Eat your heart out:

A narrative approach to understanding anorexia nervosa in

nine adult women

By

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DECLARATION

I declare that:

- The research reported in this thesis, except where otherwise indicated, is my original research.
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Date: October 2015

Signature: _____

Name: Athanasia Rees

DEDICATION

"Pain and suffering are the soil of strength and courage" – Lurlene McDaniel.

This work is dedicated to the participants of this study.

This thesis belongs to you, as it was only possible because of your brave, honest and painful accounts of your journey with anorexia nervosa.

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ABSTRACT

This study attempted to explore anorexia nervosa (AN) narratively using the writing and reading of self-reflexive stories of 9 adult women participants independently diagnosed with AN. The literature was organised using Zubin and Steinhauer's (1981) vulnerability model which argues for an integrative approach when explaining psychological disorders. Using a combination of three thematic analysis models the researcher examined emergent themes from participants' stories and questionnaires. Themes seemed to correspond with Zubin and Steinhauer's (1981) vulnerability model with the exception of maintaining and moderating factors which corresponded with the Maudsley model (Treasure, Williams & Schmidt, 2009).

Themes were categorised under 3 primary headings: Sources of vulnerability, maintaining factors and moderating factors: *Sources of vulnerability:* Participants' personalities seemed to be described as characterised by features of emotionality, obsessionality and impulsivity. In addition, these personality features were described as precipitating an increased capacity to magnify negative experiences in childhood and adolescence including family difficulties, social deficits, a tendency to make unfavourable social comparisons and internalisation of thinness ideals. *Maintaining factors:* Participants' AN was described as maintained through the proposed AN triad in which repeatedly striving to attain increasing levels of perfection was associated with decreasing goal weights. This pursuit was continually met with failure due to the inherent unattainability of the task, resulting in employment of compensation strategies. *Moderating factors:* Participants described potential moderating factors as being related to therapeutic approaches which focused on warmth, connectedness and understanding. Completion of narrative tasks in the study was described as beneficial by fostering a sense of normalisation, catharsis and separating the person from the problem. However, participants also described possible harm through a heightened sense of comparison and failure potentially activated by completing the narrative tasks in this study.

ABBREVIATIONS AND ACRONYMS

APA	American Psychiatric Association
AN	Anorexia nervosa
BMI	Body mass index
BN	Bulimia nervosa
CBT	Cognitive Behavioural Therapy
DSM	Diagnostic and Statistical Manual of Mental Disorders
DZ	Dizygotic
ED	Eating disorder
EDE	Eating Disorder Examination
EDI	Eating Disorder Inventory
HPA	Hypothalamic-pituitary-adrenal
HPCSA	Health Professions Council of South Africa
MANTRA	Maudsley Model of Anorexia Nervosa Treatment for Adults
MZ	Monozygotic
PDM	Psychodynamic Diagnostic Manual
Pro-ana	Pro-anorexia websites
SCID	Structured Clinical Interview for DSM Disorders
SSCM	Specialist supportive clinical management

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CHAPTER 1

INTRODUCTION

1.1   STATEMENT OF RESEARCH PROBLEM

Anorexia nervosa (AN) has the highest mortality rate of all psychiatric disorders (Bulik, Slof-Op't Landt, van Furth & Sullivan, 2007), with treatment failure and high relapse rates being reported (Hay, Claudino, Touyz and Abd Elbaky, 2015; Steinglass et al., 2011; Treasure, Cardi, Leppanen & Turton, 2015). Touyz and Hay (2015) argue that new approaches to understanding and treating AN are needed. Further, Welch and Ghaderi (2015) suggest that,

> Modern research on psychotherapy indicates that a significant proportion of patients (around 8%) deteriorate after receiving psychotherapy […]. An important unanswered and delicate question is how the large portion of mortality of AN can be explained by (inadequate) treatments provided (p. 227).

The current study draws on the idea that the high failure and relapse rates in AN may be associated with limited or problematic understanding and conceptualisations of AN. Strober and Johnson (2012) indicated that

> …the knowledge void [pertaining to AN] has been taken up recently by a host of misguided notions about etiology, blatantly dismissive attitudes toward psychological concepts, and ill-conceived beliefs about therapy priorities (p. 155).

They suggested that biology, environment and psyche need to be considered when attempting to investigate AN. A lack of understanding of the aetiology, maintenance and treatment of AN may contribute to its high mortality and relapse rates. Bezance and Holliday (2013) argued that qualitative studies make a valuable contribution to understanding AN.

To potentially contribute to the current evidence-based understanding and conceptualisation of AN, this study will conduct a detailed exploration of the views of a small sample of women diagnosed with AN.

1.2   BACKGROUND: INTEGRATIVE UNDERSTANDING OF PSYCHOPATHOLOGY

A number of existing models and approaches attempt to explain AN. These include psychodynamic theory (Johnson, 1991), attachment theory (Chassler, 1997), social constructionism (Hepworth, 1999), dialectical behavioural approaches (Salbach-Andrae, Bohnekamp, Pfeiffer, Lehmkuhl & Miller, 2008), cognitive behavioural theory (Carter et al., 2009) and the Maudsley family-based model (Hurst, Read & Wallis, 2012).

These approaches add valuable insights to the understanding of AN. However, research into the aetiology of psychological illness in general has tended to be dominated by polarised arguments for either nature or nurture (Rutter, 1997). Nature is focused on genetics and biology. Nurture explores environmental factors. Proponents of both approaches tend to be convinced that their approach is in and of itself an explanation for the cause of psychological illness (Rutter, 2002). Even where empirical studies have been conducted, especially in the field of genetics, the findings have been used to make overarching claims that are not always valid regarding the aetiology of certain psychological illnesses (Rutter, 2002).

Rutter (2002) indicates the necessity for a new framework in understanding aetiology in which polarised nature vs. nurture is replaced by an understanding of the important interplay between these supposedly opposing poles:

> ...the truth is that they [nature and nurture] are closely intertwined. The separation is heuristically useful for testing causal hypotheses, but it is crucial that such hypotheses deal with the different forms of interplay that may be occurring. To a considerable extent, it is the failure to do so that has led to many of the polarizing battles and absurd claims (p. 1).

In addition, it seems that it would be advantageous for researchers to humble themselves and focus less on finding simple answers to complex phenomena and shift to a less dogmatic quest for complex understanding. This is not a new idea.

Zubin and Steinhauer (1981), who addressed similar concerns regarding the conceptualisation of schizophrenia, suggested that rather than identifying specific single aetiological causes for mental illness, it may be more useful to identify potential risk factors and to discuss vulnerability including both nature and nurture. These sources of vulnerability (a complex interplay of genetic and environmental forces) create the potential to identify markers that may provide an integrated understanding of how individuals develop certain psychological disorders.

In terms of defining what would constitute nature and nurture factors, Zubin and Steinhauer (1981) and Rutter (1997, 2002) make similar suggestions. While they do not specifically split aetiology into nature and nurture, it can be extrapolated that for Zubin and Steinhauer (1981) nature comprised: genes, neurophysiology and internal environment, while nurture comprised: learning, development and ecology (including socio-economic status, physical and social characteristics of the current milieu and social network supports).

Rutter's (2002) descriptions seem to explain nature as comprising: quantitative genetics, molecular genetics and development, while environment comprised proximal and distal risk factors. Proximal risk factors included direct environmental links to pathology, while distal risk factors described indirect links between environment and pathology. For example, poor parenting is described as a likely proximal risk factor for pathology, while poverty would be a distal risk factor as it does not lead directly to pathology, but may well lead to poor parenting which could then lead to pathology (Rutter, 2002).

The writers mentioned above did not write on AN and its aetiology. However, their integrative ideas regarding the importance of exploring the interplay of nature and nurture will be used as a framework for structuring the exploration of literature in Chapter 2, which in turn will be considered in discussing the findings of the present study.

1.3 EAT YOUR HEART OUT: TITLE EXPLANATION

An explanation of the title of this study is warranted. A narrative theoretical framework (Chapter 3) informed this study's methodology (Chapter 4). The narrative theoretical framework was derived predominantly from literature by Epston (2000) and Maisel, Epston and Borden (2004). The latters' book was entitled *Biting the hand that starves you*. In keeping with a narrative framework, the authors used a figure of speech in their idiomatic title. In mirroring this, the current study also utilised a figure of speech. 'Eat your heart out' could be read in several ways.

The idiom evokes a powerful image of a person eating their own heart and consequently ending their life. Arguably, the act of eating, or lack thereof, was implicit in their becoming ill and afflicted.

The title may also imply the offer of being able to eat without restraint. For individuals with AN, one could argue that unlimited eating may constitute losing control, which is something they fear profoundly.

The idiom originated in Pythagoras' works recorded by Aristotle (Temple, 1983). The heart was described the centre of the emotions.

> One of the riddles, 'Eat not your heart', led later to the mistaken notion that the Pythagoreans did not eat heart; in fact, the riddle means 'Vex not yourself with grief', and is the origin of that common saying today, 'Don't eat your heart out' (Temple, 1983, p. 16).

The idiom's original meaning described not becoming overcome with grief or emotion. Participants in the current study volunteered to recount their experiences of their AN. These experiences and the process of narrating them were often filled with emotion. They were getting to the 'heart of the matter'.

The contemporary explanation of the idiom describes (*Cambridge Dictionaries Online*, n.d.) jealousy or envy at having someone else attain something you wanted. The expression becomes boastful (e.g. 'Be very envious of me' (*Cambridge Dictionaries Online*, n.d.) and humorous when uttered and followed by the name of someone who

the speaker has beaten (*Cambridge Dictionaries Online*, n.d.). The phrase was reframed positively by the researcher to suggest the anti-anorexia and AN resistance that Maisel, Epston and Borden (2004) describe in their book. A double meaning, drawing on the original and contemporary meanings of the idiom is suggested: AN literally eats the participant's heart and thus life up, but alternatively the participant has the potential, in writing about her AN experiences, to 'show her AN up'. Further, it suggests the individual with AN's false sense of superiority over normal weight women and their imagined triumph over hunger desires.

1.4   RESEARCH RATIONALE

As argued in 1.1 above, knowledge and understanding of AN could benefit from research focusing on individuals with AN's own understanding and conceptualisation of their disorder, and relating this to existing understandings of AN. To generate such data, the researcher applied specific narrative theory concepts (Chapter 3) to the organisation of the study's methodology (Chapter 4). Participants wrote their life stories, and read each other's stories. The data, collected and analysed, were aimed at adding to the growing body of knowledge, including narrative understandings of AN.

Writing life stories is not new to narrative research on AN (Maisel, Epston & Borden, 2004). However, having participants' stories compiled into a book to be shared with fellow participants is hopefully a novel approach. Eliciting participants' reflections on both the processes of writing and reading the stories is also new.

The current study focuses on understandings and conceptualisations of AN by participants. However, it is hoped that the findings may have implications for follow-up narrative treatment-based studies.

1.5   MAIN PREMISES AND ASSUMPTIONS

The research is largely inductive in its approach, and as such has not been based on preconceived assumptions. Braun and Clarke (2006) indicate that,

> ...an inductive approach means the themes identified are strongly linked to the data themselves [...]. Inductive analysis is therefore a process of coding the data

without trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions. In this sense, this form of thematic analysis is data-driven (p. 12).

Polit and Hungler (2007) recommend that analysis should be conducted before applied to literature in order to avoid contamination of the analysis. Interpretations and understandings in this study were drawn directly from data and then later related to existing literature. The underlying premise is that an effective way to learn about a disorder is to gain descriptive details from those afflicted by it. For this reason an approach that was data-driven was utilised.

1.6 RESEARCH APPROACH

This study was primarily qualitative. The qualitative methodology allowed for a richer, detailed insight into the research question. The study provided participants with an opportunity to voice their experiences and their views of their AN. The use of a narrative theoretical framework informed the writing and reading of stories to explore participants' ideas and beliefs, with minimal influence from the researcher.

A small quantitative component was also utilised in the study. Participants completed the Eating Disorder Inventory (EDI) (Garner & Olmsted, 1984) at the beginning and again at the end of the study. The EDI results aimed to quantitatively assess any change in eating disorder (ED) symptoms occurring during the study by pre- and post-test administration. There are benefits to using mixed methodology in research:

> ...the descriptions of quantitative analysis show how researchers can create a series of tally sheets to determine specific frequencies of relevant categories. The reference to qualitative analysis shows how researchers can examine ideological mind-sets, themes, topics, symbols, and similar phenomena, while grounding such examinations to the data (Berg, 2001, p. 242).

Although mixed methods were used, the study was predominantly qualitative in nature. The quantitative element was a minor component that was included so as to attain two sets of information that could complement or contradict each other. In the former, quantitative findings could have built further on qualitative findings. In the latter, quantitative findings could have contradicted assumptions drawn from the qualitative analysis resulting in necessary discussion to explain such contradictions.

Subsequently, the researcher attained two different kinds of information to draw conclusions from; one allowing an explorative and deeper analysis well suited to a narrative framework, and the other providing a simple quantitative perspective on each of the participants and the sample as a whole.

1.7   CONTRIBUTION OF THESIS

The current study is not treatment-based. Rather, it aimed to generate a first-hand insight into the experience of AN, which in turn was related to existing literature to identify common and unique dimensions. The resulting account could potentially provide a basis for future AN narrative treatment-based studies as discussed further in section 9.4.

1.8   OUTLINE OF THESIS

Chapter 1 outlines the research background, research problem, research rationale, main approach and assumptions. Chapter 2 describes an overview of relevant existing literature. Chapter 3 presents the theoretical framework followed in this thesis. Chapter 4 details the methodology. Chapters 5 presents the qualitative analysis of the data. Chapter 6 presents a discussion and summary of the analysis in relation to the literature. Chapter 7 describes limitations of the study. Chapter 8 concludes the study and makes suggestions for future research.

1.9   ANOREXIA NERVOSA VERSUS EATING DISORDER REFERENCES

This study has primarily sought to review and cite studies on AN. However, in some instances, no relevant articles were found on AN in particular. In these cases, general articles on EDs have been cited with caution. Such articles may not be as relevant or applicable to AN as they often include findings associated with other EDs such as bulimia nervosa (BN) and binge-eating disorder. For this reason, such generic articles on EDs are cited only where necessary and where no AN-specific references could be found.

CHAPTER 2

LITERATURE REVIEW

2.1 ANOREXIA NERVOSA: AN INTEGRATIVE REVIEW

This chapter will attempt to explore key arguments pertaining to the nosology, diagnosis epidemiology, sources of vulnerability (explored through predisposing, precipitating and perpetuating factors), comorbidity, assessment and protective factors associated with AN.

Zubin and Steinhauer (1981) and Rutter (1997, 2002) propose an integrative approach to understanding psychopathology, as discussed in section 1.2. These authors did, however, not explicitly address AN but made generic suggestions as to how psychopathology might be conceptualised in general so as to avoid simplistic searches for single-cause models of causality that tend to dominate the aetiological and conceptual literature in studies of psychopathology. Some researchers in the field of AN have also proposed integrative neuroscience models for understanding this disorder (Hatch et al., 2010). These authors conclude that,

> ... evidence for emotion-related disturbances in anorexia nervosa (AN) [should be derived] from behavioural, cognitive, biological and genetic domains of study. These domains were brought together within the framework of an integrative neuroscience model that emphasizes the role of emotion and feeling and their regulation, in brain organization (Hatch et al., 2010, p. 165).

Some of Zubin and Steinhauer's (1981) ideas emphasising the importance of recognising and exploring the potential interplay of nature and nurture are used as a central organising framework for this literature review.

Zubin and Steinhauer (1981) and Rutter (1997, 2002) suggested that risk factors for psychopathology, which may be derived from nature (biological, genetic, neurophysiological) or nurture (environmental factors including, social, familial, media, cultural), increase *vulnerability* to developing and maintaining a psychological disorder. In addition to being vulnerable to developing a disorder, an individual experiences acute specific triggering events that impact on vulnerability to create an

episode of disorder. Like vulnerability, these episode triggers could also be derived from either factors of nature or nurture. In a final part of their model, Zubin and Steinhauer (1981) argue that potential moderating factors may mitigate the effect of a trigger event on a vulnerable individual and thus impact on the manifestation and development of a disorder (Rutter, 1997, 2002). Moderating factors can also be derived from either nature or nurture.

The researcher will attempt to apply this integrative model to explore the literature on AN to identify potential sources of vulnerability, episode triggers and moderating factors for AN. While these will be discussed separately for convenience of structure and reporting, the importance of the *interplay* of all these factors should not be overlooked.

Rutter (1997, 2002) used the term 'risk factors' while Zubin and Steinhauer (1981) used the term 'sources of vulnerability'. For the purposes of this research and in favour of consistency, the term 'sources of vulnerability' will be used in this work, and since this was Zubin and Steinhauer's (1981) term, there will be more emphasis on their model than on Rutter's (1997, 2002) work, although relevant. Conventionally, a distinction is made between mediating and moderating factors (Cook & Hausenblas, 2008; le Grange et al., 2012), however because this study has prioritised Zubin and Steinhauer's (1981) model, sources of vulnerability are disussed rather than mediating factors.

2.2   NOSOLOGY, DIAGNOSIS, COURSE AND PROGNOSIS

Before exploring potential sources of vulnerability, it is important to review the background of AN regarding nosology, diagnosis, course and prognosis from a traditional psychopathological point of view to provide a context for the work that follows.

2.2.1   Nosology of AN

Bruch (1978) describes the first reported writings on AN from the 15th and 16th centuries:

The illness was described a little over a hundred years ago in England and France and was named *anorexia nervosa* by Sir William Gull, the outstanding British physician of his time. There are references to still earlier observations. Richard Morton in 1689 reported "a nervous consumption", which seems to refer to the same illness. In his vivid observations he used the crisp image "a skeleton only clad with skin" (p. 1).

As suggested above, the first descriptions of AN came from physicians who came into contact with patients displaying what would become known as AN.

Bell (1987), exploring records of 261 Catholic saints, identified descriptions of AN in medieval times during which Italian saints starved themselves in an attempt to achieve the pinnacle of holiness. He termed this "holy anorexia" (p. 3). These saints were described as being perfectionists.

In 1873 Lasegue accounted for AN as only existing in homes where food was abundant and as occurring in women who struggled to express emotional distress and used starvation as a means of compensating for this (Lasegue, 1873; Powers, Heather, & McCormick, 2005).

The first formal naming of AN as a medical condition occurred in the 1680s in England. Morton described working with a patient who was skeletal and refused to eat (Engel, Reiss & Dombeck, 2007). The choice of the name for the disorder derived from "...the Greek term for "loss of appetite" and a Latin word implying nervous origin" (Sadock & Sadock, 2007, p. 727).

After this brief nosological history, more specific diagnostic criteria for AN can be explored below.

2.2.2   Diagnosis of AN

Early diagnostic criteria for AN were proposed by Feighner and associates in 1972 and were stipulated as follows:

1. Onset prior to age twenty-five
2. Lack of appetite accompanied by loss of at least 25% of original body weight.

3. A distorted, implacable attitude toward eating, food, or weight that overrides hunger, admonitions, reassurance, and threats [...]
4. No known medical illness that could account for the anorexia and weight loss.
5. No other known psychiatric disorder [...]
6. At least two of the following manifestations: (a) amenorrhea, (b) lanugo (soft, fine downy hair), (c) bradycardia (persistent resting pulse of 60 or less), (d) periods of overactivity, (e) episodes of bulimia (binge eating), and (f) vomiting (may be self-induced) (Bell, 1987, pp. 2-3)

As can be seen, BN, rather than classified as a distinct disorder, was viewed as part of AN. This transdiagnosis suggests that AN and BN were seen as opposite sides of the same coin in that both focus on preoccupation with food and weight (Waldholtz & Anderson, 1996). Waldholtz and Anderson (1996) argued that BN could be seen as a failed attempt at AN. Similarly, Fairburn, Cooper and Shafran (2003), also exploring the transdiagnosis of EDs, argue that:

> ...common mechanisms are involved in the persistence of bulimia nervosa, anorexia nervosa and the atypical eating disorders. Together, these two lines of argument lead us to propose a new transdiagnostic theory of the maintenance of the full range of eating disorders, a theory which embraces a broader range of maintaining mechanisms than the current theory concerning bulimia nervosa (p. 509).

Despite arguments for the transdiagnosis of EDs, the Diagnostic and Statistical Manual of Mental Disorders (DSM) is currently the main authority for the diagnostic features and criteria of EDs. DSM-IV-TR (APA, 2000), discrediting the transdiagnosis of AN and BN, divided EDs into AN, BN and eating disorder not otherwise specified. DSM-IV-TR diagnostic criteria for AN are included below because much of the literature discussed in this review was based on these diagnostic criteria, even though DSM-5 (APA, 2013) has now replaced DSM IV TR (APA, 2000). According to DSM-IV-TR (APA, 2000), the diagnostic criteria for AN are:

A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).
B. Intense fear of gaining weight or becoming fat, even though underweight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles (p. 589).

Specification of one of two types was also required. The two types included the 'restricting type' (no bingeing and purging occurs) or the 'binge-eating/purging type' (consisting of binge-purge episodes). In addition, DSM-IV-TR (APA, 2000) described binge-eating disorder as an eating disorder not otherwise specified, characterised by binge episodes that are not followed by a compensatory action.

Wilfley, Bishop, Wilson and Agras (2007) examined the diagnostic validity of the ED categories in DSM-IV-TR (APA, 2000). They argued that there were major problems with the DSM-IV-TR classification of EDs and made several recommendations for the classification of EDs in DSM-5:

> ...retaining categories but adding a dimensional component; removing the amenorrhea criterion for anorexia nervosa (AN); removing the subtypes for AN and bulimia nervosa (BN); making binge eating disorder (BED) an official diagnosis; and unifying the frequency and duration cut-points for BN and BED to once per week for 3 months (p. 123).

Similarly, keeping to stringent diagnostic criteria, proponents of the DSM classification system conducted research based on Hill's Criteria of Causation (Birmingham, Touyz & Harbottle, 2009). They assessed AN and bulimia nervosa (BN) as being separate versus being conceptualised as expressions of a single disorder. They found that the disorders, while sharing certain features, did not meet enough criteria of similarity (which are based on strength of association, consistency, temporality, biological gradient, plausibility, coherence, experimental evidence and analogy) to be classified as a single disorder.

The American Psychiatric Association (APA) released the latest edition of the DSM, DSM-5, in 2013. The diagnostic criteria for AN are as follows:

A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental

trajectory, and physical health. *Significantly low weight* is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.

B. Intense fear of gaining weight or of becoming fat, or persistent behaviour that interferes with weight gain, even though at a significantly low weight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight of shape on self-evaluation, or persistent lack of recognition of seriousness of the current low body weight. (APA, 2013, pp. 338-339).

In addition to the above criteria, DSM-5 (APA, 2013), like DSM-IV-TR (APA, 2000) includes a type specifier for restricting and binge-eating/purging types. Finally, DSM-5 (APA, 2013) included a specifier for severity based on body mass index (BMI). BMI scores body mass using height and weight as measures (weight in kilograms divided by height in meters squared or kg/m^2).

In comparing DSM-IV-TR (APA, 2000) and DSM-5 (APA, 2013) diagnostic criteria, the biggest change appears to be the removal of the necessity of amenorrhoea. This change was proposed because males, females using oral contraceptives, females post-menopause and pre-menarcheal females fail this criterion despite meeting all the other requirements (APA DSM-5 Development, 2014). In addition, some females continue to menstruate despite meeting all the other diagnostic criteria. Criterion A of DSM-IV-TR (APA, 2000, p. 589) which was "Refusal to maintain body weight at or above a minimally normal weight for age and height ...", was edited to exclude the word 'refusal' due to its pejorative nature indicating intentional refusal (APA DSM-5 Development, 2014).

2.2.3 Critiques of nosology and classification of AN

Some studies question the appropriateness of the diagnostic criteria. Bulik, Sullivan and Kendler (2000) suggest that,

> ...the nosology for eating disorders, despite having been extensively revised over time, may not capture the natural clustering of eating-related pathology as it occurs in general population samples (p. 886).

Reporting on their empirical study with a community sample, Bulik et al. (2000) concluded that classification of EDs should include a six-class solution. The first class

deals with distorted eating attitudes in the absence of low body weight. The next two classes deal with low weight in the absence of the common ED psychological factors. The final three classes retain the EDs as listed in DSM-IV-TR (APA, 2000)(Bulik et al., 2000).

In keeping with earlier work generically highlighting the disadvantages of nosological approaches to psychopathology (Bulik et al., 2000), Maisel et al. (2004) argued that subscribing to a strict diagnostic classification lexicon, such as the DSM, runs the risk of disempowering individuals and defining them as the source of the problem. They argue that it is preferable to explore EDs as a discourse of oppression disseminated by societal and cultural forces.

In contrast to standard DSM classification, there have been alternative classification systems used to diagnose EDs. An example of this is the *Psychodynamic Diagnostic Manual* (PDM), a collaborative effort by several psychological and psychoanalytic organisations (dubbed the PDM Task Force). The PDM (2006) discredited the importance of strict diagnostic criteria for EDs and favoured aetiological explanations as being central to diagnosis. For example, the PDM (2006) assert that EDs should be diagnosed based on their link to family interaction:

> The interaction between caregiver and infant can involve vacillations between neediness, negativism, and anxiety, with different parts of this pattern dominating in different children and families. […] The absence of routine and timely eating patterns in a family may derail a child, and an eating disorder in a caregiver can create an eating disorder in a child (p. 341).

From this view, separation of diagnosis and aetiology is discouraged. Rather, aetiology should be incorporated in the diagnosis of EDs.

Despite continuous efforts to determine accurate and acceptable diagnostic criteria for AN, it appears that subscribing to stringent diagnostic systems, although having some advantages, warrants caution. Diagnostic classification focuses mainly on specific current displays of behaviour present in individuals with AN, and pays little attention to listing vulnerability markers. Other classification systems (PDM, 2006) suggest the careful consideration of aetiology when classifying and diagnosing disorders.

2.2.4 Prognosis: High mortality rates in AN

Sullivan (1995) indicated that the mortality rate among individuals with AN is estimated at 0.56% per year (or approximately 5.6% per decade). While a wide array of treatment options has been suggested for AN, including cognitive analytic therapy, cognitive behavioural therapy, interpersonal psychotherapy, psychopharmacological treatments and family therapy (NICE, 2004), challenges remain regarding the efficacy of treatments for AN. AN has been seen as a protracted condition that waxes and wanes in terms of symptom severity (APA, 2013).

Unlike many other psychiatric conditions, AN can result in death (Hoek, 2006). Fichter, Quadflieg and Hedlund (2006), in a 12-year longitudinal treatment study, confirmed that symptom reduction was a protracted process for their 103 AN participants. They suggested that AN treatment was not always successful, and could result in death. Medical complications associated with the death of AN patients remain varied and poorly understood. Despite autopsy research, actual cause of death is still a topic that requires further research (Derman & Szabo, 2006). Death associated with AN has been reported to involve cardiovascular complications (Sharp & Freeman, 1993; Winston & Stafford, 2000), endocrine complications (Connan, Lightman & Treasure, 2000), gastrointestinal and renal complications (Athey, 2003) and superior mesenteric artery syndrome (Mascolo, Dee, Townsend, Brinton & Mehler, 2015).

Bulik et al. (2007) state that, "Anorexia nervosa has the highest mortality rate of any psychiatric disease" (p. 263). In addition, not all individuals with AN seek professional care thus the mortality rate is estimated to be higher than has been reported in research (Berkman, Lohr & Bulik, 2007). A small number of AN patients also commit suicide which also contributes to mortality (Berkman et al., 2007). In a more recent review of 36 quantitative studies Arcelus, Mitchell, Wales and Nielsen (2011) concluded that there were 5.1 deaths per 100, 000 for AN. One in 5 of these deaths was as a result of suicide. Like DSM-5 (APA, 2013) indicates the crude morality rate for AN at approximately 5.0% per decade, similar to rates cited by Sullivan (1995) above. These deaths seem to occur mostly as a consequence of medical complications associated with AN with a small number due to suicide. These suicide figures may also

be a result of comorbid psychiatric illnesses such as major depression and substance abuse discussed in section 2.6.7.

Based on an analysis of National Health Service figures in England between 2001 and 2009, Hoang, Goldacre and James (2014), the standardised mortality ratio for EDs and other psychiatric conditions were as follows:

> … for adolescents and young adults with a diagnosis of ED was 7.8. This compares with an SMR for people of the same age with schizophrenia of 10.2, with bipolar disorder of 3.6 and with depression of 4.5. Of the ED, the standardized mortality ratio for anorexia nervosa in people aged 15-24 was 11.5 (p. 507).

The relatively high mortality rates of AN compared with many other psychiatric conditions, suggest that further research on AN is needed to better understand and treat the disorder.

2.3   EPIDEMIOLOGY

2.3.1   General epidemiology of AN

Epidemiology can be defined as, "…the study of the distribution, incidence, prevalence, and duration of disease" (Sadock & Sadock, 2007, p. 170). The epidemiology of AN has received relatively limited research in comparison to other psychiatric disorders. There have been relatively few incidence and prevalence studies for AN worldwide, and even fewer such studies in South Africa. Moreover, the research that has been conducted does not present epidemiological results consistently. Many studies are either out-dated and/or show results that are suspected to be gross underestimations of true AN epidemiology statistics because many individuals with AN do not seek treatment (Perkins, Klump, Iacono & McGue, 2005; Whitaker, 1992). A further difficulty associated with these studies is the use of self-report measures. Most epidemiological studies of AN are self-report based and may lack reliability and validity (Sadock & Sadock, 2007). Combination studies that do not rely solely on self-report are argued to be more accurate (Brislin, Lonner & Thorndike, 1973). A further problem may be that rates of AN are generally much lower than for several other

psychological or psychiatric disorders, so that it is difficult to assemble reliable population estimates. Further,

> …although awareness of the disorder has increased, the data on changing incidence are conflicting, with some studies suggesting that the incidence is increasing, and others reporting stable rates (Bulik, Reba, Siega-Riz, Reichborn-Kjennerud, 2005, p. S3).

This review of epidemiology of AN is divided into two parts: prevalence data and incidence data. Both are explored for AN in general, followed by country specific results and finally South African prevalence and incidence data. Lifetime prevalence is defined as "a measure at a point in time of the number of persons who had a disorder at some time in their lives" (Sadock & Sadock, 2007, p. 176). Incidence is defined as, "the number of new cases occurring over a specified time [usually one year]" (Sadock & Sadock, 2007, p. 175).

2.3.1.1 General prevalence of AN

According to DSM-IV-TR (APA, 2000), the lifetime prevalence for AN in females was approximately 0.5% (500 per 100,000). The rate for males was half that of females. It was suggested that prevalence rates could be skewed because many individuals were sub-threshold for AN diagnosis (meeting the criteria for eating disorders not otherwise specified) (APA, 2000).

