furthermore, this individual possesses a longing to be viewed as competent, effective, and more or less perfect by other people. Bruch also suggests that these cognitive disturbances are present in the individual long before the secondary characteristics of starvation and weight loss take place. In addition, she points out the inability to either recognize or verbalize emotions, thus touching upon the existing emotional dysregulation issues in AN. Bruch (1973) differentiates those with primary AN from atypical cases, whose eating pathology is easily mistaken for primary AN in the secondary stages, but who do not possess the profound personality disturbances of those in the former group. She further specifies that an individual with “true” AN denies the seriousness of his or her low body weight and instead readily accepts it. In addition to acknowledging the self-reinforcing behaviour of true AN, Bruch (1973) also recognizes the importance of altering the analytic thought processes of those with AN in therapy, thus touching upon the modern-day concept of cognitive-behavioural therapy (Bruch, 1973; Garner & Bemis, 1982).
Bruch’s (1973) detailed descriptions of “true” anorexic cognitions are still actively alluded to today and are considered to be some of the principal reports of the cognitive-behavioural nature of AN in existence (Fairburn, Shafran, & Cooper, 1998). Built upon these accounts is the cognitive-behavioural theory proposed by Garner and Bemis (1982).

2.1.2.2. Garner and Bemis’s cognitive-behavioural theory of AN.

A most striking aspect of the cognitive-behavioural theory of AN by Garner and Bemis (1982) is its confirmation of Bruch’s findings, specifically the confirmation of the underlying personality traits and cognitive disturbances of the typical person with AN as well as the self-reinforcing nature of the disorder. Garner and Bemis (1982) model their cognitive-behavioural theory after the original cognitive-behavioural theory for depression and other emotional disorders by Beck, Rush, Shaw, and Emery (1979). At the core of Beck et al.’s (1979) cognitive-behavioural model for depression is what is described as an ensemble of depressive thinking that involves negative views of the self, the world, and the future (Beck, Rush, Shaw, & Emery, 1979). While Garner and Bemis (1982) note similarities between depression and AN, such as the presence of negative cognitions and fear, they also note that there are sufficient differences between the two. For instance, in AN, negative views of the self appear to be the most prominent component of the depressive triad. As such, Garner and Bemis (1982) advise that modifications to the original cognitive-behavioural model are necessary.

Garner and Bemis (1982) state that individuals with AN have the tendency to be reserved and sensitive, yet high-achieving with an innate desire to meet the expectations of other people. They also refer to the feeling of being out of control as a catalyst for the development of the disorder and briefly address the difficulties in expressing or
regulating emotion. Furthermore, these authors reiterate the suggestion that individuals with AN may express an acceptance of the disorder (Bruch, 1973) or even a desire to maintain the destructive behaviours (Garner & Bemis, 1982). Garner and Bemis (1982) propose that the weight loss serves as a form of relief of their upsetting or distressful cognitions, proving to be functional for these individuals and thus self-reinforcing. In addition, these authors place underlying negative assumptions and views about the self and body image at the very core of the development and maintenance of the disorder. Their cognitive-behavioural model for AN is based on the premise that individuals who develop this disorder have a set of underlying assumptions regarding perfectionism, body image, and a need for control. These assumptions then get translated into a particular belief system surrounding the appeal of starvation (such as the belief that one can avoid negative emotions through food deprivation) and result in the typical anorexic behaviours (i.e., restricting food intake, exercising, and vomiting). Moreover, the disorder is negatively reinforced by avoidance of negative emotions and fear of weight gain. The final section of this model is comprised of the physical changes that occur in patients due to starvation, which is the point at which medical attention is drawn (Garner & Bemis, 1982).

Both Bruch (1973) and Garner and Bemis (1982) emphasize that a long and disturbed cognitive process exists in tandem with the physiological consequences of AN and should be at the heart of intervention. Garner and Bemis (1982) also stress that irrational thoughts and warped cognitive processing have the most potential for eliciting change in patients if targeted in treatment. Garner and Bemis (1982) also make the claim
that treatment will almost always fail if distorted cognitions about body image and weight are not adequately altered.

2.1.2.3. *Slade’s emphasis on control.*

In a functional analysis by Slade (1982), the premise of control in AN is highlighted. In this model of development and maintenance, Slade (1982) organizes the disorder on the basis of antecedent events leading to anorexic behaviours which then lead to psychological consequences. Like Garner and Bemis (1982), Slade (1982) acknowledges the fact that restrictive eating and weight loss occur as a result of antecedent events or psychological triggers which are then positively reinforced by feelings of control and negatively reinforced by the evasion of emotional issues and weight gain. Within this model, antecedent events include: general life dissatisfaction and low self-esteem resulting from a variety of life problems. These life problems may be autonomy issues, interpersonal issues with the opposite sex due to introverted personalities and social anxiety, and a general experience of stress or failure. Another primary antecedent is perfectionism or obsessive-compulsive tendencies (Slade, 1982). Slade (1982) suggests that the combination of life dissatisfaction and perfectionism or obsessive-compulsive behaviour leads to a dire need for complete control, which is placed at the core of his model. This need for absolute control over a particular domain in life in combination with a psychosocial prompt for dieting behaviour, which Slade (1982) suggests is common in Western society, compels the individual to direct his or her attention to controlling their weight. While Slade (1982) does not go into great detail as to which behaviours follow the antecedents, he proposes that weight loss and amenorrhea occur at some capacity and then lead to the consequence of reinforcement. As aforementioned, this model puts forward that AN is positively reinforced by the feelings
of control and success related to weight loss and is negatively reinforced through the avoidance of life problems and feared weight gain (Slade, 1982). Whilst this model is similar to the earlier cognitive-behavioural model by Garner and Bemis (1982), it is unique in its focus on control, which is later utilized by Fairburn, Shafran, and Cooper (1998).

2.1.2.4. Vitousek and Hollon’s focus on schemas.

Before moving on to more recent revisions of cognitive-behavioural models for AN, it is important to consider the contribution of Vitousek and Hollon (1990), who emphasized the development of ordered cognitive structures in individuals with AN. These authors suggest that the combination of low self-worth and distorted views on weight and body shape lead to cognitive structures in which views of the self and weight become fused together. In other words, the focus of self-evaluation becomes solely based on one’s weight and body shape. Furthermore, the development of cognitive structures related to the implications of weight pervades one’s attention, perception and behaviours, thus accounting for the perseverance of the disorder (Vitousek & Hollon, 1990).

2.1.2.5. Fairburn, Shafran, and Cooper’s revision.

In 1998, Fairburn, Shafran and Cooper revised the earlier models of cognitive-behavioural theory (Garner & Bemis, 1982; Slade, 1982; Vitousek & Hollon, 1990) and proposed that self-control should be considered the core feature in the maintenance of AN. They reiterated the presence of perfectionism, negative views of the self and feelings of ineffectiveness or low self-worth in those with AN but, much like Slade (1982), they suggest that the paramount need for control emerges as a result of these factors, rather than occurring simultaneously. Fairburn et al.’s (1998) model suggests that people with AN turn to dietary restraint as a means of gaining self-control, thus
increasing their sense of self-worth. Based on the idea of cognitive structures of Vitousek and Hollon (1990), weight is the principal focus of self-evaluation. As such, weight loss is a primary indication of self-control, and when this is endangered by feelings of hunger or lapses in the diet, feelings of self-worth and self-control are once again diminished, thus triggering a vicious cycle (Fairburn et al., 1998). Fairburn et al. (1998) embellish that the trait of perfectionism becomes embedded in the weight loss process and these individuals begin to eat exponentially less to achieve unrealistic weight loss goals. As such, the driving force becomes the weight loss itself rather than the maintenance of a low body weight. Furthermore, Fairburn et al. (1998) acknowledge the presence of the obsessive checking of one’s body for undesirable weight gain as an observed behaviour of the disorder as well as a maintaining factor.

2.1.2.6. Schmidt and Treasure’s cognitive-interpersonal model. Schmidt and Treasure (2006) highlight four key components of the maintenance of AN: perfectionism or cognitive rigidity (including obsessive-compulsive tendencies), experiential avoidance, pro-anorectic beliefs, and responses of close others. Schmidt and Treasure (2006) assert that AN is not a culture-bound syndrome that occurs as a result of the drive for thinness, noting that females may merely be at a greater biological risk and more vulnerable to hunger.

With respect to perfectionism/cognitive rigidity, Schmidt and Treasure (2006) reiterate what has already been established in earlier theories: these personality traits promote anorexic behaviours as a means of gaining control. Furthermore, these authors highlight that starvation can worsen these personality traits, making them both risk factors and maintaining factors of the disorder. The second key component in this model is avoidant personality type. Within the context of AN, Schmidt and Treasure (2006)
state that people with AN have the tendency to avoid negative emotions as well as intimate relationships and sexuality. Similar to Slade (1982), Schmidt and Treasure (2006) suggest that the development of anorexic behaviours may serve as a mechanism of avoiding other life problems, which may benefit the individual. Avoidant behaviour also worsens as a result of starvation, and thus may be considered a risk factor as well as a maintaining factor (Schmidt & Treasure, 2006). The third component of this model is the presence of pro-anorectic beliefs. Schmidt and Treasure (2006) refer to the study by Serpell, Teasdale, Troop, and Treasure (2004), which describes the perceived benefits of the disorder for patients, as well as the impact that these pro-anorectic beliefs have on the maintenance of the disorder. The fourth and final component of this model is responses of close others, which is comprised of the negative emotions expressed by close friends or family during the individual’s experience with AN, which may contribute to the need for control in the person with AN, thus perpetuating the disorder.

**2.1.2.7. Fairburn, Cooper, and Shafran’s “transdiagnostic” model.**

The existing cognitive-behavioural theories for AN build on each other quite effectively and overlap in their emphasis on key elements. It is quite evident that perfectionism, low self-esteem or self-worth, difficulties in mood and emotional regulation, and interpersonal issues are crucial to investigate when studying the maintenance of AN. The final theory to be addressed in this review is the transdiagnostic model by Fairburn, Cooper and Shafran (2003). This theory provides the basis for the current study. The transdiagnostic model is a further expansion of the earlier cognitive-behavioural models. It incorporates four pertinent constructs identified over time as core maintaining factors in AN. As such, it provides a very comprehensive approach to examining the systems that contribute to the maintenance of the disorder.
Fairburn et al. (2003) assert that this model accounts for the maintenance of AN, BN and EDNOS. The basic premise of this model is that while these three types of eating disorders are unique in their manifestations, the core maintaining factors are the same. As rationale for proposing a transdiagnostic approach, the authors state that on a longitudinal basis, individuals with eating disorders have the tendency to fluctuate between diagnoses, displaying the diagnostic criteria of each of the three eating disorders at different points in time. This suggests that the differences in the disorders are due to varying intensities of the core elements, rather than being due to different core elements altogether (Fairburn et al., 2003). As a crucial note, the present author is not concerned with whether the transdiagnostic aspect of the theory is accurate. The present study will be geared exclusively towards the relevance and applicability of the theory to AN. As aforementioned, given the history of cognitive-behavioural theory, there is reason to believe that the core maintaining constructs addressed in this theory are quite pertinent with respect to AN. As such, the generalizability of the theory to all eating disorders is not the focus of this study.

The transdiagnostic model proposes that a warped sense of self-evaluation, in which individuals judge their self-worth according to their ability to control their eating, shape, or weight rather than their abilities in other areas of life as well, exists at the core of individuals with eating disorders. These individuals set unrealistically high expectations for themselves (pertaining to eating, shape, or weight) and attribute failures to personal flaws. As a result, the negative perception of self is spurred, which then compels these individuals to try more desperately to meet their own expectations. Fairburn et al. (2003) suggested that, in specific individuals, the four mechanisms of
clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties interact with this central system of poor self-evaluation.

As touched upon by the previous theory by Fairburn et al., (1998), perfectionistic tendencies become tied in with control and the drive for weight loss, perpetuating their occurrence. Furthermore, individuals with both extremely severe and omnipresent low self-esteem become entrapped in a cycle. In this cycle, starvation becomes a means of relieving feelings of low self-esteem. However, low self-esteem of this magnitude creates a sense of general helplessness, which makes these individuals resistant to treatment because they do not feel they have the power to change (Fairburn et al., 2003). With respect to mood intolerance, this model posits that individuals with AN may have an inability to recognize, express and/or regulate extreme moods. As such, these individuals may engage in various destructive behaviours, including disordered eating, in an attempt to rid themselves of the experience. This phenomenon may be classified as “body displacement” and has been supported by a recent study by McFarlane, Urbszat, and Olmsted (2011). This study demonstrated that when exposed to a hypothetical situation evoking feelings of ineffectiveness, participants with disordered eating reported higher concerns for body image than control groups (McFarlane et al., 2011). Lastly, this theory suggests that interpersonal difficulties are detrimental both to one’s level of self-esteem and one’s mood state, adding to both a need for control as well as feeding into the core elements of low self-esteem and mood intolerance (Fairburn et al., 2003).

The following section reviews empirical examinations of the transdiagnostic theory. Since this model is considered to be an evolved version of the other cognitive-
behavioural theories, it is not necessary to address each of the previous models individually.

2.1.2.7.1. Empirical evidence for the “transdiagnostic” model.

The transdiagnostic theory for eating disorders developed by Fairburn et al. (2003) has paved the way for enhanced cognitive-behavioural therapy (CBT-E), which has been shown to be just as effective as simpler versions of cognitive-behavioural therapy, the more complex form being suitable for individuals who display striking psychopathology (Fairburn et al., 2008). As aforementioned, Fairburn et al. (2003) provide rationale for proposing a theory that addresses all eating disorders at the same time.

Critics of this theory have argued that in treating all three eating disorders as one, clinicians may overlook the unique characteristics of each, thus making treatment less effective. Furthermore, these critics have noted the danger in assessing the varying nutritional and weight statuses of eating disorder patients as the same, for those with AN may be at greater risk than those with the other eating disorders (Birmingham, Touyz, & Harbottle, 2009). Birmingham et al. (2009) utilized a comparative system to ascertain whether all eating disorders could be fused into one diagnosis. According to these authors, the single diagnosis for AN and BN was rejected based on the criteria used in the study. As aforementioned, while the transdiagnostic nature of the theory must be addressed, the present study is only concerned with the core maintaining features of the theory as they pertain to AN and not how relevant its generalizability is to all eating disorders.

Nonetheless, a randomized controlled trial comparing two forms of transdiagnostic cognitive-behavioural therapy with a 60-week follow-up found that both
therapies were found to be highly effective compared to the control group (Fairburn et al., 2009). In this trial, 154 eating disorder patients with a body mass index (BMI) of 17.5 or above were randomly assigned either to a simple version of transdiagnostic cognitive behavioural therapy addressing only eating pathology or the current version, which addresses the four core components of the theory. At follow-up, it was found that patients who displayed significant levels of the four core components benefited more from the more complex therapy (Fairburn et al., 2009). This study was limited in that researchers did not include patients with a BMI typical of AN. However, another randomized controlled trial, designed to complement the Fairburn et al., (2009) study, included 125 patients with a body mass index of less than 17.5 (Byrne, Fursland, Allen, & Watson, 2011). The results of this study demonstrated that CBT-E was still effective in reducing both eating pathology as well as the core psychopathology outlined in the transdiagnostic theory. Moreover, upon completion of the therapy, full or partial remission was experienced by 66.7% of patients. Binge eating, purging, and excessive exercise were also halted by 50% of participants who engaged in these behaviours at baseline and who also completed the full duration of therapy (Byrne et al., 2011).

Furthermore, Fairburn, Cooper, Doll, O’Connor, Palmer, and Grave (2013) examined the effectiveness of CBT-E on a clinical sample of 99 patients with AN and found that 64% of these patients completed the treatment and experienced a significant increase in weight. This study was limited in that it did not include individuals with a BMI of less than 15.0 or between 17.5 and 20.0. However, it still demonstrated the effectiveness of CBT-E on this specific subgroup of individuals with AN. Therefore, while some are critical of the transdiagnostic approach to eating disorders (Birmingham et al., 2009),
empirical evidence suggests that it may be effective in treating eating disorders, and specifically AN (Byrne et al., 2011; Fairburn et al., 2008, 2013).

The present author must reiterate that while noting the effectiveness of the transdiagnostic theory is important, this study will not concerned with whether or not the transdiagnostic approach to eating disorders is appropriate in the treatment of all disorders. Instead, of greater importance is the relevance of the four core components of the model to the maintenance of AN. As such, it is also important to consider the applicability of the theory to the explanation of eating psychopathology.

A study that applied the transdiagnostic theory of eating disorders to a sample of 588 male and female athletes found through structural equation modelling that the interplay of clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties may indeed result in eating psychopathology found in AN, as well as other eating disorders (Shanmugam, Jowett, & Meyer, 2011). Specifically, all four of the core components of psychopathology reinforced each other. Low perceived support from parents and coaches resulted in a higher likelihood of self-criticism (a common occurrence among perfectionists), which was linked to lower self-esteem and was associated with a greater occurrence of disruptive depressive symptoms (mood intolerance), leading inevitably to eating psychopathology (Shanmugam et al., 2011). This study was limited in that it was cross-sectional and therefore the causal links between the core eating psychopathology and the development of eating disorders could not be verified. Nevertheless, the results of the study underscored the relationship between the core psychopathology and eating psychopathology.
2.1.3. Constructs explored in this study.

As aforementioned, the present author highly regards the cognitive-behavioural theories of AN acknowledged earlier in the literature review, particularly Fairburn et al.'s (2003) transdiagnostic theory. The four key maintaining factors addressed in Fairburn et al. (2003) are extremely pertinent to AN, given how prominent they have been in the evolution of cognitive-behavioural theory in this area. For the purpose of this study, the core components of psychopathology as outlined in Fairburn et al.'s (2003) transdiagnostic theory of eating disorders will be explored in detail as they relate to the weight loss strategies of food restriction and physical activity. The four constructs include: clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties. However, before delving into these constructs, it is important to establish a context of food restriction and physical activity habits within AN.

2.1.3.1. Food restriction.

There are unexpectedly few studies on the specific eating habits and food choices of those with AN. In a study by Schebendach et al. (2011), secondary data on the food records of 41 adult women with AN were analyzed for food content. These researchers divided participants into two groups: treatment successes and treatment failures. While there were no significant differences in total food choice between these two groups, treatment failures consumed less total fat and less energy from fat. Furthermore, significant differences in diet variety were found between the two groups, with treatment successes consuming more variety in the added fats, added sugars, caloric beverages, starchy carbohydrates, and miscellaneous foods categories. This study was limited in that it was a secondary data analysis on a small sample. However, findings demonstrated that overall, those with active AN (as opposed to those who had been successful at treatment)
consumed less fat and variety in their foods. It has also been noted that people with AN may take on vegetarian diets as a form of food restriction. For instance, in a study by O’Connor, Touyz, Dunn, and Beumont (1987), 116 cases of AN were examined for vegetarianism. These researchers discovered that 54% of the sample avoided eating red meat, and that within this group, only four participants reported avoiding red meat prior to developing AN. Moreover, “pseudovegetarianism” (inconsistent vegetarian habits) was linked to lower weight and extended duration of AN. This study was limited due to the fact that it was retrospective and participants were subject to recall bias. However, it demonstrated that people with AN may utilize vegetarianism as a means through which they can restrict particular foods. In their examination of vegetarianism and eating disorders, Aloufy and Latzer (2006) found that the number of vegetarians with eating disorders was particularly high, indicating that vegetarianism may be used to disguise more detrimental eating habits.

2.1.3.2. Physical activity.

There have been some studies on the presence of exercise in eating disorders and specifically in AN. For instance, Davis et al. (1997) examined the prevalence of high-intensity exercise in AN and BN. In the first of two samples used in this study, 78 adult females with either current or past AN and 49 adult females with BN were assessed on the basis of physical activity habits. Davis et al. (1997) found that 81% of the group with AN exercised excessively during sudden and intense phases of the disorder, 56% participated in a consistent sport or exercise regime prior to developing AN, and 50% reported having an above-average activity level during childhood. On the whole, the group with AN scored higher on all variables of physical activity than the group with BN. This study was limited because it was retrospective and included a homogeneous sample.
However, it demonstrated that excessive exercise is particularly relevant to AN as compared to BN.

It has been proposed that obsessive traits precipitate excessive exercise in AN. Davis et al. (1995) examined obsessive-compulsiveness and physical activity in 46 adult female patients with AN as compared to a non-clinical sample of 33 adult female intense-exercisers and 55 adult female moderate-exercisers. These researchers discovered that obsessive-compulsiveness, a preoccupation with weight, and pathological elements of exercise were positively related to the level of physical activity in AN. Conversely, only obsessive-compulsiveness was related to the level of physical activity in non-clinical high-intensity exercisers. These results led to the development of a model in which obsessive-compulsiveness and desire for thinness intermingle and exacerbate physical activity, a system which then also encourages food restriction. In addition, Davis, Kaptein, Kaplan, Olmsted, and Woodside (1998) examined a group of 53 eating disorder patients, 26 of which had AN. They found that obsessive-compulsive symptoms were linked to excessive exercise. These participants also reported more perfectionism than those who did not report obsessive-compulsive symptoms. Moreover, the participants who labelled themselves as physically active tended to have an obsessive commitment to exercise. Obsessive-compulsive symptoms were not predictive of any other eating disorder pathology, which may indicate that there is a specific connection between obsessive-compulsive symptoms and starvation and exercise. The authors suggest that obsessive-compulsive symptoms may be precursors to AN that become intensified through exercise (Davis et al., 1998). This study was limited due to its self-report measures.
In addition to obsessiveness, it is important to note the links between exercise and emotionality in eating disorders. For instance, in a study by Bratland-Sanda et al. (2011), a sample of 59 adult females with eating disorders (eight of which had AN) was compared to a control group on the basis of exercise dependence and reasons for exercise dependence. These researchers found a higher rate of exercise dependence in the eating disorder group compared to the control group. In addition, vigorous physical activity (rather than moderate physical activity) and exercise to control negative emotions were the primary explanatory variables in the eating disorder group. Further, while eating disorder symptoms were positively linked to a weekly amount of vigorous physical activity (rather than moderate physical activity) in the eating disorder group, eating disorder symptoms were negatively linked to a weekly amount of vigorous physical activity in the control group. This study was limited in its generalizability to AN given that only 8 of 59 participants had AN. However, this study demonstrated that there may be specific factors that precipitate exercise in this disorder. Another study examined the link between exercise and emotionality in eating disorders (Mond & Calgero, 2009). In this study, 28 participants were diagnosed with AN, 41 were diagnosed with BN, and 33 were diagnosed with EDNOS. This clinical group was compared to a community group of 184 healthy females who had reported exercising in the weeks preceding the study. These researchers found that when participants in the clinical group exercised for weight, shape, or attractiveness, they experienced severe feelings of guilt if exercise was missed or delayed. One limitation of this study was that frequency of physical activity was not addressed.
2.1.3.3. Clinical perfectionism.

According to Fairburn et al. (2003), clinical perfectionism lies at the core of eating disorders, including AN. The presence of perfectionism in AN has been widely acknowledged in the cognitive-behavioural models but there have been a variety of views on what constitutes “perfectionism.” Hewitt and Flett (1991) are well-known researchers in the realm of perfectionism, and as such, their conceptions of perfectionism will be explored here. Hewitt and Flett (1991) distinguished between different types of perfectionism. Self-oriented perfectionism is the need to meet one’s own idea of perfection and socially-oriented perfectionism is described as the need to be considered perfect according to the expectations of others. Hewitt, Flett, and Ediger (1995) also described other-oriented perfectionism, which occurs when one expects others to be perfect, and perfectionistic self-presentation, which reflects when one feels the need to portray oneself as perfect even if perceived expectations of perfection are not met. The term “clinical” is perhaps what differentiates the perfectionism experienced in AN from the perfectionism in non-eating-disordered individuals. Shafran, Cooper, and Fairburn (2002) suggest that individuals with AN and other eating disorders possess “clinical levels” of perfectionism that are disruptive to one’s life (Shafran et al., 2002).

In addressing the empirical links between perfectionism and AN, a fundamental study to mention is the one by Bastiani, Rao, Weltzin, and Kaye (1995). This study compared the presence of perfectionism in 11 underweight females with AN, 8 healthy weight females with AN, and 10 females without AN. The results of this study revealed that self-oriented perfectionism was omnipresent in those with AN, even after weight had been restored to normal. Thus, while this study had a rather small sample size, the results of this study indicated that perfectionism may be a vital personality trait in individuals
who develop AN and not a mere effect of starvation (Bastiani et al., 1995). The presence of perfectionism among women with AN was also confirmed in a large study conducted on 322 females with a history of AN (Halmi et al., 2000). The results of this study revealed high scores on perfectionism scales among women who were at varying points in their disorder versus the comparison group.

In a study conducted on 728 females with a lifetime history of AN, global childhood rigidity (strict adherence to rules, inflexibility, and difficulty dealing with change) was prominent in all subtypes of AN (Halmi et al., 2012). While this study was retrospective and thus vulnerable to poor recall, it provided further evidence that trait perfectionism may make one more vulnerable to developing AN. The notion of inflexibility was supported in a qualitative study by Sternheim, Konstantellou, Startup, and Schmidt (2011). In this study, nine females with AN were interviewed and described the experience of uncertainty as unpleasant and necessary to avoid. Participants reported that this experience often led to anxiety and an intense desire to plan and organize as a means of controlling one’s environment.

To further acknowledge the presence of self-oriented perfectionism in AN in particular, Lampard, Byrne, Mclean, and Fursland (2012) examined different types of perfectionism in a sample of 288 females with eating disorders (54 of which had AN). These researchers found that self-oriented perfectionism, but not socially-prescribed perfectionism, was associated with dietary restraint across the entire sample and that self-oriented perfectionism was linked to weight and shape concerns in AN and BN. Similar results were found in a study by Lethbridge, Watson, Egan, Street, and Nathan (2011) who compared a sample of 238 females with eating disorders (66 of which had AN) to a
non-clinical sample of 248 females of comparable age. Lethbridge et al. (2011) found that while the eating disorder group generally scored higher on shape and weight over-evaluation, dichotomous (black or white) thinking, and conditional goal-setting than the non-clinical group, self-oriented perfectionism but not socially-prescribed perfectionism was linked to these constructs in both the clinical and non-clinical samples. Brown, Parman, Rudat, and Craighead (2012) found that adherence to food rules mediated the relationship between self-oriented perfectionism (and not socially-prescribed perfectionism) and eating disorder symptoms in a non-clinical sample of 48 female undergraduate students. This study was limited in its cross-sectional nature but provides further support of the role of self-oriented perfectionism in AN. In contrast, Gunnard et al. (2012) examined an eating disorder sample of 240 patients (34% of which had AN) and found that high family standards (a form of socially-prescribed perfectionism) was positively associated with AN. As such, while there is much support for the pertinence of self-oriented perfectionism compared to socially-prescribed perfectionism in AN, some researchers have found that socially-prescribed perfectionism may also play a role.

To further confirm the pervasiveness of perfectionism in AN, Cocknell et al. (2002) compared 21 females with AN with 17 females with mood disorders and 21 healthy females. The results showed higher levels of all forms of perfectionism in participants with AN compared to the other groups. Moreover, high levels of perfectionism persisted in this group even after controlling for factors such as depression, self-esteem, and psychological distress. The point regarding psychological distress is interesting because some have speculated that the presence of stress may trigger eating pathology in those with perfectionistic personality traits (Ruggiero, Levi, Ciuna, &
Sassaroli, 2003). Conversely, Steele, O’Shea, Murdock, and Wade (2011) found that in a mixed eating disorder group of 39 females, clinical perfectionism was strongly associated with depression and over-evaluation of weight and shape. This study lacked a control group but provided greater insight into the potential relationship between perfectionism and mood in AN.

To summarize, while there may not be a great deal of empirical evidence specifically confirming the occurrence of "clinical" perfectionism in AN, there is sufficient evidence to authenticate the presence of other types of perfectionism in this disorder.

2.1.3.4. Core low self-esteem.

The second construct addressed in Fairburn et al.’s (2003) transdiagnostic theory is "core low self-esteem." The role of low self-esteem in the development of AN has been acknowledged since the time of Bruch (1973) who described the “anorectic’s” pervasive feelings of inadequacy. Fairburn et al. (2003) build on this idea, stating that many eating disorder patients experience negative self-evaluation when they cannot meet their goals for weight loss or dieting. However, while individuals with this form of low self-esteem may improve with treatment, individuals with “core low self-esteem” possess a universally negative view of themselves. This is considered to be an unchanging part of their personality rather than a temporal symptom of the disorder (Fairburn et al., 2003). Consequently, individuals with core low self-esteem are often resistant to treatment because they rely on eating disorder practices to increase feelings of self-worth and their persistent feelings of helplessness interfere with treatment progress (Fairburn et al., 2003). The following section examines empirical evidence of the link between low self-esteem and AN.
While there are no studies examining the presence of Fairburn et al.’s (2003) concept of “core” low self-esteem in particular, there is a great deal of empirical evidence linking general low self-esteem to various components of AN and the accompanying psychopathology. Some researchers have suggested that the idea of a one-dimensional concept of self-esteem is too simple for understanding the full breadth of its relevance to AN. Paterson, Power, Yellowlees, Park, and Taylor (2007) compared a group of 27 female in-patients with AN to a control group of 74 female undergraduate students and looked at two components of self-esteem, which were self-competence and self-liking. Despite the fact that duration of treatment was not taken into account in the group with AN, meaningful results were found: anorexic eating pathology was associated with low reported self-competence but was not associated with low reported self-liking. The researchers suggested that these surprising results might have been due to the illusion of self-worth and self-liking that is produced in people with AN when they succeed at weight loss and food restriction (Paterson et al., 2007). Similar results were found in a study by Paterson et al. (2011). In this study, 55 females with AN and 50 non-clinical females completed self-report measures of various dimensions of self-esteem and problem-solving. Results demonstrated that while the dimensions of eating concern, weight concern, and shape concern were statistically significant in AN, eating restraint was not, possibly due to the fact that successful eating restraint may produce a false sense of high self-esteem (Paterson et al., 2011).

Levels of self-esteem have also been associated with the presence of excessive exercise in AN. Bewell-Weiss and Carter (2010) examined a sample of 148 females and 5 males with AN and found that higher self-esteem was related to a higher rate of
excessive exercise. These researchers suggested that high self-esteem resulted from the excessive exercise, rather than vice versa. This may due to the fact that, as aforementioned, people with AN tend to experience greater feelings of self-worth when they are able to meet their weight loss and dieting goals (Bewell-Weiss & Carter, 2010). The inclusion of only a few males in the sample was a limitation of the study.

Further research has shown that self-esteem may be linked to AN through the presence of depression. Wilksch and Wade (2004) sought to explain why some restrained eaters develop AN while others do not. Samples of 19 females with diagnosed AN were compared to 20 female restrained eaters and a control group of 21 female unrestrained eaters on measures of self-esteem and depression. Before controlling for depression, participants with AN scored considerably lower on self-esteem than both the restrained and unrestrained eaters. Furthermore, the AN group scored higher on the depression scale than the other two groups. However, when depression was controlled for, all significant differences between the AN group and the restrained eater group vanished, indicating that depression may be an important mediator in the relationship between low self-esteem and AN (Wilksch & Wade, 2004). A limitation of this study was that the measure of self-esteem, the Self-Perception Profile for Adolescents, was designed for adolescents yet was applied to an adult population, thus potentially producing biased results. Nevertheless, similar results were found in a study by Jacobi, Paul, de Zwaan, Nutzinger, and Dahme (2004), who found that low self-esteem in their AN sample disappeared after controlling for depression (Jacobi et al., 2004).

The variety of results found through empirical tests of the link between low self-esteem and AN indicates that low self-esteem is a complex construct that requires further
attention. Understanding the contribution of low self-esteem to the development and maintenance of AN is crucial for both prevention and treatment. For instance, in a randomized controlled trial, Halmi et al. (2005) compared the dropout and acceptance rates of drug therapy, cognitive-behavioural therapy, and the combination of drug and cognitive-behavioural therapy for 122 patients with AN. Within this study, Halmi et al. (2005) found that higher self-esteem was the sole predictor of treatment acceptance. Therefore, a greater comprehension of this core construct has many implications for progressing in the study of AN.

2.1.3.5. Mood intolerance. Mood intolerance is the third construct identified by Fairburn et al. (2003). Within the transdiagnostic theory of eating disorders, mood intolerance is described as a lack of ability to effectively manage particular emotions. Consequently, rather than accepting negative mood states such as anger, depression and anxiety, individuals with eating disorders may engage in what Fairburn et al. (2003) label as "dysfunctional mood modulatory behaviour," which may be an attempt to control moods through physical means. This behaviour may include non-food related behaviour such as self-injury or substance abuse, but within the realm of AN, it is more likely to involve restrictive eating, binge eating, and purging behaviours such as vomiting and excessive exercise (Fairburn et al., 2003). Fairburn et al. (2003) also claim that even intense positive emotions, such as excitement, may also be met with dysfunctional mood modulatory behaviour. The following section will explore various aspects of emotional processing in AN.

The acknowledgement of the deficiencies that those with AN appear to have in identifying and managing affective states dates back to Bruch (1973).
asserts that a true “anorectic” has difficulties identifying and expressing emotional states, thus even intense affective states, such as long-term depression and anxiety, may remain unexpressed for long periods of time. Garner and Bemis (1982) have addressed the emotional sensitivity of people with AN, and Garfinkel and Garner (1982) have acknowledged the mood problems and changes that are typically undergone in the disorder. Finally, Schmidt and Treasure (2006) also address mood issues, identifying that people with AN tend to engage in affect avoidance. Therefore, the mood and emotional difficulties of those with AN are well-documented in eating disorder theory.