Sadock and Sadock (2007) reported AN prevalence to be 0.5-1.0% (500-1000 per 100,000) in adolescent girls. The prevalence for women meeting some, but not all, AN criteria was estimated to be 5.0% (5000 per 100,000).

According to DSM-5 (APA, 2013) the twelve month prevalence of AN is 0.4%. In other words, there are an estimated 400 women with AN per 100,000 population.

2.3.1.2 General incidence of AN

Wolf (1991) argued that as women have gained more freedom in the world, and achieved greater power, they have developed increased pressure to perform, resulting

in ED incidence increasing exponentially. Wolf (1991) suggested that women, because of attaining increased freedom, have developed increased pressure to perform..

Hoek (2006) reported AN incidence at approximately 0.008% (8 per 100,000 individuals per year). The same study also indicated an increase in AN incidence in the last century (especially in the last 50 years), particularly in white females (aged 15-24 years). An estimated 0.0003% (0.3 per 100,000) women in this age group are diagnosed with AN (Hoek, 2006).

In contrast, however, a review by Smink, van Hoeken and Hoek (2012) suggested that overall incidence for EDs has remained relatively stable over the last decades, with the one exception being an increase in the age group of 15-19-year old girls. However, this increase was argued to reflect increased awareness, treatment-seeking and earlier detection of EDs rather than a true increase in incidence.

2.3.2   Country and culture specific epidemiology of AN

2.3.2.1 Country and culture specific prevalence of AN

A British study by Crisp, Palmer and Kalucy (1976) found the prevalence of AN to be 0.5% (500 per 100,000) among white girls.

Azuma and Henmi (1982), cited in Keel and Klump (2003), found that AN rates have increased in Japan. Amongst school-aged girls in urban areas the prevalence of AN was an estimated 0.2% (200 per 100,000), and 0.1% (100 per 100,000) in rural areas. Another study conducted in Japan by Suematsu, Ishikawa, Kuboki and Ito (1985) documented 1,011 patients with AN (using broad diagnostic criteria) in medical institutions, but they did not convert this into an incidence rate.

Rooney, McClelland, Crisp and Sedgwick (1995) interviewed health care workers to estimate prevalence of AN in southwest London and proposed the prevalence of AN to be about 0.02% (20.2 per 100,000).

A wide-scale study conducted by Preti et al. (2009) determined prevalence rates across six European countries through general population household surveys on 21,425

individuals over the age of 18. Lifetime estimated prevalence for AN in this group was 0.5% (500 per 100,000). The authors cautioned that this figure is likely to be an underestimation as it excluded individuals under the age of 18, who form a high percentage of those with AN diagnoses.

Swanson, Crow, le Grange, Swendsen and Merikangas (2011) estimated lifetime prevalence of AN in 10,123 adolescents (age 13-18 years old) in the United States of America to be 0.3% (300 per 100,000). The study also indicated that a minority of these individuals sought intensive treatment for AN. In a merged sequential cross-sectional survey in Australia Hay, Girosi and Mond (2015) found that the three-month prevalence of AN was under 1% (>1000 per 100,000) (*N*=6041).

2.3.2.2 Country and culture specific incidence of AN

Rooney et al. (1995) estimated annual AN incidence in southwest London to be 0.0027% (2.7 per 100,000).

In a 5-year study on Finnish individuals aged 15-19 years old, Keski-Rahkonen et al. (2007) and Keski-Rahkonen, Raevuori and Hoek (2008) estimated incidence of 0.27% (270 per 100,000). This rate was higher than other country studies and worldwide incidence rates. The reason for the higher incidence rate may be because the diagnostic criteria used in these studies were relatively loose. An alternative explanation for the elevated incidence rates may be that they were derived from individuals drawn from both the health care system *and* the general population. This may suggest that many incidence studies drawn from health care system samples alone are underestimations.

Reliable incidence rates for AN in children are even rarer than data for adolescents. However, Pinhas, Morris, Crosby and Katzman (2011) sought to determine incidence rates of EDs in children aged 5-12-years old in Canada. They surveyed 2,453 paediatricians over a 2-year period. The incidence for early-onset restrictive EDs was estimated to be 0.0026% (2.6 cases per 100,000).

2.3.3 South African epidemiology of AN

Epidemiological studies from Africa and South Africa have examined prevalence rates of disordered eating and eating attitudes, rather than AN *per se*. The prevalence rates of Black and White females' disordered eating were found to be similar (Garner, Olmsted, Bohr, Garfinkel, 1982; Henderson & Freeman, 1987; le Grange, Telch & Tibbs, 1998; Shefer, 1987; Szabo & Allwood, 2004; Szabo & Hollands, 1997).

Wassenaar, le Grange, Winship and Lachenicht (2000) found that sub-clinical ED pathology occurred across ethnic groups and within Black women in low socio-economic groups, challenging the traditional view that EDs are high socio-economic disorders occurring largely in developed countries.

A review of epidemiological studies examined by Szabo (2009) concluded that approximately 20% (20,000 per 100,000) of adolescent girls and 10% (10,000 per 100,000) of young adult females from all races, in an urban setting, show signs of abnormal eating attitudes possibly associated with ED vulnerability (Szabo, 2009).

2.3.4 A caution regarding epidemiological studies

When examining epidemiological rates, possible methodological flaws should be considered. Dolan (1991) suggests that prevalence is often underestimated because only those in treatment can be counted. With AN, many individuals do not seek treatment and are thus excluded from prevalence and incidence studies. Furthermore, determining ethnicity in AN is dependent on the socio-political structures of the country being researched. Certain ethnic groups may be less likely than others to seek treatment and are thus excluded from prevalence and incidence studies (Dolan, 1991).

Finally, the same measures and diagnostic criteria tend to be used regardless of cultural group when investigating prevalence and incidence rates. While this ensures reliability and validity, it can present inconsistencies in situations where survey measures are not conducted in the individual's mother tongue:

> Given the reservations expressed it becomes questionable whether one should or can make any firm statements about the incidence and form of eating

disorders in nonwhite groups. An estimation of the true rate of eating disorders in nonwhite groups within Western societies is impossible without a large epidemiological survey. Although the majority of evidence from surveys and clinical reports indicates that the prevalence of anorexia and bulimia in nonwhite populations is low, it is impossible to eliminate the effect of referral biases (Dolan, 1991, p. 76).

In their review of literature of incidence, prevalence and mortality rates in EDs, Smink, et al. (2012), concluded that results might be inaccurate due to reliance on health care system registers rather than surveys of the general population. They also argued that individuals with EDs, due to stigma attached to these disorders, do not seek out treatment and go undiagnosed and are excluded from incidence and prevalence estimates.

In summary of this section, the general prevalence of AN is approximately 0.5-0.1% (500-100 per 100,000) with a general incidence of 0.08% (8 per 100,000).

The average prevalence for AN from different countries is 0.3% (300 per 100,000) ranging from 0.02-0.5% (20.2-500 per 100,000), while the average incidence is 0.1% (100 per 100,000) with a range from 0.0026-0.27% (2.6-270 per 100,000). Robust longitudinal data for South African AN epidemiology do not exist. However, 20% (20,000 per 100,000) of women across races were found to have abnormal eating attitudes which increase ED vulnerability.

2.4   SOURCES OF VULNERABILITY VERSUS AETIOLOGY

As outlined in 2.1, an integrative, rather than polarised, perspective in understanding AN vulnerability may be of value to researchers. An integrative perspective avoids polarising assumptions about either nature or nurture being the primary cause of AN. Drawing from Zubin and Steinhauer (1981) and Rutter (1997, 2002), this review will thus aim not to discuss aetiological arguments but rather view these as potential sources of vulnerability. Such sources of vulnerability may be biological, psychological or social and cultural.

Alternatively, Treasure, Williams and Schmidt (2009) assess aetiology more traditionally, using the standard Maudsley model, in three broad categories:

"...predisposing, precipitating and perpetuating" (p. 60). The first of these comprise genetic biological predisposition. Precipitating factors consist of environmental triggers. Perpetuating factors are those that allow the disorder to persist. While there is strength in this model, the current literature review will not limit sources of vulnerability to these categories. These categories are not necessarily distinct and separate. A single factor, such as the existence of a mood disorder could fit into all three categories: predisposing, precipitating and perpetuating.

Using the model proposed by Zubin and Steinhauer (1981) and Rutter's (1997, 2002) research, a predisposing factor could be biological or environmental. For example, an individual could be predisposed to developing AN because of a particular pattern of brain function (biological) or because of being exposed to restrictive eating patterns displayed by her mother (social and environmental). Similarly, a biological factor could potentiate sensitivity to an environmental factor and contribute to AN development. For example, because of neurotransmitter imbalance an individual may have obsessive-compulsive traits (biological) (Murphy et al., 2013). These obsessive-compulsive traits could drive an overdetermined desire to develop a perfect body shape and a highly controlled diet (social and environmental).

Potential vulnerability and maintenance factors will be explored in this review as sources of vulnerability without categorising them as predisposing, precipitating or perpetuating. Instead, the vulnerability and maintaining factors will be explored under the following headings and subheadings: *biological sources of vulnerability* (incorporating genetic and neurophysiological factors), *psychological sources of vulnerability, social and cultural sources of vulnerability.*

While headings have been used for the reader's convenience, note that the sources of vulnerability may not be orthogonal (Zubin & Steinhauer, 1981). A single factor may fit into more than one category. For example, family discord (social) may result because the individual with AN is more sensitive to interpreting the world as critical towards women's body shapes (psychological). The sources of vulnerability should thus not be viewed as mutually exclusive (Rutter, 2002; Zubin & Steinhauer, 1981), but rather as integrative and interrelated. This framework has been used to make sense of the

literature without being overly reductionistic, rather applying an integrative exploration to understanding AN.

2.5   BIOLOGICAL SOURCES OF VULNERABILITY

Biological sources of vulnerability are largely explored in two domains: genetics (examining twin studies and family history of AN and other psychiatric disorders) and neurophysiology (examining brain structure, brain function, chemistry and hormones).

2.5.1   Genetic sources of vulnerability

From the 1980s to present, studies have suggested a genetic marker for AN. Most of this research is based on twin studies.

Holland, Sicotte and Treasure (1988) reported a twin and family study of 25 monozygotic (MZ) twins and 20 dizygotic (DZ) AN twins. Concordance rates of 56.0% and 5.0% for AN were reported in the two groups respectively. While emphasising a clear role of genetics in AN transmission, the authors indicated the necessity of observing the gene-environment interaction. In a review of twin and chromosomal studies, Strober (1991) found evidence to support the theory that AN was a result of inherited dispositional personality features that, when combined with certain environmental triggers, seemed to predispose individuals to developing AN.

A review of twin studies by LaBuda, Gottesman and Pauls (1993) found concordance rates for AN MZ twins at 56.0% and AN DZ twins at 7.0%. In a similar review, Kipman, Gorwood, Mouren-Simeoni and Ades (1999) estimated concordance rates in MZ twins at 44.0% and DZ twins at 12.5%. Based on these figures, the authors of both studies argued that genetic factors play a stronger role than familial factors in AN development. The authors did however caution that more specific genetic studies were needed to clarify this claim.

In contrast, Fairburn, Cowen and Harrison (1999) examined relevant twin studies and found that the results on AN were inconsistent and ranged from studies indicating 0.0% concordance to 70.0% for MZ and DZ twins. They argued that this variability resulted from twins having dissimilar environmental exposure, differences in defining

the phenotype, lack of diagnostic reliability and small sample sizes. The authors concluded, however, that the interaction between genes and environment is an essential element of understanding vulnerability to AN.

Wade, Bulik, Neale and Kendler (2000) explored shared genetic and environmental risk factors for AN and major depression in 2,163 female twins. They suggested a 58.0% heritability for AN, but could not discount the possibility of shared environment as a causal factor. Bulik et al. (2007) reviewed a range of studies and concluded that, "family studies have consistently demonstrated that anorexia nervosa runs in families" (p. 263). They encouraged further research into the area of molecular genetics in the development of AN.

A bivariate twin analysis of AN and BN was conducted by Bulik et al. (2010) to assess genetic and environmental factors in their development. Their study indicated high concordance in twins, suggesting that shared genetics and environmental factors influence the development of AN. In contrast to above studies proclaiming genetic transmission of AN, a recent review of literature by Dring (2015) suggests that:

> ...the relatively high concordance rates that exist in identical twins may be accounted for by the relationship between the twins, not by their genetic similarity. [...] Findings from genetic studies indicate that the tendency for anorexia to run in families cannot be accounted for by genes (p. 83).

Dring (2015) urges that researchers need to focus less attention examining genes and focus on exploring the environmental factors, in particular family environment, when trying to ascertain AN aetiology. In a nation-wide study of a total of 2,370 child and adolescent psychiatric patients and 7,035 healthy controls, Steinhausen, Jakobsen Helenius, Munk-Jørgensen and Strober (2015) indicated that having a sibling with AN increased AN vulnerability.

A separate area of genetic vulnerability was explored by Bould et al. (2015) who used data from a cohort study of 158,679 children (aged 12-24 years) to assess the impact of different psychiatric illnesses as risk factors for offspring ED development. The study found that parental anxiety, mood (major depression and bipolar) and

personality disorders were risk factors for offspring ED development. Incidentally, this conclusion could also be used as an argument for an environmental source of vulnerability.

2.5.2 Neurophysiological sources of vulnerability

Neurophysiology explores brain structure and function, as well as the role of hormones in the development of illness. Neurophysiological features in individuals with AN may be secondary - a result of chronic AN, or contribute to vulnerability of AN development. Starvation has profound effects on the human body and brain, and thus it is possible that neurobiological anomalies common to AN patients are a result, rather than a cause, of AN (Bruch, 1978; Patchell, Fellows & Humphries, 1994).

Looking first at brain structure abnormality, Herholzc et al. (1987) used positron emission tomography scans and found that AN patients had a higher metabolic rate in the caudate, thalamus and brainstem than did healthy controls. Husain et al. (1992) measured the volumes of the thalamus and midbrain in AN, BN and healthy controls. They found that the volume of the thalamus and midbrain was smallest in AN patients, followed by BN patients and lastly healthy controls. Delvenne et al. (1996), also using positron emission tomography scans on AN patients, concluded that these patients had hyperactivity in the caudate region.

Radioisotope scans were conducted on children with AN (aged 8-16 years old) to identify neurophysiological factors and showed unilateral temporal lobe hypoperfusion (Gordon, Lask, Bryant-Waugh, Christie & Timimi, 1997). Incidentally, three of the patients who recovered from AN and showed weight restoration, were retested. The neurophysiological abnormality persisted, indicating that it may have preceded AN rather than resulted from AN. This could not be confirmed because pre-testing had not been conducted prior to AN onset. In a related study, single photon emission computed tomography scans showed that AN patients with low weight displayed hypoperfusion in the medial prefrontal cortex and hyperperfusion in the thalamus (Takano et al., 2001).

In a neurobiological study conducted by Ho and Birmingham (2001) on one individual with AN, it was discovered that the individual lost her AN behaviour after being treated for encephalitis with associated hypoxic brain injury. After treatment for the encephalitis, the AN behaviours returned. This may suggest an underlying neurophysiological mechanism contributing to AN development – but this may be an atypical case.

Gordon et al. (2001) and Wagner, Ruf, Braus and Schmidt (2003) suggested that anxiety related to food was associated with the activation of the amygdala but that this may not be specific to AN patients.

Schmidt and Park (2003) state that advances in biotechnology have enabled researchers to explore the neurophysiological factors in AN more closely. There has been a rise in the number of studies examining the neurophysiology of AN. In a review of some of this literature, Chan and Ma (2004) explored biological factors that may contribute to AN development and maintenance. They suggested that problems with cerebral blood flow, appetite and satiety dysregulation, and central nervous system difficulties all appear to contribute to AN vulnerability. Steinglass and Walsh (2006) found that AN patients displayed non-specific motor behaviour (or involuntary movement) such as pacing and fidgeting. These irregularities were associated with basal ganglia dysfunction. This may suggest that basal ganglia dysfunction contributes to risk for AN development.

While the trend in the above studies was to examine brain and neurophysiological function in individuals with AN, Kaye, Fudge and Paulus (2009), recalling Bruch's (1978) concern noted:

> Individuals with anorexia nervosa have a relentless preoccupation with dieting and weight loss that results in severe emaciation and sometimes death. It is controversial whether such symptoms are secondary to psychosocial influences, are a consequence of obsessions and anxiety or reflect a primary disturbance of brain appetitive circuits (p. 573).

While abnormalities in certain brain functioning seem to be associated with AN, it is not clear as to whether these abnormalities are primary or secondary to AN onset.

In a review of literature on brain surgery in AN, Lipsman et al. (2013) indicated that neurosurgery targeting the limbic system has shown a decrease in symptoms in those patients with treatment-refractory AN.

Micali et al. (2015) explored neurophysiology of 143 individuals who were born preterm (less than 33 weeks) and found that:

> VPT[very preterm] adults presenting with ED psychopathology had smaller grey matter volume at age 14/15 years in the left posterior cerebellum and smaller white matter volume in the fusiform gyrus bilaterally, compared with VPT adults with no ED psychopathology (p. 147).

Thus, being very preterm and the subsequent impact this has on brain development may be related to increased AN risk.

In a study on 21 AN individuals and 21 age-matched healthy controls, hippocampus-amygdala formation was tested using magnetic resonance scans and behavioural data (Burkert, Koschutnig, Ebner & Freidl, 2015). The results indicated, "…a significant reduction of the hippocampal fimbria and a significant enlargement of the hippocampal fissure in patients with AN" (Burkert et al., 2015, p. 670). In addition, AN participants reported higher levels of stress. The authors concluded that perceived stress in individuals with AN may be related to hippocampal size and function.

As the findings above suggest, brain abnormalities appear to increase ED vulnerability. It is not clear however, whether brain abnormalities are involved causally in AN development or whether they are a result of starvation (Hay & Sachdev, 2011; Kerem & Katzman, 2003). Hay and Sachdev (2011) conclude that,

> The elucidation of the neurobiology of anorexia nervosa has benefited from recent advances in neuro-imaging and cognitive neuroscience. Further research is needed to examine the degree to which abnormalities are a consequence of starvation or are caused by a putative anorexia nervosa endophenotype (p. 251).

To date, no clear genotype has been identified for AN. This seems to have encouraged the exploration of potential neurophysiological endophenotypes, explored below in section 2.5.3.

2.5.3   Neurophysiological vulnerability displayed in set-shifting dysfunction

Set-shifting is an area of executive functioning that has been associated with AN. The prefrontal cortex is reportedly involved in set-shifting which involves moving from one task to another, and backwards and forwards between them (Holliday, Tchanturia, Landau, Collier & Treasure, 2005).

Tchanturia, Serpell, Troop and Treasure (2001) examined perceptual task completion in individuals with AN, BN and healthy controls. AN and BN participants showed more set-shifting irregularities than healthy controls. The AN participants displayed rigidity and difficulty in shifting sets.

A study to further compare and explore executive functioning in individuals with AN, individuals who had recovered from AN and healthy controls was conducted by Tchanturia, Morris, Surguladze and Treasure (2002). Participants were exposed to initiation and set-shifting tasks. Both the AN and recovered AN groups showed deficient functioning on these tests compared to healthy controls who displayed no dysfunction. This further suggests the presence of a potential neurophysiological vulnerability in executive functioning in AN. Another study, also exploring executive functioning in EDs, administered a battery of neuropsychological tests (all exploring different areas of cognitive flexibility) to individuals with AN, BN and healthy controls (Tchanturia et al., 2004). AN and BN groups showed lower scores in different tests, but both groups showed higher overall disturbances on the battery compared to healthy controls. This may point to a potential endophenotype marker for AN. Endophenotypes are defined as, "… measurable disease-associated traits that have a simpler relationship with underlying genes than clinical measures" (Holliday et al., 2005, p. 2269).

There has been a drive in neuropsychological research to locate potential endophenotypes for AN (Holliday et al., 2005). Discerning identifiable etiological

phenotypes for psychological illnesses has not always been successful. Instead, and compatible with the framework adopted for this review, Holliday et al. (2005) proposed the advantage of exploring potential endophenotypes to indicate sources of vulnerability rather than linear causality:

> The classification of psychiatric disorders on the basis of overt clinical phenotypes might not be optimal in the search for vulnerability genes and other etiological factors because the genotype-phenotype relationship in complex disorders is indirect. For this reason, there has been renewed interest in the search for "endophenotypes," measurable disease-associated traits that have a simpler relationship with underlying genes than clinical measures (Holliday et al., 2005, p. 2269).

Exploring neuropsychological functions (executive functioning in particular) as a potential endophenotype for psychological disorders seems to hold promise (Holliday et al., 2005). Holliday et al. (2005) conducted a study with sister pairs in which one sister had AN and the other did not. The study also included healthy controls. Set-shifting difficulties were identified in both AN and non-AN sister pairs, but not in healthy controls. In addition, even when participants had recovered from AN, their set-shifting difficulties persisted (Holliday et al., 2005).

The same authors argued that for an endophenotype to be classified as a potential biological marker, the following criteria must be met:

> ...it must be state-independent; it must associate with illness and co-segregate within families; and it must be found at a higher rate in nonaffected family members than in the general population (Holliday et al., 2005, p. 2269).

Their study, along with those mentioned before, seems to suggest that these criteria are met. In their study, set-shifting difficulties appeared to persist independent of having AN or being recovered from AN (thus the set-shifting impairment appeared to be state-independent). Set-shifting was associated with illness (in particular AN), and some other family members also displayed set-shifting difficulties even though they did not have AN. The set-shifting dysfunction, present in AN individuals, recovered AN individuals and their non-AN siblings, suggests that deficits in this area of executive functioning may be endophenotypic of AN (Holliday et al., 2005).

Following this, Steinglass, Walsh and Stern (2006) exposed 15 individuals with AN and 11 healthy controls to neuropsychological testing and concluded that on some tests the scores between the two groups were similar, yet on other tests AN individuals made more perseverative mistakes. A possible deficit in set-shifting ability was highlighted in the AN individuals. This was argued to play a role in the display of rigidity and inflexibility regarding dieting and compensatory behaviours (such as exercise) characteristic of some individuals with AN.

In a systematic review of studies on set-shifting and EDs, Roberts, Tchanturia, Stahl, Southgate and Treasure (2007) concluded that set-shifting difficulties in individuals with AN were confirmed, based on several different neuropsychological tests used in research studies.

Further, Tenconi et al. (2010) tested 153 participants with lifetime AN, 28 unaffected sisters and 120 healthy controls for set-shifting and central coherence difficulties. Both the AN participants and their unaffected sisters showed markedly poorer performance in set-shifting and central coherence tasks compared to healthy controls. Similarly, Roberts, Tchanturia and Treasure (2010) exposed 270 women with AN, BN, recovered AN, unaffected sisters of those with AN or BN, and healthy controls to neuropsychological testing. Deficits in set-shifting were found in all participants except for the healthy controls. The binge/purge subtypes of AN and BN showed the highest set-shifting deficits. Poor set-shifting was transdiagnostic between the EDs and was associated with severe and more chronic EDs. The deficit in cognitive functioning was argued to increase risk for and maintenance of EDs. A robust exploration of cognitive inflexibility (Tchanturia et al., 2011, 2012) assessed large samples of 601 and 542 participants respectively, assessing cognitive rigidity and inflexibility based on set-shifting tasks. Both studies found a link between cognitive inflexibility (as identified by set-shifting deficits) in individuals with EDs, those recovered from an ED, and their unaffected sisters.

Galimberti et al. (2012) extended the exploration of set-shifting deficits to include the executive functions of decision-making and planning. The study was conducted on individuals with AN, their unaffected relatives and healthy controls. No significant

deficits in planning were found in the participants. However, deficits were identified in set-shifting and decision-making in both the AN group and their unaffected relatives. Deficient set-shifting was argued to be a neurophysiological marker for AN while difficulty in decision-making indicated moderate heritability.

In a review of seven studies on set-shifting deficits in children and adolescents with AN, Lang, Stahl, Espie, Treasure and Tchanturia (2014) concluded that set-shifting deficits were more pronounced in adults with AN than in children with AN. This may suggest that set-shifting difficulties are not necessarily a precursor to AN but rather a possible result of prolonged duration of AN and starvation. However Lang et al. (2015) tested 41 children and adolescents with AN and 43 healthy controls, using several neuropsychological measures. The authors found no IQ differences between the two groups, but found that the AN children and adolescents displayed perseverative errors which were not found in the healthy controls. Thus set-shifting difficulties, based on this study, also appear in children and adolescents. Whether these difficulties precede AN onset remains unclear.

A possible explanation for the discrepancy in the findings of the two above-mentioned studies on children and adolescents with AN and set-shifting discrepancy is the potential concern raised about neuropsychological test results in adolescents with AN (Stedal & Dahlgren, 2015). Stedal and Dahlgren (2015) tested 20 females (aged 13-18 years) using both neuropsychological tests (Ravello Profile) and two self-report measures of executive functioning. Though the study was limited by small sample size, the authors raised several concerns regarding the use of neuropsychological tests on adolescents, some of which included:

> The choice of specific tests is often based on its professed ability to assess specific cognitive domains, for example executive functioning. However, due to the fact that the majority of such tests have an inherent complexity, few of them actually measure merely a single function or ability. [...] The results from studies investigating neurocognitive functioning in children and adolescents with AN have been highly inconsistent, and it is probable that the variability in results could be due to performance-based tests of executive functioning being more sensitive to deficits in adults than in children (Stedal & Dahlgren, 2015, p. 9).

Further, the authors found that results from the neuropsychological tests correlated poorly with the self-reports of executive functioning, possibly indicating that, "...neuropsychological tests might not be particularly effective when it comes to predicting every day difficulties" (Stedal & Dahlgren, 2015, p. 9). Thus, while participants performed well in certain neuropsychological subtests, they self-reported difficulties in everyday activities that utilised the same neuropsychological function. The authors concluded that further research is required to explore the most effective way to measure neuropsychological ability in adolescents with AN.

In addition to needing to clarify whether set-shifting difficulties are a precursor or result of AN, researchers also need to determine if the set-shifting difficulty is specific to AN or rather to comorbid depression. In a review of 62 studies on neuropsychological deficits in AN, Abbate-Daga et al. (2015) found that only 10% of studies considered depressive symptoms and their impact on cognitive flexibility. The authors found that, "...the more serious the depression, the greater the neuropsychological impairment" (Abbate-Daga et al., 2015, p. 736). The authors concluded that future studies exploring neuropsychological impairment in AN need to control for depression.

To summarise, deficits in certain types of executive functioning (in particular set-shifting and central coherence) appear to be possible cognitive endophenotypes for AN and indicate a potential biological marker for the disorder. However, this seems more pronounced in adults with AN, suggesting that the deficit may only develop later in life. This development may be as a result of starvation or other potential vulnerability factors that may have a negative impact on set-shifting ability. Thus the deficit in executive functioning is not necessarily a flaw that the individual who later develops AN is born with, but rather a flaw that is developed as a result of interaction with other potential sources of vulnerability.

Conversely, relatively few set-shifting studies have been conducted on children and adolescents with AN, and further research in this area may yield findings of executive functioning deficits. At this point, it seems safe only to conclude that executive functioning deficits (with specific focus on cognitive rigidity explored through set-

shifting), seem to be associated with vulnerability to AN. Whether this executive functioning deficit predisposes, maintains or precipitates AN, remains unclear.

2.6 PSYCHOLOGICAL SOURCES OF VULNERABILITY

Some of the factors explored below as psychological sources of vulnerability may also be discussed both under biological (section 2.5) or social (section 2.7) sources of vulnerability. They have been included in this section because they seem best discussed here but this does not suggest that they are exclusively psychological in nature. Where there appears to be an overlap into one of the other domains of vulnerability, this will be mentioned and briefly explored. This open-mindedness and flexibility regarding sources of vulnerability being interlinked and mutually effectual on each other, is drawn from Zubin and Steinhauer (1981) discussed in 1.2 and 2.1 above.

2.6.1 Perfectionism, rigidity and obsessive-compulsive tendency

As explored in 2.5.3, deficits in set-shifting in individuals with AN seems to indicate a possible endophenotype for AN. This endophenotype appears to be a deficit in executive functioning resulting in cognitive rigidity. Keeping with cognitive rigidity, the link between AN and perfectionism and obsessive-compulsive tendencies has been explored repeatedly in research studies. While cognitive rigidity was discussed in 2.5.3 as a biological source of vulnerability related to neurophysiology, this trait and its associated trait of perfectionism can also fit into psychological sources of vulnerability discussed in this section.

Srinivasagam et al. (1995) explored perfectionism in 20 individuals with AN, expressed as a need for exactness, order and precision. The authors aimed to determine whether perfectionism was part of the pathogenesis of AN. The authors compared individuals recovered from AN with healthy controls, and found that the recovered AN group maintained higher scores on perfectionism on two different tests than healthy controls. A similar study conducted by Bastiani, Rao, Weltzin and Kaye (1995) also used two measures of perfectionism and found that individuals with AN had strong perfectionist traits (characterised by rigidity and obsessional behaviour). The study further found that perfectionist traits persisted even when participants experienced recovery

through weight restoration. Considering that the perfectionist traits seemed to persist even after recovery may suggest that perfectionism is a psychological source of vulnerability for AN. However, an alternative explanation may be that perfectionism is a sequela of AN (Minarik & Ahrens, 1996).

Pollice, Kaye, Greeno and Weltzin (1997) explored the impact that malnutrition had on depressive, anxious and obsessive-compulsive traits in individuals with AN at different weight stages of their disorder (underweight, short-term weight restored and long-term weight restored). The authors found that the underweight group had the most elevated scores in all three areas (depression, anxiety and obsessionality). The short- and long-term weight restored groups showed less elevated scores in all three areas. The scores in the two weight-restored groups remained high enough to be significant compared with healthy controls. Malnourishment was found to exacerbate symptoms of depression, anxiety and obsessionality. However, these symptoms (though milder) remained, even in individuals who showed long-term recovery (Pollice et al., 1997). This again suggests that obsessionality may be a vulnerability marker in the pathogenesis of AN.

With regard to individuals with obsessive-compulsive disorder and AN, the exercise-induced weight-loss syndrome explored in animals indicates that restriction of calories and exercise increases serotonin activity (Davis, Kaptein, Kaplan, Olmsted & Woodside, 1998). This theory has been applied to humans with obsessive-compulsive disorder and AN as a way of explaining why, in both disorders, individuals seem unwaveringly committed to their pursuits of perfection and extensive exercise. Davis et al. (1998) studied 53 individuals with AN divided into two groups; those who exercised extensively and those who exercised moderately. The extensive exercise group displayed elevated obsessive-compulsive and perfectionist traits in comparison to the moderate exercise group. This may suggest that some, but not all, individuals with AN possess obsessional and perfectionist personality traits.

A study conducted by Halmi et al. (2000) explored perfectionism in a sample of 322 individuals with AN. Participants were divided into three groups based on DSM-IV-TR (APA, 2000) AN subtypes, namely: restricting, purging, binge-eating and purging. All

participants completed the Multidimensional Perfectionism Scale, the Perfectionism subscale of the EDI, the Yale-Brown Obsessive-Compulsive Scale and the Yale-Brown-Cornell Eating Disorder Scale. No significant overall differences between the three groups on all the tests were found. The only significant difference was on the parental criticism subscale of the Multidimensional Perfectionism Scale, in which the restricting group showed lower scores than the other two groups. Despite the absence of healthy controls in their study, the authors tentatively suggested that perfectionism seemed to be involved in the pathogenesis of all three subtypes of AN.

In two independent studies Bizeul, Sadowsky and Rigaud (2001) (*N*=26) and Sutander-Pinnock, Woodside, Carter, Olmsted and Kaplan (2003) (*N*=55) used the EDI to measure the impact of treatment on AN symptoms and severity. Both studies found that elevated scores on the Perfectionism subscale at the time of admission were significantly associated with responsiveness to treatment and long-term AN severity. Perfectionism appeared to be a key feature in AN vulnerability and maintenance. High levels of obsessionality, restraint and perfectionism were found in AN participants (in particular the restricting subtype participants) (Wonderlich, Lilenfeld, Riso, Engel and Mitchell, 2005). The authors concluded that perfectionism seemed to be phenotypic for AN. Similarly, Castro-Fornieles et al. (2007) tested 108 female ED patients (75 with AN and 33 with BN), 86 psychiatric patients (anxiety, mood or adaptive disorders) and 213 healthy controls using the Child and Adolescent Perfectionism Scale, the EDI and the Eating Attitudes Test. They found that self-oriented perfectionism was significantly higher for the ED group (both AN and BN) than the other two groups. They concluded that perfectionism is a key predictor of EDs.

Studies post-2010 concerning perfectionism in AN seem to draw on neuropsychological factors such as the set-shifting deficit explored in 2.5.3 above. Friederich and Herzog (2011) reviewed the literature and concluded that perfectionism and obsessionality were part of a neurodevelopmental deficit that may have been inherent in individuals with AN, possibly explaining its persistence after recovery from AN.

Based on the above studies, perfectionism may be associated with AN. Three explanations seem possible. Firstly, either individuals are born with a neurodevelopmental deficit that perpetuates the onset of perfectionism that leads to AN. Secondly, ongoing starvation in individuals with AN leads to increased perfectionism that, over time, damages neurodevelopmental structures. Thus, whether perfectionism is a predisposing cause or a perpetuating element of AN seems unclear. Thirdly, the feature of perfectionism in individuals with AN may be a learned behaviour from specific families or environments. Further studies on children with AN may elucidate more clarity in this regard.

Halmi et al. (2012) explored childhood perfectionism by administering the Childhood Perfectionism Test and the EDI-2 to 728 individuals with AN (all subtypes). They found that global childhood rigidity seemed to precipitate the development of AN. An alternative explanation for the perfectionism-AN link is postulated by Keel and Forney (2013). They conducted a review of literature examining psychosocial risk factors for AN and concluded that certain personality features (such as emotionality and perfectionism) predispose individuals to AN indirectly by making them more inclined to internalise thin ideals in society and negative peer influences. As a result of these internalisations, individuals seem prone to developing AN. This suggests that perfectionism and AN are associated, but possibly not as directly as formerly suggested.

The potential social sources of vulnerability that play a part in the development of AN are discussed further in section 2.7 below. For the present, it seems important to note that the strict biological vs. psychosocial categorisation of sources of vulnerability does not seem viable. A possible vulnerability marker such as perfectionism seems likely to be biological (in that it is associated with neurodevelopmental deficits), psychological (in that having perfectionist features may increase vulnerability to AN development and perpetuate the maintenance of AN) and social (in that being a perfectionist may incline some individuals to internalise thin ideals, and the implicit rigidity involved in attaining these, from society).

2.6.2 Pathological control

A related element of perfectionism is the desire to be in control. The link between AN and control dates back to early studies of AN. Lawrence (1979) hypothesised the 'control paradox' in AN. This paradox suggests that individuals with AN exert control over their eating because they feel out of control internally. Thus, individuals with AN focus not on gaining control, but rather on combating their sense of being out of control. Paradoxically, their AN and food restriction appear ultimately to leave them feeling even more out of control.

Individuals with AN seem to react to perceptions of loss of control by restricting their food intake (Rezek & Leary, 1991). Individuals with AN who scored high on the *Drive For Thinness* subscale on the EDI, when placed in a situation of having perceived low control, restricted their caloric intake (Rezek & Leary, 1991). When individuals with AN experience a loss of control in their environment, they may react to it by increasing their control over caloric intake. A later study by Triggermann and Raven (1998) also highlighted control as an important factor in the development and maintenance of AN. Similarly, they found that it is not the desire for control that is important in AN, but rather that it is the fear of losing self-control that motivates persistent controlling behaviours.

Exploring cognitive behavioural elements of AN, Fairburn, Shafran and Cooper (1999) concluded that three central repetitive thoughts and ideas played a role in the disorder's development and maintenance: restriction of food allowed for a sense of control, aspects of being starved encouraged further restriction, and extreme beliefs about shape and weight encouraged restriction. Granek (2007) reached similar conclusions. She found that the need to be in control was a central factor in AN vulnerability and maintenance. This control seemed to be attained through food restriction. Granek (2007) stated that AN was maintained through a "…maladaptive desire for self-worth through control of eating and weight" (p. 363). This suggests that self-worth is attained through practicing control regarding food and keeping weight as low as possible. The notion of self-esteem, and how it ties in to AN will be further explored in section 2.6.6 below.

The role of loss of control in binge eating disorder was explored by Pollert et al. (2013) by instructing participants to track their mood and feelings throughout the day. They concluded that a feeling of loss of control frequently preceded binge eating episodes. While their study was on binge eating disorder and not on AN, it is possible that feelings of loss of control also play a role in individuals with AN (particularly in the binge-eating/purging subtype).

2.6.3   Control through compensation

Related to control, discussed above, is compensation. When individuals with AN perceive that they have lost control over their eating, they appear to employ compensation strategies. One type of compensation is increased cognitive rigidity, as explored by McLaughlin, Karp and Herzog (1985). They described the sense of ineffectiveness in individuals with AN and suggested that these individuals display rigidity as a means of compensating for perceived deficits in autonomy.

Brewerton, Stellefson, Hibbs, Hodges and Cochrane (1995) found that individuals with AN who were compulsive exercisers tended not to binge-eat or abuse laxatives, while their non-compulsive exercising counterparts tended to binge-eat and compensate through the use of laxatives and self-induced vomiting. Thus, both types of individual with AN made use of compensation, either through compulsive exercising or through self-induced vomiting and/or laxative use. Similarly, Turner, Batik, Palmer, Forbes and McDermott (2000) found that individuals with chronic AN showed increased risk for laxative abuse. Thus, the longer an individual has AN, the more preoccupied they become with weight-loss maintenance through compensation strategies.

Looking at the role of schema compensation in AN, Mountford, Waller, Watson and Scragg (2004) concluded that when an individual with AN is confronted with potentially negative affect, they compensate in order to reduce this affect. Also applying cognitive theory, based on data derived from the National Longitudinal Study of Adolescent Health, Liechty and Lee (2013) examined behaviour and cognition of eating patterns so as to determine ED predictors. They found that weight was controlled through compensatory behaviours and thoughts through dieting and exercise. In a systematic review of emotion generation and regulation in AN,

Oldershaw, Lavender, Sallis, Stahl and Schmidt (2015) found more maladaptive schemata in AN individuals than in healthy controls. The maladaptive schemata aided in subjugation, experiential avoidance, negative problem solving, negative social comparison, social isolation, emotion suppression and feelings of worry, shame, disgust and guilt. Compensation in AN did not appear to be limited only to exercise or laxative and diuretic use. AN individuals appeared to compensate for feeling out of control, by having developed compensatory schemata for emotion generation and regulation.

In a systematic review on high levels of physical activity in AN, Gümmer et al. (2015) argue that insufficient emphasis is placed on this important factor of AN. The authors found that 31%-80% of AN individuals display high levels of physical activity. Physical activity, in this regard, is defined as: "...hyperactivity, overactivity, paradoxical overactivity, motor restlessness, diffuse restlessness, compulsive exercise or excessive exercise" (Gümmer et al., 2015, p. 333).

Compensatory behaviours and associated thoughts seem to have an impact on long-term eating patterns. It may thus be possible that the early use of compensatory strategies in controlling weight may be an associated source of vulnerability for AN development.

2.6.4 Control through deception

Another means of control in AN occurs through the use of deception. Ramjan (2004) explored the perceptions of nurses who worked with AN inpatients. One of the difficulties that nurses reported was that of forming a relationship with AN inpatients because of their perceived deceit and manipulation.

Hambrook and Tchanturia (2008) explored Machiavellianism in individuals with AN. Machiavellianism is the manipulation of others for personal gain (Adenzato, Todisco & Ardito, 2012). In both studies, authors found that individuals with AN scored highly on this characteristic because they used strategies to deceive others in order to allow the maintenance of their AN.

The desire to attain perfection and remain in control seems to be a source of vulnerability in the development and maintenance of AN. AN individuals employ compensatory tactics to maintain their sense of being in control. A related area of perfection and control appears to be the drive for achievement, discussed below.

2.6.5   Achievement, punishment avoidance and conditional goal-setting

Also linked to perfectionism in AN is the focus on achievement and setting seemingly unreachable goals. Weeda-Mannak and Drop (1985) found that individuals with AN had an elevated drive for achievement in comparison to healthy controls. AN individuals were focused not only on achieving, but specifically on failure avoidance. Sohlberg and Strober (1994) similarly found that individuals with AN experienced emotional difficulties in adolescence which resulted in repetitive reward-seeking behaviour. Individuals predisposed to developing AN seem to be motivated by reward-seeking behaviour associated with success and achievement.

Clinical perfectionism has been described in individuals with EDs (Shafran, Cooper & Fairburn, 2002). The authors describe those with clinical perfectionism as people who set high standards of performance for themselves. When these standards are not met, the individuals are particularly self-critical. When a goal is achieved, these individuals feel that they have not set the standard high enough, which results in them setting a higher goal (Shafran et al., 2002). With reference to AN, individuals may set weight goals for themselves. When they fail to achieve such goals they become self-critical. Conversely, when they achieve the desired weight goal, they may feel that the goal was too easy and set a more challenging goal. The result is that these individuals never seem to feel a sense of success and achievement.

Conversely, an alternative explanation regarding achievement in AN is that the focus is not on achievement, but rather punishment avoidance. Harrison, O'Brien, Lopez and Treasure (2010) found that AN individuals had equal sensitivity to rewards as healthy controls, but had elevated sensitivity to punishment. Arguably, individuals with AN are focused on rewards, only because they are preoccupied with avoiding punishment. In a recent review of literature Lavender et al. (2015) concurred that individuals with AN display "elevated punishment sensitivity/harm avoidance" (p. 120).

An important element of achievement and punishment appears to be dichotomous thinking, which was explored by Watson et al. (2010) as an important factor in the maintenance of AN. Dichotomous thinking can be defined as follows:

> Dichotomous thinking, commonly referred to as "all-or-nothing" thinking, involves interpreting possibilities and events in a polarised fashion (e.g., "If I don't do well, then I'm a failure") (Lethbridge, Watson, Egan, Street & Nathan, 2011, p. 202).

For individuals with AN, dichotomous thinking seems to concern preoccupation with achieving levels of perfection associated with weight and dietary restriction that are harmful (Lethbridge et al., 2011). Another element of dichotomous thinking in AN concerns conditional goal-setting. Conditional goal-setting is a fairly new factor that has been explored in relation to EDs as a potential vulnerability or maintaining factor:

> Conditional goal setting is a social-cognitive construct and describes the belief that attainment of a specific lower-order goal is crucial to achievement of an abstract higher-order goal (most commonly happiness), to the extent that the latter is impossible without the former. Moreover, conditional goal setting theory states that those who are vulnerable to conditional goal setting conceptualise states of wellbeing such as "happiness" as outcome goals that need to be attained, rather than experiences associated with living (Lethbridge et al., 2011, p. 203).

In individuals with AN, lower-order goals are focused on weight and dietary constraint. It is only when these goals are achieved, that there is a possibility of achieving the higher-order goal of happiness (Lethbridge et al., 2011). This fairly new idea was explored by Watson, Raykos, Street, Fursland and Nathan (2011) in 201 individuals with AN. Perfectionism in AN was found to be mediated by the over-evaluation of weight and the existence of conditional goal-setting. This may suggest that not only perfectionism, but also a preoccupation with the achievement of conditional goals are precursors and maintaining factors of AN.

2.6.6   Self-criticism, self-esteem and guilt

Achievement and punishment avoidance, as discussed in 2.6.5, are associated with self-criticism, low self-esteem and guilt. As discussed, individuals with AN appear to have a greater propensity for achievement-focused behaviour in their striving to avoid failure.

Upon experiencing failure, individuals with AN seem to become self-critical and experience guilt which may contribute to low self-esteem development.

Bybee, Zigler, Berliner and Merisca (1996) explored guilt and guilt-evoking events linked to major depression and EDs. They found that participants with EDs and healthy controls both experienced guilt. The difference between the two groups was that healthy controls were able to process their guilt whereas ED individuals internalised it and became increasingly self-critical. Arguably, the AN individual is more susceptible to internalising guilt than healthy controls. Whether this is a result or precursor to AN is unclear.

In addition to a greater propensity for internalising guilt, is a greater likelihood of having had low self-esteem preceding AN onset. Button, Sonuga-Barke, Davies and Thompson (1996) found that individuals who had low self-esteem scores at age 11-12 years old were at greater risk of developing EDs, suggesting that low self-esteem may be a precursor to AN. However, low self-esteem appears to be a generic risk factor associated with vulnerability to several psychological disorders. Sassaroli and Ruggiero (2005) explored the impact of stress on self-esteem, perfectionism and eating behaviours in 145 female school students. They found that when exposed to stressors, low self-esteem and disordered eating attitudes (such as the desire to diet and achieve low weights) were noted in several participants. Exposure to stress in individuals already vulnerable to developing AN may result in lowered self-esteem and increased perfectionism which could trigger AN onset. Low self-esteem is not pathognomonic for AN, but may contribute to increased vulnerability, when combined with stressful environmental factors.

Fennig et al. (2008) explored self-esteem in major depression and comorbid EDs. Participants completed depressive symptom measures and the EDI-2. Results showed that self-criticism appeared to be a strong predictor of ED symptoms. Thus, being self-criticising and having major depression may increase vulnerability to developing AN. The major depression-AN link will be explored further in section 2.6.7.1 below.

Goss and Allan (2009) explore shame and pride as mechanisms involved in vulnerability to and maintenance of AN. They argue that, "...shame often involves evaluations that the self is flawed or bad in some way, alongside evaluations and expectations that others are looking fown on the self"(Goss & Allan, 2009, p. 304). They suggest that pride is the opposite of shame and that, "...pride often involves a social comparison and competitive element of feeling that one is outperforming others or winning in some kind of competition" (Goss & Allan, 2009, p. 310). These and similar themes are discussed in section 2.6.1 relating to perfectionism, 2.6.5 relating to achievement and section 2.7.3 relating to social comparison. The authors conclude that

> ... there is a small but growing evidence base suggestion that shame and pride may be salient factors that need to be addressed during the course of treatment. As yet the specific ways in which shame and pride and eating disorders become entwined are not completely clear (Goss & Allan, 2009, p. 314).

Kelly and Carter (2013) conducted a comprehensive study on shame and EDs. Their sample of 74 patients completed a battery of tests including:

> Forms of Self-Criticism and Self-Reassurance Scale, Rosenberg Self-Esteem Inventory, Experience of Shame Scale, Beck Depression Inventory, Positive and Negative Affect Schedule, and Eating Disorder Examination Questionnaire (Kelly & Carter, 2013, p. 148).

The higher the scores for self-criticism, the more severe the ED pathology seemed to be. This too suggests that strong feelings of guilt, shame and self-criticism intensify EDs and could be a psychological source of vulnerability in AN.

The focus on self-criticism, low self-esteem and guilt are not only important to understand as potential psychological sources of vulnerability and maintenance in AN, but also in their role in treatment. Goss and Allan (2014) explored Compassion-focused therapy as a novel treatment for EDs. This treatment targets the emotions of shame, guilt, self-hating and self-criticism as a means of undoing psychological mechanisms involved in increasing vulnerability and maintenance of AN. This will be explored further in section 2.10 detailing moderating factors.

As can be seen above, self-esteem has been associated with social interaction and exposure to stressors, both of which will be explored further as social sources of vulnerability in section 2.7. Again, at this stage it does not seem possible to isolate specific independent sources and types of vulnerability. They seem to be interlinked domains which together appear to predispose and perpetuate AN.

2.6.7 Comorbid psychological disorders: Mood, anxiety and other disorders

In the sections covered thus far, perfectionism, obsessive-compulsive tendencies, low self-esteem and guilt have been explored as possible psychological sources of vulnerability for AN. Perfectionism and obsessive-compulsive tendencies are central to certain anxiety disorders, while low self-esteem and guilt are associated with certain mood disorders. Both categories of disorders have been described as comorbid conditions of AN. Costin (2007) highlights the difficulty in exploring comorbid disorders and EDs:

> The comorbid condition may either have a causal relation to or become exacerbated by the eating disorder. In terms of discussing causal relationships, comorbid disorders of any type develop in one of two ways. Either one disorder precedes the other and is therefore assigned a portion of the "blame", or they both develop in response to some third independent factor. For example, some people may have developed an eating disorder at least partially as a coping mechanism in response to their depression or another disorder, while others are depressed because they can't control their eating disorder (p. 30).

Often, the only way to determine whether the patient has a comorbid disorder, is to wait until AN has been treated and AN criteria are no longer met. If the other disorder persists independent of AN, the associated disorder can be considered comorbid.

2.6.7.1 Comorbid mood disorders

Kennedy et al. (1994) tested 198 individuals with EDs (83 with AN and 115 with BN) using the Beck Depression Inventory and the Structured Clinical Interview for DSM III-R. They found that 43% of participants met the criteria for major depression, while 80% of participants showed signs of major depression (but did not meet the full criteria). They concluded that the presence of comorbid major depression in individuals with EDs exacerbated the ED.

McElroy, Kotwal, Keck and Akiskal (2005) reviewed literature on EDs and bipolar disorder and concluded that a comorbid relationship existed:

> ...on phenomenologic grounds – eating dysregulation, mood dysregulation, impulsivity and compulsivity, craving for activity and/or exercise – we find many parallels between bipolar and eating disorders. Overall, the similarities between these disorders were more apparent when examined in their spectrum rather than full-blown expressions (p. 107).

The authors suggest that the disorders are similar because they share certain features such as mood and eating dysregulation).

In another review Costin (2007) concluded that approximately 50% of individuals with AN had a concurrent diagnosis of a mood disorder. She further suggested that in many cases AN appeared to precede the mood disorder, suggesting that AN (or the consequent starvation) may be responsible for triggering the onset of the mood disorder. Berkman et al. (2007) also reviewed studies on AN and comorbid disorders and concluded that mood and anxiety shared the greatest comorbidity with AN.

Lunde, Fasmer, Akiskal, Akiskal and Oedegaard (2009) studied 209 individuals with mood disorders, of which 33 had a comorbid ED (either AN or BN) and found that the two spectra of disorders shared similar affective temperaments. This link, however, appeared to be stronger in individuals with BN and comorbid bipolar disorder than in those individuals with AN and comorbid bipolar disorder.

As reported in section 2.5.3, there appears to be a link between AN and set-shifting difficulties. Giel et al. (2012) challenged this link by measuring set-shifting ability in 15 individuals with AN without comorbid major depression, 20 individuals with major depression and 35 healthy controls. They found that the major depression group performed the worst of all groups and concluded that the set-shifting difficulty previously reported in AN may be associated more significantly with comorbid major depression in AN, rather than AN itself.

Watson, Egan, Limburg and Hoiles (2014) provide normative data on comorbidity between AN and depression in adolescents. A sample of 256 females (aged 12-17 years

old) diagnosed with DSM-5 EDs completed the Children's Depression Inventory. They concluded that female adolescents with AN in particular were at high risk of developing depression and suicidal ideation. This again suggests that AN may be a source of vulnerability to major depression, rather than the converse. There does not appear to be enough evidence to conclude categorically that AN is a vulnerability factor for major depression, or whether major depression is a vulnerability factor for AN. While there does appear to be a link between AN and mood disorders, it is unclear which disorder precedes. However, more data seems to indicate that major depression is secondary to AN.

2.6.7.2 Comorbid anxiety disorders

Anxiety disorders that have been associated with AN in the literature include phobias, obsessive-compulsive disorder and post-traumatic stress disorder. Ellison et al. (1998) explored the fear of calories in individuals with AN. They found that individuals with AN had enhanced fear of caloric gain. The authors argued that this fear was intense enough to constitute a food phobia.

Childhood obsessive-compulsive personality traits[1] were explored through reflective self-report measures on 44 women with AN (Anderluh, Tchanturia, Rabe-Hesketh & Treasure, 2003). Obsessive-compulsive traits (in particular, perfectionism and preoccupation with orderliness) were found in participants as children. Thus, obsessive-compulsive features, often a feature of some anxiety disorders, could be associated with AN vulnerability. Similarly, Kaye, Bulik, Thornton, Barbarich and Masters (2004) also found a connection between anxiety disorders and AN. They conducted a study on a large sample of 672 individuals with EDs (AN and BN). Participants completed the Structured Clinical Interview for DSM-IV and standardised tests for anxiety, perfectionism and obsessionality. Similar scores were found across ED types. Of the anxiety disorders, obsessive-compulsive disorder and social phobia were the most significant with 41% (*n*=277) of participants having obsessive-

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[1] The term 'trait' has specific reference to personality disorders in psychology. However, many studies cited in the review of literature in this study use the term loosely to describe personality features (not necessarily associated with specific personality theories or disorders). The researcher, when describing studies in which the term 'trait' was loosely used, has used the same terminology. However, for general discussion the researcher has used the term 'feature' for increased accuracy.

compulsive disorder and 20% (*n*=134) having social phobia. They concluded that anxiety disorders were common in individuals with AN, and tended to precede the development of AN.

Reviewing literature, Costin (2007) suggested that as many as 10 - 66% of individuals with AN have had obsessive-compulsive disorder diagnoses or displayed obsessive-compulsive symptoms. She also argued that post-traumatic stress disorder (specifically as a result of sexual abuse) preceded the development of an ED (particularly, but not only, BN). Administering the Yale-Brown-Cornell Eating Disorder Scale to 56 women with AN, Jordan et al. (2009) found obsessive-compulsive disorder (and traits of perfectionism and obsessionality) in participants, suggesting a possible association of obsessive-compulsive disorder (or obsessive-compulsive traits) with AN. Similarly, in a study of 2,370 child and adolescent psychiatric patients, Steinhausen et al. (2015) found that anxiety disorders (in particular obsessive-compulsive disorder), mood disorders and substance abuse disorders had strong comorbidity with AN.

To summarise, it appears that anxiety disorders precede AN and contribute to AN vulnerability, while mood disorders seem more likely to be a consequence of (rather than a vulnerability factor for) AN.

2.6.7.3 Other comorbid disorders

The links between AN and mood and anxiety disorders are the most explored comorbid links for AN. Other disorders and maladaptive behaviours also explored in relation to AN are self-injurious behaviour, impulse-control difficulties, substance-use disorders, personality disorders and autistic spectrum disorders.

While self-injurious behaviour is more frequently associated with BN, AN is not excluded. Favaro and Santonastaso (2000) assessed 236 AN individuals using the EDI, Hopkins Symptom checklist and semi-structured interviews. They found self-injurious behaviour in different forms across the AN subtypes, such as self-induced vomiting and laxative or diuretic abuse. Childhood sexual abuse seemed to be a precursor for self-injurious behaviour in AN. The authors highlighted the importance of not excluding AN from self-injurious behaviour investigation.

The link between self-injurious behaviour and EDs seemed to be more prominent for BN than for AN (Thomas, Schroeter, Dahme & Nutzinger, 2002). They found that individuals with BN were more inclined to impulse control difficulties (including self-injurious behaviour), while individuals with AN seemed more inclined to obsessive-compulsive behaviours and perfectionism. While self-injurious behaviour (in the form of cutting, scratching, burning) was not recognised as a disorder by DSM-IV-TR (APA, 2000) or DSM-5 (APA, 2013), there is evidence for a strong comorbid link between EDs and this behaviour type. However, the group of ED patients that self-injure seem to be different to those who do not. This is possibly because of associated personality disorders, discussed later in this section below.

Exploring the comorbidity of AN and autistic spectrum disorders, Zucker et al. (2007) suggested that both disorders involve deficits in social information processing, social cognition and interpersonal functioning. This may indicate the existence of a common phenotype underlying both AN and autistic spectrum disorders.

Jordan et al. (2008) studied comorbidity between EDs and substance use disorders (in particular, stimulants). Predictably, the percentage of comorbidity with substance use disorders was higher in BN patients than in AN patients. The authors also investigated the comorbidity of EDs with DSM-IV-TR Axis II disorders and found that BN patients had a greater comorbidity of cluster B personality disorders (including histrionic and borderline personality disorder) than did AN patients. Both AN and BN patients showed comorbidity with cluster A personality disorders (in particular, obsessive-compulsive personality disorder).

In a study of 731 individuals with AN (including all three subtypes), Root et al. (2010) found that AN individuals with purging or a co-existing BN diagnosis, reported the highest percentage of substance use disorders. Thus, BN symptomatology, often present in individuals with AN, may increase the likelihood of comorbid substance use disorders.

Pooni, Ninteman, Bryant-Waugh, Nicholls and Mandy (2012) investigated the likelihood of individuals with early ED diagnoses (age 8-16 years old) having autistic

spectrum disorders or autistic spectrum disorder tendencies. They compared 22 individuals with early onset EDs and 24 healthy controls. Both groups were assessed using standardised autistic spectrum disorder measures. They found that the ED group were no more likely than healthy controls to present with autistic spectrum disorder diagnoses. However, the ED group showed a marked trend toward autistic social impairment and repetitive and stereotyped behaviours. Despite the small sample size, it was argued that there may be a shared phenotype between AN and autistic spectrum disorders resulting in social impairment and stereotyped behaviour. Magallón-Neri et al. (2014) explored the presence of personality disorders in 100 female adolescents (average age 15.8 years) with EDs. Standardised personality disorder measures (for example the Millon Clinical Multiaxial Inventory) were administered. They found that 28% of those with AN displayed concurrent personality disorders. The highest incidence of concurrent personality disorders however, occurred in the BN participants who tended to have comorbid borderline and histrionic personality disorders. The authors concluded that there was a comorbid link between EDs and personality disorders. However, this link was more pronounced in purging type EDs.

In summary, this section suggests that social interaction and impulse control deficits (possibly because of personality disorder traits) seem to underlie comorbidity of EDs and autistic spectrum disorders, substance use disorders, SIB and PDs. In all cases, comorbidity appears to be more pronounced in individuals with BN or the binge-purge AN subtype.

2.6.8   The AN personality

In exploring all psychological sources of vulnerability associated with AN (section 2.6) it could be argued that a particular type of personality seems to be the greatest psychological source of vulnerability for AN. This personality type appears to include some of the features described in sections 2.61-2.67. However, while some of the sections above described obsessive-compulsive traits associated with personality disorders, the AN personality described in this section discusses personality *features,* that do not constitute formal traits associated with one or more personality disorders. In addition, biological sources of vulnerability (explored in section 2.5) also seem to contribute to an AN personality constellations. Certain personality features have been

argued to be possible predictors of AN. While these features are not necessarily always predictive of AN, many individuals with AN share certain similar personality features. These features may be sources of vulnerability for AN.

Vitousek and Manke (1994) found that individuals with AN (restricting type) appeared to have personalities characterised by constricting, conforming and obsessive-compulsive features. Unstable mood and impulsivity were highlighted as less common, though evident, personality features. Anxious personality traits were explored in section 2.6.1. Again, while traits are not the same as personality features, the differences are probably dimensional, with traits having greater frequency and intensity and are more likely to be associated with personality disorders. The existence of anxious personality features may be associated with AN vulnerability. The rigidity implicit in perfectionism may also be understood as being a result or cause of anxiety-driven neurophysiological set-shifting difficulties explored in section 2.5.3.

Thus, there appear to be combined psychological and biological sources of vulnerability that may lead certain individuals to developing a pattern of perfectionist tendencies which make these individuals rigid, obsessive and vulnerable to developing AN. However, the field to date lacks reliable longitudinal data to confirm these findings.

Bulik, Sullivan and Joyce (1999) administered the Temperament and Character Inventory to a sample of 68 individuals with AN, 152 with BN and 59 with major depression and no ED history. They concluded that suicide attempts across the three groups were similar, suggesting that suicide risk was evident, not because of the psychiatric disorder, but rather a similarity in temperament (specifically elevated scores for high persistence, high self-transcendence and low self-directedness) across the three groups.

In a ten-year follow up study conducted by Nilsson, Gillberg, Gillberg and Rastam (1999) on AN and personality disorders and autistic spectrum disorders, the authors found that Cluster C personality disorders (in particular obsessive-compulsive personality disorder) and autistic spectrum disorders were common in the AN group. They concluded that individuals with AN tended to be inclined to experience

obsessions, compulsions and social interaction difficulties. Similarly, Zucker et al. (2007) (see also section 2.6.7.3) conducted a study exploring AN and potential autistic spectrum disorder features and discovered similarities in social interaction difficulties underlying both disorders. The authors argued that a new framework, considering social interaction deficits, was necessary to understand AN vulnerability and maintenance. Thus, pre-existing characteristics in these perfectionist, anxious individuals who develop AN, may make them more inclined to experience social interaction difficulties. Whether it is AN causing the social interaction difficulties or vice versa, is unclear. This will be explored in the third and final source of vulnerability below (section 2.7).

In her South African study (244 high school students), Silva (2007) identified personality features that occurred in individuals who had eating dysfunctions. Eating dysfunction was characterised by a drive for thinness and a fear of gaining weight resulting in caloric restriction. Eating dysfunctions were assessed using the EAT and the EDI. The following personality features were identified:

> Reservation, emotional instability, excitability, opportunism, shyness, individualism, proneness to guilt feelings, self sufficiency and high tension were the personality factors that were significant in relation to eating dysfunction (p. 285).