Alexithymia is defined as the reduced ability to identify, describe, and regulate emotional states and is connected to a variety of psychological disorders (Taylor, 1994). Alexithymia is also described as the difficulty in differentiating between emotions and the physical sensations resulting from emotional arousal, a limited fantasy life, and a preoccupation with external incidents (Taylor & Bagby, 2013). Some studies examining the co-occurrence of alexithymia and AN have reported overall higher rates of alexithymia in patients with AN (e.g., Bourke, Taylor, Parker, & Bagby, 1992). Conversely, researchers who conducted a study on AN patients from a community sample found that only a subgroup within the AN group had alexithymia (Rastam, Gillberg, Gillberg, & Johansson, 1997). This finding suggests that the primary measure of alexithymia (the Toronto Alexithymia Scale) may not be appropriate for community samples. In fact, there has been recent criticism regarding the Toronto Alexithymia Scale, namely that it is a self-report measure which may be too highly biased with respect to the current mood state of participants (Parling, Mortazavi, & Ghaderi, 2010). Furthermore, Torres et al. (2011) found that even though their sample with AN scored
high on the alexithymia scale, they were still able to effectively imagine and identify emotions. As such, alexithymia will not be examined in great detail.

Some researchers have suggested that the possible lack of emotional intelligence may be due to higher levels of anxiety in those with AN. Hambrook, Brown, and Tchanturia (2012) examined a sample of 32 females with AN and a control group of 32 non-clinical females on the basis of emotional intelligence. They found that not only did the group with AN score more poorly on scales compared to the control group but also that self-reported anxiety was the highest predictor of low emotional intelligence in the group with AN. Hambrook et al. (2012) suggested that high levels of anxiety in those with AN may affect their ability to rationalize and explain emotions. Several researchers have found links between anxiety and eating disorders (Davies, Swan, Schmidt, & Tchanturia, 2012; Fitzsimmons & Bardone-Cone, 2011; Lockwood, Serpell, & Waller, 2012). Fitzsimmons and Bardone-Cone (2011) found that high levels of anxiety and high levels of emotion-oriented coping were associated with more eating disorder symptoms in a clinical sample. Moreover, Lockwood et al. (2012) found that the presence of anxiety was associated with slower weight gain in their clinical sample of 40 patients with AN.

Overall, it has been reported that people with AN tend to identify and process emotions differently than others. This difference in the regulation of emotions may be an effect of the disorder. For instance, Oldershaw et al. (2012) examined emotional processing in three groups: a sample of 40 females with a current diagnosis of AN, a sample of 24 females who had recovered from AN, and a sample of 48 healthy female controls. These researchers found that the recovered group and the control group
demonstrated similar abilities in emotion tolerance but the group with a current diagnosis of AN showed elevated levels of dysfunctional emotional processing. This study was limited by its small sample sizes. Furthermore, the cross-sectional research design prevented the researchers from ascertaining whether more functional emotional processing was a protective factor that allowed the recovered group to be successful in recovery (Oldershaw et al., 2012). However, the results are still meaningful in addressing poor emotional function in current AN. Difficulties in the recognition and regulation of negative emotions in particular were found in an AN sample in a study by Harrison, Sullivan, Tchanturia, and Treasure (2009).

The importance of adverse emotional states was further supported by Wildes, Ringham, and Marcus (2010). In this study, 75 AN patients were compared to published reports on levels of emotion avoidance in other groups. It was found that patients with AN engaged in more emotion avoidance than other psychiatric patients as well as community controls despite reporting similar occurrences of negative emotion. This may indicate that patients engaged in anorexic behaviours in order to avoid negative emotions. An interesting finding within this study was that patients with AN sought to avoid positive emotions as well as negative emotions (Wildes et al., 2010). Lampard, Byrne, Mclean, and Fursland (2011) also found that the avoidance of positive emotions, rather than negative emotions, was more prevalent in an eating disorder sample (257 females, 48 of which had AN) than in a community sample of 227 female undergraduate students. Interestingly, clinicians and nurses in a study by Kyriacou, Easter and Tchanturia (2009) expressed that patients avoided positive emotions due to feeling guilty and undeserving of them (Kyriacou et al., 2009). The present author finds this to be a rather salient
finding, for it provides a very logical reason as to why people with AN may have difficulty with positive emotions, as suggested by Fairburn et al. (2003). However, the majority of the literature in the realm of emotional processing in AN suggests that the primary issue in those with AN is the way in which they experience negative emotions.

In fact, some studies have shown that individuals with AN may be overcome by negative emotions and experience fewer positive emotions. For instance, Joos et al. (2012) examined emotional perception, using visual stimuli, in a sample of 52 patients with an eating disorder (23 had AN) compared to 35 patients with depression and 25 healthy controls. Both the eating disorder and depression groups reported fewer positive emotions than healthy controls, which was influenced by the presence of depression. The biased nature of the visual stimuli may have limited this study but it still provided some insight as to the experience of positive emotions in AN. Similarly, in a study by Davies, Swan, Schmidt, and Tchanturia (2012), 42 patients with AN, 26 patients with BN, and 34 healthy controls were videotaped speaking about emotional experiences. Participants also completed a scale measuring emotional regulation. These researchers found that eating disorder patients used fewer positive words when describing their emotional experiences compared to healthy controls, possibly indicating a lack of positive emotions (Davies et al., 2012). Torres et al. (2011) also examined a group with AN and a control group on the basis of positive emotions versus negative emotions and found that the group with AN reported a higher prevalence of negative emotions but not positive emotions.

It is interesting that some research suggests that those with AN have difficulty in recognizing emotions while other research suggests that people with AN are quite adept
at describing the overwhelming stream of negative emotions that they experience. It is possible that those with AN are so overcome with negative emotion that they have difficulty distinguishing specific negative emotions (Torres, Guerra, Lencastre, Romao-Torres, Brandao, Queiros, & Vieira, 2010). On the other hand, a variety of authors have reported on the importance of specific negative emotions, which prominently contribute to emotion avoidance and intolerance. These emotions include shame (Keith, Gillanders, & Simpson, 2009; Skarderud, 2007a), disgust (Fox & Power, 2009), and most importantly, anger (Fox & Power, 2009; Geller, Cockell, Hewitt, Goldner, & Flett, 2000; Harrison, Tchanturia, & Treasure, 2010; Harrison, Sullivan, Tchanturia, & Treasure, 2010; Waller, Babbs, Milligan, Meyer, Ohanian, & Leung, 2003). Patients with AN have been found to have higher levels of anger compared to controls and were also more likely to suppress or avoid the emotion of anger (Fox & Power, 2009; Waller et al., 2003). In fact, the presence of anger was linked to excessive exercise in a group with AN (Waller et al., 2003). Furthermore, in a qualitative study by Espeset, Gulliksen, Nordbo, Skarderud, and Holte (2012), participants described how they managed different negative emotions with different eating disorder behaviours. For instance, sadness was linked to body dissatisfaction, which participants managed through food restriction and purging, whereas anger was discharged through self-control, self-harm, and exercise.

Quite a few qualitative studies have captured the subjective emotional experience of those with AN, particularly surrounding the topic of tolerating adverse emotional states. For instance, in a study by Skarderud (2007b),"concretised metaphors" (displacement of emotions onto the body) were examined. The majority of patients with AN described the experiences of being too "full" or "heavy" with negative emotions such
that the idea of being physically "lighter" (such as through weight loss) was a great relief (Skarderud, 2007b). This idea of excessive emotional experience was supported by a qualitative study by Fox (2009), in which a major theme for patients was feeling overwhelmed by too much emotion, such that the body was used in order to empty oneself of emotional experience. Interestingly, Brockmeyer et al. (2012) found that lower BMI in acute AN was linked to less difficulty in emotion regulation whereas there was no such association between BMI and emotion regulation in those who had recovered from AN, those with depression/anxiety, or healthy controls. These researchers suggested that during AN, patients may experience positive physiological and psychological changes as a result of weight loss, particularly with respect to brain reward mechanisms and feelings of control and achievement. In contrast, Ricca et al. (2012) found that emotional eating (eating as a way of managing various emotions) was quite prominent in their clinical sample of AN and often associated with fear of loss of control of eating.

To summarize this section, most research suggests that those with AN experience and regulate emotions differently than most. Furthermore, while some have identified problems with tolerating positive emotions, the majority of the research in this area emphasizes the difficulties that people with AN have with managing negative emotions. Federici and Kaplan (2008) discovered that intolerance of negative emotions is a key contributor to relapse in patients with AN, which may indicate that, as suggested by Fairburn et al. (2003), mood intolerance is a primary factor in the maintenance of this disorder.
2.1.3.6. Interpersonal difficulties.

The final construct identified by Fairburn et al. (2003) in the transdiagnostic theory of eating disorders is interpersonal difficulties. Fairburn et al. (2003) do not provide a specific definition of interpersonal difficulties and instead provide four examples of how they classify interpersonal difficulties. These examples include: dysfunctional family dynamics, environments that promote weight control, unpleasant social events, and long-term social problems that lead to poor self-esteem. Additionally, Fairburn et al. (2003) refer to the effectiveness of interpersonal therapy for those with eating disorders like AN, which by default indicates the important contribution of interpersonal difficulties to the maintenance of the disorders. The following section will explore interpersonal difficulties in AN.

Interpersonal difficulties in AN have also been identified since the time of Bruch (1973) who asserted that family conflicts and high expectations of parents may be contributors to the development and maintenance of AN. Garner and Bemis (1982) also addressed interpersonal difficulties, describing a person with AN as introverted, overly sensitive towards others, and solitary. Furthermore, Garner and Bemis (1982) acknowledged that interpersonal conflict may contribute to the development of the disorder. Garfinkel and Garner (1982) acknowledged the importance of family interactions, as did Schmidt and Treasure (2006) in their section on the responses of those who are close to the individual with AN. Therefore, the contribution of interpersonal difficulties to the development and maintenance of the disorder are established in theory.

Some studies have highlighted the contribution of mood intolerance and warped emotional processing (see previous section) to interpersonal difficulties. For instance, Geller et al. (2000) examined the expression of negative emotions and interpersonal
orientation of 21 Canadian females with AN as compared to a matched psychiatric control group and a matched healthy control group. Within this study, it was discovered that the AN group had a tendency to suppress anger and negative emotion in general. The authors suggest that those with AN may suppress their own negative emotions in order to make light of their own needs in an attempt to avoid interpersonal conflict. This may also represent a fear of rejection and a need to meet the expectations of others, as per perfectionist tendencies (Geller et al., 2000). In their study, Levinson and Rodenbaugh (2012) found that fear of negative evaluation from others as well as social appearance anxiety predicted a range of eating disorder symptoms, including food restriction. In another study by Fox (2009), 11 participants with AN were interviewed to examine their perceptions of their own emotional processing. A significant proportion of participants disclosed that they had experienced an adverse interpersonal event, such as the loss of a family member or bullying in school. Furthermore, some participants expressed that they did not want to express negative emotions due to the fear that it would cause their family and friends to reject them. Another common theme was the avoidance of negative emotion in order to avoid conflicts with others, sometimes because patients denied that their own emotions and perceptions of situations were valid. Lastly, some participants admitted to suppressing their negative emotions in order to protect others from feeling badly, and to avoid appearing weak in the face of adversity (Fox, 2009).

The occurrence of precipitating interpersonal events is supported by Schmidt, Tiller, Blanchard, Andrews, and Treasure (1997). In their study, 72 English females with AN were assessed for adverse life events alongside 29 females with BN. Approximately 67% of the AN group were found to have experienced a serious life event and difficult
issues involving relationships with family and friends. This study was limited due to insufficient controls for each measured variable. However when considered in relation to the study by Fox (2009) as well as the examples provided by Fairburn et al. (2003), it seems logical that adverse life events may play a pivotal role in the disorder.

In addition to adverse life events, ongoing interpersonal difficulties are another example given by Fairburn et al. (2003). Patching and Lawler (2009) interviewed 6 females in Australia who had recovered from AN. Common themes revealed by participants when asked about the potential causes of the disorder included overall feelings of disconnection from others and feeling misunderstood or "different" within their own family and peer groups. Furthermore, patients reported ongoing conflict within their family and peers, such as dysfunctional relationships with parents. Patients also reported that AN resulted in worsened interpersonal relations (Patching & Lawler, 2009). Similar results were found in another qualitative study by Nilsson, Abrahamsson, Torbiornsson, and Hagglof (2009). In addition, Levine’s (2012) systematic review of the literature revealed that feelings of loneliness and isolation may exacerbate eating disorders. In fact, some links have been found between perceived loneliness and rates of relapse in those recovering from BN and AN (Stewart, 2004). It is important to note the link between peer context and eating disorder symptoms. In a study by Forney, Holland, and Keel (2012), survey data from a community sample of 2060 males and females combined were analyzed on the basis of body dissatisfaction and eating disorder symptoms. These researchers found that comments from friends regarding weight or diet reinforced the association between body dissatisfaction and eating disorder symptoms in females. This study was limited due to its cross-sectional nature as well as the fact that
positive comments from friends were not differentiated from negative comments from friends. However, it still addresses the potential influence of peers on the development of eating disorders.

A few authors have acknowledged that personality traits and self-perceptions may play a role in the interpersonal difficulties experienced by those with AN. For instance, O'Mahony and Hollwey (1995) examined a large group of females with eating disorders, of which 31 had AN. While interpersonal difficulties vanished upon controlling for neuroticism in patients with other eating disorders, interpersonal difficulties continued to be of importance for those with AN regardless. This indicates that the other personality traits associated with AN may play a role in the experienced interpersonal difficulties. Another finding of this study was that interpersonal difficulties worsened as the disorder symptomatology worsened, which supports the findings by Patching et al. (2009) that interpersonal difficulties may be a cause and a result of AN.

To summarize, while the construct of interpersonal difficulties is quite broad as defined by Fairburn et al. (2003), there is sufficient evidence in the literature to suggest that individuals with AN may experience interpersonal difficulties with family and close others.
3.0. Purpose of Study

The purpose of this study was to explore the relevance of Fairburn et al.'s (2003) transdiagnostic theory to physical activity and food restriction in AN. This was accomplished through exploring the subjective emotional accounts of individuals with a current or past diagnosis of AN as they pertained to the four constructs addressed in the previous literature review (clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties). While there is a good deal of quantitative evidence indicating the pertinence of the maintaining factors outlined in the transdiagnostic theory of eating disorders, there are limited studies which examine the qualitative experiences of these four constructs, particularly in combination with each other. As a result, this study will also promote understanding of what the subjective experience of these four constructs is, and in turn, promote a better understanding of what precipitates food restriction and physical activity in AN. This study also provided participants with the opportunity to give a voice to their experience with AN.
4.0. Methodology

4.1. Research Objectives

The objectives for this qualitative study were:

1) To acquire in-depth descriptions of weight control strategies utilized in AN, specifically physical activity and food restriction (to provide context).
2) To qualitatively examine the links between the four identified constructs (clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties) and physical activity and food restriction in AN.

4.2. Participants

4.2.1. Inclusion criteria.

The present study was based on previous studies of AN in adult, female samples. As such, only adult females with a current or past diagnosis of AN (within the past two years) were deemed eligible to participate in this study. Participants needed to feel well enough to engage in a 90-minute interview. Furthermore, the study was conducted solely in the English language. In order to ensure that participants fully understood the study and interview questions, only participants who were fluent in English were eligible to participate. Lastly, the chosen method of carrying out the interviews was face-to-face, thus only participants who lived in Guelph or within one-hour of travel time from Guelph were eligible (so that the researcher could feasibly travel to the participant’s home to conduct the interview). In summary, the 20 individuals who were interviewed in this study met the following inclusion criteria:

1) Participants were 18 years of age or older;
2) Participants were female;
3) Participants were fluent in the English language;

4) Participants self-identified as having a current or previous diagnosis (or self-diagnosis) of AN of either subtype. The diagnosis needed to be within the past two years so as to ensure accuracy of memory recall;

5) Participants felt well enough to engage in a 90-minute interview; and

6) Participants resided in Guelph or within one hour of travel time from Guelph.

4.2.2. Sample.

Participants were recruited from a variety of different locations using a convenience sample. According to Seidman (2006), one method of determining sample size in a qualitative study is theoretical saturation of ideas. Saturation occurs when enough participants are recruited such that no new information is revealed through the interviews (Seidman, 2006). Seidman (2006) posits that recruiting a sufficient number of people for the study is often determined throughout the process of interviewing rather than before. Recruitment for this study was halted once 20 participants had been interviewed and the researcher determined that theoretical saturation of ideas had occurred.

4.2.3. Demographics.

Participants were recruited from throughout the city of Guelph, Ontario, including diverse community sites and the University of Guelph campus. The mean age of participants was 21.1 years (+/- 2.6) with a range of 18 to 27 years of age. Of the 20 participants, 19 were current university students and one indicated that she had recently graduated from university and presently worked in the business industry. Furthermore, 80% of participants identified themselves racially as white, 5% identified themselves as Korean, and 20% identified themselves as “Other”. Lastly, while confirmation of
treatment was not a requirement to participate in this study, 11 of 20 participants openly disclosed that they had received some kind of professional treatment for their eating disorder.

4.3. Procedure

4.3.1. Ethics.

Prior to conducting this study, an application form describing the proposed study and how ethical issues would be adequately addressed was submitted to the University of Guelph Research Ethics Board and ethical clearance was granted (REB#12JA003; see Appendix A).

4.3.2. Recruitment.

An assortment of recruitment sites were considered for the purpose of this study. The present author felt that it was crucial to recruit participants from both clinical sites and community sites. As addressed earlier in this proposal, there are often difficulties diagnosing individuals with AN due to how stringent and unclear the current diagnostic criteria may be (Attia & Roberto, 2009; Becker et al, 2009). Furthermore, Favaro et al. (2003) acknowledged that a greater prevalence of AN may be found when community samples are examined. Therefore, steps were taken to recruit participants from a variety of different sites in order to reach both people who have received an official diagnosis of AN and those who may have slipped between the cracks of clinical diagnosis. In addition, the purpose of this study was to gain a better understanding of the subjective experience of those with AN rather than verify diagnoses. As such, this study did not seek to ascertain whether participants had a formal diagnosis or not.

The majority of participants in the sample were recruited from the University of Guelph community, including the University of Guelph Wellness Centre, Student Health
Services, Counselling Services, the email list serve for three programs under the Bachelor of Applied Science undergraduate degree (Applied Human Nutrition; Adult Development and Family Well-being; and Child, Youth and Family), and the University of Guelph Athletic Centre. Other participants were recruited via: online advertisements on Kijiji.com for Kitchener-Waterloo, London, Stratford, Burlington, Hamilton, and Toronto; through Trellis Mental Health and Developmental Services; through the Eating Disorders Anonymous group located downtown Guelph; and through snowball sampling. This study was also advertised in various community sites in Guelph, such as the YMCA, the Guelph Community Health Centre, and the Athletic Club.

4.3.3. **Procedural steps.**

1) Individuals who saw poster advertisements at the aforementioned sites and were interested in the study contacted the researcher by phone or email, which was provided on advertisements (see Appendix B). All 20 participants involved in this study chose email as the preferred means of contact. The researcher thus screened participants for the inclusion criteria via email script (see Appendix C). If participants explicitly mentioned having received professional assistance for their disorder, the researcher tracked this information for the purpose of sample description.

2) Once participants were accepted for participation in the study, they were emailed an information sheet about the study (i.e., specifically a copy of a letter of informed consent) (see Appendix D). Due to the fact that all 20 participants were either students at the University of Guelph or resided in Guelph, the researcher agreed to meet with the participants in a private room at the University of Guelph for interviews to ensure confidentiality.
3) Prior to beginning the interview at the interview site, the researcher verbally described the study to ensure that the participants understood the nature of the study. Participants were prompted to ask questions if there was anything that they did not understand about the study. The researcher assured confidentiality and made participants aware that they were free to withdraw from the interview at any time or refuse to answer any questions that they were uncomfortable with. Participants signed and dated the letter of informed consent and the researcher signed as a witness.

4) Prior to beginning the interview, participants were provided with $10 compensation for their anticipated participation in the study and were required to sign a form confirming that they had received payment (see Appendix E). Participants also received an additional information sheet containing information about the study (i.e., specifically a copy of a letter of informed consent, Appendix D) as well as contact information for the researcher. Furthermore, participants were provided with the opportunity to subsequently receive a summary of the overall results of the study so that they could provide written feedback on the accuracy of the identified themes. Participants were thus provided with a form to sign, indicating their preferences with respect to receiving study results (see Appendix F).

5) The interviews took between 30 and 90 minutes to complete. Due to the personal and emotional nature of the interviews, the researcher provided participants with various eating disorder resources and distress lines prior to the beginning of the interview (see Appendix G). The researcher also devised a series of steps to
follow in the event of emotional distress during the interview, which were outlined in the letter of informed consent (Appendix D).

6) Interviews were recorded with two digital voice recorders (one was used as a back-up) for the purpose of later transcription.

7) Participants were asked if they would be willing to notify their acquaintances of this study and provide their acquaintances with the contact information of the student investigator (Appendix H). This snowball technique aided in the recruitment process. Sharing information about the study was completely voluntary.

8) A portable hard drive containing audio files of the recorded interviews were kept in a secured and locked desk at the University of Guelph. The researcher transcribed recorded interviews for data analysis. Interview transcripts were kept on a secured laptop, accessible only by the researcher. Interview transcripts on the laptop were encrypted using True Crypt software. Through the encryption process, files containing sensitive information on the laptop were kept in a secured and hidden folder, accessible with a password known only to the researcher. Raw interview data on audiotapes and the laptop will be retained for at least 5 years following publication of the study and then they will be destroyed.

9) Following data analysis of all interview transcripts, if participants so indicated, the researcher sent an email containing a summary of the themes identified in the study and requested feedback (see Appendix I). This feedback was integral in the decision to re-visit the transcripts, improving the data analysis and strengthening the validity of the study.
4.4. Interview Guide and Design

An in-depth, semi-structured interview based on the constructs of Fairburn et al.'s (2003) transdiagnostic theory and the additional construct of obsessiveness was developed for this study (see Appendix J). The interview consisted of four demographic questions (which were answered by participants), two descriptive questions, and 12 questions relating clinical perfectionism, obsessiveness, core low self-esteem, mood intolerance, and interpersonal difficulties to physical activity and food restriction in AN. The interview took between 30 and 90 minutes to complete.

According to Hennink, Hutter, and Bailey (2011), in-depth interviews are utilized to achieve a greater understanding of the subjective experiences of participants. Interviews are the most effective way of getting at the personal narratives of participants due to their one-to-one nature. Furthermore, Hennink et al. (2011) emphasize the need to maintain a conversational environment in which the participants feel comfortable in sharing their feelings and ideas. As such, it is important to establish a trusting relationship between the interviewer and the interviewee (Hennink et al. 2011). Seidman (2006) supports the notion of interviewing in order to promote understanding and to gain insight into the context and subjective experience of participants.

In designing a semi-structured interview guide, Hennink et al. (2011) assert that it is necessary to have an organized structure to the questions. To elaborate, it is important for the interview to have a formal introduction, followed by opening questions, which are designed to build a relationship between the interviewer and the interviewee. These questions should then be followed by key questions, which address the core features of the research objectives. To finish, it is important to have closing questions in order to provide a gradual end to the interview. Throughout the interview, probing questions or
examples may be employed to motivate the participant to share the key aspects of their narratives (Hennink et al., 2011). The interview guide designed for the present study included all of these aforementioned components.

Many of the resources on interviewing suggest choosing a particular interview method, such as phenomenological or ethnographic interviewing. These types of interviewing are geared towards understanding the raw experience of participants, rather than for evaluation purposes (Seidman, 2006). However, alternatives to the typical interview methods may be utilized, depending on the research objectives, as long as researchers still permit participants to share their subjective experiences and individual contexts (Seidman, 2006). The present study was quite different, given that it used a theory as a guide. While this form of interviewing is atypical, some researchers have acknowledged the usefulness of conducting a theory-based interview (Hsieh & Shannon, 2005; Potter & Levine-Donnerstein, 1999), which will be addressed in the following section.

4.5. Data Analysis

As aforementioned, the researcher audiotaped the interviews and transcribed them verbatim to facilitate subsequent coding of the data. Data-driven thematic analysis was then performed on the interview transcripts (Boyatzis, 1998; Guest, 2012) utilizing NVIVO qualitative data analysis software to facilitate management of the data. One of the benefits to using a formal theory as a guideline for interviews is that data may be used to support or contradict the theory. Descriptive evidence found for the theory may also be used to either validate the theory or ameliorate the theory through adaptations (Hsieh & Shannon, 2005). In the context of the present study, descriptive evidence provided for the relevance of obsessiveness to the maintenance of AN was considered.
While Fairburn et al.’s (2003) transdiagnostic theory served as the foundation for the present study and interview guide, themes and sub-themes relating the theoretical constructs to physical activity and food restriction were examined through data-driven thematic analysis (Boyatzis, 1998; Guest, 2012). According to Boyatzis (1998) and Guest (2012), the overarching purpose of thematic analysis is to organize qualitative data and transform it into quantitative categories or patterns. For this study, the researcher produced themes inductively at the manifest level (that is, directly from the interview data) (Boyatzis, 1998; Guest 2012). Prior to the development of themes and codes, the researcher condensed the interview data into outline form, focusing on key ideas. To accomplish this, the researcher began by carefully perusing the interview transcripts in Microsoft Word. Preliminary themes were highlighted in a variety of colours and identified through the Comment function within the program. As a result, the researcher familiarized herself with the interview data and understood as much of it as possible. Subsequently, the researcher imported all interview transcripts into the NVIVO program and generated “nodes” (folders) for potential themes, using “free” nodes for discrete categories (e.g., descriptions of eating habits and physical activity habits) and “tree” nodes to keep track of more complex relationships (e.g., themes relating to the four constructs). Furthermore, within these nodes, the researcher developed thematic codes for themes, each containing the following structure: a label for the code, a definition of the theme, written or verbal indicators of the theme in the interview data, criteria for excluding items from a theme category, and examples (Boyatzis, 1998; Guest, 2012). To code, the researcher read through each interview transcript thoroughly, highlighting specific segments of text and placing them into the appropriate node. If new themes
emerged during the coding process, the researcher created nodes for these themes and developed thematic codes for them according to the above structure. Moreover, as per the constant comparison method, all themes were compared across interview transcripts. For instance, if a new theme emerged after having already coded a specific interview transcript, this transcript was revisited to ensure that the new theme was considered. Once the coding was completed, the researcher reviewed each interview transcript to ensure that there was no overlap and no unidentified categories.

The trustworthiness of interview data is normally critiqued due to the subjective nature of the method (Shenton, 2004). Shenton (2004) suggests that research methods should ideally be based on studies that have been successful in the past. The present study was based on a very thorough literature review, which sufficiently described the phenomenon in question and examined previous research in this realm. This is important to ensuring trustworthiness (Shenton, 2004). However, the present study utilized a unique interview guide and as such, more measures were taken to maximize credibility. Firstly, due to the subjectivity of conducting interviews, the researcher kept a journal of personal and critical reflections about the research process. This ensured that throughout the study, the researcher was constantly aware of personal bias and took caution to not let it interfere with the research process. Furthermore, she kept a record of how the research was progressing, components of the research that were successful, and issues that were encountered and how they were overcome (Shenton, 2004). Secondly, member-checking (verifying themes with participants) was undertaken. This strengthens the validity of the study as it allowed participants to either support or discount the researcher’s analysis of the interview. Thirdly, the researcher worked very closely with her research supervisor.
As such, frequent consultation with the research supervisor consistently broadened the researcher’s perception and interpretation of interview data and themes, through ongoing discussion and the presentation of new ideas. Moreover, the research supervisor served as a perpetual resource, offering a second perspective and advice for improving the research process (Shenton, 2004).
5.0. Results

This section summarizes the results of the study. The first part of this section describes the food restriction habits and physical activity habits employed by the participants. The second part of this results section examines major themes related to the four constructs used as the basis for the present study (i.e., clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties). Illustrative quotes will be used throughout this results section to provide insight into constructs and related themes. A number will be used for each quotation to represent individual participants, which maintains confidentiality.

As per the first objective of the study, the food restriction habits and physical activity habits of the 20 participants were examined. The purpose of exploring these patterns was to acquire descriptions of the weight loss strategies utilized in this sample of females with AN. Having a detailed description of the weight loss strategies employed by participants, specifically food restriction and physical activity, sets a strong foundation for exploring the interconnections between these weight loss strategies and the core constructs of Fairburn et al.’s (2003) transdiagnostic theory.

5.1. Food Restriction and Physical Activity Habits

5.1.1. Food restriction.

Throughout the interviews, participants were directly asked to describe their food restriction habits during their experiences with AN, including which foods they identified as off-limits, which foods they allowed themselves to eat, times of the day that they chose to eat, and the frequency of their meals. The following section provides a summary of the major eating trends and patterns of participants during their experiences with AN.
5.1.1.1. Restricted food categories.

Of the 20 participants interviewed, six participants explicitly labelled their food restriction habits as very minimal or restrictive. Furthermore, of the major food categories, all participants were undivided in identifying the restriction of calories as essential. Three of 20 participants were particularly vocal in expressing that regulating caloric intake is a mathematical process in that avoiding a specific number of calories will unmistakably result in weight loss or prevent weight gain. For instance, when asked about the importance of restricting calories, Participant #11 responded “It was simply math, like don’t have more calories than you’re ever going to burn off.” In addition, 10 of 20 participants disclosed that they had a set amount of calories per day. The specific number of calories consumed ranged widely among these participants. The lowest caloric limit reported was 300 calories per day and the highest caloric limit reported was 2000 calories per day. Two of these 10 participants alternated their caloric allowance each day to impact their bodies. They explained that in constantly changing one’s daily caloric intake, the body is “tricked” into not growing accustomed to one’s diet.

Carbohydrates were another key category identified in the interviews. Fourteen of 20 participants reported that it was necessary to avoid carbohydrates. Of these 14, two participants described carbohydrates as negative due to the feeling of “fullness” that they produce. Participant #18 commented “Carbohydrates make you feel really full which makes you feel like you’re bigger. Your mind perceives yourself as bigger.” Additionally, three of 14 participants stated that carbohydrates should be avoided due to their high caloric content. When asked for the significance of restricting carbohydrate intake, Participant #5 discussed the manner in which carbohydrates can add up over the span of a day and contribute to weight gain:
Everything is a carbohydrate, essentially. So, most things that you would typically eat, like breakfast cereals and stuff [are carbohydrates] . . . Mcdonald’s burger buns [are carbohydrates]. You actually accumulate so many grain products over the day without recognizing it, so it’s something that I subconsciously saw as an evil type of thing.

Three of 14 participants pointed out the negative reputation that carbohydrates have. They expressed that carbohydrates are often frowned upon by others, making them a highly unappealing food group. For instance, Participant #4 stated:

> For me, that’s the first thing to go because they tend to be a higher calorie item, I guess. [There is a] stigma around carbs [and] in terms of scariness, for me that is the scarier food group.

Another key category identified by participants was foods labelled as “fattening” or “junk.” Eleven of 20 participants specified that they avoided eating fats, fattening foods, sweets, desserts, and snacks. In addition to the perceived high caloric value of these foods, two of these 11 participants acknowledged the impurity of these foods as a crucial factor. These two participants felt that it was important to avoid these foods because they essentially polluted the body with empty, unnecessary calories. In addressing fat consumption, Participant #9 stated “There was that same kind of taboo around it, that it was an unclean thing to eat. I could never pinpoint it but it just felt like something bad was going to happen if I ate it.” Furthermore, three of 11 participants avoided “junk” due to the negative stigma surrounding it. For instance:

> I have found that, even initially when my eating disorder started, [I avoided] fast foods and junk foods [like] chips, fries, and dessert options just because [in] the media, those were always the really bad things [in] all the obesity studies coming out. It’s always about Mcdonald’s and the fast food and having too much dessert, so those were the first to go. And all the doctors are telling you [that] you need to cut back on your sugars and stuff, so it was kind of like I jumped on that bandwagon and those were the first ones to go (Participant #13).
Two of 11 participants revealed interesting views regarding the avoidance of “junk”. While many participants restricted “junk” due to its caloric content or reputation, Participant #18 claimed that “junk” and sugar are more readily burned off throughout the day, increasing the occurrence of hunger and thus the likelihood of eating. In addition, Participant #20 claimed that she avoided “junk” foods such as chips, cake, and ice cream simply because she did not enjoy them, making them easy to cut out of her diet.

Vegetarianism and veganism were present in this sample. Only two of 20 participants reported avoiding meat without being complete vegetarians. Otherwise, eight of 20 participants identified themselves as being vegetarian or vegan. Of these eight participants, three specified that vegetarianism was a personal preference and unrelated to AN. Conversely, the other five (of eight) participants revealed that avoiding meat and meat products was a direct result of their disorder. Four of these latter participants chose to avoid meat due to its fat and caloric content. However, Participant #2 stated that she avoided meat due to her inability to always track the fat content of it:

The first thing that I did was I became vegetarian. I told everyone that I was vegetarian for ethical reasons but in my mind, the majority of meat that you buy doesn’t come in a package with the label on it, which means that I don’t know how much fat is in it, which means that I just want to completely avoid it. So, I [stopped] eating meat.