Similarly, Keel and Forney (2013) cited earlier, found that personality features of emotionality and perfectionism seemed to predispose individuals to developing AN indirectly, by making them more susceptible to interpret peer influences negatively and internalise thin ideals in society.

Garrido and Subirá (2013), discussed in section 2.7.4, found that individuals with EDs (both restricting and binge-purging types) showed greater impulsivity than healthy individuals.

Shyness has been highlighted as another potential personality marker for AN (Winecoff, Ngo, Moskovich, Merwin & Zucker, 2015). In a study of 17 AN individuals, 17 weight-restored individuals who had AN and 18 healthy controls, Winecoff et al.

(2015) found that the clinical groups (AN and weight-restored) displayed more social skills deficits, social withdrawal and greater harm avoidance, argued to be secondary to shyness.

In a recent review Kaye et al. (2015) highlight the importance of considering temperament when designing and researching effective treatment approaches for AN. The authors propose that the AN temperament consists of "...anxiety, reward insensitivity, altered interoceptive awareness [altered sensitivity for one's internal bodily signals] and cognitive inflexibility and rigidity" (Kaye et al., 2015, p. 13).

Arguably, certain individuals who are shy, emotional and perfectionist are more sensitive to observing, experiencing and internalising negative social experiences. This may account for the social deficits that some AN individuals manifest. A propensity to develop low self-esteem follows these negative social experiences and internalisations. Individuals with perfectionist traits seem to have a desire for control that is projected onto weight. Caloric restriction and compensatory behaviours allow for weight control. Ultimately this level of control may contribute to AN development.

The above review suggests that current knowledge has identified no single biological, or psychological factor that 'causes' AN. Rather, a complex interaction of deficits in all three areas seem to increase vulnerability to AN. This review will move on to consider literature on social sources of vulnerability to AN.

2.7   SOCIAL AND CULTURAL SOURCES OF VULNERABILITY

The above sections have attempted to outline some biological and psychological factors that appear to be sources of vulnerability to the development in AN. The final area of potential vulnerability lies in social and cultural influences. Deficits and difficulties in social interaction were alluded to in sections 2.6.7.3 and 2.6.8. Social factors appear to be both a source of vulnerability and possible episode triggers. As explored in section 2.6.8, a particular personality type (arising from possible biological and psychological factors) may contribute to social interaction deficits and AN development. These potential negative social interactions and internalisations are thus 1) sources of

vulnerability or 2) potential episode triggers. They may fall into both categories, sources of vulnerability in their own right, and episode triggers.

In exploring social sources of vulnerability, it is important to include not just specific social interactions but also the implicit influence of wider underlying cultural and social factors that have an impact on social interaction. Nasser (1997) summarises a sociocultural model for EDs in Table 2.1:

Table 2.1

Eating disorders: The sociocultural model (Nasser, 1997, p. 12)

Nature of psychopathology	Symbolic of notions of thinness cherished and promoted by culture. Positive stereotypes ascribed to thinness (beauty, health, class, success). Merges with normal dieting behaviour.
Gender specific	An answer to the 'modern woman dilemma': torn between conflicting/contradictory roles.
The epidemiological evidence	A steady increase over the past 50 years. Behaves on a spectrum of severity; evidence of subclinical forms. The spread of bulimia; socially contagious.
Sub-cultural variations	More prevalent in certain groups where thinness is endemic (ballerinas, models, athletes).
Intracultural variations	Higher prevalence in urban than rural areas.
Cross-cultural variations	Culture specific/bound. Unique to Western culture.

Table 2.1 suggests that certain social and cultural factors seem to make individuals more vulnerable to developing AN. The main vulnerability factors seem to be: being

female, part of a Western or Westernising culture and inhabiting a subculture that promotes thinness (Nasser, 1997). The specific sections that the researcher has chosen to focus on are those that are most highlighted in literature. These will be explored below and are family discord, controlling mothers (as a subsection of family), peers, sexual abuse, religion and societal and media messages.

The subsections below are sequenced according to the strength of the evidence supporting them, starting with those that have specific, direct and clear association to the development of AN (family, peers, sexual abuse), followed by broad, less specific societal factors that seem to inadvertently encourage AN (religion, societal and media messages).

2.7.1 Family systems and dynamics

In the 1960s and 1970s family systems theorists and clinicians aimed to explain AN as a result of problematic dynamics within the family. Based on clinical work, Minuchin et al. (1975) proposed that three main conditions within the family system seemed to be a source of vulnerability in the development of several "psychosomatic" illnesses including AN:

> 1) A certain type of family organization that encourages somatization; 2) involvement of the child in parental conflict; and 3) physiological vulnerability (p. 1031).

From this definition, AN is seen to result from an underlying physiological vulnerability coupled with an enmeshed family environment that encourages physical manifestations of emotional difficulties (in the case of AN – starvation and preoccupation with thinness).

Bruch (1978), also based on clinical work with AN, similarly described a particular family dynamic that seemed to increase vulnerability to AN development:

> Many anorexics express themselves in similar ways, even in much the same imagery, that their whole life had been an ordeal of wanting to live up to the expectations of their families, always fearing they were not good enough in comparison with others and, therefore, disappointing failures. This dramatic dissatisfaction is a core issue in anorexia nervosa, and it preceded the concern with weight and dieting (Bruch, 1978, p. 23).

This theory appears to be consistent with findings reported in sections 2.6.7.2 and 2.6.8 that suggested that anxiety preceded AN. Individuals with AN seem to have a tendency to experience and interpret their families anxiously which may contribute to AN vulnerability.

In observational clinical studies on families of 50 individuals with AN, Bruch (1978) reported that the majority of families were upper-middle-class, financially strong and socially respected. The families appeared to be nominally intact, with only two of the 50 being divorced. In addition, in more than two-thirds of the families, there were no sons, only daughters. Bruch (1978) found that many of these mothers felt guilty for not being able to provide their husbands with sons. Fathers in these families tended to treat their daughters in a particular way:

> It is significant the fathers value their daughters for their intellectual brilliance and athletic achievements; rarely if ever do they pay attention to their appearance as they grow into womanhood, though they will criticize them for becoming plump (Bruch, 1978, p. 25).

Bruch (1978) commented on how these apparently well-functioning families inadvertently raised girls who lacked self-esteem:

> A common feature is that these children believe they must prove something about their parents, that it is their task to make them feel good, successful, and superior. Yet the very success of the parents, their lavish style of living and all the material and cultural advantages, are experienced by these children as excessive demands (Bruch, 1978, p. 25).

Bruch's analysis of her clinical cases suggests that the parents of daughters with AN seemed to unintentionally expect daughters to behave a certain way and to live up to an ideal of perfection. While this may be typical of many parents, in these families the parents seemed preoccupied with having a perfect daughter and left little room for failure. An alternative explanation is that daughters incorrectly read their parents as having such expectations. Bruch (1978) also argued that these families tended to be characterised by enmeshment (defined as over-reliance and over-dependence on each other), with parents becoming overbearing in the treatment process and not giving their daughter enough room to fully explore herself and her AN. However, this

argument requires robust support as not all enmeshed families have daughters with AN.

A psychodynamic study conducted by Kog and Vandereycken (1989) found that individuals with AN came from families that lacked clear boundaries and those that tended to have an avoidant attitude toward conflict. An enmeshed family dynamic may contribute to AN risk. However, these findings may suggest that enmeshed families contribute to psychological problems in children, but do not explain why they contribute to AN risk specifically. In a review of literature Ward, Ramsay and Treasure (2000) found a possible link between insecure attachment in early childhood and the later development of AN. They argued that insecure attachment may have been associated with enmeshment or through parents unintentionally placing too many demands on their children. The above theories and studies seem to point to the existence of a particular family dynamic that increases vulnerability to developing AN. An alternative explanation however, may be that families who are enmeshed may have become so in response to their AN child's deteriorating state rather than being the cause of AN (Eisler, 2005; le Grange & Eisler, 2009).

Schmidt and Park (2003) explored the impact of dieting and critical comments from family as being central in the development of AN. This finding seems to be consistent with Tozzi, Sullivan, Fear, McKenzie and Bulik's (2003) findings in which individuals with AN commented on what they believed to be the cause of their AN. They believed that their dysfunctional families were one of the major causes of their AN development. Of course, individuals' beliefs as to their AN causes and actual causality may be disparate.

Similarly, Chan and Ma (2004) found that there was a strong incidence of an enmeshed relationship with the mother and a distant relationship with the father in almost all AN participants in their study. Tester and Gleaves (2005) explored the impact of the family environment on EDs. They found that families who displayed higher levels of preoccupation with appearance and weight seemed to be associated with increased AN vulnerability. While portrayal of thin body image ideals and more contradictory 'consume' and 'restrict' messages by the media (discussed in section 2.7.6 below) have

often simplistically been associated with 'causing' AN, Rodgers and Chabrol (2009), in a review of literature, explored the impact that parents as media communicators have on their children. Parents were argued to infer sociocultural ideals regarding weight through verbal messages and active encouragement. These messages seemed to impact negatively on their children's eating behaviours and resulted in body dissatisfaction. Doba, Nandrino, Dodin and Antoine (2014) conducted a study on AN and substance dependence disorder and the role that family plays in the development of both. A sample of 25 families of individuals with AN and 26 families of individuals with substance dependence was utilised. A battery of self-report tests was administered which included the Interpersonal Dependence Inventory, Family Adaptability and Cohesion Evaluation Scales and the Family Questionnaire. The authors found that the families of individuals with AN tended to have low family cohesion as well as emotional reliance on another family member, possibly constituting enmeshment.

The evidence above, some of which is clinical rather than reliably empirical, seems to support the argument that a particular family dynamic is a potential source of vulnerability for AN development. However, the child who later develops AN, because of her biological and psychological vulnerabilities, may be sensitive to family discord and thus misinterpret parental expectations. If it were solely a particular family dynamic that contributed to AN development, then all children born into such families would develop AN, which is clearly not supported by data (Holland et al., 1988; Kipman et al., 1999; LaBuda et al., 1993). While section 2.5.1 above indicated high concordance in monozygotic twin studies, low concordance was found for dizygotic twins. This may suggest that pre-existing characteristics of the child who later develops AN makes them more susceptible to experience their family in a manner that increases their AN vulnerability.

2.7.2 Controlling mothers

The area of controlling mothers was separated from section 2.7.1 on family, because it is an area that has been extensively explored in the area of family systems and AN. Exploring specific relationship dynamics within the family unit has generally been an area of focus in the psychoanalytic tradition. Research into understanding AN from a psychoanalytic perspective was popular in the 1970s to 1980s but has become less

common in contemporary research which seems to be focusing more on genetics and biological explanations for AN. However, this area warrants consideration as it added potential insights into the specific family dynamics that could be a source of vulnerability for AN.

Sours (1974), in a psychoanalytic study relating to AN, concluded that maternal control and domination appeared to play a strong role in the development of AN. Mothers controlling and dominating their daughters contributed to daughters acting out and disobeying their mothers through refusal to eat.

Contrasting literature from the psychoanalytic tradition challenges the view that individuals with AN have mothers who are controlling and dominant. Bonenberger and Klosinski (1988) explored family dynamics of 103 pubertal individuals with AN. They found no support for the theory that individuals with AN had dominant mothers and weak fathers. They described close relationships between mothers and daughters in 75% of participants. Incidentally, in this study, fathers were reported as authoritarian and dominant, if anything.

Arguably, it may be counter-productive to try to identify a particular family dynamic related to AN development and maintenance. Grigg, Friesen, and Sheppy (1989) examined 22 families of AN individuals and found that there did not appear to be a single uniform 'anorexogenic' family system that could explain AN development. This may suggest rather, that several possible family dynamics are coupled with an individual who is sensitive to conflict and contribute to AN vulnerability. Additionally, the family dynamic may be a reaction to having a starving daughter who is failing to thrive. In a later psychoanalytic article, Lane (2002) theoretically explored the relationships between self-mutilators, and individuals with disordered eating and their mothers. The author theorised that both groups of individuals tended to come from homes with controlling mothers who were obsessive and discouraged freedom and independence in their daughters.

Despite the psychoanalytic tradition dominating studies related to mother-daughter relationships and their role in AN development, a study by Murphy, Troop, and

Treasure (2000) explored individuals with AN who had sisters who were unaffected by an ED. Of their many findings, one indicated that the sibling with AN tended to perceive a greater amount of maternal control than did her non-ED sibling. This raises the important point regarding whether the maternal (over)control is objectively present, and, assuming it is, whether this control is experienced as exaggerated because of the AN individual's sensitivity to feeling controlled. This may indicate the existence of a circular pattern, rather than a linear dynamic.

2.7.3 Peers: Social comparison and low self-esteem

The above two sections describe data on family dynamics that may contribute to AN vulnerability. Another social factor that may be a source of vulnerability is the impact of peer relationships. Part of the reason that peer relationships seem to be related to AN is because of the negative impact they may have on the individual with AN's self-esteem (referred to indirectly in section 2.6.6 above).

Friendship cliques that focus on body image and dietary constraints may predict dietary behaviours and unhealthy body image in individuals from that clique (Paxton, Schutz, Wetheim & Muir, 1999). The pressure of needing to look a certain way in order to fit into a friendship clique may add pressure to an individual who is prone to developing AN. Alternatively, individuals predisposed to developing AN may seek out such cliques to maintain their AN behaviours.

Lunner et al. (2000) assessed 629 Grade 7 and Grade 8 girls with two measures of eating restraint, teasing history and body dissatisfaction. They found that a higher BMI resulted in teasing and body dissatisfaction. Body dissatisfaction was predictive of eating restraint. Thus, weight-related teasing may contribute to AN vulnerability. Alternatively, those individuals already vulnerable to developing AN may be inclined to interpret weight-related teasing more negatively than healthy individuals. They may thus be at greater risk for developing body dissatisfaction and eating restraint. These factors, if acute and related to a specific incident, may also trigger an AN episode.

One of the potential factors involved in low self-esteem in individuals with AN is their increased propensity for social comparison (sections 2.65 and 2.6.6). Troop, Allan,

Treasure and Katzman (2003) explored social comparison, submissive behaviour and social ranking. They concluded that individuals with EDs tended to make more negative social comparisons and ranked themselves lower than others, assuming a submissive role. This type of unfavourable social comparison was not only linked to EDs, but also to their severity.

In another study on teasing, name-calling and self-criticism, Kostanski and Gullone (2007) found that weight-related teasing in childhood resulted in the teased individual developing a negative body image. A negative body image may be a source of vulnerability or an AN episode trigger in the individual who already has several other sources of vulnerability and is more likely to internalise this type of teasing and name-calling.

Connan, Troop, Landau, Campbell and Treasure (2007) explored social ranking and its association with AN vulnerability. They found that low social ranking was evident in both individuals who were in an active AN episode or recovered from AN. Again, it seems that the individual who is vulnerable to developing AN is more inclined to make unfavourable social comparisons, internalise teasing and develop low self-esteem. This idea was further explored and substantiated in a study by Cardi, Di Matteo, Gilbert and Treasure (2014). The study included 50 healthy controls, 46 individuals with an ED, and 22 individuals who had recovered from an ED (recovered). All groups completed an attentional bias task related to social rank, an implicit self-evaluation task, and self-report measures on submissive behaviour, social comparison and shame. The results were as follows:

> People with EDs showed vigilance toward social rank-related stimuli and lower implicit positive self-evaluation than HCs. Self-report data confirmed the behavioral findings and showed that people with EDs had higher levels of unfavorable social comparison, submissive behaviors, and external and internal shame than HCs. People who had recovered from an ED showed an intermediate profile between the two groups (Cardi et al., 2014, p. 543).

The results showed that individuals with EDs as well as the ED recovered group had heightened sensitivity to unfavourable social comparisons. The authors also suggested that EDs seemed to be associated with an impaired automatic level of processing

related to self-evaluation. This could link to biological sources of vulnerability for AN (section 2.5) that suggested faulty cognitive processing as contributing to AN vulnerability because of AN individuals' increased sensitivity to certain negative environmental cues and information. In this way, it is not simply faulty processing that creates AN vulnerability, but that faulty processing increases the likelihood of selective attention and over-response to receiving information from a critical peer and family environment negatively. The two areas of vulnerability, biological and environmental, appear to be deeply interrelated as vulnerability factors for AN development.

2.7.4 Trauma and sexual abuse

Messages regarding thinness could be communicated to individuals directly (as discussed above in section 2.7.3 regarding peers) or indirectly (as discussed below in section 2.7.6 regarding societal and media messages). Both of these seemed to be potential sources of vulnerability in AN development and maintenance. Moving away from messages regarding thinness, exposure to trauma seems to be another major environmental source of vulnerability. This section could also be categorised as an episode trigger. While exposure to trauma in general would constitute a source of vulnerability, a time-specific acute incident would be categorised as an episode trigger. The section below deals with both general ongoing trauma as a source of vulnerability for AN and specific events as episode triggers.

In a literature review Rorty and Yager (1996) explored trauma (including complex trauma) and the impact this had on the future development of an ED. They concluded that several experiences could be regarded as traumatic. These include: abuse (sexual, physical and psychological), violence within the family, and adverse events. They suggested that such traumas had several possible consequences, including: disturbances in eating (and the later development of EDs), intensity, dissociation, substance abuse, self-harm and suicidality (Rorty & Yager, 1996). Schmidt, Humfress and Treasure (1997) also found a strong association between EDs and physical and sexual abuse in childhood. However, in this particular study the discordant family appeared to be a more important vulnerability factor of which physical abuse was a component. However, this seemed to be more applicable to individuals with BN rather than their AN counterparts. In this example, being part of a discordant and abusive

family could be considered a source of AN vulnerability, while a particularly bad beating from a parent, resulting in a child binge-eating and purging, for example, may have constituted an episode trigger.

Most research has focused on BN and abuse, which has inadvertently created the assumption that abuse is not characteristic of AN. This may be true for most but not all cases of AN. Abuse in individuals with AN should not be overlooked. Treuer, Koperdak, Rozsa and Furedi (2005) explored AN and physical and sexual abuse. They found that for individuals with binge-eating/purging type AN, childhood physical and sexual abuse had major implications to the development of body image distortion which the authors argued could have a causal link to AN.

Fichter, Quadflieg and Hedlund (2008), focusing on BN and binge-eating disorder (rather than AN), found that psychiatric comorbidity was predictive of the possible later onset of an ED as well as a poor treatment outcome. Other important findings indicated possible links between BN and self-injury, body dissatisfaction, sexual abuse and impulsivity. Similarly, Garrido and Subirá (2013) assessed 71 ED patients (27 restricting patients, 44 binge-purge patients) and 38 healthy controls on the Iowa Gambling Task, and found that both ED groups performed poorly in comparison to healthy controls. The authors associate this poor performance with impulsivity.

Despite being particular to BN and binge-eating disorder, these studies are cited here because impulsivity, self-injury and sexual abuse, though seldom reported, could exist in AN, not necessarily as sources of vulnerability, but as potential AN episode triggers, maintaining factors or associated personality features.

Vartanian, Smyth, Zawadzki, Heron and Coleman (2014) assessed 748 female university students using an online questionnaire which measured childhood adverse experiences, intrapersonal resources (such as self-esteem), interpersonal resources (such as social support), body dissatisfaction, disordered eating and exercising for weight loss. They found that individuals who had experienced more childhood adversities had fewer intra and interpersonal resources. They also had increased body dissatisfaction, which was closely linked to disordered eating and increased exercise.

Similarly, a recent study also found a link between AN and childhood trauma (Monteleone et al., 2015). They tested 23 AN individuals, 21 BN individuals and 29 healthy controls using the Childhood Trauma Questionnaire and saliva samples (to test for saliva cortical awakening response present in those who have been exposed to early trauma and consequent activated hypothalamic-pituitary-adrenal (HPA) axis). The results indicated that 13 AN and 12 BN participants who were exposed to childhood trauma showed significant results in their saliva cortical awakening response. The authors concluded that AN and BN individuals exposed to childhood trauma displayed dysregulation in their HPA systems. There can be no doubt that abuse would impact negatively on a child with AN vulnerability. However, such abuse is not typical of AN families (see 2.7.1). In a child already vulnerable to AN, a specific incident of abuse may constitute an episode trigger that leads a spell of intensive dietary restriction as an attempt to regain a sense of control.

Childhood physical and sexual abuse are seldom documented in AN families, however an instance of such abuse in an individual already vulnerable to AN could contribute to triggering the onset of the disorder and its maintenance.

Section 2.7.1-2.7.4 have explored specific potential sources of vulnerability and episode triggers in AN, the sections that follow explore general overarching societal forces that may contribute to AN vulnerability.

2.7.5 Religion

Huline-Dickens (2000) studied asceticism in Christianity and AN. While the author states that there is hardly any empirical literature to support this link, she argues that AN and religious and secular asceticism share features of denial, self-sacrifice, self-punishment and abstinence from gratifications. She concludes that both individuals with AN and those who follow a strong ascetic religion may share psychopathological features that encourage them to harm and deprive themselves to reach an unattainable ethical and ascetic ideal.

Bennett, Sharpe and Freeman (2004) studied AN in Ghanaian secondary school students and found that some individuals with AN lacked preoccupation with weight

concerns and body image and were instead focused on morbid self-starvation. These individuals viewed their self-starvation positively because it was associated with qualities such as self-control and denial of hunger (fasting), which they saw as expected by their religion (these participants reported being of either Christian or Islamic faith). Similarly, Abraham and Birmingham (2008) conducted a literature search to explore religion as a source of vulnerability in the development AN. They found a positive correlation between Islamic affiliation and higher than normal scores on the Eating Attitudes Test, possibly related to implicit messages of self-control, denial of pleasure and hunger.

In contrast, Doumit et al. (2015) explored vulnerability to EDs in 949 Lebanese females (Christian, Muslim, Druze or Other) through their association with stress, anxiety, body image dissatisfaction, depression, body mass index, religious affiliation and religiosity. The authors found that anxiety was the strongest predictor of an ED while affiliation with Christianity appeared to be a protective factor that decreased ED vulnerability. The authors concluded that religion may decrease ED vulnerability by decreasing levels of anxiety.

The links between religion and AN seem to lack robust and longitudinal studies and cannot be confirmed as a social source of vulnerability or protective factor. Furthermore, many religious individuals with ascetic ideals do not develop AN. Conversely, many individuals with AN are not religious. For those individuals who do develop AN and are religious, religion with ascetic emphases may be one of several factors involved in vulnerability to or maintenance of the disorder.

2.7.6 Society and media messages

Peer influence, discussed above in section 2.7.3, is associated with direct social interaction. Another potential source of vulnerability is a broader social influence that stems from society and media. Exposure to a society that encourages an ideal of thinness may be related to AN vulnerability. In addition, individuals who find themselves in groups that prize thinness are arguably at increased risk of receiving and responding to negative messages regarding weight and body image. For the individual

who is already inclined to receive and internalise these negative messages, there is potentially increased vulnerability for AN development.

Druss and Silverman (1979) found that ballerinas tended toward disturbed body image similar to that of individuals diagnosed with AN. Sundgot-Borgen (1993) found a high incidence of EDs in athletes, particularly in sports that had specific weight restrictions. Thiemann et al. (2015) administered clinical interviews and questionnaires to 46 aesthetic sport athletes (ballerinas for example), 62 ball game athletes and 108 non-athletes to asses thin ideals and body dissatisfaction. The authors found that five times more aesthetic sport athletes had EDs than the other two groups. Sport may contribute to AN risk. Alternatively, individuals already at risk of developing AN may be attracted to these sports and activities as a means of weight reduction, maintaining their disorder. Yet another argument may be that individuals already vulnerable to developing AN, who find themselves in these kinds of groups, may be triggered into an AN trajectory.

Looking more widely at society in general, women have appeared to be exposed to and receive media messages encouraging a thin ideal. Furnham, Badmin and Sneade (2002) found that self-esteem was directly related to body dissatisfaction in adolescent girls. This was less the case with adolescent boys. This may suggest that societal pressure to be thin affects adolescent females more specifically than males. However, Schmidt and Park (2003) caution that that argument cannot explain the aetiology of EDs:

> In the Western world the sharp contrast between the wide availability of cheap, calorific and highly palatable foods and the excessive value put on slimness and dietary restraint and the daily bombardment with images of emaciated supermodels and other media images of thin role-models has meant that weight and shape concerns and dieting are the norm among young women. However, an account of the aetiology of eating disorders as firmly rooted in these sociocultural pressures does not explain the fact that, despite the ubiquitous nature of these psychosocial pressures, only a relatively small number of women go on to developing an eating disorder. Moreover, it has been observed both in a historical context and in non-Western cultures that eating disorders manifest without weight and shape concerns. This would suggest that these socio-cultural pressures to be slim are neither necessary nor sufficient to explain eating disorders (p. 31).

As the excerpt suggests, and compatible with the vulnerability model (Zubin & Steinhauer, 1981; Rutter, 1997, 2002) adopted in the present study, it is reductionist to assume that AN develops as a result of a society that idealises thinness. However, it would be naïve to exclude the impact of societal messages on those individuals that do develop AN. As the literature review has suggested, it seems possible (if not likely) that individuals already vulnerable to developing AN are more receptive to negative media messages. These negative messages may be internalised and could contribute to AN vulnerability.

Chan and Ma (2004) conducted a qualitative study on 8 individuals with AN and found that while the participants subscribed to discourses about slenderness and beauty, this discourse alone could not account for AN development. Rather, they argued that a combination of various systems (including biological, psychological, socio-cultural and familial) were involved in development of AN. Rather than being a dominant causal factor, thin ideals were argued to contribute to AN vulnerability.

Park (2005) applied a theoretical framework of presumed influence to understanding the impact of beauty magazines on thinness ideals. She theorised that reading beauty magazines that portray a thin ideal would increase readers' drive for thinness. However, the author states that this would contribute to, rather than cause, AN. This could be equated to alcoholism; where exposure to alcohol does not cause alcoholism. However, for the individual who is vulnerable to alcoholism, alcohol exposure may be an episode trigger.

It may also be that the individuals who are already vulnerable to developing AN may be more inclined to seek out, receive and internalise media messages that encourage their drive for thinness. Norris, Boydell, Pinhas and Katzman (2006) explored the content of pro-anorexia (pro-ana) websites using a grounded theory method. Twenty pro-ana sites were selected and analysed. They found the following prominent features:

> Key website characteristics included purpose of website (75%), information about webmaster (67%), website disclaimers (58%), and information on "tips and tricks" (67%). Religious metaphors, lifestyle descriptions, and "thinspiration" (inspirational photo galleries and quotes that aim to serve as

motivators for weight loss) were frequently present. A total of 10 themes were generated. The most prevalent themes included control, success, and perfection (Norris et al., 2006, p. 443).

Messages regarding control, success and perfection seemed to be important in inspiring those already diagnosed with AN to maintain their low weight. Thus, while these sites may not be a direct cause, they seem to aid AN maintenance and in so doing may increase vulnerability to low self-esteem and self-dissatisfaction. Using the alcoholism analogy described earlier, exposing individuals with AN to pro-ana websites may be seen as analogous to exposing an alcoholic to liquor. In another study, Bardone-Cone and Cass (2007) assessed the effects of viewing pro-ana websites. They concluded that participants reported feeling negative affect, experienced greater need to compare their body size to that of others, had lower self-esteem and wanted to eat less and exercise more.

As described above, it is not all females, but rather specific individuals who seem more receptive to media and societal messages encouraging thinness. Lukacs-Marton, Vasarhelyi and Szabo (2008) assessed fashion models (*N*=543) using self-report questionnaires. They found more inclination to dieting, increased body dissatisfaction, and use of laxatives and diuretics in comparison to healthy controls. These inclinations may contribute to AN vulnerability and may also have been adaptive to participants remaining in this occupational group, thus maintaining their AN.

Austin and Smith (2008) assessed "thin ideal internalisation" (p. 448) defined as the extent to which the (Mexican) girls in their study internalised what they believed to be society's slim ideal. They found that participants who had internalised ideals of being slim were more likely to experience body dissatisfaction. Body dissatisfaction may contribute to AN vulnerability . Similarly, Carey, Donaghue and Broderick (2011) explored body image concerns of school-going children in an all-girls school and found that appearance-focused conversations that were based on weight and dieting occurred daily. While all girls may be exposed to these kinds of conversations, not all girls develop AN. It seems possible that an individual vulnerable to AN is more inclined to be affected by societal messages promoting thinness.

Rohde, Stice and Marti (2014) examined data from 496 female adolescents who were assessed, with eight measures annually from preadolescence to young adulthood, for AN risk. They found that desire to be thin, thin-ideal internalisation and body dissatisfaction were significantly associated with age increase, and that increasing body dissatisfaction at ages 13-16 years predicted the diagnosis of later DSM-5 EDs. The authors concluded that,

> …(t)he results imply that these risk factors are present by early adolescence, although eating disorders tend to emerge in late adolescence and early adulthood. These findings emphasize the need for efficacious eating disorder prevention programs for early adolescent girls, perhaps targeting 14-year olds, when risk factors seem to be most predictive. In early adolescence, it might be fruitful to target girls with body dissatisfaction, as this was the most consistent predictor of early eating disorder onset in this study (Rohde et al., 2014).

As the above suggests, the pre-adolescent age-group were more inclined to interpret and be affected by thinness ideals. For the individual who has other AN vulnerability markers in place (from either/or biological and social factors), exposure to thinness ideals may increase body dissatisfaction which may constitute a final trigger in the onset of AN. The importance of considering all sources of vulnerability, and their interaction, may be necessary for understanding AN development, and is discussed further in the section that follows.

2.8   ANOREXIA NERVOSA: TOWARDS INTEGRATED SOURCES OF VULNERABILITY

The literature reviewed above has attempted to describe biological, psychological and sociocultural factors that seem to contribute to AN vulnerability. Chan and Ma (2004) draw on general systems theory and argue that the development of AN should be understood using an integrated approach whereby all perspectives are considered. Similarly, Costin (2007) argues that genetic factors alone are not responsible for AN development and suggests a combination of predisposing genetic factors, activated by particular environmental factors, that lead to phenotypic ED manifestations.

> The belief held by several researchers in the field is that an accumulation of various genes – each with a small, additive influence – together with certain environmental factors increases one's risk of developing an eating disorder. Prominent genetic researcher Cynthia Bulik once stated, "Genes load the gun and environment pulls the trigger" (Costin, 2007, p. 59).

The above excerpt seems to recommend a linear aetiological explanation for AN, where genetics come first in the form of a vulnerability, with environment second as the trigger for AN onset. From the above exploration of sources of vulnerability (sections 2.5 to 2.7 above), this review presents an alternative aetiological explanation for AN. Rather than aetiology being explained as linear, sources of vulnerability are discussed as systemic, multidirectional and contributory to AN vulnerability, maintenance and sensitivity to trigger events. This multidirectional approach, suggested by the literature review and founded on the earlier cited models proposed by Zubin and Steinhauer (1981) and Rutter (1997, 2002) is presented schematically in Figure 2.1:
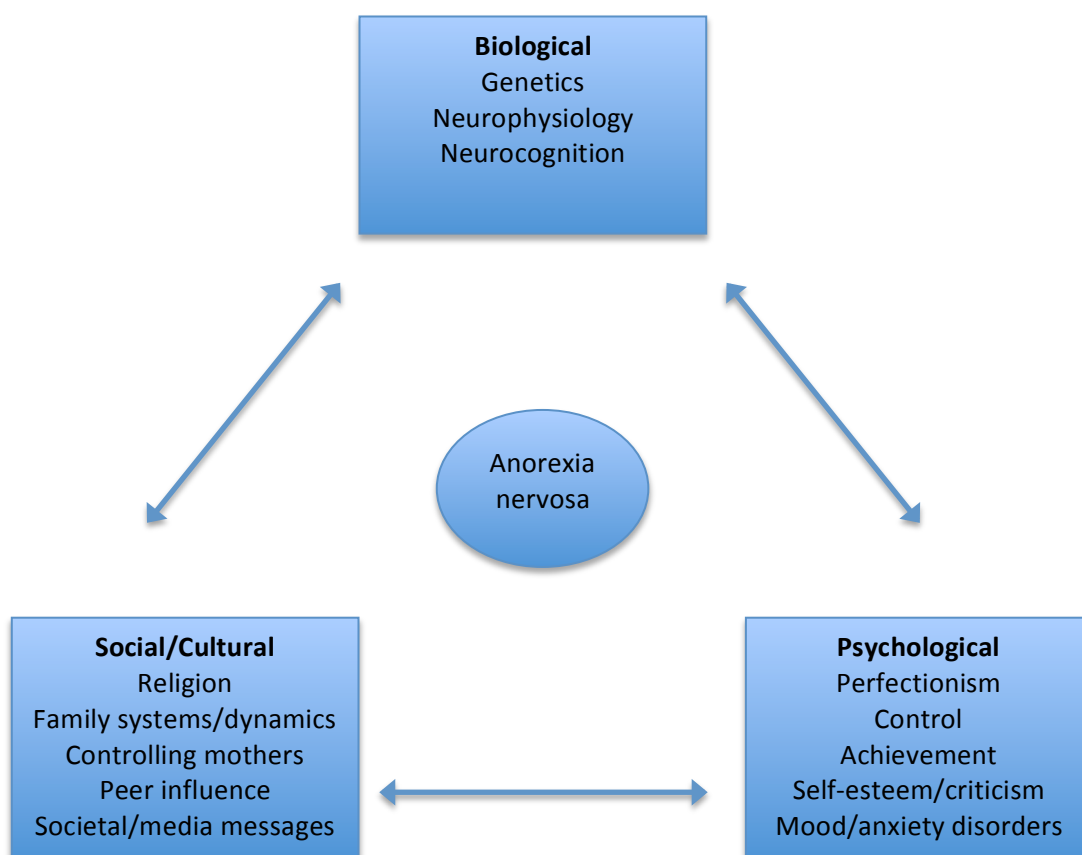
Figure 2.1. Diagrammatic presentation of potential sources of vulnerability in AN.

As Figure 2.1 illustrates, biological factors may affect the social or psychological experience of a particular individual. As indicated in sections 2.5.2 and 2.5.3, neuropsychological deficits in set-shifting may dispose particular individuals to having increased perfectionist traits and thus increased anxiety risk. This, in turn, may result in unusual family dynamics and greater sensitivity to internalising specific stimuli from family and society.

The reverse is plausible too: being exposed to specific or unusual family dynamics may increase anxiety that may lead to perfectionism. Perfectionism (and associated psychological disorders including AN, mood and anxiety disorders) may in turn contribute to or exacerbate neurocognitive deficits in set-shifting and its associated cognitive processes. Lang et al. (2014) (section 2.5.3) found set-shifting deficits more frequently in adults, not children, with AN. This may suggest that set-shifting deficits may be acquired over time, possibly because of exposure to certain biological, psychological and/or socio-cultural factors.

The interaction and culmination of these particular biological, psychological and social and cultural factors seem to increase vulnerability to AN development and maintenance. While this has not been empirically confirmed in any study related to AN, this type of systemic or integrationist model for aetiology has been used by Zubin and Steinhauer (1981) and Rutter (1997, 2002) to explain the development of other psychological disorders. It may be useful to apply these models to understanding the development of AN which, to date, has largely been accounted for by reductionist linear nature and nurture models. Strober and Humphrey (1987) suggest that it is not a simple and clear-cut linear link that creates the familial pattern in AN. Rather, the predisposition described is not to AN specifically, but to a vulnerable and sensitive personality and cognitive structure that contributes to an individual's sensitivity and reaction to social experiences. This, in turn, may increase AN vulnerability.

2.9   EPISODE TRIGGERS

Sections 2.5 – 2.7 have attempted to explore three potential domains of vulnerability for developing AN. These were, somewhat arbitrarily: biological, psychological and social and cultural. All three domains seem to interact with, and impact on each other, in increasing vulnerability for AN. With a combination of these sources of vulnerability present, an episode trigger is probably a requisite for AN onset. These episode triggers could fall into any of the three domains discussed. A multitude of combinations of elements within these domains could probably also trigger AN onset. For example, a neurophysiological shift (biological) as a result of a trauma (social) may trigger the onset of AN. Similarly, exposure to critical comments from peers (social and cultural),

may cause increased perfectionism and drive for thinness (psychological) that could in turn trigger AN onset.

Sources of vulnerability seem to be present for several years before AN is triggered. More studies are needed to identify and understand which factors trigger AN onset. Possibly, a gradual development and interplay of all the domains of vulnerability, followed by a major event in any one of them, seems to trigger AN onset. Episode triggers should not be mistaken for AN causes, as popular lay literature is prone to do. A critical comment, a relationship break-up, a growth spurt, puberty or anxiety could all signify episode triggers. Notably, episode triggers should not be synonymised with aetiology. Aetiological factors are those that increase vulnerability to developing AN. These probably need to be in place first, followed by an acute triggering event, before onset of AN. Metaphorically, the vulnerability factors place the individual on the bridge, the episode trigger is responsible for pushing them off it. The trigger factor would have little impact if they were not on the bridge.

2.10   MODERATING FACTORS

Zubin and Steinhauer (1981) and Rutter (2002) describe moderating factors as those features that discourage AN development and maintenance. These may include interventions and treatments, as well as the development of certain traits, resiliencies or social resources in AN individuals that seem to contribute to recovery or discourage AN onset after a potentially triggering episode.

This section will explore three components: effective assessment necessary for intervention, biological moderating factors and psychosocial moderating factors.

2.10.1 Effective assessment

While assessment itself is not a moderating factor, it is an important aspect of intervention that is necessary to attain a baseline of the individual's functioning at the start of treatment and can lead to early intervention which could moderate further episodes or chronicity. Costin (2007) divides psychometric assessments for EDs into three categories: self-report instruments, body image assessments and motivation assessments. Each category has strengths and weaknesses. For this reason, it is

generally suggested that a battery of assessments is used to diagnose and subsequently treat individuals with EDs (Surgenor & Maguire, 2013).

Self-report instruments are frequently used in the early assessment of a potential AN individual. Some popular self-report instruments include the Eating Attitudes Test the EDI and the Eating Disorder Examination Questionnaire (Costin, 2007; Luce, Crowther & Pole, 2008). These self-report assessments, while potentially yielding a wealth of knowledge about the individual, have less robust reliability and validity (Costin, 2007)(Refer to section 4.5.2 below for reliability and validity statistics for the EDI). Couturier and Lock (2006), using the Eating Disorder Examination Questionnaire, found that denial and minimisation were common (particularly in adolescents with AN) and thus posed difficulties for valid and reliable assessment.

Body image assessments are designed to measure body image disturbance, characteristic of many AN individuals. Uys and Wassenaar (1996) investigated body image in individuals with AN using the movable calliper technique, image-marking procedure and the Body Cathexis scale. In order to assess body image, subscales from self-report tests that deal with body image, weight and shape concerns can be used (Costin, 2007). Alternatively, a specific assessment called the Shape-and-Weight-Based Self-Esteem Inventory, can be used in AN assessment (Costin, 2007). This assessment is particularly innovative, in that it departs from the standard question-and-answer mode of self-report assessments and relies on experiential and visual modes of assessing.

Finally, motivation assessments are often used on individuals with AN as a tool to help determine which patients are best suited to different treatment modes. Two motivation assessments include the Stages of Change Questionnaire and the Readiness and Motivation Interview (Costin, 2007). 'Readiness to change', a factor measured in the test, has been argued to be a favourable predictive tool for short-term outcomes (Bewell & Carter, 2008; McHugh, 2007).

A narrative tool that could be useful as a predictive assessment for successful treatment for AN, is linguistic style. Wolf, Sedway, Bulik and Kordy (2007) compared essays written by individuals with AN and healthy controls and found that:

> ...the inpatient journals [of AN patients] displayed the highest rates of self-related words, negative emotion words, and the lowest rate of positive emotion words. Inpatients used more anxiety words and fewer words that refer to social processes and eating concerns than individuals who had recovered from an AN. Associations were found between linguistic categories, prewriting well-being, and postwriting evaluation (Wolf et al., 2007, p. 711).

Linguistic style analysis is innovative in AN assessment. It is less reliant on direct self-report and is unobtrusive in nature. An unobtrusive assessment could be less harmful than a self-report measure, which may be emotionally triggering for sensitive AN individuals.

Swanson et al. (2014) explored the importance of multiple informants when assessing EDs in adolescents. Their study sampled 7,968 adolescents and their parents, who answered questions regarding ED behaviour which included thinness, fasting, bingeing and purging. They found that parents were less likely to report BN symptoms in their children than they were to report thinness, possibly because of the severity implicit in AN thinness.

To summarise, utilising several assessment types, as well as receiving corroboration from multiple sources (such as parents, teachers, doctors, and dieticians) is useful for AN assessment. Corroboration would be beneficial in cases where the AN individual misrepresented him or herself or was unaware of symptom severity. Once behaviours and thought processes associated with AN have been identified through multiple assessments, AN can be moderated through careful intervention (APA, 2006). Intervention could occur in the biological and psychosocial domains.

2.10.2 Biological moderating factors

Intervention plans can be developed once a baseline of AN features of a particular patient are determined. Given that the sources of vulnerability for AN occur in three primary domains (biological, psychological and social and cultural) it seems fitting that

intervention be considered in all three areas. Notably, moderating factors do not include intervention only, but other factors that mitigate AN vulnerability and counteract triggering events. The biological moderating factors discussed below are treatment-focused.

2.10.2.1 Hospitalisation

The APA (2006) treatment guide suggests hospitalisation as a component of treatment for AN however,

> ...(r)esearch that addresses the optimal length of hospitalization or the optimal setting for weight restoration is sparse. There is no available evidence to show that brief stays for anorexia nervosa are associated with good long-term outcomes (p. 75).

APA (2006) concluded that patients who were discharged from hospital after attaining required goal weight seemed to have lower relapse rates than those who were discharged prior to reaching required goal weight. Hospitalisation's central goal appears to be a physical treatment by refeeding, rather than a psychological or emotional one.

Commenting on APA guidelines Yager et al. (2014) describes choice of setting, nutritional rehabilitation, psychosocial interventions, family therapy, pharmacotherapy and somatic treatments. However, findings in each domain are reported as inconsistent. Yager et al. (2014) suggest that the treatment of AN requires further empirical investigation. According to the guideline,

> There are few randomized, controlled trials, and available studies suffer from small sample sizes, short duration, and methodological problems. A contributing factor is that study recruitment is generally poor and dropout rates are high (p. 3).

Further, in a recent review of literature Herpertz-Dahlmann, van Elburg, Castro-Fornieles and Schmidt (2015) concur, suggesting that successful AN treatment in adolescents needs further research,

...the standing of a field is considerably based on its evidence for treatment. Although the number of randomized controlled trials and well-designed studies have increased in the recent past, the evidence base for treatment of adolescent AN is still limited (p. 12).

2.10.2.2 Refeeding

Much literature has been devoted to the role of nasogastric refeeding of individuals with AN who have reached low BMIs (≤13) and are critically malnourished. Sharp and Freeman (1993) list several physiological complications associated with severe AN. The worst of these complications are cardiovascular malfunctions that could result in death. The necessity for refeeding to avoid morbidity and mortality may require involuntary hospital admission (Ramsay, Ward, Treasure & Russell, 1999).

Huang, Fang, Tseng, Lee and Lee (2001) cautioned that there are physiological dangers in overfeeding chronically malnourished individuals with AN, and supported a gradual refeeding process. Agostino, Erdstein and DiMeglio (2013) further explored potential dangers of refeeding too quickly in individuals with severe AN. They found that it was necessary to include specific initial high caloric intake when treating AN patients to avoid refeeding syndrome (including symptoms such as hypophosphatemia and metabolic problems) that could occur subsequently.

In a review, Kezelman, Touyz, Hunt and Rhodes (2015) explored the association between anxiety symptoms and weight restoration. The authors concluded that refeeding served an important purpose in very low BMI cases, but that,

> ...in regards to the relationship between anxiety symptoms and weight restoration, the results of the current review do not support a significant association. In line with this finding, evidence points towards the insufficiency of solely targeting weight restoration for long-term recovery (Kezelman et al., 2015, p. 19).

Kezelman et al. (2015) further suggested that despite the,

> ...obligatory targeting of weight restoration in the recovery of AN [...] there is no evidence – clinical or empirical – to indicate that normal weight is a necessary prerequisite for initiating meaningful psychotherapeutic interventions, which may facilitate weight change (p. 20).

It appears that more research is needed to ascertain a safe and systematic refeeding procedure for individuals with AN and further, that even if a reliable and safe method of refeeding was confirmed, that this may not necessarily be synonymous with long-term positive implications for psychotherapeutic intervention.

2.10.2.3 (In)Effectiveness of hospitalisation

Meads, Gold and Burls (2001), exploring inpatient versus outpatient care for AN over a five-year period, found no distinction in outcome results between the two treatment options. However, they mentioned that in emergency situations, where patients have critical BMIs (≤13), short-term hospitalisation for refeeding may be necessary.

A comprehensive study on three modalities of AN treatment, namely: inpatient treatment, specialist outpatient treatment and general outpatient treatment, conducted by Gowers et al. (2007) found that inpatient and specialist outpatient treatment showed no significant advantages over general outpatient treatment. This raises questions as to the clinical effectiveness of hospitalisation for AN. It appears that refeeding is necessary in severe cases as a short-term emergency intervention, with the specific intention of saving life and arresting weight loss. However, beyond this assumption, empirical data on inpatient treatment seems to show little long-term effectiveness. These studies are undermined by lack of randomisation and no assurance that patients in the three groups were clinically equally severe. Uncontrolled patient differences could explain the treatment response data.

Haynes, Elivors and Crossley (2011) state that one of the major difficulties for inpatients with AN was that they experienced hospitalisation as too removed from daily life which resulted in feelings of disconnection. They concluded that this treatment form could exacerbate negative feelings of loneliness and disconnection. These out of control feelings may contribute to AN maintenance.

2.10.2.4 Potential improvements through hospitalisation

Colton and Pistrang (2004) explored the experiences of individuals with AN who received inpatient treatment. They found that patients focused on five key elements in explaining their experience of treatment:

(1) What is this illness that I have? (2) Do I want to get well? (3) Being with others: support vs distress; (4) Being an individual vs just another anorexic; and (5) Collaborating in treatment vs being treated (p. 307).

This suggests that inpatients with AN seem to be ambivalent about recovery. In addition, being surrounded by other individuals with AN seemed to have differing effects. Being with other AN patients was a support but it increased competitive comparisons and weight-reducing habits. Taking this further, inpatients seemed to have a desire to be treated as individuals. Inpatient treatment seemed to discourage individuation, making patients invested in treatment (Colton & Pistrang, 2004).

2.10.2.5 Pharmacological treatment

Antidepressants and antipsychotics have been used in the treatment of AN for symptom reduction. APA (2006) concluded that some studies have indicated positive results. However, overall, the evidence is unable to support the claim that psychotropic medications improve weight restoration in AN patients.

Fazeli et al. (2012) studied 525 individuals (aged 18-54 years old) with AN between 1997 and 2009. They divided participants into two cohorts: 1997-2002 and 2003-2009. The results were as follows:

> Overall, 53% of participants reported current use of any psychotropic medication; 48.4% reported use of an antidepressant and 13% reported use of an antipsychotic. Twice as many participants in Group II (18.5%) reported using atypical antipsychotics as compared to Group I (8.9%) (p = 0.002) (Fazeli et al., 2012, p. 970).

They concluded that many of their participants had been prescribed and were taking medications known to have negative side effects. Notably, little empirical data exists to suggest that psychotropic medication is effective in AN treatment. Commenting on the APA treatment guideline update Yager et al. (2014) suggest that there is, "… limited evidence for the use of medication to restore weight, prevent relapse, or treat chronic anorexia nervosa" (p. 7).

In concluding this section on the biological moderating factors of AN, hospitalisation for refeeding may be utilised in short-term emergency AN treatment. This treatment

may allow the emaciated patient to regain strength to enter into psychological treatment (discussed below in 2.10.3), or it may serve as a psychological interruption of a rapid spiral into critical emaciation (Agostino et al., 2013; APA, 2006; Ramsay et al., 1999). However, as discussed above in section 2.10.2.2, Kezelman et al. (2015) caution that weight restoration and psychotherapeutic success are not necessarily associated. It appears that psychotropic medication has little effectiveness in treating AN (Yager et al., 2012). However, these medications may be effective in treating comorbid conditions (discussed in section 2.6.7), which may inadvertently reduce the risk of continued AN episodes (Yager et al., 2012).

2.10.3 Psychosocial moderating factors

Psychological, social and cultural moderating factors will be combined and discussed together because of their apparent interrelatedness. Psychosocial moderating factors incorporate several personality and treatment factors that seem to reduce AN symptomatology. These include readiness to change, access to several psychotherapeutic interventions, feeling valued, focusing on the person not the problem, therapeutic alliance and the importance of sharing. These are outlined below.

2.10.3.1 Readiness to change

McHugh (2007) found that readiness to change encouraged better prognosis in a sample of 65 individuals with AN:

> Readiness for change is a useful predictor of a favorable short-term outcome and should be considered in the assessment profile of patients with AN (p. 602).

Similarly, readiness to change has been reported as a positive predictor for treatment success (Bewell & Carter, 2008). The stronger the individual's readiness to change, the more effective treatment seems to be.

Notably, readiness to change is a characteristic that may be at odds with obsessive-compulsive disorder and obsessive-compulsive personality disorder traits and set-shifting deficits. These characteristics are associated with inflexibility and rigidity in individuals with AN, which may result in resistance to change. A skilled

psychotherapist could use this rigidity drive towards agreed treatment goals. In a metasynthesis of qualitative treatment studies on AN Espindola and Blay (2009) suggest that successful treatment of AN needs to go beyond conventional treatment and that the fear of change is part of a cognitive distortion that needs to be overcome in the process of therapy.

2.10.3.2 Psychotherapeutic interventions

There are several psychotherapeutic intervention options for treating AN that can be construed as moderating influences using the framework adopted for the present study. Fully exploring each of these is beyond the scope of the current study so a selected few are briefly described below. Those selected were chosen based on popularity and how frequently they have been studied.

Ryle (1991) introduced cognitive-analytic therapy (CAT) as a treatment option for various disorders including AN. Cognitive-analytic therapy brings together cognitive behavioural therapy (CBT) and psychoanalytic therapy to create an integrative intervention. CBT is incorporated in the form of monitoring, journaling and record keeping. These CBT techniques are used against a backdrop of exploring the individual's upbringing and history and corresponding unconscious conflicts (psychoanalytic treatment goals). Particular focus is given to working with traps (negative assumptions), dilemmas (false dichotomies) and snags (abandoning of appropriate goals) (Ryle, 1991). Hay, Touyz and Sud (2012) conducted a systematic review of randomised controlled trials to assess treatment modalities for enduring AN and listed CAT as one of the specialised treatment approaches that had probable advantage.

In a randomised control trial, Schmidt et al. (2012) recruited 72 adult AN patients who were allocated to receive 20 sessions of either Maudsley Model for Treatment of Adults with Anorexia Nervosa [MANTRA] or specialised supportive clinical management (which included CAT). The authors found that CAT, along with other specialised supportive therapies were useful for outpatient treatment of AN.

According to APA (2006), robust findings regarding the effectiveness of psychosocial interventions (including psychoeducation, individual therapy, family therapy and group therapy) are sparse. However, APA (2006) concluded that:

> ...(i)n a review of 23 studies reporting surveys of people who have had an eating disorder to determine which treatments patients find helpful, support, understanding, and empathic relationships were rated as critically important, psychological approaches were rated as the most helpful, and medical interventions focused exclusively on weight were viewed as not helpful (p. 75).

A longitudinal study conducted by Fichter et al. (2006) on outcome predictors of AN concluded that impulsivity, symptom severity and chronicity were central factors associated with treatment failure. Thus, reducing impulsivity and early AN-detection and intervention may moderate vulnerability and episode triggers.

Cognitive behavioural therapy is widely used in treating AN and relies on monitoring and behaviour modification (Costin, 2007). Cognitive behavioural therapy for EDs focuses on cognitive distortions that are "… held sacred by clients who rely on them as guidelines for behaviour to gain a sense of identity, safety, and control" (Costin, 2007, p. 115). Cognitive distortions can reinforce the idea that AN is part of the individual's identity, replace reality with a distorted perception, and allow for AN behaviour (Costin, 2007). As with the other therapies, treatment studies seem to yield contradictory results regarding effectiveness. Wilson, Grilo and Vitousek (2007), in a review of literature, indicated that cognitive behavioural therapy appears to be the treatment of choice for BN and binge eating disorder but that more research needs to be conducted on its effectiveness in treating AN. They also concluded that there appeared to be a lack of research on adolescents with AN, which was problematic in view of an emphasis on early AN identification and intervention. Alternatively, Carter et al. (2009) conducted a nonrandomized clinical trial on 88 individuals with AN and concluded that, "CBT may be helpful in improving outcome and preventing relapse in weight-restored AN" (p. 202). Thus, while cognitive behavioural therapy may not cure AN, it seems to have efficacy in relapse prevention. Calugi, Dalle Grave, Sartirana and Fairburn (2015) exposed 95 participants (46 adolescent participants and 49 adult participants) to 40 sessions of a shortened CBT treatment entitled "enhanced cognitive behaviour therapy" (Calugi et al., 2015, p. 21). The authors found that, "...the mean time

required by the adolescents to restore body weight was about 15 weeks less than that for the adults" (Calugi et al., 2015, p. 21). While the authors suggest that the study should be replicated on bigger samples, they hypothesize that enhanced CBT may be an effective and fast treatment modality for adolescents with AN.

Interpersonal therapy attends to underlying relationship issues often present in the ED client (Costin, 2007). Interpersonal therapy appears to be used more frequently in the treatment of BN and binge eating disorder, and does not work directly with the ED but rather focuses on working with the patient's current interpersonal relationships. Longer-term studies using interpersonal therapy have found that in improving many problematic relationships, ED symptoms can be moderated (Costin, 2007). In a review of clinical trials, Watson and Bulik (2013) found that a combination of renourishment alongside supportive psychotherapy, in which interpersonal therapy was included, was found to be benefical in the treatment of AN.

Dialectical behavioural therapy has received attention as a treatment option for AN. Dialectical behavioural therapy combines certain cognitive behavioural therapy techniques with interpersonal therapy (Costin, 2007). Dialectical behavioural therapy was originally designed to help individuals with problematic interpersonal relationships. For this reason it proves useful when working with BN and binge eating disorder individuals who have similar problematic interpersonal relationships. Dialectical behavioural therapy focuses on mindfulness, distress tolerance, interpersonal effectiveness and emotional regulation (Costin, 2007). Salbach-Andrae et al. (2008) conducted a study on 12 ED outpatients subjected to a 25-week dialectical behavioural therapy program. After completing the trial, the participants were assessed using standardised assessment instruments for AN and BN. They found that that dialectical behavioural therapy resulted in symptom reduction. However, they indicated that studies with larger samples and control groups would be needed to confirm dialectical behavioural therapy's effectiveness.

Nordbo et al. (2008) found that the psychotherapist's insight into, and ability to identify and actively support the AN patient's motive to recover, resulted in prolonged

therapeutic success. While not a therapy *per se*, the therapeutic alliance has been shown to be more important than treatment modality (Norcross & Wampold, 2011). In addition to using the above in individual therapy, several studies recommend group therapy in AN treatment (Scime & Cook-Cottone, 2008).

Harshbarger, Ahlers-Schmidt, Mayans, Mayans and Hawkins (2009) suggest that reading the 'tips and tricks' sections on websites that promote AN can yield information regarding the psychology, social world and symptoms and behaviour of AN patients. They argue that this information is useful for clinicians in making early AN diagnoses and in immediate management of AN symptoms.

Tchanturia, Lloyd and Lang (2013) describe cognitive remediation therapy as a short-term treatment for AN aimed at targeting cognitive inflexibility (characterised by rigidity, ritualised thinking and extreme thinking). Cognitive inflexibility has been described in studies on set-shifting deficits in AN individuals (discussed in section 2.5.3 above). This more recent therapy for AN involves 8-10 sessions and comprises simple exercises that encourage the "bigger picture" (Tchanturia et al., 2013, p. 493) thinking, curiosity, insightfulness and metacognition.

Lock and le Grange (2005) reviewed literature on family treatment of AN. They found that family treatment was especially effective in treating adolescents with early-onset AN. The researchers however, proposed that more robust studies and controlled trials were needed to determine if this was the best treatment approach. Murray et al. (2015), in a theoretical paper, outlined the importance and potential effectiveness of family-based treatment and urge that family intervention should continue through all treatment sites. They suggest that,

> There can be little doubt surrounding the necessity for intensive levels of patient care in acute and severe presentations of adolescent AN, and the adaptation of [family-based treatment] from outpatient to these settings may prove to be important in ensuring swift and lasting symptom remission (Murray et al., 2015, p. 312).

The authors do however caution that,

...the recommendations outlined are theoretical in nature, and it is critical that future research evaluate the efficacy of FBT across higher levels of care, as it remains unclear to what extent findings drawn from outpatient settings may translate into more intensive treatment settings (Murray et al., 2015, p. 312).

In a recent study of seven individual interviews and six focus groups consisting of clinicians specialised in AN treatment, Dimitropoulos et al. (2015) explored the effective applicability of family-based treatment to transition age youth (ages 16-21 years). The authors found that adherence to the family-based treatment model "...progressively declined over the course of treatment" (Dimitropoulos et al., 2015, p. 1). The need for adaptation was a result of adolescents becoming more autonomous and being transferred from pediatric to adult treatment programs. The authors concluded that future research is needed to explore the effectiveness of family-based treatment in transition age youth. Following from this, in a recent review of AN treatment, Treasure et al. (2015) found that, "... although a good response to family-based interventions occurs in the early phase, once the illness has become severe and enduring there is less of a response to any form of treatment" (Treasure et al., 2015, p. 1).

In a recent review Hay et al. (2015) analysed the findings of 10 trials (comprising 599 AN participants) of the following outpatient psychotherapeutic interventions: CBT, integrative therapies (cognitive analytic therapy, interpersonal therapy, and Maudsley Model for Treatment of Adults with Anorexia Nervosa [MANTRA], psychodynamic therapy, feminist therapy and any other therapy designed specifically for treatment of AN. The authors wanted to assess which treatments were the most effective, and concluded that:

This review suggests that focal psychoanalytic therapy may be more efficacious than no treatment or treatment as usual. With one exception, we found little difference between specific psychological therapies. Most therapies appeared as acceptable as any other approach, except for dietary advice which had a 100% non-completion rate in one small trial (Hay et al., 2015, p. 33).

The authors do however caution that they were unable to draw any specific conclusions because the trails were limited by small sample sizes and lack of replication of findings.

Treasure et al.'s (2015) review of AN treatment was focused on severe and enduring EDs. The authors suggest the need for new interventions that consider not only primary symptoms (body image, food and eating) of the disorder, but also secondary symptoms (low mood, high anxiety and problems in social interaction). The authors highlight that, "…there are dysfunctions in circuits subsuming reward, punishment, decision-making, and social processes" (Treasure et al., 2015, p. 1). Adding to this, Touyz and Hay (2015) concur that new interventions and ways of understanding severe and enduring AN are needed:

> We need to rethink our treatment strategies by drawing upon the patient's strengths and competencies rather than merely paying attention to what is 'wrong' with them. Undertaking treatment with a poorly motivated, chronically ill patient where loneliness, despair and an empty sense of self prevail, poses unique challenges for clinician (p. 2).

Narrative therapy has not traditionally been used in AN treatment and its application to AN intervention is relatively recent. Rather than using narrative therapy specifically, narrative techniques (such as writing stories) may be used alongside other treatment approaches (Maisel et al., 2004). Narrative theory and therapy, because of its relevance to the current study, will be explored in a dedicated chapter (Chapter 3).

2.10.3.3 Feeling valued: Cognitive-interpersonal maintenance model

While not a treatment modality, the cognitive-interpersonal maintenance model suggests the importance of feeling valued as a moderating factor associated with treatment success (Schmidt & Treasure, 2006). They discovered four key mechanisms that seemed to be central to AN maintenance. These were: perfectionism and rigidity, avoidance of experiences, pro-AN thoughts, and the response of close others. The last component of this model indicated that individuals with AN tended to crave a sense of feeling valued.

2.10.3.4 Focusing on the person, not the problem

As described in sections 2.10.2.1-2.10.2.3, inpatient treatment and refeeding may be important in emergency intervention for individuals with potentially fatal emaciation. However, injudicious inpatient treatment of AN may be overly clinical and may

depersonalise patients as 'just another anorexic' rather than an individual with the capacity to recover (Colton & Pistrang, 2004). Many of the psychosocial and psychological interventions, described above, move away from a focus on illness to focus on the individual. However, because of a poor evidence base, more robust empirical studies exploring these suggestions are needed.