Two other food categories that participants avoided were dairy (five participants) and condiments (e.g., ketchup) (four participants). Dairy was typically avoided due to its fat content and condiments were viewed as unnecessary calories. Participant #14 spoke of the importance of avoiding condiments, stating that she avoided foods that seemed “extra” and “stripped it down to the basics” in order to preserve the wholesomeness of the food that she ate.
Overall, vegetables and fruit were collectively viewed as the “safest” foods to eat due to their healthful nature and limited calories. For instance, Participant #9 stated, “I could eat a lot more veggies and fruit and not go over the maximum calories I set for myself than I could if I had carbs and protein in addition to the fruit and veggies.” Furthermore, four of 20 participants expressed that they allowed specific types of carbohydrates in their diet. For instance, Participant #9, a vegan, stated that she ate rice, potatoes, and low-fat legumes. Also, Participant #2 listed rice products and corn flakes among her safe foods. Participant #18 stated that she chose a single food (i.e., banana bread) to eat once per day. When asked why she chose this food, she explained that she knew what was in it and that eating a food like banana bread helped her to hide her restrictive eating from her roommates.

A few participants commented on ingesting fluids. Five of 20 participants acknowledged regular water intake and three of 20 participants drank diet coke. Participant #14 reported that she drank water but was adamant on steering clear of juice due to its high sugar content and negative reputation. In contrast, Participant #17 revealed that her eating pattern was so rigid that she strictly regulated her water intake in addition to food:

I used to think that swallowing would give me more calories just because I was ingesting something when I swallowed, so I’d limit how many times I swallowed per day, which included drinking water. I didn’t even want to drink more water than I had to because even though it has no calories, it was still going into my body.

5.1.1.2. Time and frequency of eating.

As an overview, the participants were divided with respect to the scheduling of their eating. Eleven of 20 participants revealed that they attempted to avoid eating altogether, eating only when they could no longer endure it or eating minimal amounts
throughout the day whereas nine of 20 participants described their eating schedule as orderly or evenly-spaced out.

Of the 11 participants who endeavoured to completely evade eating, three participants stated that they would try to go through the entire day without eating and eat once at night. Participant #18 explained “I would try and wait until the end of the day to eat. That way, I didn’t waste my calories in the morning and have to feel hungry for the rest of the day. It was almost like a reward.” In contrast, Participant #15 reported that she would eat once in the morning and then eat very minimally for the rest of the day if she felt hungry. In addition, Participant #6 reported that she would try to go as long as possible without eating, disclosing that there were times when she would not eat for up to five days at a time, eating only when she got desperately hungry.

Within the subgroup of nine participants who described their eating patterns as evenly-spaced out, four participants reported adhering to structured meal times (breakfast, lunch, and dinner) and merely eating less than what was considered to be “normal”. Participant #9 structured her meals around her school schedule simply due to habit, explaining that she would eat in the mornings, during the allotted break times at school, and immediately after school. Moreover, four participants reported that eating at the standard meal times was important because in so doing, they could feign normalcy. Two of nine participants placed particular emphasis on eating dinner so that their parents would see them eating and therefore not be suspicious. Additionally, Participant #2 expressed her need to eat at regular intervals in order to manage feelings of hunger:

I always say that getting sick was the most difficult thing I did because I ate [a lot] my whole life. I eat a lot of food and I don’t do well with hunger, so fighting the urge of hunger was the hardest thing I’ve ever done. So, I would eat frequently, like every 3-4 hours.
Three participants were very organized with their eating schedules due to a profound need for regularity or predictability. For instance, Participant #17 divulged that, in spite of avoiding eating as much as she could, she needed to eat something small at standard intervals in order to maintain her metabolism: “Well, I would try to eat every three hours because I was scared that my metabolism would slow down if I had huge gaps between meals. I had always heard that people got fat from not eating regularly.” Evidently, numerous factors contributed to the timing of meals, as the frequency of eating was quite diverse among participants. Unique characteristics and personal preferences emerged.

5.1.2. Physical activity.

Participants were specifically asked to describe their physical activity habits during their experiences with AN, including the type of physical activity, the intensity of physical activity, the frequency of physical activity, the time of day and situations in which physical activity was done, and who physical activity was done with. This section provides a summary of the physical activity routines of participants during their experiences with AN.

5.1.2.1. Type of physical activity.

The majority of participants reported that physical activity was an important component of their experiences with AN. Five of 20 participants reported having always been active and having engaged in organized or competitive sports before and during their disorder. These sports included cheerleading (two participants), running (two participants), soccer (two participants), swimming (one participant), and competitive dance (one participant). Four of these participants were involved in two or more of the
aforementioned sports and one participant was involved in all of the above. Participant #1 attributed her initial weight loss to her involvement in running:

I started losing weight for the running. That was how it all started off and then I started getting more in tune with not only exercising healthily but eating healthy to fuel that. My coach never pushed healthy eating. We would have team parties where we would have pizza and ice cream and stuff like that, but for me, it was more what I read on the internet, or I got Runner’s World magazine or something and they would [identify] these healthy things that were good for fueling your body or whatever. So, I guess I became kind of obsessive over those too.

On the opposite end of the spectrum, four of 20 participants claimed that their physical activity was negligible during their disorder and that they focused solely on food restriction. Three of four participants attributed their lack of physical activity to not having enough energy as a result of food restriction. For instance, Participant #16 explained:

Because I was depriving my body of all nutrients except for the ones that I had stored up, I couldn’t go for runs and I couldn’t go out and do long activities. The ones that I would plan on doing would be at my home gym as opposed to going out to a gym. That way if I felt faint or if I was sweating profusely after four minutes on the treadmill, I could kind of conceal it. That was my struggle, my fight. So, that exertion wasn’t really there but I did find that I would get really dizzy. I was tired. I got to the point where I was just exhausted all the time.

The remaining participant in this subgroup admitted that she had more control over her food intake and that she felt she couldn’t find the motivation to engage in too much physical activity during her experience with AN.

With respect to particular types of physical activity, 10 of 20 participants reported engaging in physical activity for transportation, such as walking or biking to and from school and walking across campus to classes. Six of 20 participants described their jobs as physically demanding, either due to excessive standing, lifting, or running back and
forth to complete tasks. In addition, six of 20 participants disclosed that doing chores was a paramount form of physical activity for them during their experiences with AN. Some of the chores described were cleaning the house, cooking, walking dogs, and doing barn chores. Eighteen of 20 participants reported engaging in planned physical activity either for leisure or exercise. Planned physical activity was the most common form of physical activity in this sample. Within this broader category of planned physical activity, 17 of 18 participants reported engaging in planned cardiovascular activities, such as walking/running (15 of 18 participants), using a regular or stationary bike (six of 18 participants), aerobics such as zumba classes (three of 18 participants), using an elliptical machine (one of 18 participants), swimming (one of 18 participants), and rollerblading (one of 18 participants). Six of 15 participants who engaged in walking/running described their walking as excessive. Specifically, these participants indicated that they walked exceedingly far distances, walked for an extended period of time, or walked as often as they could. For instance, Participant #4 stated “I still do a lot of walking. [I did] a lot of [intentional] walking [to get to] places and [I walked] really far distances for no apparent reason.” Moreover, Participant #1 described:

I have had times when I was going for really long walks when I [lived] at home . . . One of my friends called me and was like “Oh, my boyfriend saw you walking your dogs up near blah blah blah” and it [was] a place really, really far from my house. She was like “Yeah, he said you were walking pretty fast. What’s going on?” I [was] like, “oh no, that probably wasn’t me,” when really it was.

In comparison to planned cardiovascular activity, nine of 18 participants engaged in planned toning or strength building activity. These activities included weight lifting (six of 18 participants), stomach crunches or sit-ups (five of 18 participants), and push-ups (two of 18 participants). In addition to these activities, five of 18 participants
reported engaging in excessive standing. These participants felt that standing for an
extended period of time would inevitably expend more calories than sitting. For instance,
Participant #11 stated:

I would never sit down. I would avoid it. The only times I would sit
down were if I was in a car, because I would have to, or when I was
eating. Other than that, I tried to do everything standing up. I still usually
do, except for when I’m in class. If I’m doing homework, I stand at my
desk. If I’m doing puzzles, I stand at the table. That’s something that’s
kind of been there for the whole disorder and is still there for me because I
think standing [burns] more calories than sitting.

Physical activity for mere leisure was less common in this sample. Three of 20
participants reported horseback riding as a hobby. Moreover, two of 20 participants
noted that they engaged in leisure activities such as snowboarding, informal soccer, and
nature walks.

Therefore, it is evident that while certain patterns of physical activity emerged
from the interviews, there was still a great deal of variability in the physical activity
routines among participants.

5.1.2.2. Intensity of physical activity.

This section examines the intensity of physical activity. Twelve of 20 participants
described their physical activity as vigorously intense. Two of 12 participants were
adamant on engaging in vigorous activity because one expends a higher amount of
energy through vigorous activity. For instance, Participant #2 stated:

I never went to the gym to just walk and do a few things. If I was going to
the gym, I was going to the gym. I used to love yoga and I wouldn’t even
go to the gym to do yoga [anymore] because I was like, “if you’re going to
walk into the building, you had better make use of your hour and doing
yoga isn’t making use of your hour” . . . it’s not as physically demanding
and . . . I’m not going to burn as many calories doing yoga. Or I [would
go] to a yoga class and I [would] get into the frame of mind that, “you
have got to make this as intense as you can possibly make it to burn as
many calories [as possible].” And then I [would] just hate it. That was not fun. I just wouldn’t even go anymore.

Eight of 20 participants either labelled their physical activity as “moderately intense” or could not definitively describe their physical activity as either vigorous or moderate.

5.1.2.3. Frequency of physical activity.

There was tremendous variety in the frequency of physical activity in this sample. Overall, frequency of physical activity ranged from twice a week to 13 hours per day. There were two issues in analyzing the frequency of physical activity. The first is that not all participants measured frequency in the same manner. For instance, some participants did not engage in physical activity for a specific amount of time in one session. Therefore, they reported their frequency by referring to how many times they engaged in physical activity per day or week. Others kept track of a particular amount of hours in which they engaged in physical activity. Furthermore, seven of 20 participants insisted that they moved around as much as possible throughout the day, making an exact measurement of physical activity difficult to ascertain. These seven participants reported remaining in a state of movement without sitting down for the entire day. For instance, Participant #17 stated: “I wanted to move constantly. Absolutely as much as possible. If I could take some normal activity and add some movement to it, I would. I would walk everywhere that I could, I would stand as much as I could, I would do chores, and I would cook.”

Nine of 20 participants engaged in physical activity one to two hours per day. Five of 20 participants reported engaging in physical activity for more than five hours a day, with numbers reaching as high as eight hours and 13 hours per day. These latter
participants asserted that they moved around all day long, therefore engaging in physical activity nearly constantly. Lastly, two of 20 participants stated that they engaged in physical activity at least once per day and one of 20 participants did physical activity twice per week.

**5.1.2.4. Preferred times of day and situations in which participants did physical activity.**

This section examines which times of the day and in which particular situations participants chose to engage in physical activity. Nine of 20 participants explained that they based their physical activity routines on mere convenience, for instance, when they were not at school or work and when they could access transportation (such as getting a ride to the gym from parents). Six of 20 participants preferred to exercise in the morning. Of these six participants, two participants asserted that they preferred doing their physical activity in the morning because they could get it out of the way, ensuring that they fit it into their schedule. In addition, Participant #9 chose to complete her physical activity early in the morning so that she could evade interference from her family:

> The mornings have always been a big one. I think the reason for that was just that I felt the mornings were mine . . . Of course, everyone started to catch on and they were like, “There’s a problem here, don’t let her go for a walk,” or whatever. But [I] always [felt that] they couldn’t catch me if I could get up at 5:30 in the morning.

Another participant felt that if she did physical activity in the morning, then she would trigger her metabolism and burn off calories that she ingested throughout the rest of the day. On the other hand, one participant stated that she enjoyed doing physical activity before bed so that she could expend energy right before going to sleep.

In addition to times of the day, some participants also revealed particular situations in which they preferred to do physical activity. Six of 20 participants stated
that they tended to complete physical activity following a stressful or anxiety-provoking event. Additionally, a number of participants disclosed that they structured physical activity around eating. Five of 20 participants felt it was necessary to engage in physical activity following a meal, so as to cleanse the body of the calories that it ingested. For instance, Participant #19 stated:

Well, it was a way of purging for me, like if I knew I had just eaten. I had issues throughout my disorder with vomiting, so I would more often go to that than exercising right after eating but [vomiting and exercising] were ways for me to feel like I was getting rid of it really quickly.

Furthermore, four of 20 participants stated that they preferred to do physical activity before eating. All four of these participants expressed that the physical activity acted as a prerequisite for indulging in a meal. For instance, Participant #11 stated “Usually, I would do it right before dinner because [otherwise] I didn’t feel like I [deserved] to eat yet.” Three of 20 participants acknowledged engaging in physical activity to intentionally escape meals. Specifically, these participants used physical activity as an excuse to not eat. For instance, Participant #1 stated “I think I actually ended up using exercise as well to kind of avoid eating. So, I would be like, ‘Okay well, it’s lunch time. Oh no, I have to take the dogs for a walk. Okay, I can’t eat lunch.’”

**5.1.2.5. Who physical activity was done with.**

This final section on physical activity explores whom participants engaged in physical activity with. Evidently, the five of 20 participants who were steadily involved in competitive or team sports unavoidably did physical activity with others. Outside of organized sports, 17 of 20 participants stated that they primarily engaged in physical activity alone. Of these 17 participants, eight participants claimed that they did physical activity alone due to their circumstances at the time, such as not having many friends to
do physical activity with or not thinking to ask anyone to accompany them. Conversely, six of 17 participants stated that they preferred to do physical activity alone to escape any interruptions from others. These participants expressed that they had a very meticulous way of going about their physical activity and that if anyone else were involved, they would not be able to go about things in their own fashion. For instance, Participant #13 stated:

> I know what I want to do and when I go for a walk, I know which route I want to [take] because I feel that it’s an acceptable amount of time to burn the right amount of calories or that it’s the right distance. It’s not too long but it’s not too short either. If I went [for a walk] with my sister, she would chat the whole time and she could say, “I don’t want to go that route” or “I’m tired, I want to go back” and I don’t want people distracting me from [my physical activity] because I feel like I have to do it.

In addition, two of 17 participants did physical activity alone to maintain the secrecy of their disorder. Finally, Participant #16 explained that she felt embarrassed exerting herself and perspiring in front of others and so preferred to do physical activity in privacy.

Four of 20 participants reported doing physical activity with a parent. One of these four participants explained that accompanying her father to the gym was her way of being transported there, so it was merely situational. The other three of these four participants were accompanied by their mothers when doing physical activity as a means of being monitored. Participant #9 stated:

> The only [person I did physical activity with] was my mom. My mom would usually go walking with me at night, and she still does. Actually, I think she started doing it out of concern because she realized that if she couldn’t stop me, then at least she could support me.
Five of 20 participants reported occasionally doing physical activity with friends. One participant pointed out that she had a friend with similar activity levels to herself. Therefore, they tended to collaborate in their fitness endeavours.

Overall, participants were quite adept at describing their food restriction and physical activity patterns. As aforementioned, understanding these patterns set the essential groundwork for relating weight loss strategies to the four core constructs of this study.

5.2. The Core Constructs of Fairburn et al.’s (2003) Transdiagnostic Theory

In accordance with the second objective of this study, the relationships between food restriction, physical activity, and the core constructs of Fairburn et al.’s (2003) transdiagnostic theory were examined in-depth. Initially, obsessiveness was included as a separate construct to be examined alongside the four constructs of the transdiagnostic theory. However, following data analysis, there was a great deal of overlap between the themes identified within the construct of perfectionism and the construct of obsessiveness. Therefore, these two constructs were combined under the conclusion that they were very similar in nature. The following section summarizes the themes and sub-themes identified within the constructs of clinical perfectionism (including themes identified in questions on obsessiveness), core low self-esteem, mood intolerance, and interpersonal difficulties.

5.2.1. Clinical perfectionism.

Clinical perfectionism was the first construct explored in this study. The sample was not “clinical” in nature and therefore, the “clinical” level of perfectionism could not be determined. As such, general perfectionism was addressed. During the interview, participants were asked if they believed that perfectionist tendencies influenced their
overall motivation to engage in food restriction or physical activity. Of 20 participants, 16 participants felt that perfectionism played a significant role in their food restriction and 12 out of 20 participants felt that perfectionism was a vital part of their motivation to maintain a rigid physical activity routine. On the contrary, one of 20 participants felt that her perfectionist tendencies decreased her motivation to engage in physical activity because she preferred to avoid it than risk doing it imperfectly:

> Even just going out running, I was really self-conscious about it because I knew that people could see me and I wouldn’t do things because of that. I didn’t think that my body was perfect or that I was doing it perfectly. I just didn’t want to put myself out there (Participant #15).

Eight major themes emerged from the interview data on perfectionism. These themes included global perfectionism, identity, goals, compensatory behaviour, excessive planning, comparisons, perceptions of others, and perceived advantages of perfectionism. Some of these themes were also broken down into more specific sub-themes. This section summarizes these themes and sub-themes relating perfectionism to food restriction and physical activity.

**5.2.1.1. Global perfectionism.**

When asked about perfectionism, 10 of 20 participants revealed that their perfectionist tendencies went far beyond food restriction and physical activity. These participants identified perfectionism as a central part of their personalities, affecting not only food restriction and physical activity but many other aspects of their lives as well. For instance, Participant #14 commented:

> [Perfectionism] is still a factor in my life today. I’m trying to move it away from food but I see that it can show itself in school. Or when I was planning my wedding, I relapsed in the months before my wedding because I had to look perfect on that day. There’s enough pressure for the average girl to look perfect but it was enough of a trigger for me. Whether it’s looking perfect on your wedding day or trying to be perfect in school, I
call it a core belief that’s running through me. It applies itself to even being the perfect wife and the perfect daughter or the perfect mother to my kittens, and it definitely affected my eating. You know, if I just restricted a bit more, I could have looked a bit more perfect and reached that perfect ideal. Or if I exercised a little bit more, it would help me reach that perfect ideal. And it’s hard to actually be able to be able to be happy with myself and to be able to stop and say that what I did is good enough because it never feels good enough. So, it definitely contributed to my actions during my eating disorder and even relapsing. And even when I’ve been in wellness and recovery, I just need to keep tabs on it.

In addition, Participants #1 and #9 described the manner in which perfectionism permeated their school performance. For instance, Participant #1 discussed how being cut from a sports team upset her because it was very important for her to do extremely well in all of her academic and extracurricular activities:

I joined cross-country in grade 9 because I tried out for the field hockey team and I got cut. So, that was kind of devastating for me because when I was in grade 8, I was a good student, I got all As, I was on all the different committees, and I was on all the sports teams that I could be on.

Participant #9 viewed perfectionism as a double-edged sword in the sense that it motivated her to restrict her food but also helped her to remain focused on her studies:

Most people expected me to start to take a nose-dive in school with all that was going on but that wasn’t really the case. I actually graduated at the very top of my class in school and I was a Governor-General’s award winner [an award given to high-achieving students]. The only thing I used to ever say about it was that you kind of took the good with the bad. I was a perfectionist with food and stuff and that was kind of a negative thing for me but then, the same perfectionism traits were what enabled me to do really well in school, I think.

5.2.1.2. Identity.

Another theme that emerged within this construct was identity. Specifically, five of 20 participants described a need to perfectly adhere to the core values that defined them as individuals. These participants described their disorder as a separate entity from themselves, an entity whose “rules” often contradicted their own morals. These
participants revealed that they often had to choose between obeying the rules of their AN and satisfying their own core values. However, in spite of which values they attempted to uphold, these participants revealed a great deal of frustration when they were not able to perfectly define themselves as either a person with an eating disorder or a “healthy” person. This theme relates to perfectionism as it clearly demonstrates the participants’ need to fit perfectly into a predetermined mold. For instance, Participant #4 described her identity conflict in the context of needing to restrict her food intake:

In terms of being perfect, trying to be the perfect anorexic – to be honest, which no one can really attain but – just trying to be the sickest that you can be, or the thinnest. Even though that idea of perfect is unattainable, it’s always about, “Just lose a little more and then you’ll be happy.” But then I was never happy. When I defined myself more as a person with an eating disorder than an actual person, it was like, “Okay, well this is [the] identity that I need to fit. I need to fit the mold perfectly of someone who is anorexic.” So, in my idea of someone who is like that, if I were to drink regular pop, that didn’t fit into this mold that I needed to fit into. As opposed to like being a human, I was this person, this anorexic person. There was this anorexic ideal and I wasn’t fitting into this ideal or mold or identity that I had fitted for myself. So it’s like when someone who is healthy goes against a core value that they have, that they’re feeling guilty about. Let’s say you steal something. The guilt is justified then but you would feel guilty if [not stealing] was part of your moral compass. When my mind was more consumed with the anorexia, it was like I was going against the anorexia’s values, which is, “Don’t eat. Don’t eat this and don’t eat [that].” Rules. I broke a rule, so I felt so guilty about that and then it made me feel like a bad person (Participant #4).

Similarly, Participant #19 expressed the importance of being adept at having an eating disorder:

“It got to the point where I thought my eating disorder was the only thing that I could do right. So, if I couldn’t do that right, it was like I couldn’t do anything at all and that just made me feel so awful.”


5.2.1.3. Goals.

Another major theme revealed through the interviews was goals. Eighteen of 20 participants expressed needing to meet some kind of ideal goal during their experience with AN. These goals included sub-themes of achieving a specific body type or weight, meeting a calorie quota for the day (either through food restriction or physical activity or a combination of the two), eating at specific times or intervals, and improving one’s performance in sports. Moreover, five of 18 participants described having a need to keep increasing the strictness of their goals.

5.2.1.3.1. Body type or weight goals.

Of the 18 people who identified having a type of goal to meet, 10 participants described trying to achieve a specific body type or weight. These participants disclosed that their food restriction and physical activity endeavours were designed based on an ideal body or weight. Participants #2 and #7 explained:

I think the perfectionism came in terms of my body. I had to change my body to make it perfect and the only way I was going to change my body to make it perfect was by exercise. I didn’t have a perfect workout I had to follow, you know what I mean? I would go to the gym and I never wrote out what I was doing at the gym. I’ve been so exercise-obsessed and I read magazines, so I had such a concept of it all but it was never like I had that perfect workout that I had to do. It was more like, I have a perfect body type in mind and the only way I’m going to achieve that perfect body type is if I exercise (Participant #2).

Just aiming for this almost unattainable goal, like looking like a model on the front of a magazine. I think that is kind of what pushes it. You just stop thinking about other peoples’ opinions about it and you stop thinking about a lot of other things. You just focus on the goal. You just focus on getting there, I guess. You just keep it on your mind almost all the time (Participant #7).

Furthermore, seven of these 10 participants mentioned placing particular emphasis on having a flat stomach. For instance, Participant #9 stated “I was really
worried about my stomach mainly. I wanted it to be very flat.” and Participant #17 disclosed:

Even though I was skinny, I still felt like my stomach stuck out more than it should. I would see someone with a really flat stomach and I would want that so badly. My stomach was probably flat, I don’t know, but it would grow and shrink depending on whether I ate or not. I feel like my stomach is different than other people’s stomachs. I would watch other people before and after a meal and their stomachs would always look the same but my stomach would swell after a meal and it drove me crazy.

Of these seven participants, three participants reported a need to constantly check the size of their stomach. These participants expressed that the way they perceived the size of their stomach often determined how well they were progressing in their food restriction or physical activity. For instance, Participants #9 and #10 stated:

Pretty much any time I was walking by a reflective surface or mirror, I would always check to see how my stomach looked... it was one of the driving forces behind how much I would exercise and how much I felt I was allowed to eat that day (Participant #9).

I used to have this thing where, if I was ever by the mirror, I would always look at the side of my stomach to see if I looked skinny or bloated because if I ate, my stomach would just poof out. If I had a flat stomach, I would praise myself. Or I [would] stand in [front of] the mirror and try to show my bones, which was weird, but if my stomach was protruding, it would disgust me, kind of like losing a race or something (Participant #10).

5.2.1.3.2. Caloric goals.

Ten of the 18 participants endeavoured to meet a certain number of calories per day. These participants regulated their caloric intake either through food restriction, physical activity, or a combination of both. These participants discussed their need to meet this caloric goal every day to feel as though they had had a successful day. For example, in reference to her food restriction, Participant #8 stated:

If it was planned during the day and I ate something off of [my plan] or changed something that would add calories, it used to really upset me. To
me, it was seen as a failure. It would be imperfect. Basically, if I ate
anything that wasn’t planned or wasn’t considered safe, it was imperfect.

In addition, Participant #6 said “With physical activity, I would always try to hit a certain
number of calories burned and if I didn’t, then I felt it was a waste of a gym time or
session.” Also, Participant #19 expressed:

When I was going to the gym a lot, I would always look at the number of
calories that I had burned on the machines and it had to be a certain
number or above. Otherwise, it was like I had failed. And if I didn’t go to
the gym, it was like I had failed in the biggest way imaginable.

Moreover, five of these 10 participants described the concept of having minimum
and maximum allowances for calories. These participants spoke of having a caloric goal
for the day but explained that if they consumed fewer calories or expended more calories
than their caloric quota for the day, they considered this an even greater success.

Participants #1 and #7 stated:

I would have daily allowances for food. So, it was sort of like that for me
with exercise too. But that was a minimal allowance, so that’s the
minimum bar. If I did above that, even better, but there was a minimum
amount that I had to do. And so with food, there was a maximum that I
would have and if I could do below that, that was better (Participant #1).

I had a goal for every day and if I got lower than the goal number . . . it
would just be a reward to myself. Like, “oh, you ate fewer calories today
and you exercised on the machine.” It came into the gym too because I
would keep track of how many calories I was burning on the machine and
the more I burned, the better I felt about myself (Participant #7).

5.2.1.3.3. Eating at specific times or intervals.

Four out of the 18 participants who identified having goals strived to regulate
their eating either by eating at specific times throughout the day or eating at regular
intervals. In this sense, the goals were not only set amounts but the frequency of eating
as well. Participant #18 explained “It would start off that my goal was to only eat once a
day. It started off being restriction, so [eating] once a day, then [it progressed to eating] a
smaller amount [during] the day.” Furthermore, Participant #14 described her perfect time to eat:

I had to eat the exactly correct amount of food at the exact time because when I learned about mechanical eating, it was every three to four hours and I was on the hour. So, we were at my grandmother’s [house] and it was like 5:30. Dinner was at 6 and I was bugging my mom, like, “Mom we have to go, we have to go, I need to get home, I need to be home for 6.” I was [pestering] her and she knew [that it was late]. She drove home like a maniac because she knew she had lost track of time and, “oh my god, we have to get home so she can eat.” Because of traffic or street lights or anything, we got home and I got into the kitchen and the clock said 6:04 and I did not eat dinner. I said, “too bad, we missed it.” I think I made my mom feel really bad but in addition to the perfectionism, it was all or nothing. It’s either we get home and I eat my meal at 6:00 at the perfect time or I don’t do it at all. And I didn’t do it at all. And my mom was devastated because all she wanted me to do was eat and she couldn’t understand why 4 minutes was such a big deal but in my head, it was 6:00. That’s the perfect time to eat and we didn’t make it.

In addition, 10 of 20 participants revealed how the ways in which they measured or perceived the passage of time influenced their food restriction and physical activity. For instance, three of 10 participants reported that the following day was a brand new start such that if they had not succeeded in meeting their food restriction or physical activity goals during the present day, then they had a chance to begin afresh the next day. For example, Participant #3 stated: “If it was something that I couldn’t change, like I couldn’t change the fact that I couldn’t exercise that day, then I wouldn’t dwell on it. I would just say, ‘okay, tomorrow will be different.’” On the other hand, six of 10 participants reported feeling as though there was no distinction between days and that it was imperative that their food restriction and physical activity goals be met as soon as possible. Participant #9 stated:

There was no separation of days. They all kind of blended into each other. Now I’m able to wake up and say, “Okay, it’s a new day. Whatever happened yesterday, I don’t need to compensate for that.” But at the time,
it was definitely, “oh, I only got four hours of exercise yesterday so I had better do six today to even out the average a bit.”

Lastly, four of 10 participants reported placing a great deal of emphasis on the duration of their meals or physical activity. Participants #2 and #17 stated:

I would always start [my day] with an apple and I was caught up in thinking, “It has to take at least 10 minutes to eat your apple. If you [finish] your apple [in under] 10 minutes then you’ve eaten too much” (Participant #2).

Actually, I think the treadmill really played a big role in my weight loss. When I first started working out, I would do stuff like aerobics, sit-ups, push-ups, leg lifts, and that kind of thing. I would time it for 30 minutes or something like that or I would just put on a CD and try to do the movements until the CD ended. But I had no real way of knowing how many calories I burned. Then I started using the treadmill and it had this timer and calorie counter thing on it and I was really obsessive with that. I would have a goal to walk for 30 minutes or burn 320 calories and if it went to 30:01 [minutes] or 321 [calories] or something, I would feel stressed out because I wasn’t stopping at a rounded number. So, if that happened, I would keep going until 35 minutes or 350 calories and if it went to 35:01 [minutes], same thing. So, that got pretty bad at times (Participant #17).

5.2.1.3.4. Athletic performance.

Two of the 18 goal-oriented participants focused a great deal of energy on continually improving their athletic performance. These participants described how important it was for them to not only do well, but to excel at their athletic endeavours. Participants #1 and #5 commented:

I decided to join a track team that my cross-country coach ran outside of school so that’s when things started to get a little bit out of control. I saw that the more I trained and the harder I trained, the better I became. And so, each race, I would be like, “Okay, I want to improve my time by this much” or “I want to improve my place by this much each year.” I guess I did cross country in grade 9, grade 10 and part of grade 11. So, between the years, I started seeing improvements in my athletic performance and I got compliments like, “Oh yeah, you know you’re doing really well” and “You’ve really put a lot of effort into this” and the rewards were wonderful. I felt good about myself at the end of the race. I felt good about pushing my body to that point of exhaustion. That for me was
where the perfection came in: being in constant competition to see if I could go that much further, that much faster (Participant #1).

I had to make sure that I was always at my best, doing my best at everything. I would have three practices in a row plus dance earlier in the day or fitness or whatever. It was always that I couldn’t show that I was tired. I almost couldn’t show that weakness. Other people were on the ground, panting and stuff and I would be up walking, “Okay, let’s go, let’s do it again, let’s run this” . . . I already knew at that point that I was iron anaemic, so I already had biological factors working against me that I knew of. But it didn’t matter. It wasn’t going to stop me. Nothing was going to stop me at that time because it was just not what my highest determination was. I was going to surpass that. So, that was my goal and I had to achieve it, working out and stuff and not showing that I was tired. Just trying to be the best and beat the boys and be on the same level as some of the top athletes at our school (Participant #5).

5.2.1.3.5. Increasing strictness of goals.

Rather than having a permanent goal in mind, five of these 18 participants revealed a need to keep increasing their goals in strictness and intensity. These participants attributed these ever-changing goals to perfectionist tendencies, explaining that due to their desire to be “perfect”, goals that they had attained would quickly cease to be a challenge; once attained, they no longer seemed sufficient. For instance, Participants #2, #14, and #19 described a constant need to keep restricting more and more:

It started as, “You’re not eating meat and you’re not eating dressing.” It started very simple and then it got to, “You’re not eating this” and then eventually it was, “You’re not eating this and you’re not eating this.” Then the list started becoming only things that you’re allowed to eat. So, that went on for months and months and months and months (Participant #2).

When I eventually incorporated peanut butter into my life, two tablespoons is a serving, and I would scoop it. Of course, it’s natural peanut butter because it’s purer than the other kinds. I would scoop it with the tablespoon and get the knife and measure it. Eventually, instead of using the back of the knife, I used the round part of the knife, so I wasn’t actually fully getting a tablespoon, I was getting just under. So, even just the thoughts of food restriction, again, not being good enough (Participant #14).
As I started to get deeper and deeper into it, it became stricter and I think there are a few [reasons]. I think once you do something for long enough, your norms change. Maybe I would go from [ingesting] 800 [calories] down to 500 [calories]. Then all of a sudden it became so normal to be eating such a small amount that anything more than that seemed excessive because I did it for so long. And within that, I think it’s really about control. If I wasn’t doing it, it gave me this feeling like I wasn’t in control when really I was wildly out of control. I was so out of control that I was killing myself but because it had become so normal to me, it was what I was so used to, and I hadn’t let myself deviate from it for so long, it just seemed like that’s what I was supposed to do. That’s what I was meant to do (Participant #19).

5.2.1.4. Compensatory behaviours.

Engaging in compensatory behaviours when food restriction and physical activity patterns were changed was a major theme. In essence, this theme explores the manner in which participants balanced their caloric intake and caloric output if their regular patterns were somehow disturbed. Food restriction patterns were occasionally altered when participants ate more than usual due to hunger, social pressure, or during recovery. Physical activity patterns were typically changed due to uncontrollable factors such as exhaustion, scheduling, or being supervised. This segment summarizes the compensatory behaviours revealed during the interviews. These behaviours included: immediate substitution for regular physical activity, such as fidgeting, alternative exercises, chores, and standing; increased food restriction; direct supplementation to physical activity routines; gradual supplementation to physical activity routines; and urge to move or engage in physical activity. In addition, the sub-theme of desperation, which encompasses the severe emotional and psychological reactions experienced by some participants when their food restriction or physical activity patterns were disrupted, was identified.
5.2.1.4.1. Immediate substitution for physical activity.