There has been a recent trend in AN studies to qualitatively explore individuals' experiences of treatment. Bezance and Holliday (2013) found that while there were many quantitative studies on treatment and recovery, qualitative studies have the advantage of in-depth understanding of the individual's experiences. Their review of qualitative studies found that the inpatient care setting, family, friends, peers and psychotherapists were all important in moderating AN. They also make a distinction between physical and psychological recovery, with the former concerning weight and the latter concerning individual's self and AN-conceptualisation. Kaap-Deeder et al. (2014) explored motivation to change in 84 AN female inpatients through self-report questionnaires that were completed at different stages in the treatment. The questionnaires concerned autonomy support from health care staff and from parents and fellow patients. They concluded that an environment fostering autonomy support was correlated with higher BMIs after treatment and self-endorsed motivation to recover and remain healthy.

Controversially, Trachsel, Wild, Biller-Andorno and Krones (2015) studied one individual with AN who refused refeeding and opted for palliative care (medical treatment that is used for life-threatening illness and focuses on improved quality of life for the patient and his/her family). The authors argued that in cases of "...chronic, severe, and refractory AN" (p. 56) palliative care, rather than forced refeeding, should be considered. The authors favour:

> ...a provisional change of the therapeutic setting to empathic communication and attendance with elements of motivational interviewing without pushing or forcing the patient in the direction of weight gain. [...]this approach not only honors the strongly expressed personal preferences better (even if these are influenced by the disease itself), but may also yield better therapeutic results while emphasizing quality of life (p. 56).

In a qualitative study on 8 individuals with severe and enduring AN (20-40 years with AN diagnosis) Robinson, Kukucska, Guidetti and Leavey (2015) found that the focus of AN treatment should not be exclusively on weight restoration but rather, "...that quality of life should be the focus" (p. 324).

In summary, support from family and health care workers that emphasise working with the individual without focusing exclusively on the AN problem may moderate AN. Contexts that encourage autonomy and that focus on the individual's experiences, appear more effective to approaches that focus on weight-restoration alone.

2.10.3.5 Therapeutic bonds for treatment and recovery

A particular therapeutic environment and therapeutic bond appeared significant to AN intervention. Offord, Turner and Cooper (2006) explored adult individuals' retrospective views on their AN treatment. The patients described inpatient treatment as authoritarian and as increasing their feelings of loss of an already marginal sense of control, isolation and ineffectiveness. Participants described preference for collaborative treatments not focused on weight gain. Notably, participants could have cunningly expressed this preference as a way of avoiding food intake.

A narrative study conducted by Ross and Green (2011) explored the experiences of two inpatients with severe AN and found that they centralised therapeutic relationships in their treatment. Feeling a strong sense of connection to their psychotherapists and other health care workers seemed to moderate AN episodes. Similarly, in a review of literature on treatment experiences of AN patients, Westwood and Kendal (2012) found that AN was perceived dichotomously as a means of control, but also as controlling. They identified a conflict between treatment focusing on physical rehabilitation, versus psychologically-focused intervention. Strong therapeutic bonds with health care workers seemed to moderate intervention challenges. Zugai, Stein-Parbury and Roche (2013) explored the role of nurses in AN inpatient treatment. They found better weight gain results in instances where nurses formed strong therapeutic bonds with inpatients. This suggests that a climate fostering understanding and support may moderate AN behaviours in treatment. In a randomised controlled trial on 142 outpatients with AN Schmidt et al. (2015)

compared the results of 20-30 weekly sessions of two psychological treatment approaches namely, Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA) and Specialist Supportive Clinical Management (SSCM). While both treatment modalities resulted in improvements (measured by BMI increases),

> Significantly more MANTRA, compared with SSCM, patients provided positive feedback. Taken together with acceptability and credibility ratings, these qualitative findings suggest that MANTRA is preferred by patients, and thus provides a strong alternative to SSCM (p. 10).

The MANTRA approach prioritised a relational emphasis and individuals in this group appeared to respond well to a treatment approach that fostered a strong therapeutic alliance and in which the individual felt valued and validated.

2.10.4 Sharing is healing?

In addition to experiencing strong therapeutic bonds, having an opportunity to share stories seems a potential moderating factor for AN. Pennebaker and Seagal (1999) exposed several individuals to the narrative task of writing their story, and measured the impact of this on mental and physical health. They found that the narrative task had a positive impact on mental and physical health. Furthermore, writing appeared to encourage participants to organise their ideas and emotions.

In a review, Pennebaker (2000) suggested that individuals telling stories about their traumatic life events was experienced as healing. They concluded that sharing traumatic stories fostered cathartic gains and mental health improvements. Similarly, Rini et al. (2006) presented a more comprehensive exploration of the impact of sharing stories for cancer patients. They found that reading other patients' stories allowed participants to experience normalisation and to feel better prepared for future treatment. Conversely, participants felt that some stories were too different from their own, or were disheartening and negative.

In a qualitative study on 34 AN individuals, Marzola et al. (2015) asked participants to write a letter to their AN in the hopes of attaining information about how the individuals perceived their disorder. The authors concluded that:

According to the findings of this study, this therapeutic strategy could have several clinical implications. In fact, given the well-known "adaptive function" (Schmidt & Treasure, 2006) of the disorder, therapists may find it helpful to ask patients—using a letter format—what is the peculiar meaning they attribute to their disorder (Marzola et al., 2015, p. 8).

This section suggests that there may be benefits to telling and sharing stories. However, there are also potential negatives to sharing stories that seem to depend on their nature. The data on this topic seems to be dominated by qualitative exploration on small samples, and thus results are only suggestive. Robust empirical data in this field would be beneficial in yielding conclusive results regarding storytelling as a potential factor in moderating AN episodes.

2.11   SUMMARY

This literature review has attempted to present an alternative framework for understanding the aetiology and moderation of AN. Using Zubin and Steinhauer (1981) and Rutter's (1997, 2002) models, aetiology has been conceptualised as a combination of interacting sources of vulnerability that include biological, psychological and social and cultural sources of vulnerability. These three domains seem to interact in a complex manner not yet fully comprehended, with one facet of the disorder possibly belonging to more than one domain because of interactions between sources and types of vulnerability. For example set-shifting deficits, constituting a neurocognitive problem, seem to fit into the biological source of vulnerability domain. However, set-shifting deficits are also associated to traits of perfectionism and rigidity, which seem to fit into the psychological source of vulnerability. The domains thus seem to interact and impact on each other in a circular, rather than linear, fashion.

An individual already vulnerable to developing AN (because of existing biological, psychological and social and cultural vulnerabilities) probably needs to experience an episode trigger to onset AN. Several factors (in any of the vulnerability domains) may constitute an episode trigger. Notably, episode triggers are not synonymous with aetiology. Aetiology describes sources of vulnerability that place an individual at risk for AN development. An episode trigger, only in conjunction with several existing vulnerabilities, is followed by AN onset.

Moderating factors mitigate AN vulnerabilty and alleviate AN symptomatology. Moderating factors can probably act biologically or psychosocially. Treatment approaches may be seen as moderating AN because they foster symptom reduction and discourage vulnerability to further episodes. Sharing stories was also described as a possible moderating factor in AN treatment.

Existing research, being embroiled in the nature versus nurture aetiological debate, may have obscured data from a key informant: the AN individual. Researchers could yield insight into AN by deriving information directly from its host, by asking the afflicted individuals how they conceptualise their AN. Researchers need to explore, not what these individuals are exposed to in their environments, but rather *how* these individuals *interpret* these experiences.

A narrative theoretical framework was utilised in this study to foster an alternative understanding of AN by focusing on participants' explanations and descriptions of their AN. Chapter 3 describes the specific narrative theoretical framework that informed aspects of this study's methodology (Chapter 4).

CHAPTER THREE
NARRATIVE THEORETICAL FRAMEWORK

3.1   INTRODUCTION

This chapter will explore several key concepts of narrative theory that are relevant to the current study. The literature cited in Chapter 2 illustrated that AN has high mortality and relapse rates. Also discussed were various perspectives on sources of vulnerability to AN, trigger events and moderating factors such as approaches to treatment. As indicated in the research problem (section 1.1), this study aimed to generate alternative understandings of AN derived directly from its source; individuals diagnosed with AN.

Narrative theory was used to inform the methodology (Chapter 4) and to offer a conceptual backdrop to interpret and manage participants' narrative data. The use of narrative theory in exploring AN may be useful for researchers. Because participants are encouraged to narrate their stories with little influence, researchers may elicit novel insights into AN as experienced by the individual. By focusing on how each understands their AN, its root, its maintenance and their experiences of treatment, researchers may identify patterns of thinking that were formerly not observed.

The current study is focused on understanding rather than treating AN. The research findings may be useful in informing future treatment-based studies on it.

This chapter, while citing a number of authors, focuses on the views of Michael White and David Epston (1990), which describe the practice of narrative therapy with particular reference to treating EDs.

The descriptions below are rudimentary explanations of some narrative principles necessary for the scope of the current study.

3.2   THE INTERPRETIVE METHOD

White and Epston (1990) begin with a discussion of the work of the anthropologist
Gregory Bateson (1904-1980). One idea, borrowed from Bateson, is the essential root
that enlivens White and Epston's (1990) interpretation of narrative theory.

The interpretive method (White & Epston, 1990) argues that nothing in the world can
be known objectively and rather, all our understandings are derived through
interpretation. In order to know the world, we interpret what we see and in so doing
create our own personalised map of it:

> ...the understanding we have of, or the meaning we ascribe to, any event is
> determined and restrained by the receiving context for the event, that is, by the
> network of premises and presuppositions that constitute our maps of the world.
> Likening these maps to patterns, he [Bateson] argued that the interpretation of
> any events was determined by how it fits with known patterns of events (Mole,
> 2004, p. 12).

The above notion informs a great deal of social psychology and constructivism which
argue that there is no objective reality, rather that reality is created subjectively by
each individual. Shweder (1991) introduces the concept of an "intentional world" (p.
74) which argues that the identity of an individual and the very existence of the world
depend on each other. "Their identities are interdependent; neither side of the
supposed contrast can be defined without borrowing from the specification of the
other" (p. 74). Shweder (1991) uses the illustration of a weed to further explore his
notion of an intentional world. In this illustration, he argues that a weed is only a weed
by virtue of the fact that somebody chose to classify it as a weed. We termed it, defined
it and studied it and in so doing essentially created it (or rather, created what it means
to us). Similarly the same is true for our own identities; we become who we are based
on our engagement with the world. This action in the world is exactly what then
defines who we are (Miller, 1984; Piaget, 1977). Fay (1996) draws a similar conclusion
to Shweder:

> [Humans] act on the basis of roles and rules which they glean only from others;
> [...] Selves are the active traces which have been precipitated out of their
> relations with other selves [...] Selves are not mere others to each other they
> mutually help to define each other such that without others selves cannot have

the capacity to be selves or the material to be the particular selves they are (pp. 47-48).

An individual's identity is argued as one created through interaction and interpretation. We interpret what we experience, and in doing so create a unique map and understanding of our lived experience. Similarly, who we become is derived through interaction with others. This defines us, and how we understand ourselves.

The interpretive method acknowledges the temporal dimension (in therapy in particular). Bateson (1979) suggests that we map the world over *time.* There is an order and sequence to events that determines our understanding and perception. This has bearing on psychotherapy as it allows individuals to identify when in time certain perceptions were created, and how these may have developed or become maladaptive to a changing context. Perceptions can change over time.

3.3   NARRATIVES AS MAPS

White and Epston (1990) take Bateson's notion of one's perception of the world as being a map and suggest that the story we construct about it, creates our experience of it. White and Epston (1990) draw on Bruner (1986) to further elucidate:

> In my view, we began with a narrative that already contains a beginning and an ending, which frames and hence enables us to interpret the present. It is not that we initially have a body of data, the facts, and we then must construct a story or theory to account for them. Instead…the narrative structures we construct are not secondary narratives about data but primary narratives that establish what is to count as data. New narratives yield new vocabulary, syntax, and meaning in our ethnographic accounts, they define what constitutes the data of those accounts (p. 143).

According to this framework, it is the narrative that creates our map or perception of experience. The narrative, while framing one's perception, is not able to capture every facet of experience and lacks the richness implicit in "lived experience" (White & Epston, 1990, p. 11). However, it is the narrative that gives the lived experience meaning. The narrative puts the lived experience into a sequence that allows it to be defined and understood meaningfully. Further, it is this meaning ascribed to experiences, that determines behaviour. In this view, the main narratives that create

and inform understanding of the world are termed dominant stories (White & Epston, 1990).

White and Epston (1990) locate problematic identities as originating from unhealthy dominant stories from which individuals derive their understanding. There is, however, a possibility for stories to change. Because the dominant story is unable to capture all the detail of the lived experience, "gaps" (p. 15) exist that are termed "unique outcomes" (p. 15). New meanings can emerge from exploring these unique outcomes. Externalising, a method used in narrative therapy (discussed below in section 3.5.1), encourages the dominant story and its gaps to emerge, be explored and reframed to reflect more adaptive meanings.

> The externalization of the problem-saturated story can be initiated by encouraging the externalization of the problem, and then by mapping of the problem's influence in the person's life and relationships (White & Epston, 1990, p. 16).

By dividing the person and the problem in this manner, unique outcomes emerge. The person and the problem are separated.

3.4   LANGUAGE AND POWER

White and Epston (1990) also draw on Foucault's ideas about power and its transmission through language. Foucault (1975) argues that discourses of power, which define how we think about the world and understand ourselves, are sewn into the threads of the language we speak:

> Who are we, we who speak a language such that it has powers that are imposed on us in our society as well as on other societies? What is this language which can be turned against us which we can turn against ourselves? (Foucault, 1975, p. 95).

White and Epston (1990) argue that while our narratives create meaning for us, the way in which we construct these narratives is influenced by various social forces and discourses that exist around us. These forces inform our engagement with the world. Gergen (1994) concurs with White and Epston:

… our observations do not drive our descriptions, explanations, and theories. Reality makes no necessary demands on what our vocabularies or understanding will be. Rather, in seeking understanding we approach the world with interpretive resources already in place, and these forestructures of understanding exert a powerful influence on what we derive from our observations (pp. iii-iv).

Subjective perception is influenced prior to experience, by social, cultural and historical forces. Fay (1996) concludes:

Each separate self does not construct its own private, individual world nor live in one; rather, each self is a self only because it is part of a community of other selves that builds up a public, social world which uses a common system of symbols [...] The self is an essentially social entity (p. 47).

Surrounding forces of power, and the communities in which they exist, inform the story. Understanding of the world and one's identity, are created by the words and phrases used and conveyed in story construction. Dennett (1989) succinctly expresses:

…words are potent elements of our environment that we readily incorporate, ingesting and extruding them, weaving them like spiderwebs into self-protective strings of *narrative*. Our fundamental tactic of self-protection, self-control, and self-definition is not building dams or spinning webs, but telling stories – and more particularly concocting and controlling the story we tell others – and ourselves – about who we are (p. 169).

3.5   NARRATIVE THERAPY IN TREATING ANOREXIA NERVOSA

The *Archive of Resistance* is an online resource with a positive message that has been created by influential writers and psychotherapists in the narrative field so as to aid in prevention of and intervention with AN. The resource explores EDs through a narrative lens specifically. This online work also deals extensively with the narrative attack on AN termed Anti-Anorexia. In comparison to more classical psychotherapies like psychoanalysis, the narrative approach to AN is relatively new in understanding, exploring and treating AN. Research in this particular area is becoming increasingly popular, but is still sparse in comparison to research that uses traditional theoretical approaches (discussed in Chapter 2). Narrative theory, briefly explored above, has influenced the creation of narrative therapy. This is discussed with specific reference to AN for the remainder of this chapter.

3.5.1 Distinct identities: Separating the person from the problem

Epston (2000) describes the importance of separating the person from the problem when trying to understand AN. This is essentially the starting point at which narrative theorists and psychotherapists come to understand EDs: as two personae. The non-disordered persona and the AN persona are described as rivals for control:

> Few problems have the comparable capacity to 'make over' one's identity as completely as anorexia. To those who have known and loved these young women all their lives, they can become estranged, almost unrecognizable and at times lost or disappeared. Many anti-anorexic women have accounted to this by descriptions of having their lives lived in a servitude that only allows for robotic obedience to tormenting requirements (Epston, 2000, *Archives of Resistance*).

The tool of anti-anorexia aims to shift this control from the AN persona to the one that is non-disordered by separating the person and their AN. Anti-anorexia's intention is to starve AN while feeding the depleted non-disordered persona:

> By conceptually and linguistically pulling the problem and the person as far apart as possible without breaking their relationship, there are many openings (Epston, 2000, *Archives of Resistance*).

Notably, the AN persona will continue to fight against anti-anorexia. The individual experiences a continual tug-of-war, marked by moments of lucidity and progress versus moments of confusion and constraint.

Narrative psychotherapists use the concept of separating the person from the problem as a part of their treatment. A derivation of this concept is discussed by Costin (2007):

> I view everybody who comes to me for eating disorder treatment as having a core, whole, "healthy self". I sometimes refer to this as the "soul self", the part of them they were born with, the part we all have. I also see that, to a greater or lesser degree, there is another split-off part, a separate adaptive, disordered self (the eating disorder self) with a separate set of perceptions, thoughts, and behaviours (p. 132).

The author goes further to argue that the objective of psychotherapy is not to eradicate the eating disordered self, but rather to understand it. The ED exists because it serves an adaptive purpose and is functional in the individual's life. Marzola et al. (2015), in a

qualitative study on 34 AN individuals, suggest that:

> Qualitative studies investigating the subjective aspects of AN have increasingly shed light on the need of taking into account in treatment the peculiar adaptive function of this disorder (Marzola et al., 2015, p. 8).

For this reason one cannot simply eliminate the disorder, rather, one needs to understand the ED's function and purpose served. The key to doing this is working with the soul self (the identity that exists independent of and arguably prior to, the ED persona), building it up, giving it strength, and then using this process to understand the eating disordered self.

This typical narrative method of separating the person from the problem is termed *externalisation* (Costin, 2007). In separating the AN and the individual, the psychotherapist can attack the problem while still forming a positive affirming relationship with the individual. Because it is treated as separate, the AN is attacked as an entity distinct from the individual. Part of this process involves identifying the 'anorexic voice' as separate to the non-AN or healthy persona of the individual. Dolhanty and Greenberg (2009) present a case study of an individual with AN undergoing emotion-focused therapy. They conclude that,

> The approach provides specific techniques and therapy tasks to decrease alexithymia and increase awareness of internal experience, to decrease the harshness of the internal critic or 'anorexia voice', and to enhance resilience and develop a capacity for self-soothing (Dolhanty & Greenberg, 2009, p. 382).

The authors argue that identifying the 'anorexic voice' helps the individual to see their healthy identity as separate to the AN part of themselves.

In a recent study, Williams, King and Fox (2015) conducted semi-structured interviews with 11 women with chronic AN. The authors' grounded theory analysis found that the participants felt that AN had taken over their identities and that they were afraid of being "…no one without AN" (p. 1). In order to recover from AN the authors suggest that, "…participants had to discover the real self, by accepting the fear of the unknown and separating the self from AN" (p. 1). Similarly, Fox and Diab (2015) explored

chronic AN by interviewing 6 individuals currently in treatment. The individuals with AN "...defined who they were by their AN and how they felt that they were locked in a constant battle with their AN" (Fox & Diab, 2015, p. 35). Understanding how AN becomes an integral part of the self for individuals with AN seems to be an important consideration for future research and treatment of this disorder.

3.5.2 Deconstructing and renaming the problem

Shapiro and Ross (2002) explored narrative theory as applied to family medicine and described the importance of the process of externalising the problem. In addition, they suggested two processes that have positive implications for narrative treatment. They described the importance of "deconstruction" (Shapiro & Ross, 2002, p. 98), as the psychotherapist's act of encouraging the individual to identify her life story and problem source. In doing so the disorder's development can be deconstructed then reconstructed more adaptively. Similarly, Shapiro and Ross (2002) encourage the renaming of the problem. Naming and renaming their problem is argued to give the individual a sense of control over it. This is argued to be the first step in overcoming and redefining the map of meaning that allowed the problem to persist.

3.5.3 Anna's morality

The *Archives of Resistance* uses personification when describing anti-AN. AN is personified as Anna and the name is applied in this section. Once anti-AN has fashioned the process of externalisation (discussed in 3.5.1 and 3.5.2), a progressive attack on AN is launched (*Archives of Resistance*, 2000). This attack exposes Anna's moral authority and the fact that she determines a person's worth and value (Epston, 2000). Anna's morality creates continually shifting goalposts:

> These 'living deaths' are dedicated to attempts to measure up to measures that continually shift just out of reach. It seems that once a candidate is taken in by anorexia, anorexia assesses them relentlessly as 'bad, 'unworthy', 'undeserving' and the only way out is to drop out. Anorexia sets a myriad of tests of perfection and ironically, only their death can ensure their success, e.g. 'the perfect failure' (Epston, 2000, *Archives of Resistance*).

The individual with AN seems to be held in a repetitive process of trying to achieve that little bit more, of being that little bit thinner, of exercising that little bit harder. By

separating the person from the problem the individual can see that Anna is deceptive. She demands unrealistic, increasingly stringent and unattainable expectancies:

> Anti-anorexia proves a counter-morality to rival that of anorexia. It attempts to do so by turning anorexia against itself. Its arguments are found, under scrutiny, to intend to deceive rather than uplift. Its captious reason which catches people up both by their very words and benevolence is exposed as misleading and fallacious (Epston, 2000, *Archives of Resistance*).

Once Anna's moral standards are exposed, the individual is able to reconstruct moral expectations. In doing so, the individual begins to construct a new set of rules under which to operate.

3.5.4 Dominant and alternative stories: Revisited

White and Epston (1990) propose that individuals with AN create understandings of their world by developing a personal map of meaning. This map of meaning is termed the dominant story. This story persists, and is automatic in allowing the individual to derive an understanding of themselves. A particular map of meaning is created which ensures AN persistence. However, there are gaps between the dominant story and aspects of lived experience. These gap experiences are in contrast to the dominant story. Narrative therapy is focused on highlighting these gaps and encourages acknowledgment of the unique outcomes that they may present. Unique outcomes are also termed alternative stories and suggest a different map of meaning for understanding AN. These alternatives introduce the potential for different, positive outcomes.

3.6   SUMMARY

The exploration of key narrative ideas discussed in this chapter, while focusing on narrative therapy, has been used to inform the development of an appropriate narrative data collection methodology for the current study.

Key concepts from this chapter included the construction of identity through the stories that a person tells him or herself that contribute to the existence and maintenance of AN. Also of interest is the possibility of the reframing of this

understanding by the creation of an alternative story that may or may not be therapeutic. The current study aimed to explore participants' stories and the features therein that may have contributed to the development, maintenance and possible moderation of their AN.

CHAPTER 4

METHODOLOGY

4.1   RESEARCH AIMS

This chapter describes the methodology that has been utilised in this study, as informed by narrative theory concepts discussed in Chapter 3. As described in Chapter 1, researchers conducting studies on AN could gain insight by focusing on how individuals with the disorder conceptualise their AN. Following this, the research aims were focused on participants' understanding of their AN.

This study's main aim was to gain novel insight into how individuals with AN understand and conceptualise their disorder. Based on specific procedures outlined below in section 4.2, the aims of this study were divided into two phases. Phase A and B aims were as follows:

- Phase A aimed to:
  - Comprehensively review literature on AN nosology, epidemiology, aetiology and treatment.
  - Confirm AN diagnosis through participant completion of EDI
  - Subject participants to a narrative task (writing their life story)
  - Assess the effect that writing their life story had on participants.

- Phase B aimed to:
  - Subject participants to a narrative task (reading the compilation of stories)
  - Assess the effect that reading the compilation of stories had on participants

The researcher hoped to gain information from participants' life stories to answer research questions 1) and 2) (section 4.3).

4.2   RESEARCH PROCEDURE

The researcher devised the study's procedure by using a narrative theoretical framework (described in Chapter 3) that focused on attaining information regarding participants' understanding of their AN.

Participants were required to:

1) Complete the EDI at the beginning of study as additional confirmation of diagnosis.

2) Write their life story (prompted by a guideline sheet (Appendix 4)).

3) Read a collated book containing all participants' stories (anonymised and compiled by the researcher).

4) Answer two questionnaires: the first after completing the writing of their own story (Appendix 5) and the second after reading the book of all participants' stories (Appendix 6).

The information above was conceptualised as involving two phases, shown in Figure 4.1 below:

PHASE A	PHASE B
Administer EDI	Read compilation of stories
Write life story	Complete questionnaire on the experience of reading stories
Complete questionnaire on the experience of writing life story	
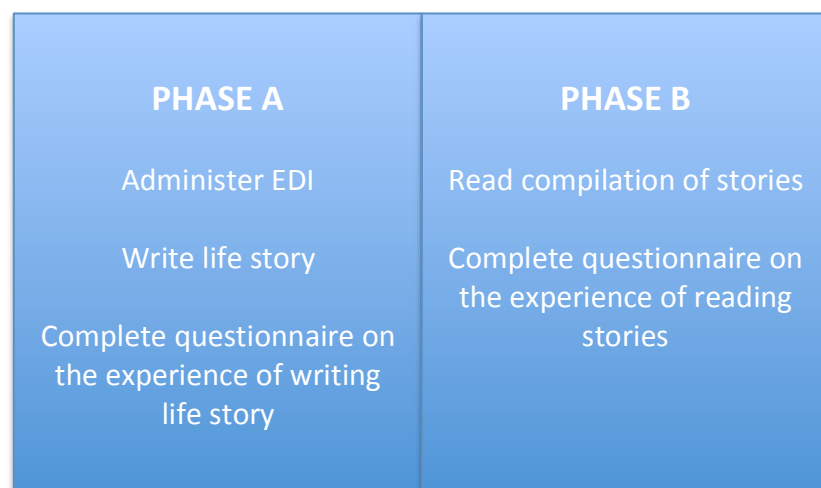
Figure 4.1. Research procedure in two phases.

4.3   RESEARCH QUESTIONS

1) What did participants perceive as the main sources of vulnerability involved in their AN development?

2) What factors did participants perceive as maintaining their AN?

3) Was AN moderated, if so, how?

    a. Did writing their stories have possible moderating influences on participants' AN?

    b. Did reading each others' stories have possible moderating influences on participants' AN?

4.4 PARTICIPANTS

4.4.1 Sampling method

The study made use of purposive sampling. The advantage of using this sampling method was its ability to identify the specific participant characteristics required for the study. Patton (1990) suggests that,

> ...the logic and power of purposive sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposive sampling (p. 169).

Participants were recruited from several inpatient facilities in KwaZulu-Natal that treat AN. This geographical constraint was imposed by funding limitations. Practitioners working in private practice in this province and treating AN were also approached in order to assist in identifying potential research participants. The researcher aimed to have 6-10 participants complete phases A and B of the study (see Fig 4.1). Nine participants completed Phase A; seven completed Phase B.

Narrative theory suggests that each individual's story is different. Thus, there was no intention (and it was not possible) to generalise the findings of this research to the wider population. Rather, the intention was to engage in the narrative process of extrapolating stories from participants about their AN experience, and the experience and possible impact of writing and reading stories.

4.4.2 Selection criteria

The inclusion criteria for selection were as follows:

- Participants were required to have a formal (independent of this study) diagnosis of AN made by their psychotherapist and confirmed by a research-driven EDI score
- Participants needed to be over 18 years of age
- Participants needed to be in psychotherapeutic treatment (in/out patient)
- Participants needed to be first language English speakers
- Participants needed to be willing to sign informed consent.

The reason for selecting AN specifically, as opposed to exploring EDs in general, was because BN and AN are argued to be different in several respects (Birmingham et al., 2009). Thus, material drawn from BN and AN patients would arguably have qualitative differences. Because these would be expected to be less similar than researching one or the other, this may have posed problems in trying to draw parallels and conclusions about the nature of the disorders.

The study necessitated participants be over 18 because there was a higher possibility of them being more open to the narrative process of writing their story. The age criterion also meant that parental consent was not a prerequisite.

Choosing participants who were in psychotherapy served a dual purpose. Firstly, they were likely to be in a process that encouraged self-reflection. Already being in a reflective process may have fostered some openness to write about their AN experiences. Secondly, in the event that participation in the study caused any negative emotional experience, participants would be actively involved in psychotherapeutic treatment in which such experiences could be addressed.

No specific gender, culture or ethnic group was required. Controlling these factors seemed unnecessary given that in narrative framework, each story is of interest. However, participants were required to be first language English speakers as the researcher is English speaking. An understanding of the language use was important in this study because of its narrative underpinning. Furthermore, translation may have contaminated data and its analysis.

The signing of informed consent was an ethical obligation so as to ensure that participants understood the study's requirements. Informed consent clarified that participants could withdraw at any point without negative consequence to them.

4.4.3 Vulnerability and risk

Participants were vulnerable because of their AN diagnoses. Their being required to be in psychotherapeutic treatment might suggest that their AN symptoms were severe enough to warrant intervention. Writing and reading stories could have triggered distress in vulnerable or sensitive individuals. These vulnerabilities were negated in the following ways:

- Participants needed to be receiving psychotherapeutic treatment in order to participate in the study. This meant that potential negative outcomes from the study could be mitigated with treatment
- Participants' psychologists were informed and provided with detail on the study. This meant that psychologists were aware of any possible negative outcomes for the study's duration
- Participants signed informed consent documents which detailed that they could withdraw from the study at any point without consequence.
- Care was taken to ensure confidentiality by anonymising as fully as possible without altering narratives, identifiers in the narratives generated by each respondent.

4.4.4 Incentives and recruitment

A manuscript containing all participants' stories (Appendix 8) was offered as an incentive for participants. It was professionally designed, printed and bound, and presented as a hardcover book (Figure 4.2) for participants to keep if they wished.
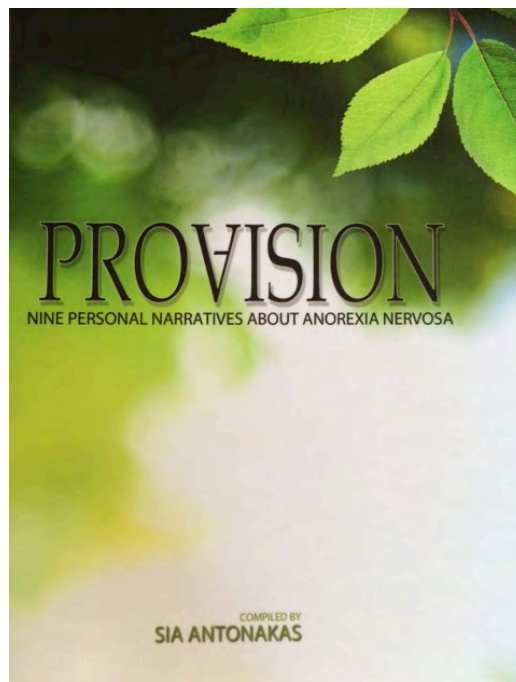
Figure 4.2. Provision cover.