Fourteen of 20 participants disclosed engaging in some form of substitute physical activity if they missed their usual physical activity. This included fidgeting (e.g., leg-shaking or other intentional movement or straining of the body), alternative exercises, chores, and standing.

Of these 14 participants, 11 participants reported doing some sort of fidgeting as an immediate substitute for their regular physical activity. This often included leg-shaking. For instance, Participants #5 and #11 discussed how leg-shaking was an instant and secretive way to burn calories:

There are the little things that you don’t realize have an effect on your energy output. So, there’s that and it was also probably because of nervousness and having so much anxiety that I couldn’t help it but shake sometimes. [I would] foot tap and stuff because it just felt comfortable. There was always that [thought] “Oh, you’re burning calories at the same time and people aren’t going to notice because a lot of people foot tap or bounce their leg.” I guess it was kind of a sneaky way to burn calories without people noticing (Participant #5).

I would do what I could because I have been in [eating disorder treatment] programs before and of course you’re not allowed to do exercise in them. But if I was in my room alone, I would try to do stuff. It wasn’t good enough for me but it was better than not doing anything at all. So, I would do anything. If I am forced to sit for some reason, I find myself really anxious. I’m usually bouncing my legs or fidgeting or moving. Doing anything to move more, I guess (Participant #11).

In addition to leg-shaking, four of 11 participants revealed other forms of small, deliberate movements or ways of burning a minimal amount of calories. For example, Participant #13 reported chewing gum to expend calories. In addition, Participant #2 discussed making common tasks more strenuous as a means of expending more energy:

I would hold my coffee mug [higher up] like this because I believed that if I constantly held my coffee mug like this, it was working some form of a muscle. I figured, it has to be doing something, you know what I mean? I found a theory for everything. I figured blow drying my hair for longer
than normal has got to be doing something. Or I figured taking a longer shower has got to be doing something.

Participants #5 and #16 stated that they sometimes exposed their bodies to cold so that they would expend energy warming up:

[I would] constantly have cold water because I know with the cold water, your body has to heat it up before it can use it. That’s what I think. I researched it. So, I would drink ice water and a lot of it. And the cold helps your stomach stay smaller (Participant #5).

I would stay cold because I knew that being cold and shivering burned more calories and it was your body’s way of trying to heat yourself. So, if I was cold and shivering, I would be like, this is okay, this is fine. By no means was I walking around without a coat on but I just wasn’t as layered as I should have been. But I was okay with that (Participant #16).

Two of the 14 participants who engaged in immediate substitution for usual physical activity explicitly stated that they never fidgeted or engaged in small, deliberate movements. For instance, Participant #18 stated that such small movements did not expend enough energy to satisfy her: “It had to actually be an exertion where you became short of breath if you exerted yourself enough.”

In addition to fidgeting and small, deliberate movements, engaging in alternative exercises was another form of immediate substitution for usual physical activity routines. Out of 14 participants, seven participants revealed doing some other form of exercise if they could not complete their usual routine. Participants #4, #7, and #16 disclosed that they would isolate themselves from their present environment to fit in some form of exercise: “If I was at a friend’s house, I would just go to the bathroom and do it” (Participant #4); “I would try to find little ways. Sometimes I would even go to the washroom and do a couple of jumping jacks or something silly like that” (Participant #7).

I’ve been caught doing push-ups at work, in my bedroom, or in my private office. Or at one of my stores, I had my own space. So, I would be like,
“Oh, I have to go make a phone call,” shut the door, and do 25 push-ups and 100 sit-ups. I would come back and be like, “Alright, done” . . . [I would do it] just to get the blood moving. Just to keep my body toned. It’s better than nothing. It’s something. It’s going to do something (Participant #16).

Seven out of the 14 participants who engaged in immediate substitution for their regular physical activity reported completing tasks and chores to expend energy. Participant #2 stated:

Two months before I went to Homewood [an eating disorder treatment centre], I wasn’t able to go to the gym anymore because I was so exhausted. I literally felt like a zombie every single day. So, that was when the cleaning and walking got way more obsessive because I wasn’t able to go to the gym (Participant #2).

Finally, four out of 14 participants discussed standing as a method of burning calories if they were not able to do their usual physical activity. Participants #9 and #13 disclosed:

If I was not able to exercise, then I was never able to sit down. If I had to be in a room somewhere, I would always be on my feet. I don’t know why there was some kind of guilt associated with sitting. It was like, “No, I’m supposed to be burning calories right now.” So, even though the difference between standing and sitting is so negligible, there was definitely some element of that (Participant #9).

Just standing because it’s somewhat easy to get away with, I guess, and it doesn’t seem so out of place sometimes. So, it’s kind of easier to get away with and although it’s not that much different from sitting, it’s the fact that you burn just a little bit more calories than when you’re sitting. You will stand just to make up for the fact that you can’t do anything else that day (Participant #13).

5.2.1.4.2. Increased food restriction.

Out of 20 participants, 8 participants reported engaging in even further food restriction if they had eaten something that they normally avoided. Participants #11 and #16 recounted occasions during which they had over-indulged in food and compensated for the calories by restricting their food intake at a later time:
For my 15th birthday, that was the last time I ever had cake. And what I did was, I just basically rearranged my whole day. I took a chunk of something out of my dinner that I thought was equivalent. If I couldn’t really compensate through extra exercise or changing food around that time, then I probably wouldn’t even let myself have stuff that I would normally eat. Basically, once I decided that I couldn’t have something, I would never have it (Participant #11).

You go to Starbucks and order one of their Grande Frappuccinos with whipped cream on top. You’re drinking it and you realize you’ve licked the whipped cream out with your fingers at the end and you’re just like, “Oh, God.” And at that point, I wouldn’t eat for days. That was bad (Participant #16).

In addition, 16 of 20 participants reported restricting their food intake even more severely if for some reason they were unable to engage in their usual amount of physical activity. Participants #12 and #13 described how they would compensate for missed physical activity by eating less:

I would definitely restrict more. I wouldn’t completely cut myself off from food or water but I would cut it down so that I was still able to burn off everything that I was eating to make sure I wasn’t going to put on any weight (Participant #12).

I would be pretty flustered [if I missed my usual physical activity], I think. I would probably be really irritable because I would start to think, “Is there any way to sneak anything in? Can I sneak in some time here or something?” And if I realized, “No, I’m not going to have control over my activity,” then it would switch to, “So, what can I cut out for the day? What should I eat? When should I eat it?” And [I would] have the least amount possible, just to make up for the fact that I wouldn’t be able to do my activities (Participant #13).

5.2.1.4.3. Direct supplementation of physical activity.

Fourteen of 20 participants stated that they directly compensated for additional calories that they ingested or calories that they failed to expend through physical activity. Specifically, these 14 participants stated that if their caloric quota were off-balance, they would compensate such that they expended the exact amount of calories necessary during
their physical activity routines. Participants #16 and #17 explained that this often meant adding on significant amounts of time to their physical activity:

They have that calorie counter on the treadmill, which is grossly inaccurate but it’s still comforting to know that it’s there. If I knew that I had gone to Starbucks and had a 560-calorie frappe, I would make sure I stayed on the treadmill for 560 calories and say, “Okay, well at least now that’s gone” (Participant #16).

God, if I ate something that I usually avoided, I would want to kill myself, seriously kill myself. There were a bunch of times where I binged because I was so hungry that once I got a bit of food, I just ate uncontrollably. And I mean like, inhuman amounts of food. There was one time when my sister’s friend brought over a humungous batch of homemade cookies. I’ve always had a sweet tooth, so the temptation was really bad on that one day. So, I took one. But I couldn’t stop at just one. They went outside to hang out and they left the cookies inside and I think I easily ate 10 big cookies before I could stop myself. . . . Another time, I ate a whole box of granola bars for the same reason. And another time, I ate a whole loaf of bread. Another time, I ate three quarters of a coffee cake. When that happened, I would first go to my room and cry and cry. I’ve always been a cry baby and I cry very easily, so this would be dramatic. Crying, pounding my head against the wall, trying to make myself commit suicide. And then I would try to exercise all of the calories off. If my mom was at work, and on Tuesdays she worked 5:00 pm to 9:00 pm, I would stay on the treadmill for 3 hours trying to burn off what I ate. I would be exhausted and weak but I would feel so relieved (Participant #17).

5.2.1.4.4. Gradual supplementation of physical activity.

Ten of 20 participants reported making gradual additions to their physical activity routines if they believed that they had eaten too much or if they missed their usual physical activity. These participants reported that they did not immediately expend the precise amount of calories that they had ingested or double their physical activity routine if they missed it on one day. Rather, these participants reported making up for an imbalance in their caloric output in smaller increments. For instance, Participants #14 and #6 commented on the gradual compensation for eating a forbidden food and missing a workout, respectively:
I wouldn’t tell my therapist because I didn’t want her to know. I knew that I shouldn’t be compensating but I felt like I had to. I would even do it over time, so, even if it was just adding an extra 5 minutes of cardio every day (Participant #14).

I wouldn’t say that I would do double to make up for it but if I hadn’t gone the day before, I might do an extra 100 or 200 calories. Not every single time but there were definitely times where I thought, “Oh, I didn’t come yesterday so I’ll do an extra 200 calories or whatever” (Participant #6).

In addition, Participant #17 specified that it was more feasible to compensate for missing her usual physical activity in smaller increments so as to ensure secrecy:

If I knew I wasn’t going to burn the right amount of calories . . . I would add some more time to my workout. It wasn’t always realistic to double my workout, especially during the time that my mom was watching me. But I would definitely try to add a bit more the next day and then a bit more the day after that. I guess it’s almost like it was a continuum. If it all balanced out somehow, it was okay.

5.2.1.4.5. Urge to move or engage in physical activity.

In addition to conscious compensatory behaviour, some participants reported an uncontrollable urge to move or engage in physical activity. Eight of 20 participants described having an intense need for movement, which then led to impulsive physical activity. These participants described this type of movement as indispensable and reported feeling as though they could not escape it. Participants #4 and #14 disclosed:

I used to do a lot of [stomach] crunches and it was more of a compulsion, like I had to. It was kind of like an obsessive tendency. I guess it comes with the disorder but I just did a lot of [stomach] crunches. I had to do a certain amount of crunches every morning before I would go down and eat breakfast or whatever. That had to happen every day or else I don’t know what I was going to do (Participant #4).

I had my run planned on, let’s say Saturday. I don’t remember the day exactly but I had achieved all my workouts all week. I got the check marks every day. I was doing it perfectly, and I think there was a snow storm and I thought, “Oh great, I did not plan on snow. That does not work in my plan.” But I had a pair of boots and I put my boots on and I ran in snow, in snow boots, which are ridiculous to run in and I remember my heels were killing me. I did this to get the run in, because that would
make my week complete and that would be the perfect workout schedule. I came back and my heels were hurting so bad because the boots had been rubbing and it wasn’t very pretty. I had to go in the shower and wash it off. It was a mixture of blisters and blood and it was brutal. I would never do that to myself again but at that time, I had to get my run in. It didn’t matter if I was hurting, if it was snowing, if I was running in boots, and if I was destroying my heels in the meantime (Participant #14).

5.2.1.4.6. Desperation.

The sub-theme of desperation was revealed among 10 of 20 participants. This sub-theme pertains to participants who reported experiencing extremely strong emotional and psychological reactions to disrupted food restriction and physical activity patterns. These reactions were often a result of worrying that some terrible consequence would follow disruptions to food restriction or physical activity routines. For instance, Participants #5 and #14 discussed the fear of disappointment and weight gain, correspondingly:

[A disruption to my food restriction or physical activity routine] would get my anxiety right up there. I would probably be hyperventilating and freaking out because that’s often what would happen if I didn’t do things right or if I disappointed myself. I would have panic attacks and have anxiety about it and what people would think about me. Or sometimes I would have a panic attack and people would be like, “Oh what happened? Are you okay?” It would scare people. I would be like, “Oh I’m fine. I was just worrying about that test [at school].” I always made an excuse for it (Participant #5).

The very first time my family tried an outing to a restaurant . . . I ordered the healthiest option. I think it was the vegetable primavera and as soon as it came, I just started crying at the table and I ran out of the restaurant. I couldn’t handle the amount. I felt like I couldn’t breathe. I was just so terrified of that food that it seemed impossible to eat it. So, in that case, I tried to eat a new food and I just couldn’t. And whenever I did include a new food, I would always cry. I would always cry over what’s going to happen. Oh my god. And I would probably weigh myself the next day to make sure I didn’t gain weight. It was just tears. Lots and lots of tears any time I included a new food (Participant #14).
5.2.1.5. Excessive planning.

Another principal theme that emerged from the interviews was the notion of excessive planning. Participants reported a disproportionate amount of planning with respect to their food restriction and physical activity. This planning occurred both as a part of their typical routines as well as when they wanted to adjust for any unexpected changes to their food restriction or physical activity patterns. Within this broad theme of excessive planning were the seven sub-themes of: recurring thoughts of food restriction, precision, using the internet to aid in planning meals or physical activity, creating detailed meal plans for subsequent days, keeping records of what was eaten or how many calories had been expended each day, repetitive checking of nutritional information and meal plans, and a need for predictability in their food restriction and physical activity habits.

5.2.1.5.1. Recurring thoughts of food restriction.

Of 20 participants, 18 reported having recurrent thoughts of food restriction. These participants described food restriction as being foremost on their minds, often interfering with other priorities throughout the day. Participants #2, #5, and #14 described the degree to which thoughts of food restriction consumed their minds:

I’m terrified of getting hungry, so I’m always thinking, “Oh I hope you can go 20 more minutes without being hungry, I hope you can go another 20 minutes without being hungry” . . . Before Homewood [an eating disorder treatment centre], [my goal] was, “Go as long as you can without being hungry and then when you get hungry again, eat as little as you can.” Now, it’s “Go as long as you can without being hungry but when you get hungry, eat a meal that looks normal to everyone around you but still has many restrictive factors in it.” So, I’m always trying to cheat the program and find as many ways as possible to get around restricting. And I’m always thinking about calorie content. I go to bed thinking about what I’m going to eat for breakfast, I wake up thinking about what I’m going to eat for breakfast, and I’m eating breakfast thinking about how long I’m going to go until I eat lunch. I’m walking on campus thinking about what
the girl beside me ate, how much she ate and whether I can go longer than her [without eating]. I’m sitting in the library and I’m comparing myself to the girl beside me who’s drinking a coffee and I wonder if it has milk in it. So, then I’m like, “Oh my god, if she doesn’t have milk in it, maybe I shouldn’t have milk in it” so then I have to go and get another coffee with no milk. So it’s constant, constant, constant. I’m trying really hard to get away from the calorie content on food. I hate that there’s calorie information on food . . . I don’t just look at it and forget about it. I look at it and think about it and think about it and think about it (Participant #2).

When I wasn’t thinking about what I was immediately doing, I was probably thinking, “Okay, what did I eat today? What am I going to eat tomorrow? How can I make sure that I’m not going to overeat? How can I make sure that I’m staying within a small margin of what I have allowed myself basically just to continue my hefty schedule and continue to go on without fainting and making it obvious that something was wrong?” I was concerned about the food I would eat and in front of who and just being able to hide it (Participant #5).

My food preoccupation was huge. I would sit at the kitchen table or I would sit downstairs in front of the TV and I would either be reading a food magazine or cookbook or watching Food Network and I would be watching them make things that I would never eat. They would be using butter, cream and sugar. Or even the books I was reading, it was just recipe after recipe and I would analyze it in my head. So, as I’m eating my pure food, I would be looking at these recipes, going, “Oh, that’s bad. Oh, they shouldn’t have that.” I would be critiquing everything I could, watching the Food Network and looking at the chef making the meal. If he was a little overweight, I would think, “Oh, he probably eats his food, that’s why he looks that way.” I was so judgmental. I would buy Canadian Living magazine. I had a subscription to Canadian Living when I was 16. It’s for parents and they have family ideas and recipes but I wanted to read about food. I wanted to watch food. I was eating my food. I was preparing my food. I was obsessed with what others were eating. I would give my dad such nasty looks over the dinner table. If he were to reach for a second cookie, I would just give him that look of, “Really? You’re going to eat another cookie?” And he would back right off (Participant #14).

5.2.1.5.2. Precision.

Sixteen out of 20 participants described a need for precision in planning their food restriction or physical activity. Participant #9 described this phenomenon quite vividly in saying:
I was very meticulous about it. It was not enough to just qualitatively say, “Oh, I’m going to eat a low-fat diet.” It was like I wanted to count how many grams of fat I was eating and I wanted to know how much saturated fat it was and I needed to know exactly how much sodium I was getting.

As such, these participants felt the need to be exact and accurate in planning their food restriction and physical activity rather than merely estimating. For instance, Participant #3 explained that to meet her caloric goals for the day, she would use mathematical precision to aid in her progress:

I had this counting system where, whatever calories I ate, I would write them down and they would have to be within a range. Then [with] exercising, I would have to minus those [expended calories] and there were calculators on the internet that I would use. I would minus those [expended calories] and then add whatever amount that I wanted to lose [in addition].

Lastly, Participant #14 revealed her need to accurately measure the food that she ate:

Control was the key and so was being perfect. So, I would actually use measuring cups. If a cereal said one cup, I would get a cup out, I would scoop the cereal, and I would get the back of a knife and level it off so that it was exactly one cup. And I would measure the milk that I would put in the cereal and . . . there was a method and a routine behind it.

5.2.1.5.3. Using the internet.

Sixteen of 20 participants reported using information and tools on the internet to assist them in planning their food restriction or physical activity. These participants used the internet to research nutritional information so that they could make informed dietary choices and regulate their energy input and output on a regular basis. Furthermore, eight of these 16 participants reported using the internet to investigate restaurant menus in the event that they had to eat food that had not been prepared at home. In all eight cases, the purpose of reading restaurant menus was to either predetermine which meal options would be safe to order (i.e., permissible according to their individual meal plan) when they went to the restaurant or merely to verify how many calories were in the food that
they would be eating. Participants reported that they felt the need to know how many calories they would consume and subsequently compensate for by altering other meals or modifying their physical activity. When discussing the topic of planning, Participants #9 and #17 stated:

I used to Google a lot. I would see ingredients and look them up and make sure they fit the criteria of what I was willing to eat. I would see something on a nutritional panel and I would be like, “Well what is that? Am I allowed to eat that?” So, I would look it up and sometimes I would decide, “Yeah, that’s fine” or other times I would be like, “No, don’t eat that.” I definitely read up on how to analyze nutrition labels in terms of what the numbers meant and what the goal numbers should be. I would usually read around and see what was recommended for most people and then I would make my own tweaks to that. Obviously for fat, it’s recommended that you get 20-35% and I was like, “No, I don’t need that much fat.” I was more like 10%. So, in some ways, a little knowledge is a dangerous thing because I had read a little bit about it and then I was an expert. I would start making assumptions and do things myself (Participant #9).

I used the internet a lot to look up the calorie information for fast food. I remember this one time, my dad decided to buy a pizza for dinner. Domino’s Extravaganza. I remember it so clearly. And I couldn’t always get out of eating dinner, so I would just eat less of what we were having, if I could, or make something else. One time, my dad ordered that pizza and there was honestly nothing else to eat. So, I ate one slice of the pizza and then I went online to see the calorie information. And I worked off every single one of the calories that I got from that pizza (Participant #17).

As aforementioned, the majority of these participants read informational websites to track nutritional informational such that they could plan their caloric intake and output accordingly. However, three of 16 participants explicitly reported using calculators on the internet to design their physical activity routes. For instance, Participant #5 stated: “I would Google anything I didn’t know, like how many calories you would burn or whatever. There are all types of calculators on the internet so it was definitely a lot of
researching.” Participant #1 also discussed her use of the internet to specifically plan her physical activity:

I had certain routes that I would walk because I knew how long they were and how many calories I burned. That’s the great thing about the internet these days. You can go on and map out your route. You put in your weight and height and it tells you how many calories you burned. So I knew everything (Participant #1).

5.2.1.5.4. Creating meal plans.

Sixteen of 20 participants reported creating meal plans ahead of time so that they could have a concrete guide in determining which foods to eat. Participants described meal plans as a way of maintaining control and focus while also helping to avoid eating foods that were considered to be “unsafe”. For instance, Participants #2 and #15 stated:

I used to keep a book [in which] I would always [plan], “Okay, for the next two weeks you’re not allowed to eat this, this, this, this, this and this.” Then, two weeks later, I would make another list and be like, “Okay, now you’re not allowed to eat this, this, this, this, this and this.” When it was on paper, it was like, “This is a for sure thing.” When it was in my head, I could always bargain around it but when it was on paper, it was like, “No, you have to stick to what’s on paper” (Participant #2).

I’ll make [a meal plan] for the week. I’ll say, “Monday I’m going to eat this, Tuesday I’m going to eat [that] . . . . just to have control and to make sure that I’m not eating high-calorie or high-fat foods. If I did eat something and then I found out that it was high-fat, I would have a nervous breakdown and it would just be so hard to deal with that (Participant #15).

5.2.1.5.5. Keeping records.

Nine of 20 participants reported keeping a record of what they actually ended up eating. These participants described record-keeping as a means through which they could hold themselves responsible for what they had eaten as well as have written documentation to refer back to. In having a physical record of what had been eaten, participants could evaluate their energy input and output as well as keep track of whether
they were meeting or exceeding their goals. In discussing their record-keeping,

Participants #3 and #16 stated:

I had a food journal where I would write everything [down]. I used to figure out the [caloric content] of everything and I would look at the back of the packages and stuff . . . just so that I could count [the calories] better to see what I could cancel off with exercise and so that I would know that I can only have 300 [calories] today or 100 [calories] today. So, I would know that I was in those bounds (Participant #3).

I used to keep track of what I ate during the day. At first, it was calorie-wise and then it was eventually just what I ate . . . it held me accountable. Sure, I could write down that I had three crackers and a can of diet coke even if I had three Oreo cookies in between. But when I was honest about it, I held myself accountable and I looked back on the day and thought, “Wow, I had forgotten about that this morning.” Then I would make sure that I was either keeping it consistent or gradually restricting what I ate [further] . . . It wasn’t just in my mind, it was in black and white and [on] paper (Participant #16).

Participant #8 also described the need to record what she had eaten throughout the day so as to not confuse what she had eaten in reality with what she ate in her life-like dreams and daydreams about food:

It just made things easier to control, maintain, and track. I remember I used to have really vivid dreams of eating food and I could never remember if I was really eating or just asleep, so having the record was a way to calm myself down sometimes . . . I would so vividly daydream about eating something and by the end of the day, I would get confused [as to whether] I actually did eat it or if I was just thinking about it.

On the contrary, five out of 20 participants explicitly stated that they did not keep a record of what they had eaten. Three of these five participants stated that they did not need to keep a record due to how regular their eating habits were. For instance, Participant #11 stated: “Surprisingly, I never kept track of what I had because by that time, I had a fixed schedule. I knew what I was having every day because it was [always] the same thing.” In addition, Participant #18 commented:
I didn’t record what I ate because at the time, it was very standard. There was a point where I would eat one piece of banana bread every day so I didn’t have to write it down because I knew that in the last 5 days I had had a piece of banana bread every day.

Two of these five participants explained that they did not keep track of what they had eaten because they were afraid to think about it: “I wouldn’t record what I ate because I didn’t like looking at that or thinking about it really.” (Participant #6) and

I looked up calories when deciding what to eat but I never calculated my daily calories. I think a part of me didn’t want to know because I knew I would probably reduce even more and it was already hard as it was (Participant #11).

5.2.1.5.6. Repetitive checking.

Fourteen of 20 participants discussed repetitive checking. Of these 14, six participants revealed a need to continuously verify the caloric information of various foods even if they did not plan on eating these foods. These participants expressed that they felt compelled to know how many calories were in both safe and unsafe foods. For instance, Participants #2 and #13 stated:

I used to have a book that [contained] the calorie content of fruits and vegetables because I couldn’t just check the label whenever I wanted to. So, I always had my book to refer to with the calorie content of everything, from celery to carrots to everything. That took so much research because I never believed one website. There are so many websites and still to this day, I google Starbucks, Tim Hortons, Subway, and everything a thousand times to double-check the calorie content of everything (Participant #2).

I will just look up some nutritional information on random products that, a lot of the time, I know I’m never going to eat. I will go on the Mcdonald’s website and look at the nutritional information for a Big Mac or all these things that I know I’ll never eat but it’s like I just want to know the information (Participant #13).

Furthermore, five of these 14 participants revealed a need to relentlessly verify the food records that they kept. Participants #15 and #17 stated:
I would keep records. For [the] records, every day I would count calories and even if I knew how many calories [I had consumed], just to calm myself, I would just keep adding it up in class on pieces of paper to make 100% sure that I wasn’t making a mistake (Participant #15).

I had this diary thing. Oh man, my mom found it one time and freaked out. But yeah, I would keep track and I would always try to compete with the previous day. If I ate something extra on one day, I would make sure to beat that the next day by eating a bit less or something. And for some reason, I used to enjoy reading over my food entries. I used to go over them and double-check what I had written. I guess I got some kind of sick pleasure from it but I also just felt drawn to reading through all the different meals, as if I were re-living them or something (Participant #17).

**5.2.1.5.7. Predictability.**

Another sub-theme within the discussion of excessive planning was a need for predictability in eating habits or physical activity patterns. Nine of 20 participants described having an overall fear of change or fear of the unknown. These participants reported having a sense of security and control when they maintained a level of sameness in their routines. Participants #1 and #11 provided illustrative descriptions of their need for predictability in their eating and physical activity routines:

I was almost OCD about that kind of stuff. It had to be a certain order, a certain way. Even the direction I walked on a route and things like that. Certain times, for sure. And I saw a therapist and she was challenging me to not only change my routes but change the time of day that I went for a walk or which dog I took or whatever and I couldn’t do it. It was like I wouldn’t be able to make it throughout the day if I couldn’t do it that certain way (Participant #1).

My cereal had to be one kind of cereal. I had to eat out of a certain bowl with a certain spoon, sitting in a certain spot at the table. Certain times of the day, too. If I had breakfast at 10 o’clock, then I wouldn’t be able to have lunch at 12 o’clock. There had to be more time in between. So, it wouldn’t be like, “Okay, I had breakfast at 10 o’clock and then I’ll have lunch at 2 o’clock.” I would be like “Okay, you missed breakfast,” or “No, you had breakfast at 10 o’clock, so you’re skipping lunch.” Even now, I sometimes fall into food patterns of having the same thing because it’s a safe thing. So, having the same breakfast every day or things like that. There’s definitely some obsession around those sorts of things . . . Personally, I think that it was being perfect but it was also partially a fear
of change because change is scary. It’s unpredictable, it’s unknown. I like things to be pretty set in stone, like I can expect them, I guess. So, nothing’s ever different and at that point it was sort of like, “Okay, I know I can get through the day if my food is consistent” (Participant #11).

When I was really bad, I would have the same thing at the same time every day. I had a fixed breakfast and a fixed lunch and a fixed dinner. Every day it was the exact same thing. That’s what worked for me, I guess. That was the only way I felt I had control because if I ever deviated from that, I would panic [because] something wasn’t exactly the way it was supposed to be. And I always ate in the same room [of] the house, in the same spot . . . basically, a lot of repetition and routine. I was very strict on when and where and what it was (Participant #11).

5.2.1.6. Comparisons.

Drawing comparisons between oneself and others was a significant theme that surfaced in this construct. Thirteen of 20 participants discussed comparing themselves to others with respect to body types, food restriction, or physical activity. In making these comparisons, some participants revered others for their bodies, eating habits, or abilities to do physical activity and aspired to reach their level. Other participants felt superior to others because of their own bodies, eating habits, or abilities to do physical activity. Moreover, some participants acknowledged constant comparisons and even competition with others with respect to eating and physical activity. These participants often fluctuated between admiring others and looking down on others or wanting to avoid being like others.

5.2.1.6.1. Revering others.

Throughout the interviews, five of 13 participants addressed feeling admiration towards others at some point. For example, Participant #1 discussed wanting to be as athletic as other girls who she observed:

My brother talked to the cross-country coach and he was still looking for people to run, so I decided to run there. And I found that there were girls
out there that were really, really good and I wanted to push myself just like they were pushing themselves.

In addition, Participant #7 talked about the impact of having a close friend who was thinner than she was:

I guess a big part of it was one of my best friends was always skinnier than me. She was my friend since I could [first] walk, practically. She was always skinnier than me and I found that she would always get more attention from people. I always felt like I was comparing [myself] to her because if we had sleepovers, I wouldn’t fit in her clothes and things like that.

5.2.1.6.2. Superiority.

Feelings of superiority were more common when comparing oneself to other people. This sub-theme was found among 11 of 13 participants. These participants explained that their restrictive eating habits or higher levels of physical activity made them feel better than people who were perceived as less healthy. Participant #10 described her feelings of superiority with respect to restricting what she ate:

I just felt like I was better than other people, I guess. I would see people eating and I would be like, “Ha, eat it. Yeah, I want you to eat that” and there would be people who would not finish food on their plate and I would try and egg them on to eat it. It was almost, “You’re getting fat and I’m sitting here [not eating].” So, I guess it would just make me feel better in a way. [It would] lift my spirits to watch other people do what I felt was so awful.

Furthermore, Participants #13 and #14 expressed feeling better than others due to both their food restriction and physical activity habits:

I think [there was] the feeling of superiority. Being able to say, “I did more activity than you today.” I don’t know why that’s so important to me but it’s almost like wanting to be the perfect person, especially with eating. If you have a huge group meal, it’s always looking at what everyone else is eating and saying, “Oh you chose that and I have the healthier option, so I’m obviously better.” Or comparing [myself to] my friends. It’s like, “Oh, you did nothing today and I went for an hour-long walk, so I’m obviously better.” But I know it means absolutely nothing in the real world, in reality. But with your eating disorder, it’s almost like
you’re delusional and you feel like that’s the only important thing (Participant #13).

If I was in the cafeteria at lunch and everyone was ordering poutine and pizza, I would think in my head, “I’m better than that, I don’t need to eat that. They do.” and “I packed my own lunch and I’m eating vegetables and whole grains.” Or especially in my family, all of them being overweight, all of them having high cholesterol and high blood pressure and all this stuff. I would sit at the table and they would just be eating, eating, eating, and my grandma would push food, and they would always say yes. I was the one who could always say no and I felt, in my head, “I’m better than that, I have more willpower than that. Because of the way I am, I’m not going to turn out like that” and that was a really big drive to keep me going. I did not want to be the average North American or the average person in my family. I wanted to show them that I could be different. That perfectionist drive to exercise the way I was exercising and eat the way I was eating was taking me in that direction of, “I’m losing weight instead of gaining weight” or “I’m exercising instead of sitting on the couch,” and that helped me be different than them (Participant #14).

Participant #12 also emphasized feeling better than friends who had been less active than her throughout the day:

I would always hear about my friends that spent the entire day on the couch watching movies or studying for a test and I felt that if I had been able to drag myself out of the house and go for a walk or go to the gym, then I had had a more successful day than them. I was always looked up to like the good girl, so I felt that I had to maintain the standards for myself as well as everyone else that looked [up to] me.

Participants #7 and #17 elaborated on their desire to avoid becoming like people who were perceived as having unfavourable body types, eating habits or physical activity habits:

I also felt at that point that I didn’t want to be lazy and I was so afraid of falling into everyone else’s habits because to me, being fat is not appealing. It shows that you’re not dedicated. To a lot of people, it says that you’re lazy. I know there are a lot of people who are overweight and they still work out but it bothered me that people would always say, “Oh I’m so fat,” and never do anything about it whereas I would just prevent it. I would show that you just take action and that’s how you don’t get fat. So, I guess I just had a huge fear of getting fat (Participant #7).
A lot of my eating and exercise behaviours were due to a fear of getting fat, not just when I felt fatter. I would be scared of eventually becoming fat like my friends at school. My sister had a huge impact on me, too. She was never fat but she was always kind of chubby and sometimes I would look at photo albums of how she was when she was really young. She was skinny like me until she hit a certain age and then she started looking chubbier, so I was scared that would happen to me too and I felt like I had to stop it before it started (Participant #17).

5.2.1.6.3. Constant comparison.

All 13 participants acknowledged engaging in continuous comparisons and competition with anyone in their vicinity. For example, Participant #2 described her need to compete with anyone she could in the context of eating and physical activity:

I compare my food intake to every single person around me. My mom always tries to make me understand that my grandma is 75 years old and she doesn’t eat as much food as she used to. [But if] my grandma only has a small portion, I have to have a smaller portion than my grandma. Or if the girl beside me orders something that, in my mind, is a restrictive meal, I have to get a more restrictive meal. I literally compare myself to every single person I can find. Even if I have never seen them [before], I can find a way to compare myself to them and try to make my meal more restrictive or better . . . The girl [is] drinking a coffee at 3:00 and [I] believe that she hasn’t eaten all day, and I literally saw her for five minutes, drinking a coffee. She could have eaten all morning and all night but I will be like, “Oh my god, she’s only drinking a coffee right now and I want to have a snack. You can’t have a snack because she’s not having a snack.” I will find anyone to compare to.

I go to the Athletic Club and for a long time, I would do classes . . . but then I stopped going to classes because I would get really upset because I would compare myself to everyone in the class. If I wasn’t the fittest one in the class, I would want to cry (Participant #2).

Participant #12 also recognized her need to constantly compete with others around her:

If I were going on the treadmill next to someone else, I would always have it in my mind that I was racing them. So, it was more of a self-induced “if you know this person then you have to beat them” type of thing. . . . When I would go out in public and eat, I felt that I had to eat less than everyone but at the same time not let them catch on about what I was doing.
Lastly, Participant #1 emphasized how challenging it can be to accept individual nutrition requirements:

Comparisons are really hard. Now I recognize that everybody is unique, so we all have our unique needs and things like that and... you do need to eat a lot of food to even just maintain your weight. So, I never wanted to eat and then to have someone serve me a whole bunch of food when they were having half the amount that I was having, and expect me to eat it. That just made me really frustrated.

5.2.1.7. Others’ perceptions.

Twelve out of 20 participants discussed the significance of how they felt other people perceived them. Specifically, these participants were strongly affected by others’ comments and opinions about their bodies, food restriction, or physical activity. The perceptions of others often served as encouragement to continue in their endeavours to restrict their food intake and engage in physical activity. This category relates to perfectionism in that participants made every effort to live up to perceived standards for food restriction and physical activity. Within this broader theme, three sub-themes emerged: positive attention, fearing the negative perceptions of eating a certain way or being inactive, and wanting to be looked upon as “perfect”.

5.2.1.7.1. Positive attention.

Of these 12 participants, six participants reminisced about positive attention that they had received during the peak of their food restriction or physical activity. These participants described the profound effect that this attention had on them. It increased their motivation to engage in restrictive eating and physical activity so that they could maintain the positive regard that they received from others. Participants #2, #5, and #7 described various compliments that they received during their experiences with AN:

When people would tell me I looked small, I didn’t believe it and I also thrived off of it. I was like, “Obviously that’s what I’m going for, so
great, okay.” I never believed that I looked small to the point that it was a problem. I was like, “Okay, they’re noticing, this is good.” I wanted to hear that I looked small but I didn’t believe that it was a problem (Participant #2).

I felt like I was never seen and I was never noticed. The one thing I had was, “Oh, you know, that short, really tiny girl with the long hair.” So, I held onto that and I felt like if I was to ever get larger than I currently was, then people wouldn’t describe me like that. People wouldn’t see me that way and well, I’m short so as soon as I gain weight, people will notice. So, being able to stay tiny, and I was stereotypical, the cheerleader. I almost felt like I had to maintain a certain image (Participant #5).

Once I started dieting and [engaging in] these [eating] behaviours [and] exercising more, I found that I was getting a lot more attention from everybody, especially males and I’m heterosexual so, I especially liked that. I think it just made me happier. [It] made my life so much happier that I was really afraid of straying from it (Participant #7).

5.2.1.7.2. Fearing negative perceptions.

Four of these 12 participants revealed a fear of the negative repercussions that they felt would accompany being overweight or eating a certain way. Participant #8 explained “For food, the [thought process] was, ‘if you ate it, you’re going to gain weight, you’re going to get fat, and then there’s no reason for anyone to like you.’”

Moreover, Participants #11 and #13 expressed not wanting to be met with disapproval over their eating habits:

I didn’t want people to see how much I was eating because I thought it was a lot. So I would always try and make it look, to other people, like I was eating healthy . . . I just tried to make sure that everything I consumed was healthy because I didn’t want anyone to be like, “Oh, she eats that? That’s not good for you” (Participant #11).

I’ve always been one to worry about what others think of me and I wanted to do the right thing. I never wanted to get in trouble. So, initially, I would read a lot of those health articles and then it kind of gave me the ability to say, “Oh, I’m doing the right thing and not eating this” (Participant #13).
5.2.1.7.3. Appearing “perfect”.

Lastly, five of 12 participants revealed a desire to be admired or viewed as “perfect” by others. For example, Participants #12 and #13 stated:

I was still maintaining the grades that I had but I wasn’t getting the positive feedback that I wanted to. So, I felt that if I did more physical activity and restricted more, people were going to see how hard I was working and how high my self-control was and they would see me as a role model... All my life, I wanted to be someone that people look up to, and by showing on the outside that I was in control of everything, people were able to be like, “Oh, I want to be her because she’s good at everything” (Participant #12).

I have always been worried about what other people thought about me. I was always a really shy kid and I was always really insecure and [my food restriction] was [about] not wanting to be frowned upon. It was almost like I didn’t want to get in trouble with a doctor or the medical field and have them say, “You shouldn’t have this more than once a week” or “Fries are bad for you.” It was like I didn’t want to get in trouble for eating those fries. Not that anyone was actually going to come up and scold me for eating them but I just didn’t want to be perceived in that way. I wanted to be perceived as perfect and as a perfect, healthy eater (Participant #13).

5.2.1.8. Perceived advantages of perfectionism.

During the interview, participants were asked what they believed the advantages of being a perfectionist were with respect to how perfectionism influences food restriction and physical activity. Three major advantages were identified in the interviews: determination and control, weight loss, and health and fitness. Two participants felt that perfectionism was a significant disadvantage in regards to physical activity.

5.2.1.8.1. Determination and control.

Nineteen of 20 participants felt that having perfectionist tendencies created a profound sense of determination, which strengthened the ability to meet goals and helped to maintain control over oneself. For example, Participants #2 and #4 explained:
You just don’t let anything else happen. It’s the same as school work like, “I’m going to work on this until it is perfect, I’m going to do it. I’m not going to, because I’m tired, just give up and hand it in as is.” It’s the same with food, it’s like, “Well, I’m starving but I’m not just going to give in and go eat that. I’m going to stick through it and not eat it” (Participant #2).

I think that perfectionists are very determined. A lot of them have a lot of self-control and if there’s a goal to meet, then I’ll get there . . . Just like a personality that is a little bit obsessive and determined . . . I think that perfectionists can be really obsessive with minute details and I was definitely, and still am, very concerned about little details . . . in different things in my life but also with respect to food, like having a little bit of extra at this meal or a little bit less. I’m learning to deal with that a little bit now but before it was like, “No, I need to have this many calories at this meal or this little at this meal.” So, it’s rigid and perfectionistic in that way (Participant #4).

5.2.1.8.2. Weight loss.

Furthermore, 18 of 20 participants felt that being a perfectionist acted as a catalyst to losing weight. Participants #8 and #14 described their views on this:

Perfectionism with food restriction would mean you would be skinny and stay skinny, which means that people would be more likely to talk or interact with you, which means that you would be given more opportunities, in general. More people would seem to want to be friends with me or be around me. [People’s] attitudes [towards me] changed (Participant #8).

Being the perfectionist and meeting guidelines and going beyond guidelines. If it said exercise 30 minutes a day, if there was a real guideline out there, I would be like, “Oh, I’m going to do it two hours a day, even better.” Or if you read somewhere and it says to watch what you eat or eat your whole grains and low-fat dairy products, I would be like “Yes, that’s what I’m going to do and I’m going to do it even better. I am going to eat less than that.” So, by having that [perfectionism], the advantage is that it was leading me on a path to reaching that ideal in society (Participant #14).

5.2.1.8.3. Health and fitness.

Six of 20 participants identified health and fitness as an advantage to being a perfectionist with food restriction and physical activity. These participants stated that
their determination to meet their goals initially resulted in positive health outcomes. For example:

Before I really started [on] destructive paths, I was more athletic for a period of time. I felt better, I had more energy, and I was more muscular. So, I reached a peak of like, “Yes, I feel good,” and as it continued, I didn’t stay athletic for very long [because I got too sick] (Participant #14).

I felt that on the inside, my body was perfectly healthy. My heart was really strong and my muscles were capable of doing whatever I felt like. Because of my perfectionism around eating and exercise, I was healthy and that was a huge advantage to me (Participant #1).

5.2.1.8.4. Disadvantage.

In contrast to the general sentiment regarding perfectionism, two participants felt that perfectionism was a disadvantage with respect to physical activity. For instance, Participant #2 explained that her perfectionist tendencies actually discouraged her because she felt constantly dissatisfied:

[Perfectionism] just became a pain. It was just frustrating because it was never good enough. When you’re a perfectionist with school work, if I have a vision of how I’m going to do it for school work, I can get to that vision. It’s on paper, it’s a visible thing. But in terms of physical activity, it’s the same as body image; you have a perfect body image but you can never get to that perfect body image. And you have a perfect physical activity [goal] that you have to get to but you can never actually get to it. So, you’re just always annoyed and upset and it just feeds off of [itself], and feeds and feeds and feeds.

To summarize, the construct of perfectionism generated eight distinct themes. Within these themes, participants vividly illustrated the role that perfectionism played in their experiences with AN. While a couple of participants commented on the nuances of being a perfectionist with respect to food restriction and physical activity, the majority acknowledged how perfectionism impelled them to persist in their endeavours to restrict their food intake and be physically active.
5.2.2. Core low self-esteem.

The present section reviews the construct of low self-esteem, focusing primarily on the bidirectional relationships between low self-esteem and food restriction as well as low self-esteem and physical activity. Five principal themes emerged within this construct: pervasiveness of low self-esteem, effect of food restriction on self-esteem, effect of overeating on self-esteem, effect of low self-esteem on physical activity, and effect of physical activity on self-esteem.

5.2.2.1. Pervasiveness of low self-esteem.

Fairburn et al. (2003) described “core” low self-esteem as a form of low self-esteem that is central to an individual’s personality. The extent to which low self-esteem affected participants’ lives outside of food restriction and physical activity was not directly raised in the interview questions. However, some participants volunteered opinions on how pervasive they personally felt their low self-esteem was. Of 20 participants, five participants reported that self-esteem issues were prominent in their lives. For instance, Participant #19 stated: “[My self-esteem was] horrible. Horrible. I mean, I didn’t have great self-esteem. I still don’t. It has always been a really strong factor in things for me.” In addition, Participant #2 commented:

I just have low self-esteem in general. I believe that I am a bad person. I believe that I am ugly and I believe that I am gross. And I believe that I don’t have many good qualities. So, for a long time, I believed that the only way people would want to be my friend was if I lost weight. So, then I went to the gym.

In contrast, four of 20 participants volunteered that they did not feel self-esteem was a prominent issue for them. For example, Participants #9 and #17 stated:

I’m kind of a funny one and I know that this doesn’t really fit but I don’t feel like I have ever had any major problems with self-esteem. I don’t know if it’s just the way we were raised or what but I have always felt
pretty good about myself and I have always had a pretty strong hold on who I am. I know I definitely didn’t fit in at high school. It bothered me but it was never enough to make me think there was something wrong with me. It was more like, “Whatever, I just won’t deal with [my peers]” (Participant #9).

My self-esteem was always weird. Even though this makes no sense, I feel like my self-esteem was low and high at the same time. While I felt worthless and depressed, I still felt better than other people. I had a real problem with friends because I always hated my friends. It sounds stupid, I know. I would hang out with this group of people and they just seemed so different than me. I wanted them to be smarter, deeper, and more like me but they weren’t. So, I would hang out with them because I was lonely and they were there but I resented them at the same time. I would always long for the perfect friend who would be exactly like me. But at the same time, I did get made fun of in school a lot and that made me feel like shit. I did feel like all the popular girls were prettier than me. I don’t know. Maybe it’s a personality thing versus a body thing. I felt like my personality was better than everyone else’s [personalities] but I felt uglier [than everyone else] (Participant #17).

5.2.2.2. Effect of food restriction on self-esteem.

When examining the effect of food restriction on self-esteem, two sub-themes emerged: perceived achievement and perceived empowerment.

5.2.2.2.1. Perceived achievement.

Of 20 participants, 13 participants described having improved self-esteem as a result of restricting food. Specifically, following successful food restriction, these participants reported feeling as though they had achieved an aim or purpose. Participants #7 and #14 stated:

It felt like I had accomplished something. I looked good and it felt good to be able to fit into a size one or size zero. I was like, “Wow, this is achieving the optimal” because I felt I looked like something that everybody strives for, like that model on the front of a magazine (Participant #7).

I would feel good. I would feel like I did it. I got away with it. And if I had adjusted my exercise to compensate for food but then didn’t eat the food, I would be ahead of the game because then I had exercised more but didn’t eat. So, I might actually lose weight. So, yeah, it definitely felt like
I was better than that. I didn’t need that food, so I had achieved something. I had shown or proven myself as being disciplined. So, it felt good (Participant #14).

5.2.2.2. Perceived empowerment.

The second sub-theme identified within this area was perceived empowerment.

Eleven of 20 participants described having feelings of inner power and effectiveness following successful avoidance of food. For instance, Participants #1 and #17 stated:

[I felt] so good [after restricting]. Yes, I managed to get out of that one again. Things like birthday parties and going out to restaurants always freaked me out. I did not go out to any of those things. So, I tried to come up with an alternative plan, like an excuse. All of my friends knew but I tried to come up with an excuse like, “I have to do this, or I have to do that,” and then afterwards I would be like, “Okay good, I got out of that. I’m good at doing this.” Or if someone offered me a cookie or something and I said no, I would be like, “Okay, that’s good, you have willpower.” People always aim to have that willpower. You hear about it all the time on TV or whatever. “Don’t give in to your cravings, blah blah blah.” For me to actually be able to do that [felt good]. Or I would hear other people say, “Oh, I really shouldn’t be having this” and then [they would] have it anyway [whereas] I would be like, “Oh, I really shouldn’t be having this” and I wouldn’t have it. So, I would be like “Okay, I feel good about myself and I have willpower. I have the strength to basically disobey what my body’s telling me [to do]” (Participant #1).

[Following food restriction], I felt really empowered; like I had beaten something. And that feeling of emptiness was great. I just felt lighter, cleaner, and purer . . . in general, I felt better about myself. I especially felt better than other people. That situation I mentioned, where I made myself eggs and corn instead of eating fried chicken, I felt like I was high above the rest of my family, that they would get fat and I wouldn’t. That made me happy. Oh, and one weird thing that I just remembered is that I used to relish the idea of other people eating fattening food when I was not. I used to quote, unquote, “poison people with calories sometimes”. I know that sounds kind of sick but I used to cook a lot and prepare food for everyone. I loved being around food even though I wouldn’t eat it. But sometimes I would add extra butter or oil to something just so that I would know they were eating really fatty foods and I wasn’t. It just made me feel powerful somehow (Participant #17).

Contrary to the former participants, one of 20 participants reported having both lower self-esteem and higher self-esteem as a result of successful food restriction. This
participant explained that the means through which she restricted her food occasionally made her feel guilty rather than good about herself yet she still felt empowered:

I guess I would feel good [following food restriction]. I would probably feel safe. I think I might still feel bad about myself though, because if I avoided something that I didn’t want to eat, I would probably have been lying to someone in the process or something. So, I wouldn’t actually feel like I was a good person because of it. But that eating disorder voice or whatever would be calmed down and I would feel stronger or proud of myself for being able to deny myself. [But for example], if I was somewhere and there was a dessert and I was able to say no when everyone else had given in to their temptation, I was able to control myself and I felt good that I was able to do that. [In that case], my self-esteem would be better in some kind of sick way because I had more control over myself than another person would (Participant #4).

5.2.2.3. Effect of overeating on self-esteem.

During the interviews, participants were asked to reflect on the impact that eating “too much” had on their self-esteem. Two sub-themes emerged within this category: perceived failure and weakness, and believing oneself to be a “bad person.”

5.2.2.3.1. Perceived failure and weakness.

Eleven of 20 participants reported having lower self-esteem as a result of eating too much. Specifically, these participants reported experiencing feelings of failure after eating more than they had planned to. For instance, Participants #2 and #11 commented:

I hate to say this but I thought, and I still believe to this day, that I was a failure of an anorexic because I got to a point where I was so hungry. Every single night, I would lie in bed and cry on the phone to my mom and be like, “I want bread, I want a muffin, I want this, and I want that.” And, it got to a point where I started eating bread and I started eating oatmeal because I couldn’t handle the feeling anymore. So then at that point, my weight stopped dropping and I just maintained. I had a really hard time accepting the fact that my weight wasn’t going down anymore. It was even harder going into treatment because when I went into treatment, my weight was just above the point to be put on bed rest. And I was like, “Well, why am I even here? I’ve been eating these foods for the last three months. I don’t need to be here.” So, I still don’t believe that I was ever . . . a successful anorexic or eating disorder person (Participant #2).
[My self-esteem is] always low but basically as soon as something was in my mouth, I regretted it. So, my self-esteem would plunge even more and I would be like, “Why did you do that? You’re so stupid and you already messed up this much today or whatever. Why would you do that?” (Participant #11).

Of 20 participants, five participants expressed feeling weak and ineffective as a result of eating too much. According to these participants, the inability to avoid eating when presented with food symbolized internal fault. For example, Participants #5 and #16 commented:

[If I ate too much, I felt] guilty. Really bad. My self-esteem is really low. I felt disappointed, that I was going to be fat, and that no one was going to like me. I felt that people would judge me for what I ate, like, “Oh, look at her, she’s eating a Timbit” or something. I just thought that people would think that I was fat. I always worried [about] what people thought of me. That always triggered the more harsh perception of myself. I was going to be fat, I was not going to be good enough, and people weren’t going to see me as strong. I think it really [affected] my self esteem, how I saw myself, and how others would see me. It really upset me, especially if I couldn’t get rid of it. If I actually had to eat it and keep it in my body, that really got my anxiety going and really made me feel worse about myself (Participant #5).

[If I ate too much], I would feel awful. I just felt weak. That’s the best way to describe it. I had mentally given in and physically given in and then actually ingested it. [But] I was never the girl to go throw up (Participant #16).

5.2.2.3.2. Believing oneself to be a “bad person”.

Three of 20 participants described feeling as though they were “bad people” if they ate more than they felt they should. Participants #1 and #4 stated:

When I was engaging [in my eating disorder], before I was in recovery, I would feel really badly about myself [if I ate too much]. I would feel like I was not in control of my life, that I had done something bad, and that I was a bad person (Participant #1).

I would feel really bad [if I ate too much]. I would feel really down on myself, very inadequate, and very guilty, as though I did something wrong. [I felt like] a bad person. I think deep down I felt like I was a bad
person all the time but [eating too much] definitely brought out [those] feelings. If I was forced to eat and I didn’t really want to eat, if there was no part of me that actually wanted to eat it, there was a lot of anxiety, anger, and really bad self-esteem (Participant #4).

5.2.2.4. Effect of low self-esteem on physical activity.

In the descriptive component of the interview guide, participants were asked to describe their general physical activity habits. When asked about self-esteem, participants were also asked to discuss the impact of low self-esteem on their physical activity. This sub-section describes how low self-esteem impacted the intensity; duration and frequency; and type of physical activity. Furthermore, within this discussion of self-esteem and physical activity, the sub-themes of needing faster results and targeting problematic body parts emerged.

5.2.2.4.1. Intensity of physical activity.

Of 20 participants, 16 reported that they increased the intensity of their physical activity when they felt that their self-esteem was at a particularly low point. In general, these participants reported engaging in higher intensity physical activity to try to induce feelings of achievement (i.e., through burning calories) and thus alleviate or improve feelings of low self-esteem. For instance, Participants #10 and #19 commented:

I would run up and down three flights of stairs in my house six or seven times and then go for a run around the block. I would be dying but at that point, I would feel like I had accomplished something. I felt like the exhaustion and my breathing were a sign of working myself to the point where I was getting something done. I guess at the time, I was losing weight or trying to work out, so it was kind of accomplishing something (Participant #10).

[My physical activity] was more intense, I guess. Even just walking for a long time [helped] because I could kind of turn my mind off a little bit too. I would go into a trance when I was exercising. The harder I worked out, the more in control I felt and if I was feeling really horrible about myself, then feelings of being in control would calm me [down] and make me feel more accomplished (Participant #19).
5.2.2.4.2. Duration and frequency of physical activity.

Eleven of 20 participants reported increasing the duration of their regular physical activity when they felt particularly badly about themselves. Similar to intensity, these participants reported that increasing the duration of their physical activity promoted feelings of achievement or provided continued relief or escape from feeling negatively about themselves. For instance, Participant #3 stated that she would exercise for a longer period of time so that she would not have to think about anything else during that time. Moreover, Participant #9 explained: “I would be more inclined to exercise for a longer time . . . I don’t really know [why]. I don’t think it even really made that much of a difference in how I looked or felt about myself . . . but it still felt like I had done something good for the situation.” Also, Participant #11 stated:

Every situation was different depending on what triggered me and how badly I felt. Sometimes I would just go for a 10-minute run and other times I would spend a whole hour running, walking, and doing push-ups. The worse I felt, the longer I would go for, usually longer than if I were feeling a little bit better about myself. Again, it’s probably just the math: a longer time equals more calories, which equals feeling better.

In addition, Participant #2 described how low self-esteem compelled her to do as much movement as possible:

[If my self-esteem was particularly low], I would do everything and anything I could to not sit down, whether it was standing up while eating, walking up and down the stairs, or exercising in my room. Anything. But I was at a point where I had no energy to go back and forth to the gym. That was too much and I got noticed [when I went to the gym] and I had to hide that. That was not very easy to hide, especially when I was using my parents’ vehicle. So, just anything and everything. Literally, anything and everything I could do.

On the contrary, two of 20 participants stated that feelings of low self-esteem made them do less physical activity than normal. Participants #15 and #18 explained that
feelings of worthlessness and inadequacy compelled them to withdraw from activities, which in turn led to less physical activity:

I love doing things like zumba and taking classes but there are mirrors there. It makes me feel so horrible because I hate seeing myself. I’ll try to go to the side of the room or I will try not to look in the mirror and it definitely inhibits me. I don’t put as much into it as I normally would. Or even just gym clothes are a huge thing for me. I feel self-conscious being seen in my athletic wear. . . . I just feel so self-conscious that I don’t want to draw attention to myself and I’m not in the mood to be energetic. If I’m at home, I sometimes just fantasize that I look differently and that I have a different body. Then I can put a lot of energy into what I’m doing but at the gym, it’s harder to do that (Participant #15).

I think the lower my self-esteem, the less I was able to get up and do physical activity. I didn’t feel good enough to do it. I didn’t feel that I deserved it. Usually if I had low self-esteem, then I was suicidal so I was more interested in what plan would work with suicide than I was with exercise (Participant #18).

5.2.2.4.3. Type of physical activity.

Six of 20 participants reported altering their usual type of physical activity when they felt particularly badly about themselves. These participants reported that certain types of physical activity produced more favourable results with respect to improving self-esteem or providing a distraction. Participants #4 and #5 stated:

The types of activities that I would do would differ if I was feeling good or feeling bad. If I was feeling good, [stomach] crunches were always there, so that was a consistent thing. . . . If I was feeling good, I would go for a long walk and if I was feeling bad, it would be less but then I would feel bad about just doing nothing. So, then I would do exercises like run up and down the stairs or do jumping jacks or something just to fulfill the eating disorder/anorexic part and ease my anxiety. . . . It’s kind of hard to measure it all out but I think that’s the gist of it. The types of activities I would do would change according to my mood (Participant #4).

I usually pick running, especially running outside or running in a forest. You’re constantly moving and if you put on an iPod and listen to the lyrics, it’s like that drives you much further. Whether it’s how the song is, how it makes you feel if you’re upset, or if the lyrics trigger something, you push harder and you go faster. You just hear your feet going and it’s almost like being able to run away from a problem. Being able to escape;
that’s what I have found in running... I would feel like I had pushed myself further. I ran faster and I beat that time. It was still almost a competition to me. I would look at how long it took me, so when I felt really bad, I would try to push myself harder and beat the times that I had. I would run away from the problem (Participant #5).

5.2.2.4.4. Need for faster results.

Of 20 participants, seven reported experiencing a more desperate need for weight loss when their self-esteem was low. These participants explained that they altered their physical activity according to what they felt would produce desirable results more quickly. Participants #11 and #12 stated:

Usually I would go for a bit of a run or else it would just be avoiding sitting even more. Like, “Do everything you can standing up.” But usually I went for a run because I knew running was one of the higher calorie-burning activities. I knew that was one of the quicker ways to burn calories. That was pretty much it (Participant #11).

I would usually throw in an extra 20 minutes or half an hour to the workout that day or for the next couple of days and then it would go back to what it was before. It would definitely be more intense... it was more to see results. Like, I’m going to push myself a little harder to see the results sooner (Participant #12).

5.2.2.4.5. Targeting problematic body parts.

Similarly, three of 20 participants revealed that when their self-esteem was low, they felt a more desperate need to work on body parts that they found to be problematic.

Participants #8 and #9 commented:

Well, low self-esteem affects all of the physical activity that I do because low self-esteem is linked to how I look. So, the parts of my body I’m more concerned about affect the kind of physical activity I do, to make sure it focuses on those areas. It would change according to what I felt most insecure about at that time. Usually, I have a problem with my legs or stomach, so if I was more upset about how my stomach looked, I would do a lot more crunches or sit-ups or longer planks or something. If I was worried about my legs, I would do squats or lunges or running (Participant #8).

I still swim a lot. There’s something about swimming. Afterwards, my
sto
mach looks very flat. I don’t know if it has to do with the water pressure or just the type of exercise and the muscles it uses. But I just found that, more than anything else, when I got out of the pool I was just like, ”whoa, my stomach is completely flat.” It was kind of this instant gratification thing (Participant #9).

5.2.2.5. Effect of physical activity on self-esteem.

The opposite relationship between physical activity and self-esteem was also addressed in the interview guide. Within this category, five sub-themes emerged: perceived achievement, perceived empowerment, weakness and physical exhaustion, guilt, and hopelessness.

5.2.2.5.1. Perceived achievement.

Similar to the effect of food restriction on self-esteem, participants also reported feelings of achievement as a result of physical activity. Overall, 18 of 20 participants expressed a sense of having accomplished a goal when they did physical activity.

Participants #9 and #17 commented:

It always felt like it was an accomplishment. No matter how rainy it was outside or how cold it was, it always felt better to go outside and exercise and then come home than to not go out at all. If I didn’t go out, I would feel as though I had failed. So, doing the exercise always [made me feel as though] I had accomplished something or proven myself. There was a sense that I had done this thing and was able to do it (Participant #9).

I would feel really good, as though I had accomplished something. I would be so exhausted and sore and sometimes I would feel really weak. But to me, those were indicators that I had worked hard and that I had succeeded. So, it made me feel really good (Participant #17).

5.2.2.5.2. Perceived empowerment.

Three of 20 participants reported feelings of empowerment following engagement in physical activity. Similar to food restriction, these participants reported feeling that successful completion of physical activity demonstrated inner potency or ability.

Participants #5 and #16 stated:
[Following physical activity], I felt better. It kind of relates to an inner strength that I have been talking about. I just felt like I was untouchable and people couldn’t bring me down. I was in control and I controlled how far I went and how fast I went. I just felt that I had the strength that other people didn’t and that people used to envy, like “Oh, I wish that I could run like you.” Knowing that people wanted that quality in me made me admire that and made me feel better that I was able to have that drive and determination to keep going and run as far as I did (Participant #5).

I loved spinning on the bikes. I would feel powerful when I did it. I loved it. Or weight lifting. I bulked up at one point. I got pretty muscular. I did a lot of weight lifting and from my dance years and my years of skiing, I have a very strong lower body. It is still extremely strong. And I just loved being able to go into the gym and set the weights high and have a guy kind of look at me and be like, okay, and then just pound the crap out of it. He would look at me and be like, “Whoa, look at you go.” I would be like, “Yep, it happens, here, jump on, it’s your turn.” And then [I would] go on to the next machine. I loved doing that. That felt good to me (Participant #16).

5.2.2.5.3. Weakness and physical exhaustion.

During the interviews, participants also reflected on times when physical activity did not make them feel better about themselves. Thirteen of 20 participants reported that physical activity did not make them feel good if they did not perform as well as they desired due to perceived weakness or physical complaints. For instance, Participants #1 and #11 commented:

Leading up to my first hospital stay, I was training. I was still going for runs and stuff like that but I was doing them on my own because our team kind of split up a little bit over the winter time to do training on our own. So, I was just doing the long runs by myself. Then one day, I spontaneously asked two of the girls on my team if they wanted to get together and go for a run. So, we did and I was so much slower than they were. I was so much weaker than they were. And I did not feel good about myself. I felt tired. Every muscle hurt. I had cuts that weren’t healing and things like that. And I was cold; it was the middle of winter time. So, that for sure, I did not end up feeling good about myself after that. And then when I was doing dance, I couldn’t finish some of the dances. I just couldn’t manage it so that, too, definitely affected my self-esteem. I felt like I was a weak person. I couldn’t stick through the pain to continue doing what I was doing. I also felt like I was physically weak. I wasn’t strong enough to do these things and for me it wasn’t like, “Okay,
that’s because you’re pushing yourself too hard.” It was like, “Oh no, it’s because you’re not strong enough or muscular [enough]. You’re not strong enough to be doing these things” (Participant #1).

Sometimes you’re tired and you don’t want to do it and that was more just the physical feeling like, “I don’t want to be doing this but I have to.” Then other times, like I told you, I horseback rode. Every now and then it would be really hot and I would be tired because I didn’t have much energy. I would push myself through that but I would really just want it to be over. I guess that is one of the reasons a lot of people with eating disorders lose interest in things they used to like. For me, that made horseback riding less enjoyable because it was just like, “Oh, I have to get through this, I’m tired.” And I guess the more I did, the more I would need to satisfy myself. So, even if I could go for a run, I would get back and think, “Well, you could have gone longer. You could have done this.” And then I wouldn’t really feel better about myself. So, it’s like a never-ending cycle, I guess (Participant #11).

5.2.2.5.4. Guilt.

When reflecting on circumstances in which physical activity did not make them feel good about themselves, five of 20 participants reported feeling guilty as a result of exercising when they knew they were not supposed to. When discussing this topic, Participants #7 and #14 stated:

After people started getting concerned and I started seeing my own appearance a little bit more, I felt guilty going to the gym. I felt like I shouldn’t be there but by that point, it was a part of my routine and it had made me feel so good before that I didn’t know what [else] to do to make me feel good. I felt guilty. . . . The only thing I really knew at that point that made me feel so good and was engraved in my routine was physical exercise. So, when I would go, I would strive for that good feeling but [I would] feel guilty, knowing that people were probably looking at me, thinking I was way too skinny to be there and that I shouldn’t be on that machine (Participant #7).

I would not feel good about physical activity or even food was when my therapist told me what I was supposed to do. We agreed on it. It was a mutual “Yes, I can do this. This is the plan for the week.” and when I deviated from the plan, I would feel really bad because I didn’t keep my word and I was cheating myself. I knew that but sometimes that drive [to exercise] would just overpower me. So, if my therapist and I had agreed on moving from seven days a week to six days a week of physical activity and I did a seventh day, after that workout, I would feel worse because I
wasn’t supposed to do it. So, [it was] almost as if I was going to get in trouble. So, [I felt guilty] any time I deviated from my plan of recovery. I knew it was important but sometimes the eating disorder felt more important at the time (Participant #14).

5.2.2.5.5. Hopelessness.

Three of 20 participants identified hopelessness as a negative repercussion of physical activity. These participants explained that there were times when they would engage in physical activity and be overcome by a notion that they could never burn sufficient calories to meet their workout or weight loss goals. Participant #17 commented: “There were times when I had eaten way too much and I felt like there was no way I could work it all off. So, sometimes I would cry while I was working out because it felt hopeless.” Furthermore, Participant #8 stated:

Sometimes if I had been really, really upset about something, I couldn’t finish a workout because I would be crying too hard. Or I felt that there was no point in doing it because it wasn’t going to help me anyway.

To summarize, the five major themes emerged within the construct of low self-esteem. While a few participants indicated that low self-esteem may not have been an issue for them during their experience with AN, in general, low self-esteem was quite pertinent to both food restriction and physical activity.

5.2.3. Mood intolerance.

The following section summarizes the relationships between mood intolerance and both food restriction and physical activity. Five general themes emerged within this construct: concurrent emotional issues, the relationship between negative emotions and food restriction, the relationship between positive emotions and food restriction, the relationship between negative emotions and physical activity, and the relationship between positive emotions and physical activity.
5.2.3.1. Concurrent emotional issues.

While the interviewer was unqualified to confirm the presence of AN or coexisting disorders in participants, seven of 20 participants explicitly mentioned struggling with an emotional problem in addition to AN. All seven of these participants mentioned having difficulties with depression, two of seven participants identified anxiety as a persistent emotional problem, and two of seven participants revealed consistent issues with suicidal thoughts and behaviours. While discussing depression, Participants #17 and #19 stated:

I experienced a lot of negative emotion, actually. I suffered from depression even before the eating disorder kicked in, I got made fun of a lot in school, and I had pimples and stuff. So, I felt sad, depressed, and angry very often and my negative emotions really tied into the anorexia. I didn’t really understand that at the time but I saw a doctor [for the eating disorder] a few times and he tried to get me to talk about other things in my life. I thought he was stupid and that he was missing the point but now I see that it was all related. I have always been a misfit and I have always felt different and out of place, so that was a big issue. Just feeling like I didn’t belong anywhere. It made me really lonely and hopeless. I spent a lot of time alone and I would cry really often and cut myself sometimes. Then I think the starving and exercise were coping mechanisms. A lot of the time, I felt like I was punishing myself for not being like other people. Or maybe I was just hurting my body so that I wouldn’t pay as much attention to how much I was hurting on the inside. I guess that’s the most typical reason for self-harm and stuff like that. But yeah, there were times when I would just have a really bad day. I would feel depressed or people would piss me off at school and I would feel my stomach tighten up and end up starving even more. Or I would try to exercise more intensely or for longer when I got home so that I could feel that pain in my body. My emotions and my body are really linked together. I still have that stomach tightening thing nowadays even though I consider myself to be recovered. If I have an argument with someone or I’m just sad, it’s hard for me to eat because my stomach just feels too tight and I don’t want to add to that feeling (Participant #17).