The researcher's hope was that a small incentive was offered by *Provision*. Participants were able to share in each others' stories and experience a sense of accomplishment in knowing that their story contributed to a (limited circulation[2]) book of narratives. There was an ethical concern regarding identification of participants and third parties in the stories. Because third parties had not consented to the books being distributed, anonymity of all parties was maximised. Anonymisation and its details are discussed further in section 4.8 below.

In terms of recruitment strategy, the following process was followed:

- A list of psychologists working with AN patients was compiled after having been identified through word of mouth
- An information sheet that outlined the process of the research (Appendix 1) was emailed to the above-mentioned psychologists
- The researcher welcomed any psychologists' concerns regarding possible conflict of interest. These were outlined in the information sheet (Appendix 1)
- The consenting psychologists discussed the study with participants meeting inclusion criteria

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[2] *Provision* was circulated only to the nine participants, the research supervisor and the three examiners.

- The psychologists relayed interested participants' contact information to the researcher
- The researcher gained permission to use diagnosis from the psychologist (Appendix 2), and sent informed consent (Appendix 3) to participants.

Concurrent engagement in psychotherapy was required to protect vulnerable participants.

Section 4.4 described how participants were recruited. Section 4.5 outlines the data collection process.

4.5   DATA COLLECTION

4.5.1   Data collection process

Section 4.2 briefly outlined the research procedure. Section 4.4.4 outlined how participants were recruited. After this selection, data were collected as follows:

- After obtaining consent from both participants and their psychologists, the EDI (Appendix 7) was sent to participants
- The EDI was completed then returned
- Participants were emailed a guideline sheet (Appendix 4) for writing their story
    - The guideline sheet provided suggestions, rather than requirements, for writing. The guidelines encouraged participants to write in whichever manner and style they chose. Suggestions included writing about their first feelings of AN, their belief of its cause, what amplified or diminished their symptoms and their experience of intervention
- A questionnaire (Appendix 5) was attached to the guideline sheet. The questionnaire was used to assess the experience of writing, and the possible positive and negative effects of this
- Stories were anonymised, compiled as *Provision* (Appendix 8) and posted to each participant
- After reading *Provision*, participants completed a second questionnaire (Appendix 6), used to assess their experience of reading the stories

- The second EDI (Appendix 7) was completed then returned. It was initially thought that a second EDI score could reveal any possible participant deterioration or change during the research process. However the EDI re-test scores are not reported in this thesis because the small sample size rendered comparison with the first EDI score statistically meaningless.

To minimise possible respondent bias, all participants' stories, EDIs and questionnaires were sent to the researcher via email.

4.5.2 Measures/Instruments: Eating Disorder Inventory

The EDI was used to measure ED features in participants. The main reason for including the EDI in this study was to obtain some independent 'objective' verification of ED symptoms; that participants were indeed characterised by AN features, independent of the diagnosis of their primary care providers. The test was completed before and after data collection. This self-report measure consists of 64 items divided into eight subscales: *Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness* and *Maturity Fears* (Garner & Olmstead, 1984). The EDI was developed based on "…the growing recognition that anorexia nervosa is a multidimensional disorder" (Garner & Olmsted, 1984, p. 4). Rather than utilising existing personality tests, the EDI was designed to measure "…the cognitive and behavioural characteristics often observed clinically in anorexia nervosa" (Garner & Olmsted, 1984, p. 4).

The EDI was found to be a reliable measure. Each of the subscales obtained a coefficient of internal consistency above 0.80 for AN samples (Garner & Olmsted, 1984). Criterion-related validity for the EDI was established using patient scores and patient clinical presentation (assessed by a psychologist and psychiatrist). Convergent and discriminant validity was also confirmed (Garner & Olmsted, 1984).

The EDI has been used in South Africa to determine EDI scores across race groups (Wassenaar et al., 2000).

The more recent EDI 2, SCID (Structured Clincial Interview for DSM Disorders) and Eating Disorder Examination (EDE) were not used in this study because they could not be accessed easily in South Africa due to budget constraints.

4.6   DATA ANALYSIS

   4.6.1   Data analysis models

Thematic analysis in qualitative research appears to lack the boundaries and constraints that are present in quantitative analysis. As Braun and Clarke (2006) indicate, "thematic analysis is a poorly demarcated and rarely acknowledged, yet widely used analytic model" (p. 77).

The benefit of qualitative analytic models is that their lack of specificity allows for interpretation and the emergence of themes and ideas. However, the lack of clearly demarcated boundaries in this type of analysis has received criticism, as described by Braun and Clarke (2006) "…an absence of clear and concise guidelines around thematic analysis means that the 'anything goes' critique of qualitative research may well apply in some instances" (p. 78). Braun and Clarke (2006) recommend utilising the flexibility that qualitative models provide, but also recommend that the researcher defines exactly how the model was applied and adapted.

Because of their grounding in theory, certain thematic analysis models are more specific. Narrative analysis, which is grounded in narrative theory, is an example of a specific thematic analysis (Braun & Clarke, 2006). Using a more stringent analytic model allows for clearer analytic process guidelines (Braun & Clarke, 2006). However, the lack of specificity in general thematic analysis models allows for data-driven interpretation, rather than researcher-driven interpretation.

Riessman (2002) suggests that even within specific narrative analysis models, there appears to be room for interpretation: "the study of narrative does not fit neatly within the boundaries of any single scholarly field" (p. 217). While Riessman's model (2002) is more stringent than a general thematic analysis model, it allows the researcher flexibility in interpretation because of its qualitative nature.

For the current study, the researcher was unable to use a standard narrative model, such as Wengraf (2005), as it did not meet all the requirements for this study's dataset. Rather, the researcher has combined a basic thematic analysis model (Braun & Clarke, 2006) with two specific narrative analysis models (McLeod, 2000; Riessman, 2002). The researcher regarded the general model too general, and the narrative models too specific. By combining the models, the researcher hoped to utilise the advantages of both. Where the general model fell short in lacking specificity, the narrative models provided it; where the narrative models were too specific, the general model allowed a general interpretation of the data.

Braun and Clarke (2006) support the use of any models as long as "...the finished product contains an account, – not necessarily that detailed – of what was done and why" (p. 86). Because of the flexibility inherent in thematic analysis, there is scope for interpretation and adjustment of models so as to appropriate the requirements of the dataset.

The researcher has combined elements from three different models in order to maximise the yield. A detailed account of each analytic model follows.

4.6.2   Braun and Clarke's thematic analysis

Braun and Clarke (2006) outline a standard thematic analysis model that includes the following phases:

> Phase 1: *Familiarizing yourself with your data*: Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
>
> Phase 2: *Generating initial codes*: Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
>
> Phase 3: *Searching for themes*: Collating codes into potential themes, gathering all data relevant to each potential theme.
>
> Phase 4: *Reviewing themes*: Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.

Phase 5: *Defining and naming themes*: Ongoing analysis to refine the specifics of each theme and the overall story the analysis tells, generation clear definition and names for each theme.

Phase 6: *Producing the report*: The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracted, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis (p. 87).

The advantage of Braun and Clarke's (2006) model is that the phases are general which allowed the researcher to follow a method that optimised the current study's data.

The disadvantage of this model is that it ignores the wider social, political, religious and economic themes implicit in data. Furthermore, narrative style and the use of metaphor and language are not accounted for. Specific narrative models (discussed in 4.6.3 and 4.6.4) moderated these disadvantages.

4.6.3 Riessman's model

The researcher drew on two narrative analysis approaches, both of which needed to be adapted so as to account for current methodology distinctions.

Riessman's (2002) model is utilised to analyse interview data that includes transcripts between interviewer and participant. The current research differed from this in that stories were written rather than spoken.

Riessman's (2002) narrative analysis includes the following steps:

Step 1: Attending: The researcher pays close attention to the environment and situation that the participant is in.

Step 2: Telling: Interview schedules are provided so as to help guide the participant in telling their story.

Step 3: Transcribing: Stories are transcribed with careful consideration to the way in which they were conveyed.

Step 4: Analysing: The researcher analyses the story using two methods:
- 'Reduction to core narrative' (whereby material is summarised as key points).

o 'Analysis of poetic structures' (whereby the story is divided into stanzas and lines, then analysed).

Step 5: Reading: Transcripts are read several times. Comments from other readers are considered in analysis.

In the current study Riessman's (2002) steps were utilised. The following adjustments were necessary:

- Step 3 was excluded. No transcription was necessary because data included written stories
- Step 4 was adjusted. While each story was reduced to its core narrative, the stories were not broken into stanzas. Rather, the style in which the story was written was explored. The analysis included commentary on the use of figures of speech, tone and style
- Step 5 was adjusted. This change included a questionnaire that gave participants the opportunity to comment on each other's stories.

4.6.4   McLeod's model

The second narrative analysis model adapted for use in the current study was designed to analyse psychotherapy transcripts. While the current study did not include psychotherapy transcripts, many of McLeod's (2000) steps were suited to the analysis of rich data present in this study.

McLeod's (2000) model can be summarised in the following phases:

Phase 1: *Preliminary analysis: finding structure and meaning in the text as a whole:* Involves reading and immersion, identification of stories, summarising stories and sequences, constructing a representation of the case or session as a whole.

Phase 2: *Micro-analysis: developing an understanding of specific therapeutic events and processes:* Involves selecting text segments for micro-analysis, transformation of text into stanzas, separation of client and therapist narratives, identification of voices, identifying

figurative use of language, story structure analysis and identifying cultural narratives (metanarrative and macronarrative).

Phase 3: *Communicating what has been found:* Involves construction of summary representation, theoretical interpretation and writing.

4.6.5 Current study: A collective model for data analysis

By combining Braun and Clarke (2006) with Riessman (2002) and McLeod (2000), and adjusting all three to suit the necessary purposes, the current research made use of the following hybrid method of thematic narrative analysis:

STAGE 1:   ATTENDING

This stage included familiarisation with the data (taken from the Braun and Clarke (2006) model) through reading and re-reading. Thereafter, demographic, clinical (current and previous psychological treatment) and biographical information about each participant was described. Age at illness onset, duration of illness and whether the participant was in an inpatient facility at the time of the research process was considered.

STAGE 2:   TELLING

This stage provided participants with open-ended prompts (Appendix 4) to guide their writing (taken from stage 2 of Riessman's (2002) model). Information as to the level of communication between researcher and participant was also explored in this section. The researcher had more direct email contact with some, rather than with others because of psychologist intermediation.

STAGE 3:   PRELIMINARY ANALYSIS

Stories were reduced to their core narrative (taken from stage 4 in Riessman's (2002) model). To achieve this, the researcher used Braun and Clarke's (2006) phases of data coding, searching for themes, reviewing themes and defining and naming themes. Diagrammatic representations were utilised to depict links between themes. Diagrams indicated core narratives.

STAGE 4:   MICRO-ANALYSIS

This stage was taken from phase 2 of McLeod's (2000) micro-analysis. The researcher identified figurative use of language (such as metaphors and personification), style, structure, the presence of different personas in writing, as well as the impact of the greater social, political, religious, cultural and media influences implicit in each story.

STAGE 5:   READING & WRITING

This stage was drawn from step 5 of Riessman's (2002) model, and involved exploration of responses to questionnaires completed at the end of phase one (writing the story) and phase two (reading *Provision*).

STAGE 6:   COMPARATIVE ANALYSIS

The final stage borrows from phase 6 of Braun and Clarke's (2006) model. After each individual story analysis, the researcher drew comparisons across stories by searching for common threads, repeated themes and similar use of figurative language and structure so as to identify similarity in participants' conceptualising and understanding of their disorder. Links to existing literature were also explored in this stage.

4.6.6 Description of analytic process

Attride-Stirling (2001) indicates that application of analytic models to a research study should be clearly explained. Braun and Clarke (2006) argue that,

> …qualitative psychologists need to be clear about what they are doing and why, and to include the often-omitted 'how' they did their analysis in their reports (p. 79).

In carrying out the proposed thematic narrative analysis the researcher followed the following pattern of analysis:

The data corpus refers to all data collected (Braun & Clarke, 2006). In the current study, this included:

- Nine narratives

- Questionnaires completed after writing the stories

- Questionnaires completed after reading *Provision*

- EDI results from the beginning of the study

- Email and correspondence between researcher and participants and their psychologists.

The researcher felt it useful to divide the data corpus into data sets (Braun & Clarke, 2006). Each data set was analysed differently as indicated in Table 4.1.

Table 4.1

Data sets and corresponding methods of analysis

DATA SET	METHOD OF ANALYSIS
Nine narratives	Analysed through thematic narrative analysis as provided by the researcher (see below for step-by-step explanation).
Questionnaires after writing	Analysed in stage 5 of the thematic narrative analysis model as provided by the researcher.
Questionnaires after reading	Analysed in stage 5 of the thematic narrative analysis model as provided by the researcher.
EDI results	Used for diagnostic confirmation of participants.
Additional comments	Used in adding to the analysis of stages 1 and 2 of the thematic narrative analysis model as provided by the researcher.

In working through the proposed stages of the thematic narrative analysis model, the Researcher systematically did the following:

STAGE 1:   ATTENDING
In this stage the researcher read and reread (four to five times) the nine narratives so as to familiarise herself with the data. The researcher

extracted relevant biographical information as well as details regarding previous and current participant treatment.

STAGE 2:   TELLING

In this stage the researcher reviewed all (if any) direct contact transpired between participant and researcher, and made comments about the impact this may or may not have had on participant story production (for example, comments about how long the participant took to write the story and what parts she may have found more challenging than others to write, were considered). The researcher also explored contact that transpired between researcher and participants' psychologists. This seemed important because some comments from psychologists may have impacted on story production.

STAGE 3:   PRELIMINARY ANALYSIS

Most of the analysis occurred in this stage. After the initial reading and rereading, the researcher employed Braun and Clarke's (2006) suggestion to use different coloured highlighters to denote prominent ideas emerging from each story. In addition, margin notes were added. The researcher drew lines connecting ideas that appeared to be similar or linked. Thereafter the researcher carefully reviewed what appeared to be the key ideas and themes in the story and presented these and their links diagrammatically. Finally, the researcher recorded detailed explorations of each theme and substantiated each with data extracts.

Note that the researcher chose to use an inductive method in locating the themes (Braun & Clarke, 2006). This means that, as far as possible, the researcher tried to suspend personal understandings, and did not look for specific themes but rather commented on what appeared to emerge from the written text. While the researcher used an inductive approach in deriving themes, she also worked from a latent, rather than semantic, standpoint. As Braun and Clarke (2006) suggest:

...thematic analysis at the latent level goes beyond the semantic content of data, and starts to identify or examine the *underlying* ideas, assumptions and conceptualisations – and ideologies – that are theorised as shaping or informing the semantic content of the data (p. 84).

In creating the diagrammatic representation of each story the researcher worked at a latent level focusing not only on existing story content, but also on underlying assumptions.

STAGE 4:   MICRO-ANALYSIS

The researcher examined each story in terms of style and use of language. Use of metaphor, interesting title choices, exclamation marks, all capitalisations, humour and irony were all described. Story excerpts were used to comment on the link between writing style and themes identified in the preliminary analysis. In this stage the researcher also commented on social, political, religious and media forces that appeared to underpin beliefs implicit in each story.

STAGE 5:   READING & WRITING

In this stage the researcher examined the questionnaires that participants completed after writing their story and again after receiving and reading *Provision*. Here, the researcher identified positive and negative experiences described by participants.

Stages 1-5 of analysis were conducted on each individual story, and were compiled into transcripts with diagrammatic representation, data extracts and details. One example of this process has been provided in Appendix 9 (the same data are available for all participants on request).

STAGE 6:   COMPARATIVE ANALYSIS

In the final stage of the thematic narrative analysis, the researcher used the collation of stages 1-5 as a means to compare stories. Until this stage the stories were analysed individually, rather than collectively, in an attempt to make the process more inductive and data-driven. It was only

at this stage that the researcher examined all stories in order to draw comparisons of experience and perceptions between them. Common themes and similarities were identified between the nine stories, then diagrammatically represented. Thereafter, the analysed data were compared and linked to the literature reviewed in Chapter 2.

Notably, while Zubin and Steinhauer's (1981) model was used to organise the literature review in Chapter 2, the researcher tried to suspend this knowledge during the process of data analysis with the goal of allowing the analysis to be data-driven rather than trying to fit the data into predetermined categories. Data-driven analysis was utilised in keeping with the narrative tradition of focusing on each individual's story in and of itself.

As discussed in section 1.5, Polit and Hungler (2007) are in favour of analysis being conducted before the literature review in order to keep analysis more data-driven. This was not possible in the current study, as ethical clearance (which required a research proposal including literature review) needed to be attained by the university before data collection and subsequent analysis could be completed.

While the researcher tried to suspend knowledge from the literature review while conducting the data-driven analysis, it was not possible to fully suspend preconceived ideas from the literature review, in particular Zubin and Steinhauer's (1981) vulnerability model. For this reason, the analysis included sections and themes that appeared to be clearly compatible with or associated with the vulnerability model (Zubin & Steinhauer, 1981). However, some themes and subthemes emerged which did not directly link to Zubin and Steinhauer's (1981) model, for example maintaining factors.

4.7   THE TRUTH IN STORIES: LIMITATIONS OF NARRATIVE ANALYSIS

Riessman (2013) explores the argument about objectivity in narratives and concludes that "…narrative analysis does not assume objectivity but, instead, positionality and subjectivity" (p. 181). In Riessman's (2013) view, the lack of objectivity in narrative

analysis is not seen as a limitation because attaining objectivity is not the purpose of this type of analysis. Rather,

> Verification of the "facts" or lives is less salient than understanding the changing meaning of events for the individuals involved – and how these, in turn, are located in history and culture. Personal narratives are, at core, meaning-making units of discourse. They are of interest precisely because narrators interpret the past in their stories, rather than reproduce the past as it was (p. 182).

Rather than focusing on objectivity, the current study is interested in *how* the individual participants understand their AN and how this conceptualisation has contributed to their disorder's maintenance.

The researcher employed a second reader, competent in qualitative research in psychology, to analyse one of the stories and check themes and subthemes. The reader, working from a feminist perspective, prioritised socio-cultural influences derived from the story. These themes, though not focalised, were also derived by the researcher. The researcher learned that one's frame of reference has an impact on how stories are analysed and where attention and focus is placed. The researcher was satisfied in that, despite different focal points, both reader and researcher derived similar themes from the stories.

4.8   ETHICAL CONSIDERATIONS

Emanuel, Wendler and Grady (2008) state that the four widely accepted principles for ethical research are autonomy and respect for the dignity of persons, nonmaleficence, beneficence and justice. They further suggest the use of a framework of eight principles in order to conduct ethical research. Wassenaar and Mamotte (2012) adapted Emanuel et al.'s (2008) eight principles to social science research. Wassenaar and Mamotte's (2012) adaptation was utilised in the current study as follows:

4.8.1   Collaborative partnership

Collaborative partnership suggests working directly with the community involved in the research:

> Research should arise from an expressed community need, should involve the

community in all stages of the research from study planning to implementation, and dissemination of results and should be considerate of the traditions, cultural practices and values of the community (Wassenaar & Mamotte, 2012, p. 274).

AN is a community concern given its high mortality rates (Bulik et al., 2007). Those diagnosed with AN were recruited for the current study. In addition, psychologists treating these individuals participated collaboratively as intermediaries. The researcher, having worked for several years in private practice as a psychologist for individuals with AN, used her insights to formulate the study's conceptions. The nature of the research population and research design did not render any other formal prior community engagement necessary.

4.8.2   Social value

For the study to have social value it should:

…specify who the beneficiaries of the research will be, and in what way they might benefit directly or indirectly. The problems being studied should lead to knowledge and/or interventions that will be of value to the participants and/or society (Wassenaar & Mamotte, 2012, p. 275).

Participants in the study may have benefitted indirectly from being exposed to narrative exercises. While this may have impacted only participants, the findings may prompt further treatment-based studies that may well have wider social value implications. It is also hoped that potential publications arising from this study might influence future research and treatment of AN.

4.8.3   Scientific validity

Ethical research methodology: "…should be rigorous, appropriate, and systematic, whether quantitative or qualitative designs are being used." (Wassenaar & Mamotte, 2012, p. 275) and "(t)he competence of the researcher […] to undertake the research and its subcomponent tasks are also important…" (p. 275). The current researcher was hopefully competent in research having a masters degree in psychology. The researcher is a registered Counselling Psychologist with the Health Professions Council of South Africa (HPCSA) which assures a minimum standard of competence in engaging

with persons with various presenting problems, including those with EDs. The study supervisor has substantial clinical experience with AN and has published papers on AN and research ethics.

Specific rigorous narrative methodology was used in this study for both data collection and data analysis (discussed in sections 4.5 and 4.6).

4.8.4   Fair selection of participants

Wassenaar and Mamotte (2012) describe the importance of selecting participants suited to the research questions of the given study. The researcher in the current study confirmed that all participants had independent clinical AN diagnoses (section 4.4.2). Specific selection criteria (section 4.4.2) were used to ensure that participants would provide the necessary information so as to answer the research questions.

4.8.5   Favourable risk/benefit ratio

Ethical research should consider possible risks and benefits of the study and in so doing:

> ...researchers should carefully identify all the possible harms and "costs" of the research to the participants, and specify means to minimise these so that the risk/benefit ratio is favourable (Wassenaar & Mamotte, 2012, p. 276).

Risks to the participants in the current study were carefully considered and the greatest of these appeared to be the possibility of adverse impact on their disorder or treatment. Potential risk was mitigated in three ways. Firstly, all participants had to be in psychotherapy to moderate potential psychological distress. Secondly, participants were forewarned of the risk implicit with participation. Finally, psychologists were informed of potential harm in order to alleviate participant risk.

Furthermore, the narrative tasks of the study could potentially have a modest (but untested) positive rather than harmful effect. Narrative tasks were perceived as being potentially beneficial. Receiving *Provision* was also perceived as being positive because participants were likely to experience some satisfaction from inclusion in the

development of a tool to help others. Due to the challenges of obtaining informed consent and their greater vulnerability, children were excluded from the study.

4.8.6 Independent ethics review

Wassenaar and Mamotte (2012) suggest that ethical research practice requires ethical review by an independent research ethics committee. The current study was reviewed and approved by the UKZN Social Sciences & Humanities Research Ethics Committee, protocol reference number: HSS/0902/011D (Appendix 10).

4.8.7 Informed consent

Ethical research ensures that all participants consent to being in a study, and should include:

> …(a) provision of appropriate information, (b) participants' competence and understanding, (c) voluntariness in participating and freedom to withdraw after the study has started, and (d) formalization of the consent, usually in writing. This means that researchers must provide potential participants with clear, detailed and factual information about the study, its methods, and its risks and benefits, along with assurances of the voluntary nature of participation and freedom to refuse or withdraw without penalties (Wassenaar & Mamotte, 2012, p. 277).

The current study made use of consent forms for both participants and their treating psychologist (Appendix 3). Consent forms included the requirements set out above, and were signed by participants.

4.8.8 Ongoing respect for participants and study communities

The final principle explored by Wassenaar and Mamotte (2012) is that of respecting participants.

> This can be achieved by allowing participants to withdraw from the research at any stage, providing participants with any new information obtained during the research, monitoring participants' well-being throughout the research, and respecting participants' privacy by maintaining confidentiality and anonymity (p. 278).

As described above, participants in the current study were able to withdraw at any point. Contact between treating psychologist and researcher ensured that participants were coping with the research tasks (especially given that the majority of them were in inpatient facilities and closely monitored). Given the intimate nature of the detail in the stories and because these stories would be shared with other participants, particular attention was paid to confidentiality.

The anonymity of participants, as well as second and third parties (who were unable to consent), was of ethical concern. Data anonymisation was carefully conducted. Finding a balance between keeping story authenticity (essential for the narrative analysis of data) and identity protection was closely considered. The following measures were taken to achieve this balance:

- Two anonymisation guidelines were consulted in order to guide the process of modifying identifying data. The anonymisation guidelines taken from the Irish Qualitative Data Archive (2008) and the anonymisation guide taken from the UK Data Archive (2012) were utilised
- As suggested by the guidelines, an 'anonymisation log' for each participant's story was generated. The log listed all changes made alongside corresponding page number references
- Based on the guidelines, the researcher changed the following information:
  - Names of participants, their families, friends and all other persons mentioned
  - Names of places were changed to a close relevant match or made less specific (for example 'Croatia' could be anonymised to 'Europe')
  - By retaining original month and year but omitting day, birthdates were made less specific
  - Names of schools, tertiary institutions and workplaces were generalised and all specifics omitted (for example, University of KwaZulu-Natal could be changed to 'the university')
  - Names of specific diet plans, organisations, websites, treatment facilities and exercise plans were omitted or generalised.

Despite the careful anonymisation process, deductive participant identification may still have been possible. Participants were made aware of this risk in the consenting process. Certain information that may have been sensitive or harmful seemed important to retain when central to the authenticity of the stories. For this reason, the researcher added a foreword to *Provision* that encouraged participants to talk to their psychologist if feeling unsettled at any point during the reading process. Participants were also encouraged to skip any story or part of story that they felt was unsettling. Only obvious typing errors and spelling mistakes were edited. In order to retain authenticity the grammar and style of writing in *Provision* remained largely unchanged.

4.9   SUMMARY

While Zubin and Steinhauer's (1981) sources of vulnerability model organised this study's literature review, ideas from narrative theory and therapy (postulated predominantly by White and Epston (1990)) informed the study's methodology. In an attempt to keep with a data-driven narrative analytic process, the researcher tried to avoid fitting data into preconceived categories (as those defined by Zubin and Steinhauer, 1981, or Rutter 1997, 2002) and attempted rather to let the data 'speak for itself'. The interpretations derived from the participants' stories are presented in the chapter that follows.

CHAPTER 5

RESULTS AND INTERPRETATION

5.1 INTRODUCTION

This chapter details the interpretations derived from the participants' stories and questionnaires. The process discussed in the previous chapter outlines how the researcher conducted stages 1-5 of the analysis. A central concern was finding an effective way to present the results and interpretation and condensing much information without losing valuable detail. The following steps were taken in the analysis and presentation of the results.

- Stages 1-5 (refer to section 4.6.5) were completed for each story. These analyses, including diagrammatic representations, were too long to include in the write-up below. However, one participant's data and analysis is available in Appendix 9 (Data and analyses for the other participants is available on request).
- Stage 6 of the analysis aimed to identify and describe common themes and subthemes across the nine participants' stories.

As mentioned in section 4.8.8 above, the names below are pseudonyms. All identifying details were anonymised for the confidentiality of the participants. Tables listing participant demographic details, participant EDI scores and EDI norms are provided below. Therafter, a central excerpt from each story and basic biographical information are provided for each participant. Finally, details about each participant's treatment at the time of the study, and level of contact with the researcher is described.

Table 5.1

Demographic information

Participant	Age (yrs)	Race	Lowest weight (in kgs)	Lowest BMI	Current weight (in kgs)	Current BMI	Out-patient treatment	In-patient treatment
Amanda Lere	31	White	31.00	10.24	37.90	12.52	No	Yes
Alison Clark	29	White	36.00	11.62	52.70	17.01	No	Yes
Sarah Adam	31	White	35.00	13.50	55.00	21.22	Yes	No
Kim Joseph	19	White	42.00	14.53	49.00	16.96	No	Yes
Jane Harris	25	White	35.00	11.43	48.00	15.67	Yes	No
Lucy Edwards	43	White	56.00	17.67	58.00	18.31	No	Yes
Tessa Schaefer	31	White	34.00	12.34	46.40	16.84	No	Yes
Kate Barlow	20	White	24.00	9.14	39.2	14.94	No	Yes

Participants were all white females above the age of 18 years. The majority of participants were in in-patient treatment facilities at the time of the study with only two (Adam and Harris) being in outpatient treatment. A BMI of under 18.5 is indicative of being underweight/ED while BMIs ≤13 indicate critical malnourishment and a need for hospitalisation (Sharp & Freeman, 1993). At their lowest self-reported weights, BMIs for all participants met the criteria for an ED with 5 of them scoring under the critical malnourishment marker of 13. At the time of the study the participants were receiving treatment and for this reason displayed healthier BMIs. Lere (12.52), Clark (17.01), Jospeh (16.96), Harris (15.67), Edwards (18.31), Schaefer (16.84) and Barlow (14,94) still fell in the underweight/ED category (under 18.5) with only Adam (21.22) having a normal BMI. According to DSM-5 classification (see APA, 2013, section 2.2.2), BMI is not a requirement for AN diagnosis, and having a healthier BMI (particularly as a result of current treatment) does not mean an individual is no longer afflicted by AN. Participant EDI scores, listed in Table 5.2, indicated AN features in all participants.

Table 5.2

EDI scores to confirm diagnosis

Participant	Lere	Clark	Adam	Joseph	Harris	Edwards	Schaefer	Barlow	Hughes
Drive For Thinness	13	5	19	18	18	11	9	19	2
Bulimia	0	2	1	7	0	7	0	0	0
Body Dissatisfaction	11	10	27	26	26	12	21	25	5
Ineffectiveness	18	7	20	9	24	4	12	18	0
Perfectionism	11	9	17	6	17	4	11	13	10
Interpersonal Distrust	13	8	14	8	14	1	7	1	1
Interocep. Awareness	10	8	18	14	17	3	10	10	2
Maturity Fears	9	7	3	1	18	1	6	6	0
TOTAL	85	56	119	89	134	43	76	92	20

Table 5.3

EDI norm scores

EDI Subscale	EDI norms: Anorexia nervosa				Normal
	Restrictors	Bulimics	Total	Recv	Fem col.
Drive For Thinness	11.70	14.90	13.80	3.60	5.10
Bulimia	2.80	10.90	8.10	0.30	1.70
Body Dissatisfaction	13.40	16.70	15.50	6.30	9.70
Ineffectiveness	9.90	13.30	12.10	3.10	2.30
Perfectionism	7.70	9.10	8.60	6.60	6.40
Interpersonal Distrust	6.20	6.60	6.40	1.90	2.40
Interoceptive Aware.	9.90	12.20	11.40	2.10	2.30
Maturity Fears	5.70	5.60	5.60	1.10	2.02

Table 5.2 shows participant scores per EDI subscale and Table 5.3 shows the EDI norms for AN restrictors, AN purgers (bulimia), total (comprising restrictors and purgers), AN recovered and normal female college students scores per EDI subscale (Garner & Olmsted, 1984).

Looking at the *Drive For Thinness* subscale, Lere (13), Adam (19), Joseph (18), Harris (18) and Barlow (19) fell into or were above the the norm total of 13.80. Edwards (11)

and Schaefer (9) fell under the AN restrictors norm (11.70), while Clark (5) fell into the normal female college norm and Hughes (2) below this.