Before my eating disorder even started, I was dealing with pretty intense depression in my first year of university. I really had no idea how to respond to it or how to deal with it properly. It wasn’t even something I looked into. I wasn’t really doing therapy and I was feeling so much sadness, so much pain, and my self-esteem was terrible. So, I started
restricting and it totally numbed me out. It stopped feeling so intense. I was still depressed but it was like my brain couldn’t function so, it just shut it off. I didn’t have to deal with it because my brain couldn’t really work and I was sick. A big part of my [eating] disorder was feeling like I couldn’t cope with everything else that was going on. My emotions felt so out of control and so all over the place. So, if my eating was in control and if my exercising was in control – well, out of control, but my eating disorder said it was in control – then it made me feel like everything else was in control (Participant #19).

5.2.3.2. The relationship between negative emotions and food restriction.

Participants were asked to explore the relationship between negative emotions and their food restriction habits. Overall, 11 of 20 participants revealed that experiencing negative emotions compelled them to restrict their food intake. Within this discussion, four sub-themes emerged: control, improved self-esteem and perceived achievement, self-punishment, and numbing.

5.2.3.2.1. Control.

Of the 11 participants who reported engaging in more food restriction as a result of negative mood, seven revealed that food restriction served as a way of controlling their negative emotions. In general, these participants described food restriction as an outlet for their negative emotions, reporting that being in control of their food intake compensated for not being in control of their emotions. Participants #4 and #14 stated:

I think restricting my food was a general emotion regulator. If [my eating habits] varied from what I was comfortable with, that was a situation [that would trigger] very [intense] negative emotions and I didn’t want to deal with that. So, I just kind of stayed with the status quo of what my eating disorder would allow me to eat. That was kind of like a mood stabiliser in itself, to just regulate those emotions. And I think a lot of my eating disorder had to do with a lot of anxiety [surrounding] things. Anxiety is an emotion right? Yeah, [I dealt] with a lot of anxiety [through food restriction] (Participant #4).

I would eat less. If I felt worse about myself, I thought I would feel better by restricting because restricting always made me feel more in control. It
made me feel powerful and so if I was ever feeling really down or in a bad place, my coping mechanism would be to restrict (Participant #14).

5.2.3.2.2. Improved self-esteem and perceived achievement.

Five of 11 participants reported engaging in food restriction as a result of negative mood due to the improved sense of self-worth and achievement that followed successful food restriction. Participant #18 explained that engaging in food restriction made her feel “[like] a better person and more desirable”, so it was often her preferred method for dealing with negative emotions. In addition, Participant #3 commented:

Knowing that I was cancelling stuff out [through food restriction], it was like I was [accomplishing] something. When I would restrict and stuff like that, I just felt so light and good about myself. So, that’s when it affected my mood. It’s not only about your stomach [being] empty but you also just know that you haven’t had any bad foods. I don’t know how to explain that feeling . . . You didn’t have any bloated feelings so that’s the physical feeling and mentally, it’s the knowledge that you have not had any bad foods.

5.2.3.2.3. Self-punishment.

Four of eleven participants described food restriction as a punishment for negative emotions. These participants reported directing their negative emotions back onto themselves, using food restriction as a means of inflicting punishment on themselves for having negative emotions in the first place. Participant #17 described her ongoing feelings of detachment, stating that she often used food restriction as a punishment for being so unlike her peers. Moreover, Participant #11 commented:

Part of me didn’t even realize that the worse I felt, the more I restricted because it was more a case of my brain automatically taking those negative feelings and turning them towards me. So, instead of being like, “Oh well, my friends aren’t being very good to me today, I’m going to restrict” I think it just automatically went to, “You don’t deserve for your friends to like you or treat you well, so you have to be thinner and maybe they will.” The more problems [I had], the more negatively I felt about myself. Regardless of the problem, I just always internalized it. So, I guess every problem just came to, “There’s got to be something wrong
with me” and then I just turned to my disorder. So, the more the problems continued, the more severe it got.

5.2.3.2.4. **Numbing.**

Three of 11 participants who reported engaging in more food restriction as a result of negative emotions revealed that food restriction served as a way of numbing these undesirable emotions. These participants reported feeling that food restriction affected their ability to fully experience emotions, thus making them less sensitive to them. Participants #7 and # 19 commented:

[I just felt] numb. It was such a routine. It was hard because it was the first summer after [my] first year [of university] and I was used to so many new and exciting things in [my] first year [of university]. Coming home to my Dad, it was very . . . I love my Dad but the job I got was 9 to 5 every day, [doing] the exact same thing, just at the computer and it was actually a research position for diet plans for seniors. So, I was conflicted with so many healthy food options and the different diet options. I think that was reinforcement for me to eat healthy because I was surrounded by that information. Yeah, it felt like I was kind of numb and I wanted to be numb because I didn’t like where I was. I didn’t have a lot of people to visit or see and [I didn’t have] a lot of people making me happy, social stimulation-wise, so if I was just numb, then I wouldn’t be upset. So, the less I ate, the less I really thought about it because obviously when you’re not eating a lot, your brain isn’t working the same way. So, I figured if I could just do the routine through the work day with as little energy as possible, then I could just get through it and get home and do what I wanted. I guess [food restriction] made me feel number and less emotional, which I liked at those times because I was unhappy (Participant #7).

When I got a lot sicker, the only thing I thought about or that I had to worry about was my eating disorder and that was what everybody else focused on too. So, it was like I shifted the focus. There was a lot going on with my family that I hadn’t really dealt with and so I pretty much just avoided it by getting sick. It was like, “I can’t think properly, well, I don’t want to think properly anyways because there’s too much going on and it’s too overwhelming for me and I can’t deal with it.” I can look at it now and say that but I don’t think it was that intentional at the time. It was like I started doing it and I was like, “This works, this feels better, I feel in control, I don’t have to think, I’m going to focus all of my attention on this eating disorder, and my food and my exercise.” and that took up
everything. And it took up the attention of other people on those issues, too. It was more focused on my eating disorder (Participant #19).

Contrary to these 11 participants, two participants reported engaging in less food restriction as a result of negative emotions. Participant #2 explained that on days when she felt extremely depressed, she would limit her activities and thus be more inclined to obey her hunger:

It was tricky. I would want to restrict more because I was like, “Oh my god, you’re doing nothing, so you shouldn’t be able to eat.” But when I was lying in bed, say, I was lying in bed as opposed to having a conversation with someone or out at the mall walking, I was 100% thinking about being hungry. So, it was a lot harder to fight off the [feeling] of being hungry when I was lying in bed as opposed to if I was out walking, right? [If you’re out walking and you get hungry] you’re like, “Oh I am just going to walk for 20 more minutes, and I’ll be fine [I can fight off the hunger].” But if you’re lying in bed, you’re like, “I’m doing nothing and I’m not going to be able to sleep if I don’t eat.” So, it was really, really hard.

In addition, Participant #16 reported that when she experienced negative emotions, she felt out of control of everything, including her plans to restrict. As such, she would break her planned diet:

Every day at work is a challenge. When I get upset, I’m certainly more likely to eat foods I shouldn’t or, in my mind, that I have said that I shouldn’t because I’m frustrated and I’m angry. In cases like that, I’m absolutely more likely to do something bad . . . [If I experience negative emotions, I’m more likely to] go grab a poutine . . . I think it has to do with the whole perfectionism thing, being stubborn, and being controlling because sometimes I feel like I don’t have control over my own life except for what I put in my mouth. And so, when I’m experiencing a time of chaos or disarray, I can’t even control what I put in my mouth. I just go on impulse, instinct, and craving. And I feel that sometimes if I indulge [in] all that and I [appease] that craving, I can move on to dealing with everything else in my life.

5.2.3.3. The relationship between positive emotions and food restriction.

Participants were also asked to reflect on the relationship between positive emotions and their food restriction habits. Eleven of 20 participants reported that positive
emotions did not have a significant impact on their food restriction. In general, these participants explained that while positive emotions might have taken the edge off of their behaviour, their goals to restrict their food remained the same. Participants #5 and #13 commented:

I guess the positive emotions kind of made me seem more easy-going. I don’t know. I guess it wasn’t as intense as when I was upset but it was still a pretty intense thing . . . with the food it was always kind of like, I only really ate fruits and vegetables or ate little bits of things here and there, so I think it probably just maintained. I think definitely when I was upset or angry, it was taken even more to the extreme. [Positive emotions] didn’t eliminate [the eating disorder] I guess. At that time, feeling positive and feeling happy wasn’t really what I was feeling; it was what I showed on the outside . . . So, I think it made me less intense and less concerned at that moment but the happiness never lasted long and then it was back to feeling as though I wasn’t good enough (Participant #5).

I wouldn’t necessarily say that [positive emotions] make me eat more. I will still be restrictive with what I’m eating but I won’t be as obsessive about it and I just won’t plan it out as much. I might be a little more lenient on what I’m having but I won’t necessarily say, “Let’s go have a piece of cake or have an extra serving of bread.” But it just makes it easier to eat what I’m supposed to be having (Participant #13).

In contrast, seven of 20 participants reported decreased food restriction when they experienced positive emotions. In general, these participants explained that positive emotions made them feel more deserving of food. Five of seven participants reported feeling more comfortable with positive emotions such that they no longer felt a need to control their feelings through food restriction. Furthermore, four of seven participants reported that they felt they deserved a reward for their previous food restriction. With respect to no longer needing control, Participants #14 and #19 stated:

[When I experienced positive emotions], I would follow what my therapist said or what we [had] agreed on. So, if I was feeling in a good place, it was a lot easier to act and behave in a [healthier] way instead of an eating disorder way. When I was 16, everything felt so difficult and it was so hard to act in a non-eating disorder way, so my therapist suggested anti-
depressants or anti-anxiety medication. When I went on the medication, I felt positive more often, which then made recovery and doing the eating more or exercising less or in a healthier way, easier. So, it kind of helped me get to a more positive place and stabilize my mood. I still had my ups and downs but they weren’t so way up and way down. It was steadier and when I was steadier, had more good days, and felt good about myself, I would find it easier to follow the recommendations and what my therapist and I had agreed on. So, eating that granola bar wouldn’t be so scary or wouldn’t be so hard. And choosing not to go to the gym wasn’t so hard. So, feeling good made acting well and acting in a recovered way, easier . . . because I didn’t need a coping mechanism. If I was feeling good, and if I had a bit of self-esteem, then I didn’t need to try and go to something to feel better because I was already feeling better. (Participant #14).

It’s tough because it’s sort of like a cycle. The more awful I felt, the more I would restrict and the more I would restrict, the more awful I felt and it would just keep going in a circle. So, then if I was able to eat a bit more, my mood would lift, or if my mood lifted, then I was able to eat a little bit more. I think that can kind of account for the phases that I went through because it just spirals down so quickly but it can also work [in] the opposite way. If I could eat a bit more, I would typically have more energy, which would allow me to hang out with some friends. I would feel a little bit better and wouldn’t feel so hard on myself for maybe eating a little bit more. I think [it’s] because those are emotions that I was comfortable feeling. [When I felt] happier, I didn’t feel like I needed to numb that out. It was okay [to feel happy] (Participant #19).

With respect to deserving a reward, Participants #10 and #11 commented:

Sometimes when I was at my skinniest, I felt like I could eat a big meal and it wouldn’t really affect me because I would not eat the next day. I was in such control of myself, so sometimes I would have a bag of candy. Candy was my thing. I always have candy or I would have a muffin in the morning sometimes. Just little things that I knew wouldn’t be a huge change but would be a little cheat that I could get by with . . . I just felt that it wouldn’t lead to me eating every day or having a meal three times a day or anything like that. So, I felt like I was still in control. I was just kind of allowing myself to have a little treat for my hard work (Participant #10).

Well, [positive emotions] obviously didn’t make me increase my activity or restrict more but they basically just kind of made me feel more deserving. So, if I was having a good day or I did well on a test, I would say, “oh okay, I have something to be proud of. I’m feeling good today, so I can eat my dinner without feeling guilty” or, “I earned this.” I would never increase [food intake] just because I felt better or [decrease] activity
that I usually did but it was just easier for me to accept when I did eat or if I did sit down because I felt like I deserved that (Participant #11).

Additionally, two of 20 participants reported increasing their food restriction as a result of positive emotions. One of two participants attributed their positive emotions to prior food restriction and thus restricted more as a means of maintaining positive emotions. Furthermore, one of two participants reported feeling guilty (i.e., undeserving) when she experienced positive emotions, which then led to further restriction to cope with this feeling. With respect to feeling guilty, Participant #4 commented:

I was really uncomfortable with all [of my] emotion[s]. I remember feeling happy and not knowing what to do with that because I felt like I didn’t deserve to feel happy... If I was experiencing a positive emotion, my eating disorder would punish me for that. I wasn’t allowed to feel positive emotion. So, it wouldn’t be like, “Oh, [you’re feeling positive, so] you get to eat this.” It would be like, “Well [you’re feeling positive, so] you can’t eat this.” Or for me, [if my eating disorder did let me eat, it would be] something that I would let myself have [anyway]. I would get a Diet Coke or something like that, with no calories in it.

5.2.3.4. The relationship between negative emotions and physical activity.

While discussing the relationship between negative emotions and physical activity, 14 of 20 participants reported engaging in more physical activity as a result of negative emotions. Within this broader discussion, three sub-themes emerged: control, improved self-esteem and perceived achievement, and escape.

5.2.3.4.1. Control.

Similar to the relationship between negative emotions and food restriction, some participants reported engaging in more physical activity to control their negative emotions. Eleven of 14 participants revealed that having control over their physical activity served as a substitute for controlling their negative emotions. Participants #1 and #7 commented:
Let’s think about a good example. If I get stressed because of school, I can’t handle it. When I was in high school, during exam time, it was absolutely ridiculous. Everything piles up at once and you’re just totally stressed and again, my perfectionism came out through school. For me, dealing with that stress, I don’t know if it was because it was a learned thing for me to do exercise or if it was because you always hear about exercise being a good stress reliever but that for sure made me exercise more. During exam time, I would just study and exercise and study and exercise. My study break was going for a run (Participant #1).

Having control over the fact that I could go to the gym was kind of a relief for me because again, it was another thing that I could control. I could work through everything, I could think about things and kind of push through them. And the feeling after the gym was what I really liked. All of the endorphins and everything just made me feel so much better about the situation and about life. Just thinking about it was a stress relief for me (Participant #7).

Contrary to these participants, three of the 14 participants who reported engaging in more physical activity as a result of negative emotions reported feeling out of control.

Specifically, these participants felt as though they were forced to engage in physical activity as a means of satisfying an urge. Participant #7 commented on the fact that she felt as though she had to go to the gym or else she would not feel better. Furthermore, Participant #17 stated:

If I exercised because I was in a bad mood or something, yeah, afterward I would feel like I had beaten it or that I had controlled it. But there were these other times where, after I finished a workout, I would be like, “What’s wrong with me?” I felt like a slave in a way. I don’t know. I imagine that I felt the way drug addicts feel. I would feel good that I had gotten my fix but then I would realize that I had a big problem and that I was really out of control. I couldn’t fight my need to exercise.

5.2.3.4.2. Improved self-esteem and perceived achievement.

Four of 14 participants reported engaging in more physical activity as a result of negative emotions because it made them feel better about themselves. Similar to food restriction, these participants reported having an improved sense of self-esteem or
achievement following physical activity. Participant #6 stated “If I had worked out that
day, then I always felt better.” In addition, Participant #7 commented:

The worse I felt mood-wise and the angrier I felt at myself, the more I
would do physical activity and the more I would restrict. I think my mood
definitely played a role in it. I felt better when I had accomplished those
things, like when I had restricted food and had done a lot of physical
activity . . . As an output, it was the only way I knew that I was going to be
able to feel better about what I had done or about myself. Restricting the
food and being able to work out. I was burning calories, so I felt better
that way. I felt I was able to regain some of my control and strength that
people envied (Participant #7).

5.2.3.4.3. Escape.

Four of 14 participants reported that physical activity was a means through which
they could channel or escape from their negative emotions. For instance, Participants #1
and #3 commented:

If I felt stressed or I felt like I was going to blow up, I would go for a walk
by myself. Now [in recovery], it’s more like trying to do yoga and less
strenuous exercises, I guess. But going for walks and going for runs, being
on my own and just having that time to think really calmed [me] down. It
helped me to [focus on] how I was really feeling and what was driving
those feelings (Participant #1).

Whenever I felt bad about anything, I would exercise, maybe even go for a
walk. As I said, [I would do that] when my sister and I fought or if
anything [else] made me upset. When I was happy, it was obviously
because I was doing something. When I had things going on, I wouldn’t
be thinking about this stuff. I wouldn’t be thinking about my weight or
whatever. But when it was just me and I had nothing around me, this is
what I would do. So, if my dad got mad or something, then I would go
exercise and I would just start thinking about all of this again. So, that’s
how any negative feelings would influence my exercise (Participant #3).

Contrary to these participants, five of 20 participants reported engaging in less physical
activity as a result of negative emotions. In general, these participants reported being so
emotionally-overcome that they lacked the drive or ability to engage in any of their usual
activities, including physical activity. Participants #2 and #14 commented:
Well, if I was feeling so bad and not knowing what to do with it, I probably wouldn’t have exercised. I probably would have stayed in bed. There would be days where I would literally stay at home and cry all day and not know what to do with myself. So, [when that happened] it was pretty much a day of me trying to restrict as much as possible and just literally not getting out of bed. Maybe I would get out of bed to wash some dishes or something. But I had some lows where I was so upset and so sad for no apparent reason and I just didn’t know what to do about it. I just couldn’t carry on with my day. It was like I just needed the day to be over (Participant #2).

I would kind of get upset being at the gym when I wasn’t supposed to be at the gym. I was getting to the point where I knew better but I still went. So, I know it was around that time where I was at the gym when I wasn’t supposed to be and instead of being proud of myself, I was getting to the point of “Okay, you know better than this, what are you doing?” And as I kept exercising, I was physically doing the exercise but it was also a fight in my head between “Do I keep exercising or do I stop because I know better?” That battle was so exhausting and I would describe it as a negative experience. Those battles were not pleasant. I ended up crying. My tears were just my thing. If I couldn’t put a word to it or if I couldn’t figure it out, then I cried. And so I ended up crying in the middle of my workout and I couldn’t even physically do the exercise anymore. I got up, went to the locker room, got my stuff, and left. So, that negative experience and those negative emotions of the battle and the, “Do I stay? Do I go?” And feeling good that I was there but feeling bad about myself for being there made the tears come out and I just decided to leave. So, it actually stopped me from exercising and doing physical activity rather than encouraging me to keep doing it (Participant #14).

5.2.3.5. The relationship between positive emotions and physical activity.

Participants were also asked to explore the relationship between positive emotions and their physical activity habits. Ten of 20 participants reported that positive emotions did not affect their physical activity routines. These participants discussed the fact that while positive emotions may have slightly improved their states of mind, they did not lose track of their weight objectives. Participants #17 and #20 stated:

Positive emotions. I don’t remember having many of those when I was sick. I was in a different world . . . With exercise and eating, I would imagine that positive emotions wouldn’t really impact me. I probably wouldn’t have those periods where I would try to do extra stuff, but I would still stick to my usual routine. I guess one day of being in a good
mood wasn’t enough for me to completely forget my goals. I had really deep-rooted issues that caused the eating disorder. I mean, feeling out of place and feeling like I didn’t belong anywhere didn’t just go away because of one good day, you know? I would just do my usual routine but not stress as much over it and maybe not feel as desperate for it because the need to punish myself or distract myself from emotional pain wasn’t as bad (Participant #17).

[If I were feeling positively], I would probably just do what I’m doing normally. It wouldn’t make me eat more or exercise less. If I was happy, I would just meet my regular number because there’s always something that’s going wrong in life. So, it helps me feel in control of something because I always have this mindset that even though things are going good, something will probably go bad pretty soon. So, it kind of just helps me feel a little bit more in control (Participant #20).

On the contrary, six of 20 participants reported increased physical activity when they experienced positive emotions. These participants explained that positive emotions gave them more energy and confidence, which in turn revitalized their motivation to engage in daily activities, including physical activity. Participants #2 and #16 stated:

In terms of physical activity, [positive emotions] would have made me [do more]. If I was feeling good, I would have been like, “Okay, I’m going to get up and I’m going to go to the gym.” So, then it would have gotten me up and going. Or, “I’m going to get up and go for a run” whereas if I was feeling so upset and sad, I would have been like, “I’m not getting out of bed.” So, feeling better, positive, and happier was like, “You’re going to go to the gym” (Participant #2).

[If I were feeling positive], I would have a friend come to the gym with me or I would take a class. That sort of stuff. I knew I was feeling better about myself when I was able to share that workout with someone else versus if I wasn’t doing well, it was solo. All by myself . . . it was not necessarily [being] more social, it was being more vulnerable. I found that when I would work out, I was vulnerable and I was able to expose myself to people during that vulnerable time when I was happier and secure with myself. I felt like, “Okay, I can do this and you’re not going to judge me as much as you would normally” (Participant #16).

Lastly, four of 20 participants reported decreasing their level of physical activity as a result of positive emotions. These participants explained that when feeling positive, they
felt less of a need to control their emotions through physical activity and could shift their focus to other areas of their lives. Participant #8 commented: “Because I already feel better, I feel like I’m worth something. I’m not as focused on perfectionism through weight. It can expand to my personality.” Moreover, Participant #13 stated:

There are some days where I’ll wake up and I really want to get over my eating disorder. I feel like I need to make changes so that I can go back to school in the fall and so I can actually return to my co-op job. And there will be days where . . . I’m feeling really good today and the fact that I’m going to go sit doesn’t bother me as much. A lot of that happens if I’m distracted, like hanging out with friends or going to the movies. You have to sit there but it just seems okay at that moment because everyone around you is also sitting and you’re just feeling really good. It’s like those negative voices are just kind of turned down, so they aren’t so much at the forefront of my mind . . . I think just because I’m more in the moment. I’m not in my own mind the whole time. Watching a movie, it’s like you’re focused on a screen but you’re also there with your friends. Obviously, you don’t want to be thinking about food and exercise the entire time and miss the entire movie because then they’re going to know. You’ll have nothing to say about the movie. Or my next door neighbours, we’re really close to them and they have a 5-month old son. It’s a lot easier for me to go over there, play with the baby, and sit. I’m not beating myself up over sitting down when I could be standing or going for a walk if everyone else is there. It’s just because I am in the moment and it’s like you get the bigger picture. You’re enjoying what you’re doing and then that just kind of turns down the negative voices and it’s like, it’s okay that I’m not thinking about what I’m going to eat next or the fact that I’m not exercising. It’s okay (Participant #13).

In summary, five themes emerged within the discussion of mood intolerance. These themes clearly identified how mood, food restriction, and physical activity all intertwine and influence one another within AN.

5.2.4. Interpersonal difficulties.

This section reviews the construct of interpersonal difficulties. This construct addresses the issues that participants experienced in their interactions with other people and how these issues impacted their food restriction and physical activity habits. Six major themes emerged within this construct: significant life events, negative perceptions
of overweight, conflict, isolation, lies and manipulation, and having a friend or sibling with extreme eating and/or exercise behaviours.

5.2.4.1. Significant life events.

During the interview, some participants voluntarily disclosed that they had had an impactful event in their life before or during their experience with AN. These participants reported that they felt that these events triggered or promoted their disorders. Five general life events surfaced within this discussion: romantic break-ups, bullying and ridicule, divorce, illness, and death.

5.2.4.1.1. Romantic break-ups.

Five of 20 participants revealed having endured the dissolution of a romantic relationship before the onset of AN. These participants suggested that they developed AN as a way of coping with the negative repercussions of their break-ups. Participants #16 and #20 commented:

I always liked boys but was never interested in them. Then I started dating a guy in university and he broke up with me. And that just ruined me. That was the summer that I got diagnosed. I went from being a healthy 120 pounds down to 95 pounds... He tricked me into dating him and then just left me high and dry and that really stung. And so, I was just like, “Well, if there’s nothing wrong with me, then why would he leave?” I mean, I always see people in these horrible relationships but no one leaves. So, if I looked perfect, then that’s one less thing for [people] to hate about me. So, I would try to modify my eating and my activity level to cater to that (Participant #16).

I felt very insecure about other people. I felt very insecure when I was with my ex-boyfriend because we had a lot of trust issues. He cheated on me with a 12-year old and that was really intense for me. So, when that happened, I just felt so insecure... that I had to do something for myself, just to feel more in control and to feel more like in power (Participant #20).
5.2.4.1.2. Bullying and ridicule.

Four of 20 participants reported having experienced some form of harassment or ridicule that made them feel very negatively about themselves, thus leading to a need for a coping mechanism. Two of four participants were ridiculed specifically about their weight and the remaining two were harassed for other reasons. Participants #7 and #11 stated:

When I first started exercising to keep my weight controlled rather than just doing it for fun or leisure, it was because I had been bullied to the point where I would go home and cry. People said that I was fat or that I didn’t look good and that lowered my self-esteem. That was in elementary school (Participant #7).

I had a really crappy high school experience... I went to a high school where you were judged on how many brand name clothing items you wore and how drunk you got on the weekend. That was never me and I never wanted to really change who I was because I wouldn’t like myself. So, high school was pretty miserable. Then of course I had my eating disorder, pretty much the whole way through high school. I guess that was kind of like my coping mechanism. I feel like I have had a dark cloud over my whole life. Hopefully now things are starting to change (Participant #11).

5.2.4.1.3. Divorce.

In addition, three of 20 participants identified parental separation or divorce as the primary antecedent of the development of AN. Participants #11 and #20 commented:

Two years ago when I was 18, my parents split up and that was kind of hard because we’d been a family my whole life. It was difficult having things be different... they never fought in front of us very much but you could just feel it in the air and it was the worst. It was almost worse than fighting because it just hung there... Before they separated, there was a lot of tension in the house and that made it really hard for me. I would be in the kitchen and I would feel like I had to choose or defend both of them because I agreed with both of them. And that would just kind of overwhelm me. I would be like, “I’m going to retreat to my disorder.” Stuff like that just made me [turn] to my eating disorder more. So, in a way, it affected me because the worse I felt emotionally, the more attached I felt to my eating disorder (Participant #11).
I just feel like things are out of my control sometimes. I think when I was probably at my worst was when my parents got divorced. That was something that I couldn’t really control but I could control me. So, yeah, I guess it was about power and control because I can’t stop bad things from happening but I can change things about myself (Participant #20).

5.2.4.1.4. Illness.

Two of 20 participants identified illness as a significant precursor to the development of AN. These participants discussed how deeply and negatively they were impacted by illnesses that their mothers were dealing with. With respect to illness, Participants #7 and #19 stated:

My mom was getting pretty sick. She had alcoholism and bipolar disorder, so I was feeling really stressed in that environment . . . I went to the gym all through high school but it was a lot more minimal. I would do sports instead and I didn’t really focus on it as much until my mom started getting worse. She was just very neglectful and she was drunk. It showed that she just didn’t care about herself or me, obviously. So, I guess that feeling that she didn’t love me or care about me and could hurt me so easily lowered my self-esteem. It was also harder because my dad likes his alcohol a lot too, so he was trying to cope with the situation. Oftentimes he was so stressed out by the situation that [he would take it] out on me and that lowered my self-esteem more because the two family figures who were supposed to give me all of my self-esteem and confidence were just obviously not. I think I started wanting to get my confidence back through guys or through dating for a little bit because I was always dating a lot through high school, like back to back. I think I felt that if I was skinnier, I would get more guys and that would help my self-esteem even more (Participant #7).

[My mom] also had these terrible habits of making a crap ton of food when she was around and when she was able to cook. Often, she was drunk when she ate it so, when she would eat it, it just looked sloppy and gross that it was just like, “I don’t ever want to look like that.” So, I guess that put a negative association in there (Participant #7).

I spent my teenage years from 15 until I moved out of my house, so until 18, taking care of [my mom] and my little brother because my dad had left and [my mom] was severely depressed. So, I didn’t actually deal with my own stuff right away because I just took on this co-parenting role with her for my younger brother who was four. I refused to show her that I was hurting or that I was having a hard time. At first, it felt like it was necessary because I really needed to be strong for her and be strong for my
brother and that’s just what we did. That’s just how I got by but it got to the point where I felt like I couldn’t express myself at all and I would get so stuck trying to explain things to her. So, when I left for school, everything sort of came crashing down on me and my eating disorder started. Part of it was that I couldn’t express myself to her so I wanted to be able to show her physically that I was hurting. So, the smaller I got, the more she would notice that I wasn’t okay. We had terrible communication, so my way of communicating my issues was, “I have an eating disorder,” instead of actually saying anything. It was similar with my dad in that way, too. I wanted him to notice that something was wrong, same with her and with my sister a bit too. It was trying to show them that something was wrong (Participant #19).

5.2.4.1.5. Death.

Lastly, one participant revealed that the death of her good friend triggered the onset of AN. She stated that she turned to her disorder in a time of need:

This past fall, my friend actually committed suicide and I didn’t know how to deal with it. She was a really close friend. I felt really alone and so my eating disorder was like a coping strategy. It was like, “Well, she’s gone but my eating disorder is going to be there for me.” So, I just relied on the eating disorder. I became more restrictive and I increased my activity level just because I felt like it was there for me, I could rely on it, and it wouldn’t leave me (Participant #13).

5.2.4.2. Negative perceptions of overweight.

A second major theme that emerged within this construct was negative perceptions and opinions of overweight or obesity. Six of 20 participants revealed that members of their family expressed feelings of disapproval towards gaining weight or being overweight, which in turn influenced their weight control. Participants #5 and #10 commented:

My mom was never by any means a big or heavy person but she would claim, “Oh my gosh, I weigh a hundred and fifteen pounds. I’ve never been this big before in my life.” She has three daughters, so hearing her constantly say that, we knew that she associated thinness with beauty, too. So, definitely, the more my mom would say negative stuff about herself, the more I felt that she would think negative things about me. So, I used to get really upset and angry with my mom. That relationship made me push to do more physical activity and eat less and stuff... I constantly did
anything to keep myself small and tiny. I almost had this obsession with being pocket-sized. I wanted people to feel like they could just pick me up and put me in their pocket. I wanted to be seen as that little and that petite in every aspect. So, that relationship definitely had an effect [on] restricting food and working physically harder and stuff. I was able to keep that goal of being tiny (Participant #5).

I grew up with my mom. She’s overweight . . . And so growing up, I was always her best eater. Both [of] my sisters are kind of picky and she would be like, “Oh you’re going to look just like your mom. Oh, just wait, I always used to tell myself [that] I would never be fat and look at me now.” Obviously growing up [with] that, [it] was not something you wanted to hear. Like, “Great, I’m going to be obese.” I never wanted to be like that. I weighed 134 [pounds] in grade 10 and then I just looked at myself and [thought], “I’m on a fast-track to being my mother.” So, I started losing (Participant #10).

5.2.4.3. Conflict.

The next major theme that surfaced within the discussion of interpersonal difficulties was conflict. Twelve of 20 participants identified conflict as a significant problem that they encountered with those close to them. All 12 of these participants reported having conflict with their parents. Of these 12, five participants stated that conflict with their parents was driven by their food restriction habits and four participants stated that conflict with parents was driven by their physical activity habits. In addition, five of 12 participants reported experiencing conflict with their boyfriends. Of these 12, only one participant reported that the conflict with her boyfriend was caused by food restriction. Three of 12 participants reported having conflict with their friends, one of three reporting that conflict was due to food restriction, and one of three reporting that conflict was due to physical activity. Lastly, two of 12 participants reported having conflict with siblings. Both of these latter participants stated that conflict was often driven by their food restriction and physical activity.
Overall, the 12 participants who identified conflict as a significant interpersonal problem reported that conflict compelled them to engage in food restriction and/or physical activity. Three sub-themes emerged: control over conflict-induced emotions, spite, punishment, and resisting authority.

5.2.4.3.1. Control over conflict-induced emotions.

Of the 12 participants who identified conflict as a significant issue, eight reported that they engaged in food restriction as a means of controlling the negative emotions that were brought on by the conflict. For instance, Participant #3 stated that if she got into a fight with her dad or her sister, she would restrict more so as to control how upset she was. Participant #13 stated:

[Conflict] affects my mood so much. If I have a huge fight with my mom or my sister or even my friends, I’ll start to feel bad about myself and then I might be more restrictive just because it is a coping strategy. Then it is like, “That’s not going so well, but my eating disorder makes me feel better and it won’t leave” (Participant #13).

In addition, of the 12 participants who identified conflict as an important interpersonal issue, eight reported that conflict specifically compelled them to engage in physical activity. These participants stated that they engaged in physical activity as a result of conflict because physical activity served as a means of controlling consequent negative emotions. For instance, Participants #8 and #19 stated:

My family would always be really upset and frustrated with me, which would not help my feelings of perfectionism or self-esteem. It would usually cause me to work out more or try to please them by not working out, which would just stress me out more . . . Usually [physical activity] would get me out of the house, away from people, so it would give them a chance to calm down and it would give me a chance to calm down. It would help me feel better about myself because I would think, “If I’m skinny, then other people will like me” (Participant #8).

My relationship with my dad has been really, really rocky for the past six years, more so over the past three years, with my eating disorder. Things
have just been in a really bad place for me. If I would receive a text from him that made me upset . . . I would feel like I needed to exercise more to numb the feelings out. And because it made my self-esteem so much lower, I was like, “I need to do something or I will lose my mind” . . . It was like, neglect from my dad. It wasn’t specific conflict. We wouldn’t fight but he would ignore me and wouldn’t talk to me. I would feel neglected or feel like I wasn’t important. Things like that. I think, too, separately from him, relationships with friends or social situations [affected me]. I have a lot of social anxiety and I think feeling in control of my eating and of my exercising made me feel more competent in a weird way. I was zonked out of it but it was like, “At least I have these things under control. At least these are things that are good about me and that I can do.” So, it made me feel like I would be more accepted by other people, I guess (Participant #19).

5.2.4.3.2. Spite.

In addition, four of 12 participants reported engaging in food restriction as a way of spiting others. Specifically, these participants explained that if they had experienced conflict and felt negatively towards others, food restriction served as an indirect way of expressing themselves or getting revenge. Participants #12 and #20 stated:

There were a few times when a conversation that I had didn’t leave me feeling good about myself, so I just decided that I wasn’t going to eat. It was a way of getting back at them. Or if they made a meal for me, not eating it was a way of saying that “I’m mad at you” without coming right out and saying it (Participant #12).

When I had a boyfriend, if we would fight, I would just not eat. Or if I was feeling really angry about something, I could just go days without eating. The more out of control and angry I felt, the less I would eat. So, if I was really, really mad, I just wouldn’t eat all day . . . I still got hungry but it was kind of like a protest. I would just not eat because I was pissed (Participant #20).

5.2.4.3.3. Punishment.

Two of 12 participants reported engaging in food restriction as a way of punishing themselves following a conflict. Participants #17 and #18 commented:

My mom was the one who freaked out the most [over my eating disorder]. And I say freaked out because she was frantic about it. The thing about my mom is that I know she loves me but she has a really hard time putting
her own feelings aside. So, she would often be really emotional about what I was doing to her by starving myself. She would talk about how she could feel my bones and [tell me] that she cried every night. She would say that I was killing her and that she should starve herself too so that I could see what it’s like to see someone I love going through this. Oh man, I get her now but back then, her words used to make me feel so guilty that I just ended up starving even more to punish myself for upsetting my mom so much (Participant #17).

I always took it personally when someone was mad at me and I didn’t feel that I was a good enough person. [Not being a good enough person] would obviously be why they would be mad at me. Or maybe we wouldn’t have gotten in a fight [if I were a good enough person]. I couldn’t fix that or control [being a good enough person] but I could control what I chose to eat. That was one thing that no matter what anybody else said or did, I got to pick, and so I guess I ate based on a rewards system. If I was doing well or if I deserved something then I could [have] dessert or if I did something to piss somebody off then I didn’t deserve any treats. It usually amounted to sweets and things like that unless it was something big enough that I was like, “I’m not eating at all because I’m so angry” (Participant #18).

5.2.4.3.4. Resisting authority.

Lastly, three of the 12 participants who identified conflict as a crucial interpersonal problem reported engaging in both food restriction and physical activity as a means of resisting authority and disobeying the orders that their families gave to them. These participants explained that being told what to do compelled them to exert control over their own actions, specifically through restricting and engaging in physical activity.

Participants #1 and #13 stated:

Not having control around the food [was a problem]. I would try and watch what my mom was making for dinner. I didn’t like having other people make food for me or serve me. So, when I was at home, if my mom was making dinner, I would try to watch and see what she was putting in. If I didn’t have the control over it, if I didn’t have the final say, then I would restrict or I would cut out that entire food item from my meal . . . So, it was around certain foods, like I didn’t want to include any fats, so if my mom put, let’s just say margarine in mashed potatoes, I would not eat them. And then having someone else serve me really bothered me because it made me feel like I was a 2-year old and yet I was 15, 16, 17, whatever . . . I wanted to have that control, that ability. I didn’t want to
have to feel like I was being told what to eat or told how much to eat, especially. Then at the early stage of my recovery, I was trying to gain weight and it was hard for me to have my mom serve me a bigger portion than she was having herself. That really frustrated me. I was like, “I don’t want to eat this,” so I wouldn’t eat it (Participant #1).

I think anger is one [emotion] that I have difficulty expressing for sure. I have control issues. Recently, I went home for a little bit and . . . I have a difficult relationship with my dad because I do find him to be more controlling. And so [he wouldn’t even be controlling with respect to] food and activity, it would just be like, “Oh no, we’re going do this now.” I think coming from living by myself at university for this amount of time and almost being 20 years old, I’m kind of like, “Okay well, I’m independent. I don’t want other people telling me what to do, especially my parents.” I know that’s a common thing but I think that for someone with an eating disorder, it takes a bit more of a toll than for normal, healthy people without eating disorders. So yeah, I would get angry with my dad if he told me what to do and then that would [result in my thinking], “Okay, you know what? I’m going to get back at him for that. I’m going to get back [at you] and I’ll show you. I’ll show everyone who is boss; my eating disorder is boss.” And so, I would do that through restricting [food] and [doing] more exercise . . . If anyone tried to control an aspect of my life but mostly my eating and my exercise, I would flip it around and push it even harder in the opposite direction of what they wanted. Or I guess my eating disorder would do that. If, for example, I wasn’t allowed to go for a walk, then I would be like, “Okay, screw this, I won’t have dinner and I will still go for a walk. I will get it in there.” So, I think that definitely affected my relationships (Participant #1).

[Conflict] definitely increases my restriction. My mom could say, “You can’t go for that walk today” or “You can’t go to the store because that’s too much activity.” Then I will find ways to [restrict]. She will think that I’m having something. For example, I have a lot of crackers for snacks and so she will think that I’m having a full serving of crackers but I will cut a few out. You just feel like you have to get back at someone. So, I will restrict my food and be like, “You have no control over me. It looks like I’m eating everything that I’m supposed to but I’m not” (Participant #13).

The eating disorder thoughts are always pester you and [the eating disorder] is almost the only way of rebelling. If someone is saying that you can’t exercise today, it’s like, “well, standing isn’t exercising”, so technically you’re following their rules but at the same time, you’re still rebelling and trying to burn those extra calories (Participant #13).
5.2.4.4. Isolation.

Twelve of 20 participants identified loneliness and/or isolation as an important interpersonal difficulty. Five of these 12 participants reported that their isolation was unintentional, being due to environmental circumstances or a lack of friends. Participant #7 stated that moving home for the summer after her first year of university led to long periods of isolation because of her location. Participant #3 expressed difficulty in dealing with being alone at the end of the day when she was not distracted by being with her friends. In addition, Participants #9, #11, and #17 discussed their inability to make a lot of friends in school, inevitably leading to spending a lot of time alone. On the other hand, six of 20 participants reported isolating themselves on purpose. Within the discussion of isolation, seven sub-themes emerged: prioritizing food restriction or physical activity, eating too much, more opportunities for physical activity, more opportunities for food restriction, negative emotions, spite, and secrecy.

5.2.4.4.1. Prioritizing food restriction or physical activity.

Five of the six participants who reported isolating themselves intentionally stated that they avoided friends or social events because their food restriction or physical activity routines were a priority. Specifically, these participants discussed how social events often interfered with food restriction or took time away from going to the gym. For instance, Participant #1 commented, “Instead of sitting with friends at lunch time, I would go for a walk outside or I would go and do extra work in the library, just something to get around the awkwardness of my not eating with them.” In addition, Participant #2 stated:

When I was sick, I pretty much lost all relationships with friends. It was pretty much just relationships with family. So, they didn’t really have an influence. To be completely honest, I didn’t really get an influence from
friends or other people. I just shut off every relationship and every contact I had with people because it interfered with restricting and going to the gym. I couldn’t meet a friend for lunch if I didn’t want to eat. I couldn’t meet a friend if I still had to go to the gym. So, I just didn’t make plans.

5.2.4.4.2. Eating too much.

Two of six participants reported cutting themselves off from social gatherings if they had eaten too much. Participant #15 explained that feeling “bigger” following eating too much made her feel self-conscious, which in turn led to her avoidance of others. Moreover, Participant #19 stated that social gatherings were often positive activities. As such, if she felt that if she had eaten too much and felt “fat”, she would punish herself by not partaking of social events:

I remember one night specifically. [My friends and I] were going out dancing or something and I felt that I had eaten too much in the day. Therefore I wasn’t allowed to go. It was like a punishment. I would just withdraw, like I wasn’t allowed to be around my friends or do anything because eating too much automatically translated into me being fat. So, it was like this combination of, “I don’t look okay, I look horrible, my friends are going to think I’m fat.” I was drastically underweight but it was this running dialogue in my head of my eating disorder saying that I’m not allowed to do anything. So, I just wouldn’t go. I wouldn’t show up.

5.2.4.4.3. More opportunities for physical activity.

Three of 12 participants stated that being alone allowed them to justify their physical activity habits. Participants #4 and #11 stated:

Well, it definitely affects [physical activity] in the sense that I’m able to do it more and I think about it more often. Cutting myself off from people kind of keeps me in my own little eating disorder world where all of this is normalized and it’s okay that I’m doing all of it. I rationalize everything like, you know, “I ate this so it’s okay to go for this long of a walk” or, “It’s okay to run up and [down the stairs].” It’s like, “You need to do this” and there’s no one outside being like, “You’re crazy, what are you doing?” (Participant #4).

Well, I guess, the more time I spent alone, the more time I felt stuck inside of my own head and of course, my head’s just telling me, “You’re not
good enough, you’re not thin enough, you don’t deserve this, and you shouldn’t be happy.” So, the more time I’m alone, the more time I’m listening to my own head. So, that would probably increase my activity. The worse I felt, [the more I would isolate myself] and that in turn would just kind of go in a vicious circle of, “I have to exercise” and I don’t want to exercise with people, so [I would exercise] by myself. Then it just ended up where basically I felt alone all the time. And even though that’s what I thought I wanted, I think there’s always a part of you that’s just like, “No, I don’t want to be alone” (Participant #11).

5.2.4.4.4. More opportunities for food restriction.

Similar to physical activity, two of the 12 participants who identified isolation as an important interpersonal problem discussed how being alone facilitated their food restriction habits because there was no one around to question or stop their behaviour.

Participants #9 and #10 stated:

I think being away from people definitely made it easier to restrict more because people didn’t see what you were eating, right? If I was sitting with a group of people and they saw me just eating a salad with no dressing and nothing on it, they would be like, “What are you doing?” But if I was doing it on my own, it didn’t matter because no one even knew. If people were eating or whatever, I would say “Oh, I’ve already eaten” or, “I’m going to eat later,” and I would just eat when I was on my own (Participant #9).

Actually, when I got to my worst, I didn’t even get hungry at all. I had no physical feeling of hunger other than light-headedness. I could go the whole day without thinking about it but having someone put a plate in front of me, I would be like, “Alright, how am I going to do this? How much of this am I going to eat?” Normally, I would always scarf down the whole thing because I was starving. But when I was by myself, food restriction was simple. I would just have either yogurt or an orange or something just to tide me over. But when I was with other people, it was kind of like, “I’ve got to eat this whole thing because I don’t want to look like I’m sick” (Participant #10).

In contrast, Participant #2 stated that isolation actually decreased her food restriction.

This participant explained that when she was alone and without distractions, it became much more difficult to ignore her body’s signs of hunger.
5.2.4.4.5. Negative emotions.

Two of 12 participants discussed how isolation often triggered negative emotions, which in turn compelled them to engage in food restriction to control those emotions.

Participants #3 and #17 described:

Even stupid stuff like school projects [were a distraction from negative emotions]. That was just something that was going on but [it] even [happens] now. I had this weird feeling yesterday. My friends and I came back from being outside and then I was just alone. You know, it’s just you, so, what do you fill your thoughts with? And at the time [when I had AN], [physical activity] was the thing [that I filled my thoughts with] (Participant #3).

Problems [with others] definitely influenced my physical activity. I think it mainly happened in indirect ways. So, feeling lonely and out of place, as I mentioned, being around friends that I thought were fat, getting made fun of, feeling ugly compared to the popular girls. I think all of these kind of combined together to form this really warped view of myself and the world, and really contributed to me wanting to make sure I didn’t get fat. Or it would just intensify my depression and then that in turn would make me want to exercise to punish or hurt myself. It also happened in direct ways though but it was usually because the problems with others affected my mood and then my mood affected my exercise . . . Also, well, this is a bit embarrassing but I always, always wanted a boyfriend since I was like 5 years old. And boys never paid attention to me, so I think that the loneliness I felt really intensified the depression and sadness and made me want to exercise (Participant #17).

5.2.4.4.6. Spite.

One of 12 participants reported engaging in physical activity as a way of spiting the people who did not want to be her friends:

I would be at a school dance and, you know, people started pairing off and they were stupid. The guys were going after the girls wearing the skinniest stuff and I would be like, “Well no one ever wants to dance with me or do this or that. So, I’m just going to dance more and burn more calories while they go and get a drink of pop and just add calories.” That’s a really dumb situation. Or if I was in gym class and everyone was talking, having fun, and I felt like nobody wanted me to be part of the conversation, I would just be like, “Okay, I’m just going to run more laps than everyone” (Participant #11).
5.2.4.7. Secrecy.

Lastly, one of six participants described how she would isolate herself as a means of keeping her eating disorder a secret from others:

I wouldn’t want anyone to know [about my eating disorder] especially since I have relapsed [multiple] times. I was embarrassed that I was relapsing, you know, it was like, “I can’t let anyone see this.” So, it was very secretive and [involved] a lot of isolation. You’re very wrapped up in your own world because to be able to persist with your eating disorder and to hide it from other people, whether you’re successful or not, take a lot of planning and thinking. So, even if I were to engage in some social activity, I would be mentally [absent], thinking about food, how [to avoid eating it], what I was going to eat later or the next day, or how I was going to avoid my mom. That kind of thing (Participant #4).

5.2.4.5. Lies and manipulation.

Another theme that emerged within the discussion of interpersonal difficulties was lies and manipulation. Eight of 20 participants reported manipulating or lying to others on a regular basis to avoid eating. For instance, Participants #5 and #17 stated:

Basically if I was told that I was eating something for dinner, I instantly thought about [how to avoid it]. Like, “You know you’re eating this tonight, I’ve already made it” . . . I would probably eat up to half of the meal and then claim that I was full or I would put too much pepper in it or something and I would be like, “Oh, I don’t like it.” Or if I had to re-heat something, I would [intentionally] overcook it so it wasn’t good to eat (Participant #5).

Sometimes [my friends would] offer me some [fries] and I would feel obligated to take one because I didn’t want them to think anything was going on. So, I would eat one fry and it would be torture. I would find some way to spit it out or something . . . It was the same with pizza, like if they ever wanted to buy pizza for lunch. Sometimes they would offer me a pepperoni and I actually stooped so low as to lie and say that I didn’t like pepperonis so that they would stop asking me. It was the same with chips. For the longest time, my friends thought I hated chips but I really just told them that so that I wouldn’t have to eat them if it came up (Participant #17).
5.2.4.6. Having a friend or sibling with extreme eating or exercise behaviours.

The final theme that emerged within the discussion of interpersonal difficulties was the influence of having a friend or sibling who also engaged in extreme eating or exercise behaviours. Five of 20 participants reported having someone close to them who also engaged in food restriction or excessive physical activity. Within this topic, three sub-themes emerged: competition, motivation to engage in healthy behaviours, and encouragement of unhealthy behaviours.

5.2.4.6.1. Competition.

Of the five participants who reported having a friend or sibling with extreme eating or exercise behaviours, three stated that this compelled them to compete with that person, thus increasing food restriction or physical activity. For instance, Participants #2 and #10 stated:

Last year, when I was [living] in this house, one of [my roommates had] an eating disorder as well. So, she was the one friend that would really influence me because I would feed off of her behaviours. If I saw her restrict, I would have to restrict. Or if I saw her not eating, I would have to go longer than her without eating. That kind of thing (Participant #2).

My friend and I aren’t really friends anymore. We had a falling out. But when we were in high school, she was heavier than me and she was always asking me for help and stuff, like advice on how to lose weight. I helped, like I told her how I was losing weight and whatnot and she kind of started losing weight. Then it was more like a competition for me to lose more and to stay skinny. I think that relationship with her, talking about my eating, and trying to help her lose weight helped me stay skinny. It helped me push myself to lose weight (Participant #10).

5.2.4.6.2. Motivation to engage in healthy behaviours.

One of five participants reported that having a friend with an eating disorder compelled her to try to engage in healthy behaviours in spite of her difficulties because she did not want to impact their disorder:
This week, I went out for dinner with a friend. I have a really hard time with any kind of fat, so oil or butter or anything like that. So, the salad I got had a lot of dressing on it and lot of oil. It was all over the place and I had a really hard time but I was with one of my friends who was also in recovery so I knew I couldn’t not eat it, so I ate it but it contributed a lot to my stress level. My thoughts were just all over the place in terms of like, what that [oil] was going to do [to me], how many more calories I ate because [of the oil], and just worrying about that kind of thing (Participant #4).

5.2.4.6.3. Encouragement of unhealthy behaviours.

Lastly, one of five participants reported that having a sister who dieted and who asked for weight loss advice made her feel like engaging in food restriction and physical activity. She explained that being asked for advice made her feel negative and thus reinforced her need to engage in these behaviours:

My sister was weird. She would ask me how I managed to lose so much weight and asked if I could help her. That used to drive me insane. I can’t really articulate why. I think it’s because she seemed to be making light of the situation and, even though I felt like I needed to restrict and exercise, I was miserable and she was turning that misery into a good thing. She was also kind of taking the effect on me out of the equation . . . Her asking me for diet advice made me feel horrible and I would want to restrict and exercise even more (Participant #17).

To summarize, the discussion on interpersonal difficulties revealed six major themes which demonstrated how relationships with others, food restriction, and physical activity, all intertwined and impacted each other.
6.0. Discussion

The purpose of the present descriptive study was to examine the four maintaining mechanisms of Fairburn et al.’s (2003) transdiagnostic theory of eating disorders and, in so doing, promote further understanding of the weight loss strategies (i.e., food restriction and physical activity) used by those with AN. To our knowledge, this is the only available study which explores AN qualitatively using the features of the transdiagnostic theory as a guide. The rationale behind using this theory as the foundation for the study was that all four mechanisms are well-supported by literature on AN yet there still lacks a full appreciation of the emotional experience of clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties, particularly within the context of food restriction and physical activity. It is hoped that the in-depth responses explored in this study paint a portrait of how these four mechanisms manifest in individuals with AN to inform prevention and treatment options.

Overall, data analysis revealed eight major themes for clinical perfectionism, five major themes for core low self-esteem, five major themes for mood intolerance, and six major themes for interpersonal difficulties. While there was a great deal of variety amongst the identified themes, they demonstrated the vicious cycle that occurs within AN. Participants revealed how these four constructs influenced food restriction and physical activity during their experiences with AN and how these two weight loss strategies, in turn, intensified the four constructs.

As mentioned in the methodology section, participants were provided with the opportunity to comment on themes identified in the data analysis process. While 18 of 20 participants indicated at the time of the interviews that they would be interested in
providing feedback on the themes, only one participant responded. This participant acknowledged that her experiences were represented in the summary of themes.

6.1. Descriptions of Food Restriction and Physical Activity

Prior to discussing the constructs of the theory, participants were asked to describe their eating and physical activity habits during their experiences with AN. While the specifics of eating and physical activity were not the primary focus of the study, it seemed important to establish a context of eating and physical activity habits before delving into the core constructs of the transdiagnostic theory of eating disorders. With respect to eating habits, participants generally avoided ingesting too many calories, carbohydrates, and food considered to be “junk” or high in fat. Furthermore, just under half of the participants reported avoiding meat. Fruits and vegetables were universally deemed as permissible foods.

There are surprisingly few studies on the actual eating habits of individuals with AN. However, in one study by Schebendach et al. (2011), patients with AN who were deemed to be “treatment failures” were compared to “treatment successes” in their dietary intake. Treatment failures were found to consume less variety in added fats, added sugars, caloric drinks, carbohydrates, and miscellaneous foods than treatment successes, which appears to be similar to the findings of the present study. In addition, O’Connor et al. (1987) found that in 63 of 116 cases examined in the sample, individuals reported avoiding red meat or having adopted some kind of vegetarian diet. In this particular study, “pseudovegetarians” (participants who had inconsistent vegetarian preferences) tended to have a longer duration of AN and lower weight throughout the course of their disorder. O’Connor et al. (1987) found that 6.3% of the 63 participants who avoided meat did so before developing AN. Within the present study, only a few
participants indicated that vegetarianism was a personal preference unrelated to AN. It is
difficult to ascertain a connection between vegetarianism and AN based on the results of
the present study. However, further research may be needed to examine this area.

Participants were also asked to describe the type, intensity, frequency, preferred
times of day/situations in which physical activity was done, as well as who they did
physical activity with. Results in this area were quite diverse. Types of physical activity
ranged from organized/competitive sports to walking and completing chores. Some
participants reported not engaging in physical activity, as their primary focus was food
restriction. The majority of participants reported engaging in vigorously intense physical
activity as opposed to moderately intense physical activity. These results on intensity are
supported by Bratland-Sanda et al. (2011), who found that vigorous physical activity
rather than moderately intense physical activity was positively linked to eating disorder
symptoms in their clinical group but not in their control group. In the present study,
frequency and preferred times of day/situations in which physical activity was done
ranged greatly and appeared to be based on convenience and personal preference.
Conversely, when asked to describe who physical activity was done with, a large number
of participants reported doing physical activity alone. While some participants claimed
that physical activity was done alone due to uncontrollable circumstances, others stated
that they did physical activity alone to avoid being disrupted by others.

6.2. The Core Constructs of the Transdiagnostic Theory of Eating Disorders

Overall, using the four mechanisms of the transdiagnostic theory as a guide was a
favourable approach in addressing key components of the experience of AN as revealed
by participants. Fairburn et al. (2003) acknowledged in their theory that not all
individuals with eating disorders may exhibit all four mechanisms or the same level of all
four mechanisms. This was certainly true with the participants in the present study, as there were a few participants who did not experience all four constructs. In addition, while all participants reported some level of food restriction, not all participants emphasized physical activity as a major weight loss strategy. As such, it is important to consider the variation within the participants’ behaviours. However, in general, the four constructs identified and described by Fairburn et al. (2003) were all very relevant within the experiences of AN described in this study.

Fairburn et al. (2003) posited that at the heart of the eating disorder maintenance model (in this case, for AN, specifically) is a distorted sense of self-evaluation, in which individuals appraise their self-worth based solely on their ability to control their eating, shape, or weight rather than on their abilities in other areas of life as well. Furthermore, these individuals set extremely unrealistic expectations for themselves (pertaining to eating, shape, or weight) and when they fail to meet them, they conclude that it is due to personal flaws. Consequently, the negative perception of self is reinforced, which then compels these individuals to endeavour more fervently to meet their own expectations.

Fairburn et al. (2003) suggested that, in specific individuals, the four mechanisms of clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties intermingle with this central system of distorted self-evaluation. This “core psychopathology” of distorted self-evaluation was very evident in the majority of the participants within the present study. Goal-setting was particularly prominent in the present study, demonstrating a profound need to set concrete and measurable standards for food restriction and physical activity. Among the participants who reported goal-setting, the majority indicated that their goals focused primarily on acquiring a certain
body or weight, through regulating caloric intake and output. Furthermore, a considerable number of participants indeed attributed not meeting their goals to personal failure or weakness. This phenomenon certainly supports the idea presented by Fairburn et al. (2003), which posits the fusion of self-worth and meeting standards.


In looking more closely at the four constructs that may accompany the aforementioned “core psychopathology” of the transdiagnostic theory, clinical perfectionism appeared to be the most pertinent. While this sample was not “clinical” and so, the clinical level of perfectionism could not be measured, themes relating to perfectionism and their interaction with food restriction and physical activity habits were adequately addressed within this study. Furthermore, the extent to which participants engaged in perfectionist behaviours was addressed. Prior to completing data analysis, the construct of obsessiveness had been added as an additional construct to explore in this study. However, due to the considerable overlap between the themes identified within perfectionism and obsessiveness, these two constructs were combined. Given the extremity of the behaviours associated with clinical perfectionism, it was concluded that the obsessive behaviours revealed in the present study may be the result of clinical levels of perfectionism. However, as aforementioned, the clinical nature of perfectionism could not be confirmed in the present study.

Within the discussion of perfectionism in the interviews, the major themes of global perfectionism, identity, goals, compensatory behaviour, excessive planning, comparisons, perceptions of others, and perceived advantages of perfectionism emerged. As mentioned earlier in this thesis, the role of perfectionism in AN has been well-documented, particularly in quantitative research (e.g., Bastiani et al., 1995; Cocknell et
al., 2002; Halmi et al., 2000). Within the present study, half of the participants reported having perfectionist tendencies in many aspects of their lives in addition to food restriction and physical activity (i.e., “global” perfectionism), which supports the notion that this personality type may be more vulnerable to the development of AN. For instance, in a study of early childhood perfectionism in individuals with AN, Halmi et al. (2012) found that global childhood rigidity was a prominent feature in all subtypes of AN in their sample, demonstrating that this may be a salient feature of those who are vulnerable to developing AN.

As aforementioned, the majority of participants in the present study reported setting goals for the purpose of acquiring a specific body type or weight. These results are supported by Lethbridge et al. (2011) who found that self-oriented perfectionism, weight and shape overevaluation, dichotomous thinking, and conditional goal-setting were significantly associated with eating disorder behaviours in both clinical and community samples. Moreover, Brown et al. (2012) found that obeying self-imposed food rules mediated the relationship between self-oriented perfectionism and eating disorder behaviours. In the present study, there were a couple of participants who did not report a high level of goal-setting, which serves as a reminder that not all individuals with AN can be treated in the same manner and that individual characteristics must be taken into account in the treatment approach. However, the majority of participants in the present study reported extensive goal-setting and placed a great deal of importance on meeting these goals to feel accomplished, which suggests that this is a crucial occurrence.

In their description of “clinical perfectionism” within eating disorders, Fairburn et al. (2003) in fact mentioned a pervasive fear of failure with respect to meeting standards.
This fear of failure was definitely present within the participants in the present study, which will be touched upon at a later point.

In addition, the majority of participants in the present study reported excessive planning, which involved first and foremost, a preoccupation with food and food restriction. Participants described the extent to which food and food restriction occupied their thoughts, often interfering with daily activities. Participants also revealed using a great deal of precision and measurement when planning their food restriction and physical activity. Many participants used the internet as a resource to inform their food restriction and physical activity practices. This identified an element of perfectionism relating to the need for knowledge and understanding of weight loss strategies. For these participants, it was not sufficient to set goals and meet them; the process of setting and meeting goals needed to be completed using mathematical precision in order to assure effective weight loss. Fairburn et al. (2003) also commented on this phenomenon in their description of “clinical perfectionism,” suggesting that participants who exhibit this trait often engage in selective attention to performance and repetitive counting and verification. In the present study, predictability was a sub-theme within planning, in which some participants expressed a need for sameness in their routines such that no unknown factors would threaten their goals for weight loss. Often, participants who reported a need for predictable environments, foods, and routines stated that predictability made them feel “safer,” which may be interpreted as feeling more in control. This mention of a need for predictable circumstances is supported by another qualitative study of AN, in which participants described uncertainty as stressful, leading
to feelings of being out of control, and in turn leading to extreme planning and organization so as to avoid unpredictability (Sternheim et al., 2011).

Given the literature on self-oriented versus socially-prescribed perfectionism in people with AN, it is important to comment on the fact that themes relating to both these forms of perfectionism emerged within the present study. With respect to goal-setting, most participants devised goals based on their own desires or ideals for body weight. The presence of self-oriented perfectionism in those with AN has been well-documented, and in fact, a few studies have demonstrated that self-oriented perfectionism is strongly related to AN while socially-prescribed perfectionism is not (Brown et al., 2012; Hewitt et al., 1995; Lampard et al., 2012; Lethbridge et al., 2011). However, just over half of the participants in the present study commented on the perception of others and how this played into their food restriction and physical activity habits. For instance, some participants reported revering others for their weight, food restriction habits, or athletic abilities and incorporated these envies into their own goals and routines. These results indicating the potential importance of socially-prescribed perfectionism are supported by Gunnard et al. (2012), who found that socially-prescribed perfectionism, specifically family standards, were more associated with AN than the other eating disorders in their sample. Other participants in the present study discussed fearing the negative repercussions they believed they would face if they did not engage in food restriction and physical activity or if they gained weight. These participants also incorporated these fears into their goals and routines. This fear of negative repercussions is similar to the findings in a study by Levinson and Rodebaugh (2012), who found that fear of negative evaluation by others predicted a variety of disordered eating in their sample.
While some participants in the present study reported an ability to remain comfortable if their normal food restriction or physical activity patterns were altered by external circumstances, the majority of participants in this study engaged in compensatory behaviours if original goals or plans could not be maintained. The majority of participants reported engaging in an immediate substitution for physical activity if they could not fulfill their original regimens. Often, this immediate substitution for missed physical activity included minor body movements or fidgeting. In general, this type of movement burns fewer calories than a traditional workout. The fact that the majority of participants resorted to this form of minor physical activity demonstrated that the need to meet goals was so important that they attempted to do so through any means possible. A similar number of participants added on to future workouts if their goals for food restriction and physical activity were altered. This was accomplished either directly or gradually. Some participants felt the need to double or even triple their usual workout while others compensated in increments. This demonstrates a variation in urgency and perception as to how soon the interrupted patterns needed to be re-established. This compensatory behaviour signified the importance of meeting predetermined standards. As indicated by Shafran et al. (2001) and Fairburn et al. (2003), the ability or inability to meet standards was often reflected in participants’ perceptions of self-worth. In the discussion on core low self-esteem in the present study, most participants were quoted as feeling weak or feeling like failures if they had eaten more than planned or had missed their regular physical activity. These reactions support Fairburn et al. (2003)’s description of the fusion of self-worth and the ability to adhere to perfectionist guidelines – participants in the present study did in fact
appear to evaluate themselves based solely on their ability to restrict food and engage in physical activity. Within the present study, participants also reported a need to meet their standards in spite of harmful consequences, which also supports Shafran et al. (2001) and Fairburn et al. (2003). Several participants in the present study described having an almost uncontrollable urge to meet their food restriction and physical activity goals, even when circumstances were unfavourable. Mond and Calgero (2009) found that when exercise was done for weight, shape, or physical attractiveness in their eating disorder group, participants often experienced intense feelings of guilt and negative emotions if exercise was missed or even temporarily delayed.

The present study was also unique in that participants commented on what they felt the advantages of being perfectionists were with respect to food restriction and physical activity. This element of the study provided a lot of insight into how participants perceive their perfectionist tendencies and how aware they are of their own personality traits. For the most part, participants identified that perfectionism often gave them stronger determination and the ability to maintain control over themselves, which included the ability to meet goals. Due to the fact that the sample used in this study included both current and past cases of AN, it is difficult to ascertain whether participants became aware of their perfectionist tendencies during or following their experiences. However, these findings are still useful in exploring the level of awareness participants have and how they perceive themselves.

6.2.2. Core low self-esteem.

According to Fairburn et al. (2003), “core” low self-esteem constitutes a form of low self-esteem that is central to a person’s personality. While a few participants in the present study indicated having a general issue with self-esteem independently of AN,
most participants did not explicitly express a pervasive sense of low self-esteem throughout their lives. Some participants even went as far as to say that low self-esteem was not particularly problematic for them. This contradicts the classical literature on the characteristic low self-esteem and ineffectiveness in individuals with AN (e.g., Bruch, 1973; Garner and Bemis, 1982). On the other hand, in the present study, varying degrees of general low self-esteem were reportedly present during the majority of participants’ experiences with AN.

Within the present study, the discussion of core low self-esteem centred on the relationships between food restriction and self-esteem as well as between physical activity and self-esteem. In general, the relationships between self-esteem and food restriction and self-esteem and physical activity related to feelings of achievement, power, and control. Participants indicated that successful food restriction often made them feel empowered and as though they had achieved something. This was similar for physical activity in that participants reported feeling strong or accomplished following physical activity. This supports previous literature on self-esteem and AN that explores the function of AN in relieving feelings of ineffectiveness. For instance, based on their mixed findings regarding self-esteem and anorexic behaviours, Paterson et al. (2007, 2011) suggested that successful food restriction and weight loss may result in temporarily higher self-esteem. Similarly, Bewell-Weiss and Carter (2010) found that excessive exercise was related to higher levels of self-esteem in their anorexic sample, suggesting the possibility that feelings of self-worth may result from engaging in physical activity.

6.2.3. Mood intolerance.

Mood intolerance was the third construct explored in the present study. Many theorists have commented on the issues that individuals with AN have with managing
affect (Bruch, 1973; Garfinkel & Garner, 1982; Garner & Bemis, 1982; Schmidt & Treasure, 2006). Furthermore, a good deal of empirical evidence has demonstrated that individuals with AN do not process or manage emotions in an effective manner (e.g., Brockmeyer et al., 2012; Harrison et al., 2009; Oldershaw et al., 2012). Some research has also linked the presence of alexithymia to AN (Bourke et al., 1992). Within the discussion of mood intolerance in the present study, the themes of concurrent emotional problems, relationships between negative emotions and food restriction and physical activity, and relationships between positive emotions and food restriction and physical activity emerged. Within the present study, a few participants indicated that they had struggled with co-occurring depression and/or anxiety and this reportedly had a considerable impact on their food restriction and physical activity. A few researchers have looked at concurrent emotional problems such as depression and anxiety. Hambrook et al. (2012) suggested that lower emotional intelligence (and thus management of emotions) may be the result of higher levels of anxiety, which may inhibit the ability to rationalize emotional experiences. In addition, Wilksch and Wade (2004) and Joos et al. (2012) have demonstrated the potential mediating effect of depression on eating disorder behaviours. The number of participants who explicitly mentioned issues with anxiety and depression were so few that it is difficult to draw conclusions without further exploration.

Fairburn et al. (2003) posited that individuals with eating disorders engage in “dysfunctional mood modulatory behaviours” in an attempt to control their moods. These adverse behaviours may be related or unrelated to food intake and physical activity. Fairburn et al. (2003) commented on binge eating, vomiting, and exercise as
possible dysfunctional mood modulatory behaviours. The present study examined food restriction as a potential dysfunctional mood modulatory behaviour in those with AN and in fact, many participants described a bidirectional relationship between food restriction and mood. Often, participants restricted food intake based on their moods and in turn, mood was affected by food intake. The majority of participants reported reducing their food intake when experiencing a negative mood, as food restriction served as a means through which negative mood could be controlled or numbed in some way. This is supported by literature on AN and emotions, which has revealed that many individuals with AN engage in eating disorder behaviours as a way of coping with negative emotions. This may be due to the displacement of emotions onto the body, as described by Taylor and Bagby (2013) in their discussion on alexithymia and in the study of body displacement conducted by McFarlane et al. (2011). For instance, Espeset et al. (2012) found that participants reported high levels of negative emotions and responded to different emotions with different eating disorder behaviours (such as managing anger through food restriction, purging, self-control, and exercise). Similarly, Waller et al. (2003) found that anger was linked to excessive exercise in an anorexic sample, which may be due to the fact that some individuals with AN manage anger through exercising. In contrast, a small number of participants in the present study reported that negative emotions compelled them to eat more than usual due to feeling out of control. This finding supports research conducted by Ricca et al. (2012), in which emotional eating as a response to negative emotions and fear of loss of control of eating was observed in patients with AN.
A subgroup of participants in the present study revealed engaging in less physical activity as a result of negative emotions because they felt too overcome by emotion to do much movement. It is difficult to ascertain why specific participants responded to negative mood in this way. However, the participants who expressed an inability to do physical activity when feeling overcome by negative emotion also reported having suffered from concurrent depression. As such, it is possible that this subgroup was particularly vulnerable to intense depression and thus lacked the energy and motivation to do physical activity during emotionally difficult periods.

A unique element of mood intolerance as defined by Fairburn et al. (2003) is that individuals with AN may utilize dysfunctional mood modulatory behaviours to cope with positive emotions in addition to negative emotions. This notion has been supported by a few studies. For example, Kyriacou et al. (2009), Lampard et al. (2011), and Wildes et al. (2010) found that individuals with AN sought to avoid positive emotions in addition to negative emotions. Indeed, a few participants in the present study disclosed engaging in further food restriction and physical activity when they experienced positive emotions. This was due to a boost in energy and motivation to engage in food restriction and/or physical activity, a desire to maintain positive emotions through food restriction and/or physical activity, or feeling undeserving of positive emotions and wanting to punish themselves through further food restriction or physical activity. These findings are important and indicate that the emotional experience of AN may be quite diverse and variable across individuals. Nonetheless, the majority of the participants indicated that positive emotions had little or no effect on their regular food restriction and physical activity routines. This supports findings by Torres et al. (2011), who revealed that
negative emotionality is rampant in individuals with AN and that positive emotions are not often expressed.

6.2.4. Interpersonal difficulties.

Interpersonal difficulties is the final construct identified by Fairburn et al. (2003). Examples of interpersonal difficulties include dysfunctional family dynamics, environments that promote weight control, unpleasant social events, and long-term social problems that lead to poor self-esteem. Fairburn et al. (2003) suggested that these social issues impact the other core constructs, thus exacerbating the psychopathology of AN. Indeed, the primary observation within the discussion of interpersonal difficulties was that there was a great deal of overlap between this construct and the other constructs. For instance, in the present study, participants reported that interpersonal difficulties often resulted in negative emotions or feelings of low self-worth, which in turn affected food restriction and physical activity. Within the discussion of interpersonal difficulties, the following themes were revealed: significant life events, negative perceptions of overweight in the family, conflict, isolation, lies and manipulation, and having a friend or sibling with extreme eating and/or exercise behaviours. Once again, many theorists have commented on the interpersonal issues that individuals with AN often have (Bruch, 1973; Garfinkel & Garner, 1982; Garner & Bemis, 1982; Schmidt & Treasure, 2006).

The significant life events identified in the present study were romantic break-ups, bullying and ridicule, divorce (of parents), illness in the family, and death of a loved one. Indeed, Fox (2009) and Schmidt et al. (1997) found that many of their participants with AN had experienced some form of adverse life event involving close others or peers at some point in their lives. In the present study, participants who had experienced such an
event appeared to be quite cognizant of the fact that the event had somehow impacted their emotional well-being or perceived self-worth.

Conflict with close others was a prominent theme within the discussion of interpersonal difficulties. In the present study, participants experienced conflict that related primarily to eating and exercise behaviours. Nearly all participants who discussed conflict indicated that conflict often compelled them to further restrict their food intake and/or engage in physical activity. The reasons provided for this reaction included being overcome by negative emotions, guilt, and seeking revenge on those who were involved in the conflict. Once again, anorexic behaviours served to elicit control over one’s circumstances. Patching and Lawler (2009) and Nilsson et al. (2009) also found that feeling misunderstood and ongoing conflict with close others were often related to anorexic behaviours. Further, Patching and Lawler (2009) found that the presence of AN worsened interpersonal relations which, based on the present study, may be the result of a number of factors such as increased conflict over food restriction and physical activity as well as intentional isolation so as to maintain food restriction and physical activity routines.

In the present study, isolation was another major theme within the discussion of interpersonal difficulties. While some participants revealed intentionally isolating themselves so as to maintain the secrecy and consistency of their disorder, others claimed to be isolated due to not having many friends. Among the majority of participants who reported isolation, isolation was found to worsen food restriction and physical activity habits, either because being alone enabled participants to engage in these extreme behaviours (without interference from others) or because loneliness resulted in negative
emotions or low self-worth. Indeed, Patching and Lawler (2009) and Nilssen et al. (2009) found that feelings of disconnection were associated with AN. Furthermore, Levine (2012) examined the links between loneliness and AN and described the self-reinforcing cycle of isolation and how it may exacerbate eating disorder behaviours.

While only a few participants in the present study reported having a friend or sibling with extreme eating and exercise behaviours, it is important to comment on how this social comparison may affect AN. One participant reported feeling compelled to engage in healthy behaviours as a result of having a sibling or friend with an eating disorder. However, the other participants in this subgroup reported engaging in further food restriction and physical activity as a means of competition. Forney et al. (2012) found that the frequency of friend comments on weight or diet reinforced the relationship between body dissatisfaction and eating disorder behaviours. It may be that the participants in the present study who competed with their friend(s) wanted to prove their adeptness at self-control and weight loss. Indeed, a few participants reported feeling stronger or better than others due to their eating disorder behaviours. As such, competition with friends may have been the result of needing to maintain the feelings of self-worth that accompanied successful food restriction and physical activity.

6.3. Strengths and Implications

One major strength of the present study is that it used the constructs of the transdiagnostic theory as a guide. The transdiagnostic theory of eating disorders by Fairburn et al. (2003) has paved the way for the development of CBT-E, a recent form of eating disorder treatment designed to treat all eating disorders (including AN) based on the core psychopathology and four maintaining factors described in the theory. Recent studies have demonstrated the effectiveness of CBT-E in treating those with a range of
eating disorder symptoms (Byrne et al., 2011; Fairburn et al., 2013). Furthermore, Fairburn et al. (2013) found that CBT-E was successful with respect to weight restoration and decreased eating disorder symptoms in a sample of individuals with AN, in particular. As such, there is evidence which demonstrates the great potential of this treatment and thus the relevance of the four constructs used in the present study. The present study serves as further support for the transdiagnostic theory of eating disorders and promotes more in-depth understanding of this theory.

A second strength of the present study is that it was qualitative and exploratory in nature. As aforementioned, there is evidence suggesting the pertinence of clinical perfectionism, core low self-esteem, mood intolerance, and interpersonal difficulties to AN. However, to our knowledge, there have been no studies examining the in-depth, subjective experiences of these four constructs as they relate to food restriction and physical activity in AN. The present study has shed light on the emotional experience of these four constructs and how they interact with food restriction and physical activity in AN. Furthermore, the participants in the present study have provided detailed accounts of their experiences with these four constructs and food restriction and physical activity. It is hoped that this further understanding of the emotional experiences of these four constructs and weight loss strategies will foster empathy and allow practitioners and family members to interact with patients with AN in an appropriate and helpful fashion. Furthermore, these detailed, emotional accounts have revealed specific situations and environments which may trigger and/or worsen food restriction and physical activity in people with AN. This may also have implications for treatment approaches, as
practitioners and family members can more readily identify dangerous stimuli and contexts, which may serve as a focus in individual treatment regimens.

A third strength of the present study is that it included participants who self-identified as having had AN rather than relying on clinical diagnoses. Researchers have found a higher prevalence of AN in a community sample as compared to clinical samples (Favaro et al., 2003). The inclusion of self-identified AN in the present study broadened the scope of experiences with AN, including both those who received diagnoses and treatment as well as those who may not have sought professional assistance for their disorder. Therefore, experiences with AN were diverse and less biased than if only a clinical sample had been used. That being said, a fourth strength of the present study is that participants were recruited until theoretical saturation was reached. Indeed, no new information emerged by the end of the 20th interview, which indicates that the sample size was appropriate for this type of study.

As aforementioned, obsessiveness was originally included in the present study as an additional construct but was combined with clinical perfectionism following data analysis. There was a great deal of overlap in the themes revealed in clinical perfectionism and obsessiveness. However, early theorists have commented on the presence of obsessive behaviour in AN (e.g., Slade, 1982) and many studies have examined the link between obsessive-compulsive disorder and AN (e.g., Milos et al., 2002), indicating that obsessive behaviour may be a separate entity from clinical perfectionism. On the other hand, the results from the present study indicate that there may be a more complex relationship between clinical perfectionism and obsessiveness.
The present study revealed that obsessiveness may be a critical piece to consider in the transdiagnostic theory of eating disorders.

6.4. Limitations

There are a number of limitations to the present study. First, since diagnoses of AN were not verified, it is possible that participants did not truly have AN. The presence of participants with misdiagnosed BN or EDNOS may have impacted some of the results of the study. Nonetheless, since the purpose of the study was to acquire in-depth emotional accounts rather than verify diagnoses, including a broad range of participants was favourable. Second, this study focused on food restriction and physical activity but not other purging behaviours (such as self-induced vomiting and laxative use), which are also pertinent to AN and the theory. Purging was not a key component of the study, and thus there was no differentiation between subtypes of AN (i.e., binge-purge AN versus restrictive AN). Many studies have shown significant differences between the subtypes of AN (e.g., Ricca et al., 2012) which were not addressed in the present study. However, not differentiating between subtypes allowed for exploration of AN as a whole, which is consistent with the objectives of this study. A final limitation is that the four constructs were only addressed within the context of food restriction and physical activity in AN. While some participants commented on other areas of life, such as academics and relationships, the primary focus was how the four constructs impacted food restriction and physical activity and vice versa. As such, the pervasiveness of these constructs in other areas of life was not examined. In spite of these limitations, the objective of the study (i.e., to better understand the emotional experience of these constructs within AN) was achieved.
6.5. Future Research

This study revealed several areas within the topic of AN that warrant further research. First, future research should thoroughly examine the similarities and differences between clinical perfectionism and obsessiveness. As aforementioned, while these two are generally considered to be separate entities within the literature, within the present study, there was a great deal of overlap between the themes revealed during the discussion of both clinical perfectionism and obsessiveness in the interviews. It is important to further examine these two constructs to clearly differentiate between them and to determine why some individuals with AN only display elements of clinical perfectionism while others display elements of obsessiveness and/or obsessive-compulsive behaviour. Second, internet use and access to information on nutrition and physical activity were prevalent among almost all participants in this study. Future research should examine how internet access and knowledge of weight loss strategies precipitate anorexic behaviours. After all, participants would not have a base of knowledge for devising weight loss goals if they did not have access to sources of information that describe optimal weight loss methods. Third, a number of participants in the present study reported being at least partly vegetarian. While there are a few studies on vegetarianism and AN (e.g., O’Connor et al., 1987), it may be important to further investigate any links between vegetarian eating and the development of AN. Fourth, there was a great deal of variety in the physical activity habits of participants in the present study. While some participants reported focusing primarily on food restriction as opposed to physical activity, others placed a great deal of emphasis on physical activity. Future research should examine the similarities and differences between individuals with AN who primarily restrict their food intake and those who both...
restrict food intake and engage in excessive physical activity. Fifth, the participants in this study who explicitly reported having co-occurring difficulties with depression often also reported not engaging in physical activity when they were emotionally overcome. Future research should further examine this subpopulation and compare eating disorder behaviours among this group and those who do not have concurrent depression. Lastly, while formal diagnoses were not required nor verified, some participants indicated that they had received professional treatment for their eating disorder. There was a notable difference between individuals who had explicitly mentioned treatment and those who did not, namely in their ability to describe and explain aspects of their disorder. Future research should examine the differences between individuals who received treatment and were thus educated about elements of their disorder, and those who did not receive treatment.
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## APPENDIX A: RESEARCH ETHICS CERTIFICATE

**RESEARCH ETHICS BOARD – General**

**REB-G**

Certification of Ethical Acceptability of Research Involving Human Participants

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<td>Family Relations &amp; Applied Nutrition</td>
</tr>
<tr>
<td>Sponsor:</td>
<td>N/A</td>
</tr>
<tr>
<td>Title of Project:</td>
<td>In my head, the flesh seems thicker: Examining the maintain factors of AN</td>
</tr>
<tr>
<td>Changes:</td>
<td>21 Mar 12: B.13 Recruitment</td>
</tr>
</tbody>
</table>
Recruitment

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human subjects in the above-named research project and considers the procedures, as described by the applicant, to conform to the University’s ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that you adhere to the protocol as last reviewed and approved by the REB. The REB must approve any modifications before they can be implemented. If you wish to modify your research project, please complete the Change Request Form. If there is a change in your source of funding, or a previously unfunded project receives funding, you must report this as a change to the protocol.

Unexpected events and incidental findings must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Responsible Faculty, the safety of the participants, and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-council Policy Statement, 2nd Edition, requires that ongoing research be monitored by, at a minimum, a final report and, if the approval period is longer than one year, annual reports. Continued approval is contingent on timely submission of reports.

Membership of the Research Ethics Board - General: S. Banerjee, Community Member; J. Carson, Community Member; C. Carstairs, COA; S. Chuang, FRAN (alt); K. Chuong, Graduate Student; J. Clark, PoliSci (alt); J. Devlin, OAC; J. Dwyer, FRAN; M. Dwyer, Legal; B. Ferguson, CME (alt); H. Gilmour, Community Member (alt); J. Goertz, CME; B. Gottlieb, Psychology; B. Giguere, Psychology (alt); S. Henson, OAC (alt); L. Kuczynski, Chair; R. Ragan, Legal (alt); V. Shalla, SOAN (alt); R. Stansfield, SOAN.

Approved:

per
Chair, Research Ethics Board- General

----------------------------------

Date:
Appendix B: Recruitment Poster

ANOREXIA NERVOSA

SHARE YOUR STORY

Are you 18 years old or older?
Are you female?
Do you have a current or recent diagnosis/self-diagnosis of Anorexia Nervosa?

Participate in a 90-minute interview and receive $10 in appreciation for your time.

Research Advisor:
Dr. John Dwyer

CONTACT Petrina for more information.
paberdee@uoguelph.ca / 519-824-4120 ext. 58066
Appendix C: Telephone and Email Script

“Hello, my name is Petrina. I am contacting you because you showed interest in my study on anorexia nervosa. I would like to ask you a few questions to determine whether you should participate in this study or not.

• First of all, are you 18 years of age or older?
• Secondly, do you consider yourself to be fluent in English?
• Thirdly, why do you feel that you can participate in a study on anorexia nervosa? Is your diagnosis or self-diagnosis from within the past 2 years?
• Most importantly, do you feel healthy enough to participate in a 90-minute interview?
• Lastly, would you be willing to travel to the University of Guelph in order to participate in a face-to-face interview? If not, would you be willing to have the student investigator visit your home to conduct a face-to-face interview?

I am going to send you a letter of informed consent on this study. It will describe the study in detail so that you can make an informed choice as to whether to participate or not. Then, if you want to participate, you can contact me again to set up a date and a time for the interview. Would you prefer to be sent this letter of informed consent through mail or through email?

Thank you so much for your interest in this study. I look forward to hearing from you. Take care and bye.”
Appendix D: Letter of Informed Consent

UNIVERSITY
of GUELPH

CONSENT TO PARTICIPATE IN RESEARCH

"In My Head, the Flesh Seems Thicker: Exploring the Maintaining Factors of Anorexia Nervosa"

You are asked to participate in a research study conducted by Petrina Aberdeen (MSc Candidate), John Dwyer (PhD, Psychology), and Michèle Preyde (PhD) from the Department of Family Relations and Applied Nutrition at the University of Guelph. This study and the interviews involved will be carried out by Petrina Aberdeen in partial completion of a Master of Science degree.

If you have any questions or concerns about the research, please feel free to contact:
John Dwyer (PhD, Psychology)
Phone: 519-824-4120, ext. 52210
Fax: 519-766-0691
Email: dwyer@uoguelph.ca

PURPOSE OF THE STUDY

The purpose of this study is to explore perfectionism, obsessiveness, self-esteem, mood, and relationship problems as they relate to physical activity and food restriction in anorexia nervosa.

*Important Note*: The purpose of this study is to understand anorexia nervosa. As such, the researcher will not at any time try to change your behaviours or provide treatment to you. A list of resources will be available to you if you are interested.

PROCEDURES

If you volunteer to participate in this study, we will ask you to do the following things:

1. Arrange a meeting time with the researcher, Petrina Aberdeen (interviews will take place at the University of Guelph if participants are willing to travel; if participants are unable to travel to the University of Guelph and are comfortable with a home-visit, the researcher, Petrina Aberdeen, is willing to visit your home to conduct the interview).
2. Complete a consent form and provide some information about your age, race, and occupation before your interview (this will only take a few minutes).
3. Participate in an in-depth interview with the student researcher, Petrina Aberdeen (this will take approximately 90 minutes).
4. If you choose to, review and comment on the themes and illustrative quotes identified by the student researcher, Petrina Aberdeen, at a later date once your interview transcript has been analyzed.

To make sure the researcher keeps an accurate account of the interview results, interviews will be recorded on a portable audiotape recorder and will be typed up at a later time for analysis.

POTENTIAL RISKS AND DISCOMFORTS
Due to the personal nature of the interview questions, some participants may become upset or emotionally distressed during or following the interview. As such, a variety of distress and crisis resources will be provided to all participants before beginning the interview. If a participant becomes emotionally upset during the interview, the interviewer will pause, allow the participant to take a break from the interview and/or call a distress line in privacy, and the interviewer will provide the participant with the opportunity to withdraw from the interview immediately. Participants are encouraged to use the distress/crisis resources if they feel the slightest bit uncomfortable. Furthermore, while only participants who feel well enough to participate in a 90-minute interview are encouraged to participate, the interview will be terminated at any point if a participant feels too uncomfortable to continue. Importantly, if a participant expresses immediate harm to themselves or others at any point during the interview process, the interviewer will call the police. If a participant expresses a desire to harm themselves or others at a later time, the interviewer will request full contact information from the participant so that the interviewer can reach them at a later date and ensure that they are safe.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

You will get the chance to share your personal experience with anorexia nervosa by participating in this study.

On a larger scale, the results of this study will help to better understand anorexia nervosa and could possibly be considered when researchers and practitioners develop prevention and treatment programs for those who require them.

PAYMENT FOR PARTICIPATION

Participants will receive a token of appreciation of $10 for participating in this research. They will receive it after partial or full completion of the interview. Participants will be required to initial a form confirming that they have received $10 from the interviewer.

CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

To ensure confidentiality, no identifying personal information needed for this study will be available to anyone other than the three researchers identified at the beginning of this form. Contact information will be required for the purpose of setting up a meeting time and so that participants can be sent a summary of overall research findings and/or an outline of identified themes and quotes for review. However, this information will not be directly attached to recorded interviews or interview transcripts; only unidentifiable ID codes or pseudonyms will be used. Furthermore, names, organizations, work titles, and any other identifying information will be altered in the interview transcripts to ensure confidentiality. Audiotapes of the recorded interviews will be kept in a secured and locked cabinet in the Department of Family Relations and Applied Nutrition at the University of Guelph. Audiotapes that have been typed up will be encrypted (this means that the words in the document are rearranged, which makes the document unreadable without proper resources) and secured on a portable hard-drive, accessible only by the researchers. At no time will the identities of participants be available to others. Interview data on audiotapes and the hard-drive will be kept for 5 years after the publication of this research and then it will be destroyed.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option
of removing your data from the study. You may also refuse to answer any questions you don’t want to answer and still remain in the study. The researcher may withdraw you from this research if circumstances arise that warrant doing so.

*NOTE: If you complete the interview, you may withdraw from the study up until one week following the interview and then your audiotaped interview will be permanently destroyed.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Sandy Auld, Director, Research Ethics
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided for the study “In My Head, the Flesh Seems Thicker: Exploring the Maintaining Factors of AN” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

______________________________________
Name of Participant (please print)

______________________________________                             ______________
Signature of Participant                             Date

SIGNATURE OF WITNESS

______________________________________
Name of Witness (please print)

______________________________________                             ______________
Signature of Witness                             Date
Appendix E: Proof of Participant Compensation

Please initial this section to confirm that you have received $10 as appreciation for participating in this study.

Participant #_____

My initials on this page indicate that I have received $10 in cash for participating in the study “In my head, the flesh seems thicker: Examining the maintaining factors of anorexia nervosa” by Petrina Aberdeen _______________________

Thank you very much for your participation!
Appendix F: Form Indicating Desire to Receive Summary of Study Results

REQUEST TO RECEIVE A SUMMARY OF RESEARCH FINDINGS AND/OR PROVIDE FEEDBACK ON THE THEMES AND QUOTES IDENTIFIED IN YOUR PERSONAL INTERVIEW TRANSCRIPT

1. Would you like to receive a summary of the results of this overall research project?
   □ Yes
   □ No

2. Would you like to review the themes and quotes identified in your personal transcript and share your opinions on what you think of them?
   □ Yes
   □ No

If you indicated “Yes” to either of the above questions, please indicate whether you would prefer to be contacted by email or mail and write your contact information below (You do not need to include your name).

   □ Email
   □ Mail

Email or Mailing Address:
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Participant #____
Initials: ______________________________________
Appendix G: Eating Disorder Resources and Distress Lines

Some Resources

For University of Guelph Students ONLY:

1. University of Guelph Counselling Services
   Telephone: 519-824-4120, extension 53244.

2. University of Guelph Student Health Services
   Telephone: 519-824-4120, extension 52131.

For Both University of Guelph Students and Residents of Guelph (Non-Students):

Trellis Mental Health and Developmental Services
Telephone: 519-821-2060
Address: 147 Delhi Street, Guelph, ON N1E 4J3
Website: www.trellis.on.ca

1. Community Torchlight
   Local 24-hour Distress Line: 519-821-3760
   Toll Free 24-hour Distress Line: 1-877-821-3760
   Local 24-hour Crisis Line: 519-821-0140
   Toll Free 24-hour Crisis Line: 1-877-822-0140
   Website: http://www.communitytorchlight.com/

For Residents of Kitchener-Waterloo, ON

1. Crisis Clinic at Grand River Hospital
   Telephone: 519-742-3611
   Address: 67 King Street E, Kitchener, ON N2G 2K4
   Website: http://www.cmhagrb.on.ca/dnn/

2. Kitchener-Waterloo Distress Line
   519-745-1166

For Residents of London, ON

   London Mental Health Crisis Service
   Toll Free Help Line: 1-866-531-2600
   Address: 682 Richmond Street, London, ON N6A 3H8
   24-hour Web Chat: http://www.mentalhealthhelpline.ca/Home/Chat

For Residents of Stratford, ON

   Huron Perth Community Mental Health Services
   Crisis Line: 519-274-8000
   Address: 90 John Street S, Stratford, ON N5A 2Y6

For Residents of Hamilton, ON

   St. Joseph’s Hospital Crisis Outreach and Support Team
   Crisis Line: 905-972-8338
Main Line (St. Joseph’s Hospital): 905-573-7777
Address (St. Joseph’s Hospital): 2757 King Street E, L8G 5E4

For Residents of Burlington, ON

1. Halton Crisis Outreach and Support Team
   Telephone: 1-877-825-9011

2. Telecare
   905-681-1488

For Residents of Toronto, ON and the Greater Toronto Area

1. Distress Centres of Toronto
   Telephone: 416-408-4357

2. CAMH Main Line
   416-535-8501

3. CAMH Emergency Department
   250 College Street, Toronto, ON M5T 1R8

4. TeleHealth Ontario
   Telephone: 1-866-797-0000

5. Distress Centre Peel
   Telephone: 905-278-7208

6. Mobile Crisis Peel
   Telephone: 905-278-9036

EATING DISORDER INFORMATION FOR EVERYONE

1. Homewood Health Centre
   Telephone (Eating Disorders Program Coordinator): 519-824-1010, extension 2292.
   Address: 150 Delhi Street, Guelph, ON N1E 6K9
   Website: http://www.homewood.org/healthcentre/main.php

2. Sheena’s Place
   Telephone: 416-927-8900
   Address: 87 Spadina Road, Toronto, ON M5R 2T1
   Website: http://www.sheenasplace.org/

3. Danielle’s Place
   Telephone: 905-333-5548
   Address: 895 Brant Street Unit 3, Burlington, ON L7R 2J6
   Website: http://www.daniellesplace.org/

4. National Eating Disorder Information Centre
   Website: http://www.nedic.ca/

5. National Eating Disorders Association
   Website: http://www.nationaleatingdisorders.org/

IF YOU FEEL LIKE HARMING YOURSELF OR OTHERS, CALL 911 IMMEDIATELY.
Appendix H: Verbal Script for Snowball Sampling

“Participant, thank you so much for your participation in this study. If you are satisfied with the interview process and have acquaintances that might be eligible to participate, would you consider sharing information about the study with them? If so, please have them contact me by phone or by email and they will undergo the same process as you.

I really appreciate your time and your ongoing contribution to this study.”
Appendix I: Email Script for Summary of Themes

Dear Participant,

Thank you for participating in the University of Guelph study “In My Head, the Flesh Seems Thicker: Examining the Maintaining Factors of Anorexia Nervosa,” conducted by Petrina Aberdeen, Master of Science Candidate. You are receiving this email because you indicated that you would like to review the themes identified in this study.

Attached to this email, you will find a summary of the themes identified across all interviews included in the study. IF YOU CHOOSE TO, please read them and let me know whether you think the experiences you shared with me are represented in this summary. All opinions and thoughts that you might have regarding these themes are welcome and would be greatly appreciated. Your feedback will help me to confirm and finalize the results of the study.

COMMENTS:

(Please type your comments in this space, save document, and return to sender in an email reply).

Thank you so much for your ongoing participation in this study!

Kindest regards,

Petrina Aberdeen, MSc Candidate.
Appendix J: Interview Guide

Demographic Information

1. How old are you?

________________________________________________________________________

2. What is your ethnic background? (Statistics Canada, 2006). Please check one item:
   - Aboriginal
   - White
   - Chinese
   - South Asian (e.g. East Indian, Pakistani, Sri Lankan, etc)
   - Black
   - Filipino
   - Latin American
   - Southeast Asian (e.g. Vietnamese, Cambodian, Malaysian, Laotian, etc)
   - Arab
   - West Asian (e.g. Iranian, Afghani, etc)
   - Korean
   - Japanese
   - Other

3. What is your level of education? (Statistics Canada, 2006). Please check one item:
   - Completed some high school
   - Completed high school
   - Completed a registered apprenticeship or other trades certificate/diploma
   - Completed college, CEGEP or other non-university certificate/diploma
   - Completed university degree or certificate/diploma

4. What is your occupation?

________________________________________________________________________

Opening Question

1. Can you tell me a bit about yourself?
Descriptive Questions

1. How would you describe your eating habits?
   
   Probe a) How often do you eat each day?
   
   Probe b) What do you avoid eating and why?

2. Physical activity is any movement of the body (Centers for Disease Control and Prevention, 2011). This may happen in different ways, such as through your job (e.g. lifting), as a form of transportation (e.g. walking to go from place to place), as part of house work or caring for family (e.g. chores), or as part of recreation, sports, or leisure (e.g. exercise, aerobics, etc) (International Physical Activity Questionnaire, 2011).

How would you describe the physical activity that you do?

Probe a) What kinds of physical activity do you do?

Probe b) Would you describe those activities as moderately intense, during which you can talk but not sing, or vigorously intense, during which you can’t say more than a few words without stopping for breath? (CDC, 2011).

Probe c) How often do you do physical activity?

Probe d) When (e.g. what time of the day, in what situations) do you do physical activity?

Probe e) Who do you do physical activity with?

Constructs

Clinical Perfectionism

Perfectionism involves expecting too much of yourself and then judging yourself if you do not meet your expectations (Hewitt & Flett, 1991). Sometimes perfectionism is shown through the physical activity that you do and the way that you restrict what you eat.

1. Describe a situation in which you have been a perfectionist with physical activity and the way you restrict what you eat.

   Probe a) Did perfectionism make you do more physical activity or less physical activity? Why?
Probe b) How did perfectionism influence the way you restricted what you ate?

Probe c) Have others around you ever expressed concern about your physical activity or food restriction? Share some of their concerns with me.

2. What do you believe are the advantages of being a perfectionist with regards to physical activity and food restriction?

Probe a) Does it help you to lose weight? How?

Probe b) Does it help you to maintain control over yourself? How?

Obsessiveness

So, we talked about perfectionism. Next, I would like to talk about obsessive thinking about physical activity and food restriction.

3. Describe how much you think about restricting what you eat.

Probe Do you research nutritional information, write meal plans, or keep a record of what you eat? Why?

4. Imagine that for some reason you are unable to do your usual physical activity. Describe how much you would worry about this.

Probe a) Would your worries disrupt other things that you do throughout the day? How?

Probe b) Would you find some other way of burning calories, such as fidgeting? Why?

Probe c) Would you restrict more or do extra physical activity at a later time? Why?

5. Recall a situation where you ate something that you usually avoid. Describe how much you worried about what you ate.

Probe a) Did your worries disrupt other things that you did throughout the day? How?

Probe b) Did you do extra physical activity to offset what you ate? Why?
Core Low Self-Esteem

Low self-esteem can be described as having a negative opinion of yourself (Fairburn et al., 2003). Sometimes low-self-esteem can influence your physical activity and the way you restrict what you eat.

6. Recall and share a situation in which feelings of low self-esteem influenced the physical activity that you did.

Probe a) Did low self-esteem make you do more physical activity or less physical activity? Why?
Probe b) How often would you do physical activity when you felt bad about yourself? Why?
Probe c) What type of physical activity would you choose to do when feeling bad about yourself? Why?
Probe d) What intensity of physical activity would you choose to do when feeling bad about yourself? Why?
Probe e) How long would you do physical activity for when you felt bad about yourself. Why?

7. Describe your self-esteem after you have eaten something that you usually avoid.

Probe a) Do you feel better about yourself or worse about yourself? Why?
Probe b) Think back on a situation in which you succeeded in avoiding a food that you did not want to eat. How did you feel about yourself after this situation?

8. How do you feel about yourself after you do physical activity?

Probe a) Do you feel good about yourself or bad about yourself. Why?
Probe b) Describe a situation in which physical activity did not make you feel good about yourself. Why didn’t it make you feel good?

Mood Intolerance
The next couple of questions will be about “mood intolerance,” which can be described as difficulty controlling your feelings or emotions in a healthy way (Fairburn et al., 2003).

9. Recall a situation in which you experienced negative emotions and felt unable to control them. How did this influence the physical activity that you did and the way you restricted what you ate?

_Probe_ a) Did this make you do more physical activity or less physical activity? Why?
_Probe_ b) Did this make you eat more or eat less? Why?

10. We discussed the influence of negative emotions and feeling out of control. How do positive emotions influence the physical activity that you do and the way you restrict what you eat?

_Probe_ a) Did this make you do more physical activity or less physical activity? Why?
_Probe_ b) Did this make you eat more or eat less? Why?

11. We talked about how mood intolerance influences the physical activity that you do and the way you restrict what you eat. However, sometimes the opposite happens in that doing physical activity and restricting what we eat help us to feel more in control of our emotions. Does this ever happen to you? How?

Interpersonal Difficulties

Next, we are going to talk about the problems that we sometimes face in our relationships with other people.

12. Have problems in your relationships with others influenced the physical activity that you do? Can you tell me more about this?

_Probe_ a) What kinds of problems do you experience with other people? (e.g. conflict, isolation).
_Probe_ b) Who do you experience problems with?
_Probe_ c) Do these problems make you do more physical activity or less physical
Have problems in your relationships with others influenced the way you restrict what you eat? Can you tell me more about this?

**Probe a)** What kinds of problems do you experience with other people? (e.g. conflict, isolation).

**Probe b)** Who do you experience problems with?

**Probe c)** Do these problems make you do more physical activity or less physical activity? Why?

**Closing Question**

1. Are there any comments that you would like to add?