Lere, Harris, Schaefer, Barow and Hughes all scored 0 for the *Bulimia* subscale which falls into the recovered AN norm (0.30). Joseph (7) and Edwards (7) scored below the norm total (8.10). Clark (2) and Adam (1) fell close to the normal female college norm (1.70).

Several particiapnts scored much higher than the norm total for the *Body Dissatisfaction* subscale (15.50). Adam, Joseph, Harris, Schaefer and Barlow scored 27, 26, 26, 21 and 25 respectivley indicating much higher body dissatisfaction than standard individuals with AN. Hughes (5) scored below the standard norm for recovered AN (6.30) while Lere (11), Clark (10) and Edwards (12) scored close to the stand norm for normal female college students (9.70).

The total standard norm for the *Ineffectiveness* subscale is 12.10. Lere (18), Adam (20), Harris (24), Schaefer (12) and Barlow (18) all fell within or higher than this score. Clark (7) and Joseph (9) scored closest to the AN restrictors norm of 9.90, while Edwards (4) was close to the recovered AN norm (3.10) and Hughes (0) closest to the norm for normal female college students (2.30).

Most participants in this study scored higher than the total standard norm for the *Perfectionism* subscale (8.60). Lere, Clark, Adam, Harris, Schaefer, Barlow and Hughes scored 11, 9, 17, 17, 11, 13 and 10 respectively. Jospeh (6) and Edwards (4) scored closest to the recovered AN (6.60) and normal female college (6.40) norms.

The total norm score for *Interpersonal Distrust* is 6.40. Lere (13), Clark (8), Adam (14), Jospeh (8), Harris (14) and Schaefer (7) all fell in or above this category with Edwards (1), Barlow (1) and Hughes (1) falling closest to the recovered AN norm of 1.90.

Lere (10), Clark (8), Adam (18), Joseph (14), Harris (17), Schaefer 10) and Barlow (10) all fell close to or above the standard norm for total AN (11.40) for the *Interoceptive*

Awareness subscale, with only Edwards (3) and Hughes (2) falling close to the recovered AN (2.10) and normal female college student (2.30) scores.

The total AN standard norm for *Maturity Fears* is 5.60. Lere (9), Clark (7), Harris (18), Schaefer (6) and Barlow (6) all fell above this category with Adam (3), Joseph (1), Edwards (1) and Hughes (0) falling close to the recovered AN (1.10) and normal female college student (2.02) norms.

Overall, it is evident that participants in this study met or surpassed total norm threshold scores for all the EDI subscales, with only a few participants in each subscale falling into the recovered or normal score ranges. Despite participants all being in treatment at the time of the study, and some having closer to normal BMIs, their AN features were still evident according to their EDI scores.

5.1.1 Participant A: Amanda Lere

We grew up in a warm family with a lot of love and affection (pats on the back, hugs, kisses, support etc.). My mom and dad truly did everything to make us feel good and happy. Nothing was too much for them. I felt I had no right to cry, complain or to be unhappy and so I smiled and bottled up most of my emotions (Lere, *Provision*, p. 7, l. 15-19).

Amanda Lere was 31 years old at the time of the study. She was married and resided in Europe. She became involved in the study while receiving inpatient treatment at a South African centre that treats EDs. She is 1.74 meters tall and her lowest adult weight was 31.0 kilograms (BMI 10.24). At the time of the study she weighed 37.9 kilograms (BMI 12.52).

Contact between the researcher and Amanda commenced through her psychologist[3] who was the intermediary. Amanda received Appendix 4 as the only prompt to writing her story (Fig. 4.1 Phase A). She had no direct contact with the researcher before or during the process of writing. In April 2013 her treatment was complete and she had returned home. The first contact made between Amanda and the researcher was by the

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[3] In South Africa psychologists require at least an approved masters degree in psychology and must pass the Health Professions Council of South Africa's board exam resulting in subsequent statutory registration as a psychologist. Registered clinical, counselling and educational psychologists may generally practice psychotherapy if it was integral to their professional training.

researcher emailing Amanda to ask for her postal address. After receiving *Provision* she emailed the researcher and indicated that she was unable to continue with the study because: "I started the reading but couldn't/didn't want to read further. It was too painful" (Personal communication, July 31, 2013). The researcher encouraged her to talk to her psychologist to receive support. She was asked to give feedback about what had made reading the stories too difficult for her and was invited to complete the second EDI but did not reply. The researcher felt it unethical to request Amanda to proceed and respected her right to withdraw.

5.1.2 Participant B: Alison Clark

I felt with many people like everything I said had to be said in my head first – to be sure it was OK. I wasn't sure how to be happy, or to cope with being unhappy. Hormonal changes in my brain chemistry and my body left me feeling sad. I was still trying to be perfect. The two do not go together (Clark, Provision, p. 15, l. 42-45).

Alison Clark was 29 years old at the time of the study. She resided in Europe and came to be a study participant while receiving inpatient treatment at a centre in South Africa that specialises in the treatment of EDs. Her height is 1.76 meters. Her lowest adult weight was 36.0 kilograms (BMI 11.62). At the time of the study her weight was 52.7 kilograms (BMI 17.01).

The researcher had no direct contact with Alison during Phase A. Her psychologist at the ED facility was the intermediary. She received the standard story guidelines (Appendix 4) from her psychologist and based her story on this. The psychologist felt that she had not put enough effort into writing her story and asked Alison to use the story guideline prompts and answer each individual question. Alison did so and this may have influenced her writing. Alison was transferred to a different ED centre in South Africa and had not attained a healthy body mass by the time she completed Phase B. She emailed the final questionnaire and second EDI to the researcher directly.

5.1.3 Participant C: Sarah Adam

I used to daydream that I would one day be taken away and be looked after in a normal family and I'd be happy again. I tried my best in all the sports, got my honours in cross country, colours in leadership, colours in athletics and swimming, as well as certificates of distinctions in my subjects but I never got any recognition (Adam, *Provision*, p. 30, l. 5-8).

Sarah Adam was 31 years old at the time of the study. She is South African. Her height is 1.61 metres. Her lowest adult weight was 35.0 kilograms (BMI 13.50). At the time of writing her story her weight was 55.0 kilograms (BMI 21.22).

She was receiving ongoing outpatient treatment for her AN as well as comorbid anxiety, depression and borderline personality disorder as diagnosed by her psychologist.

The researcher had no direct contact with Sarah during Phase A. Her psychologist, with whom she met weekly, was the intermediary. Reading the story guidelines (Appendix 4) prompted her story writing. She was the first participant to complete Phase B by returning her questionnaire and EDI.

Sarah's story was atypical in several respects which may be a result of the comorbid diagnoses of generalised anxiety disorder, major depression and borderline personality disorder by her psychologist. Sarah reported a range of traumas, including on-going sexual abuse from her father for several years of her childhood.

5.1.4   Participant D: Kim Joseph

I was only a teenager, choosing friends who never stayed, loving a boy who broke my heart, and choosing modelling as a job to hear the problems with my body and my terrible skin. Never feeling good enough for anyone, not even myself (Joseph, *Provision*, p. 38, l. 13-15).

Kim Joseph was 19 years old at the time of the study and resided in South Africa. She was the youngest participant in the study. Her height is 1.7 meters. Her lowest adult weight was 42.0 kilograms (BMI 14.53). At the time of writing her story her weight was 49.0 kilograms (BMI 16.96). She was receiving inpatient treatment for her AN at a specialist clinic in South Africa.

The researcher had no direct contact with Kim during Phase A. Her psychologist, at the ED facility acted as the intermediary. She received the structured story guidelines (Appendix 4) and based her story on these.

For Phase B the researcher was unable to make contact with Kim. She did not respond to emails. She had been discharged from the ED facility and her psychologist did not have her contact details. She did not read the book or complete the final questionnaire and second EDI. The researcher chose to use her story in the analysis because it was included in *Provision* prior to her lack of response.

5.1.5 Participant E: Jane Harris

> Anorexia became my 'best friend' because that's where I could escape all my worries, it gave me power, it gave me a high and most of all it was the 'one thing' that I had complete and utter control of or at least, that's what I thought (Harris, *Provision*, p. 41, l. 26-28).

Jane Harris was 25 years old at the time of the study and resided in South Africa. Her height is 1.75 meters. Her lowest adult weight was 35.0 kilograms (BMI 11.43), which was at the end of high school (age 17-18). At the time of writing her story her weight was 48.0 kilograms (BMI 15.67). She was receiving outpatient treatment for her AN through weekly sessions with her psychologist and was also diagnosed with symptoms of obsessive-compulsive disorder obsessive-compulsive personality disorder and major depression.

The researcher contacted Jane through her psychologist who informed her about the study. Once Jane had consented to being in the study she preferred to be in direct contact. Jane seemed to retain the anxious desire to write a perfect story despite the researcher repeatedly conveying that there were no rules or expectations as to how she wrote it.

Jane did not complete her story. At the time of the study she was not coping emotionally and, though she was motivated to complete it, she seemed unable to produce something that she could feel proud of:

> I must say that I REALLY do feel bad with the way my story was written because I really wanted to give all the details etc, it was just not the way that I would normally send anything like that out [...]. I felt rather embarrassed (Personal communication, June 20, 2013).

She rewrote the beginning sections of her story several times but never completed it. In the end she wanted to submit what she had written and, given the effort she had put into her incomplete story, the researcher accepted this. She envisioned the second section of her story comprising life after school, but was unable to complete it. She completed Phase B and returned the questionnaire and second EDI. Jane was the only participant who made further contact with the researcher by calling to say that she had enjoyed being a part of the study and to thank the researcher for including her in it.

Jane's responses seemed to show that she was an intensely emotional person who was finding it difficult to manage her emotions. Also evident was a perfectionist tendency that seemed to be detrimental because it appeared to evoke anxiety and a resultant sense of failure.

5.1.6 Participant F: Lucy Edwards

I became obsessed with it [weight]. I became more manipulative, lying, sneaking and being dishonest. I *had* to follow the rules I had made up in my mind about food. *Use as little fat and sugar as possible. Fruits and vegetables were ok, but no banana. No butter on my bread...* Lots and lots of rules, but because I loved so many tastes of food, I loved eating food and I loved cooking! It was a hell of a battle. Always in my mind, always in my mind, always in my mind... (Edwards, *Provision*, p. 49, l. 4-8).

Lucy Edwards was 43 years old at the time of the study and was receiving inpatient treatment at an ED facility in South Africa. Her height is 1.78 meters. Her lowest adult weight was 56.0 kilograms (BMI 17.67). At the time of writing her story her weight was 58.0 kilograms (BMI 18.31). Lucy was the healthiest of the participants based on her BMI score, which was the closest to normal range (a BMI above 18.5 based on World Health Organisation definition) (Cole, Flegal, Nicholls & Jackson, 2007). Lucy displayed a pattern of binging and purging followed by compensation through restriction. The researcher had little direct contact with Lucy during Phase A. Her psychologist at the inpatient unit was the intermediary. Her story was written with prompting from the story guidelines (Appendix 4). She completed her story after being discharged from the ED facility and emailed it to the researcher directly.

5.1.7 Participant G: Tessa Schaefer

On the outside, very few would guess there was anything awry; I remained calm and continued with my work. Inside, a part of me died in that moment [when she found out her horse, Twirler, had died]. My world felt like it came to an end and it was as though someone had cut my oxygen supply. I couldn't breathe, I couldn't comprehend what was happening and I just could not fathom how life could possibly continue without Twirler. I was devastated, yet I shut down. I denied myself the permission to grieve, to cry, to express my pain. This is a typical example of the incongruence that I have battled to overcome between my inner and outer worlds (Schaefer, *Provision*, pp. 57-58, l. 41-2).

Tessa Schaefer was 31 years old at the time of the study and resided in Europe. Her height is 1.66 meters. Her lowest adult weight was 34.0 kilograms (BMI 12.34). At the time of writing her story her weight was 46.4 kilograms (BMI 16.84) and she had been admitted to an inpatient treatment facility for EDs in South Africa.

The researcher had little direct contact with Tessa during Phase A. Her psychologist at the ED facility was the intermediary. She wrote her story using the guidelines (Appendix 4) provided by the researcher. She completed it while at the ED facility and was anxious about her story being good enough resulting in a few revisions before submission. Despite numerous story revisions, Tessa completed all the research tasks.

5.1.8 Participant H: Kate Barlow

I think I misinterpreted a lot of the love I was given as I think deep inside I didn't feel I deserved it and I was constantly comparing myself to my sisters who were always being admired for their good looks, popularity and confidence (Barlow, *Provision*, p. 68, l. 33-35).

Kate Barlow was 20 years old at the time of the study and resided in Europe. Her height is 1.62 meters. Her lowest adult weight was 24.0 kilograms (BMI 9.14). At the time of writing her story her weight was 39.2 kilograms (BMI 14.94) and she was in an inpatient treatment facility for EDs in South Africa. Of all participants Kate was the youngest to receive her diagnosis and treatment of AN and had spent the longest time in treatment centres.

The researcher had little direct contact with Kate during Phase A. Her psychologist at the ED facility was the intermediary. She wrote her story using the guidelines

(Appendix 4) provided by the researcher. At the time of Phase B Kate had returned to Europe where she completed the final questionnaire and second EDI before emailing them directly to the researcher.

5.1.9 Participant I: Emily Hughes

> I had been raised in a Christian home. My mom a bible school teacher. I learned that women were not equal to men. That God wanted women to submit to their husbands. I had learned from these teachings that women were weak. That being female was not at all a good thing. I firmly believed that I was sick and weak by birthright as a woman (Hughes, *Provision*, p. 78, l. 11-14).

Emily Hughes was 32 years old at the time of the study and resided in the United States of America where she had completed an inpatient program treating her substance abuse and AN. She was receiving outpatient treatment when she commenced Phase A of the study. Her weight at that time had reached normal range and was 64.9 kilograms. Her height is 1.68 meters (BMI 22.96). She experienced her lowest adult weight, 42.0 kilograms (BMI 14.88), before entering the inpatient program. The researcher's contact with Emily was different to that of the other participants because Emily contacted the researcher after hearing about the study and wanted to participate. The researcher contacted her psychologist for consent and confirmation of diagnosis. Thereafter, Emily received the guidelines (Appendix 4) and completed her story.

5.2   COLLATING PARTICIPANTS' DATA

By examining the nine diagrammatic representations of the stories above (of which one example is available in Appendix 9), the researcher looked for similarities. These similarities were grouped together to create overarching themes and subthemes[4]. Braun and Clarke (2006) suggest that a difficulty with this part of the analysis is the potential to lose detail by reducing raw data:

> By 'define and refine', we mean identifying the 'essence' of what each theme is about (as well as the themes overall), and determining what aspect of the data each theme captures. It is important not to try and get a theme to do too much, or to be too diverse and complex (Braun & Clarke, 2006, p. 92).

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[4] Note that certain themes present in the nine individual diagrams that appeared for only single participants were excluded.

In order to achieve this balance the researcher worked systematically through all the themes and subthemes and kept the analysis data-driven. The focus of the research was to present how these individuals understood their AN. As a result a large number of themes and their corresponding subthemes emerged. An exploration of each theme and subtheme is presented below, followed by the researcher's collation of these themes into a working model. The model summarises the participants' experiences. This is not an aetiological or treatment model of AN in general, but rather a collation of nine individuals' experiences and how these informed their understanding of their AN.

The researcher considered when and where the discussion of results should be included. Literature was only re-consulted *after* the analysis of the stories was completed and was substantiated with raw data extracts. This was done so as not to influence the researcher and to keep the analysis data-driven (Polit & Hungler, 2007). Due to the large amount of information provided, the analysis that follows is complex, multi-layered and comprises many themes. Rather than linking to the literature in a separate section, the researcher has opted to present themes' relationship to the literature after each theme or subtheme is discussed. Thereafter, in the concluding discussion of results and interpretations (Chapter 5), the data analysis is further summarised and collated. The data analysis process is summarised in Table 5.2:

Table 5.4

Process of data analysis and presentation

Process	Description
Step 1	Detailed exploration of each theme and subtheme within the model (including substantiation from the raw data (stories).
Step 2	For each discussion in Step 1, substantiating literature is provided.
Step 3	A proposed working model is presented and briefly described.
Step 4	The final collation of analysis is explored in the discussion chapter.

Regarding the order in which participants are quoted, excerpts that were most representative for each theme were presented first followed by others in descending order of representativeness.

5.3 PERCEIVED BIOLOGICAL SOURCES OF VULNERABILITY

While the participants did not use the term 'source of vulnerability', all participants described where they believed their AN originated from. The participants' perceived sources of vulnerability were grouped into themes by the researcher based on participants' descriptions in their stories, the first of which appeared to be perceived biological sources of vulnerability.

5.3.1 Presumed heredity

One participant appeared to refer to existing discourse that AN may be heritable. She presumed that, not the disorder, but rather her unhealthy attitude toward food, stemmed from family:

> Mummy also is very funny about food which she denies but she most definitely does not have a normal attitude to eating, this has reflected some of my beliefs about food (Barlow, *Provision*, p. 74, l. 6-8).

Notably, the above excerpt was the only quotation from all the stories that directly referenced a parent with a problematic attitude toward eating. The other eight stories did not directly mention a family relative who had an ED. This may be because the participants did not have family members who had difficulty in this area (or if they did, they did not feel it necessary to mention them). The researcher had anticipated that heredity would be a central theme given the wealth of literature that has suggested that AN tends to run in families (Bulik et al., 2010; Bulik et al., 2007; Cloninger, 1987; Fairburn et al., 1999; Ho & Birmingham, 2001; Isky, Bryan & Rachel, 1997; Schmidt & Park, 2003; Stice, Agras & Hammer, 1999; Wade et al., 2000), and that genetics has become a 'folk model' for explaining personal problems, whether evidence-based or not. The researcher chose to include this as a theme as it is strongly argued by the authors cited above. Although much literature has attributed AN to genetic heritability based on twin studies with high concordance rates (Bulik et al., 2007; Bulik et al., 2010; Kipman et al., 1999; LaBuda et. al., 1993; Schmidt & Park, 2003; Wade et al., 2000), Fairburn et al. (1999) reported that concordance studies were inconsistent, suggesting widely varying concordance rates from 0-70%. Strober and Humphrey's early work (1987) suggests that there is no single genetic mechanism of influence in AN but rather a predisposition to personality factors that result in greater sensitivity and

vulnerability to social experiences. In a recent literature review, Dring (2015) supports these notions by suggesting that studies of the impact of genes in the aetiology of AN have not been able to draw any substantial proof of an AN gene and urges a focus on family environment to ascertain AN aetiology.

The design of the current study cannot verify or refute the literature regarding genetic heritability; it can only describe participants' perceptions and experiences. Based on the participants' lack of mention of family members with EDs, it seems that in this group of individuals, heredity was not perceived as being involved in the development of their AN.

5.3.2   Comorbid psychiatric disorders

While none of the participants described first-degree relatives as having an ED, almost all of them described family members who appeared to have other psychiatric disorders. Comorbid psychiatric disorders are described below relative to two factors: psychiatric disorders of first-degree relatives as well as participants' own comorbid psychiatric disorders. In both cases the participants and their relatives may or may not have had formal diagnoses of the psychiatric disorder, but the descriptions in their stories imply the existence of these disorders. These are detailed below.

5.3.2.1 Substance abuse and dependence

The psychiatric problem that appeared to emerge most frequently in the participants' stories was substance abuse and dependence. Emily Hughes did not indicate whether or not the diagnoses mentioned below were made by qualified mental health care practitioners, but her use of the specific names of disorders suggested that at some point formal diagnoses may have been made:

> I was born in April, 1981. To a mother who was from a line of Factitious Disorder and addiction. My grandfather and uncle were the guys who got kicked out of buffets for eating too much. My grandmothers on both sides were alcoholics (Hughes, *Provision*, p. 77, l. 18-20).

Emily saw herself as coming from a family with a range of psychiatric difficulties. Sarah Adam also described family members with substance abuse difficulties. Sarah's

description contained no formal diagnoses of these disorders but she stated that her mother and sister abused substances:

> I can't remember what happened but shortly after that my mum started drinking more and hitting me with a whip [...] she would start to attack me by using foul language, drinking, and abuse (Adam, *Provision*, p. 24, l. 32-37).

> I felt upset as we were struggling just to keep food on our plates and she [mom] was buying alcohol. When we went on holiday with them [mom and sister's family] it was the same, that my sister, mum and her boyfriend and children were drinking so much, and never even worried about the other children (Adam, *Provision*, p. 32, l. 28-30).

Jane Harris also appeared to have substance abuse problems in her family:

> ...but he used to come home late because he would sit at the pub nearly every week day and drink. It became so bad that if my dad was not home by a certain time, then I knew there was going to be a fight (Harris, *Provision*, p. 40, l. 10-12).

For Alison Clark, it was not family members that appeared to have substance problems, but herself. Alison seemed to have abused marijuana and ketamine[5]:

> I was unhappy, and isolated from real life, as I had been when I was in hospital. I started going out with Paul, a ketamine addict. For a while my world was ketamine-based. We split up (Clark, *Provision*, p. 17, l. 25-27).

Later in her story, Alison described her substance dependence on marijuana and explained how it was only with support that she was able to overcome it:

> Things began looking up as I started attending the local Buddhist Centre. The Lama there, who was an old friend, began looking after me, and vice-versa. He got me off the weed, and gave my life structure and meaning (Clark, *Provision*, p. 18, l. 1-3).

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[5] "[Ketamine] is a noncompetitive antagonist of N-methyl-d-aspartate receptor. It has been widely used in anesthesia and pain management" (Tawfic, 2012, p. 379). In addition, "...its use as a recreational drug has spread in many parts of the world during the past few years. There are now increasing concerns about the harmful physical and psychological consequences of repeated misuse of this drug " (Morgan & Curran, 2012, p. 27).

The excerpts above seem to suggest that, for these participants, substance abuse or dependence was evident in first-degree relatives or themselves. Substance abuse and dependence have frequently been linked to EDs in the literature (Costin, 2007; Jordan et al., 2009; Root et al., 2010). Jordan et al. (2009) however, indicate that substance problems appear to have higher comorbidity in individuals with bulimia nervosa (BN) rather than AN. Several participants mentioned binge eating followed by compensation strategies, but due to low BMI scores they had formal diagnoses of AN only (suggesting AN of binge-eating/purging subtype) (APA, 2013). Exposure to substance abuse or dependence may have been associated with the risk of developing AN for some of the participants.

Fichter et al. (2008), in their study of BN and binge-eating disorder (BED), proposed that individuals with BN are impulsive. This impulsivity may be what makes these individuals more susceptible to substance abuse or dependence. The role of impulse control in the development and maintenance of AN should be further considered in research. Askenazy et al. (1998) conducted a study on whole blood serotonin concentration, free and total tryptophan concentration, large amino acids, impulsivity and AN. They concluded that impulsivity and anxiety were two important personality components in AN and suggested that research on the importance of impulsivity and AN needed to be pursued as a possible central contributor.

5.3.2.2 Mood disorders and suicide risk

A second psychiatric difficulty that appeared clearly in the narratives described instability and mood difficulties. Several participants and/or their first-degree relatives were described as having mood problems. Alison Clark experienced mood problems from a young age:

> I first became unhappy around age 13 […] I felt quite paranoid around this age, at school and home (Clark, *Provision*, p. 15, l. 28-38).

Alison attributed her mood problem as being related to her brain chemistry: "Hormonal changes in my brain chemistry and my body left me feeling sad" (Clark, *Provision*, p. 15, l. 40). Sarah Adam also appeared to have mood difficulties and described her formal diagnosis of bipolar disorder:

Within that year in 2010 I lost that whole 40kg I had gained and spiralled back to depression, and had mood episodes eventually being diagnosed with bipolar disorder (Adam, *Provision*, p. 31, l. 40-41).

It is not clear from Sarah's story as to whether her mood difficulty preceded her AN or vice-versa. Lucy Edwards also described mood difficulties from a young age:

I have to mention that from an early age I also had periods of darkness, black moods, as I would call them. Mostly during winter times. During these periods I was more negative thinking, pessimistic, worrying a lot and more sleepy. Then it was more difficult for me not to eat more. When I did it made me feel even worse about myself, because of my weakness not to restrict and ignore the hunger (Edwards, *Provision*, p. 47, l. 10-14).

Lucy's difficulties with mood had features of seasonal affective disorder (APA, 2013) but were formally diagnosed as bipolar disorder:

In October 2011 I got my first hypomanic period! A psychiatrist told me that I really seemed to have a Bipolar disorder and told me that there would be a chance that after this period I probably would have another (hypo)manic period again or would get depression (Edwards, *Provision*, p. 51, l. 2-25).

Several participants and their first-degree relatives were described as having mood difficulties. This appeared to be in keeping with literature on comorbidity of mood disorders and AN. Kennedy et al. (1994) found that 80% of the 198 individuals with EDs in their study showed signs of major depression. A review by Berkman et al. (2007) concluded that mood and anxiety disorders shared the strongest comorbid links to AN. Costin (2007) found that 50% of individuals with AN had comorbid diagnoses of major depression. Notably, however, Costin (2007) mentioned that in the majority of cases, AN preceded the mood disorder. This may suggest that AN is a risk factor for a mood disorder, rather than the alternative. Watson et al. (2014), after administering the Children's Depression Inventory to a sample of 256 adolescent females with DSM5-diagnosed EDs, concluded that female adolescents with AN in particular appeared to be at greater risk of developing depression and suicidal ideation.

Moving on to bipolar disorder in particular, a study by McElroy et al. (2005) suggested strong comorbidity between EDs and bipolar disorder. They did however suggest that the strongest comorbid link appeared to be between bipolar II disorder and BN. Lunde et al. (2009) described similar findings that support a strong comorbid link between BN and bipolar II disorder. They further suggest that individuals with BN were more likely to develop bipolar II disorder than were individuals with AN. Those with AN were not as inclined to having bipolar II disorder as BN individuals. They added, however, that those with AN had affective temperaments that were common in bipolar II individuals. It can thus be suggested that AN individuals have personality and temperamental traits that may make them vulnerable to mood disorders (including bipolar II). Bould et al. (2015) in a cohort study of 158,679 individuals found that parental mood, anxiety and personality disorders increased risk of ED development in offspring.

The mood-related difficulties of several participants and their families appeared to include suicide risk. Tessa Schaefer's sister reportedly attempted suicide on numerous occasions:

> A man claiming to be Mia's psychiatrist (of whom we knew nothing about!?!) told my father Mia had taken an overdose and then run out of his office. I am convinced time stopped in that very moment. Mia was later found and, thankfully, survived following an admission to hospital (Schaefer, *Provision*, p. 59, l. 15-18).

> Mia took two more overdoses in as many weeks. It seemed no one could help her. She left home and refused to engage in any treatment. She would attend counselling appointments dripping blood from her wrists, having self-harmed, but fight not to let anyone touch her wounds... or she would sit looking at the ground for the entire hour's session. She intimidated every professional she encountered so it was not long before they refused to keep seeing her (Schaefer, *Provision*, p. 59, l. 24-29).

Sarah Adam's story describes suicide attempts by herself and by her mother:

> I then somehow knew she was taking tablets because as I opened the bedroom door I saw her. I ran as fast as I could [...] I thought to myself 'what are my sisters and I going to do without our mum' (Adam, *Provision*, p. 24-25, l. 45-6).

Sarah described her own attempted suicide:

> Then somehow got to the psychiatrist's office and pretended I was all fine but I was ill. I remember sitting in her office and every so often I would hear her say did you take tablets and in my mind I thought I was telling her I never but she said I was talking incoherently so eventually I nodded I did and I was dragged to hospital and I only remember them sticking a tube down my throat and then waking up to see my family there. […] Then the psychiatrist who has been my devoted caring person came in and gave me a hug, I thought she was going to shout at me but she did the opposite (Adam, *Provision*, p. 30, l. 30-37).

The extracts above indicate that several participants and their first-degree relatives appeared to have mood difficulties that led to suicide risk. This is consistent with the findings of Bulik et al. (1999). Using a sample of 68 individuals with AN, 152 with BN and 59 with major depression and no history of an ED, they found that suicide risk was common in all groups. The commonality between groups, however, was not attributed to their psychiatric disorders but rather to trait similarities (including high persistence, high self-transcendence and low self-directedness). This suggests that it is not necessarily the AN, but rather certain existing personality features that increased vulnerability to suicide risk. These same features may be central to increasing an individual's vulnerability to developing AN or major depression.

5.3.2.3 Self-injurious behaviour

The above extract from Sarah Adam's story, in addition to describing numerous attempted suicides, also indicates self-injurious behaviour. Self-injurious behaviour has been linked to major depression and EDs. Costin (2007) reported that 61% of individuals with AN had also engaged in self-injurious behaviours. Lucy Edwards described her self-injurious behaviour in the following excerpt:

> I had self-destructive behaviour from an early age. Primary school age I bit myself on my arms before I fell asleep in the evening. Often feeling very sad or desperate (Edwards, *Provision*, p.47 l. 15-16).

Sarah Adam also appeared to initiate her self-injurious behaviour when she felt unable to cope with some life situations:

But that night I cut my arms. The whole time I was sitting in that doctor's room when he was checking my vitals I prayed that he would not take my pulse because of the cuts on my arm but I was unlucky as he did and saw it and immediately booked me back into hospital for depression (Adam, *Provision*, p. 29, l. 15-20).

Alison Clark described how her self-injurious behaviour appeared to become pronounced when she tried to stop her AN behaviour:

I couldn't break away. I switched from my ED to self-harm and overdosing (Clark, *Provision*, p. 20, l. 6-7).

This suggests that self-injurious behaviour, like AN, was a coping mechanism for Alison. Research by Thomas et al. (2002) supported the finding that self-injurious behaviour was common in individuals with AN. However, they found that reliable data on this topic were sparse and that while there did appear to be a link between self-harming and EDs, the link is not yet understood. They proposed that self-injurious behaviour seemed more linked to potential personality disorder comorbidity (in particular, borderline personality disorder) in AN (Thomas et al., 2002). Finally, they suggested that individuals with BN seemed inclined to self-injurious behaviour due to impulse-control difficulties, while individuals with AN seemed more inclined to compulsive behaviours and comorbid obsessive-compulsive disorder (Thomas et al., 2002). This again supports the notion of the existence of a distinct AN personality type.

5.3.2.4 Anxiety disorders and obsessive-compulsive traits

The final comorbid psychiatric conditions described in participants' stories referred to anxiety. Kate Barlow described her anxiety succinctly:

So these 5 years I spent at all girls schools were enjoyable and I did average in all my school work but do remember having to take medication to ease my anxiety before exams (Barlow, *Provision*, p. 69, l. 5-7).

Several participants did not directly label their anxiety as anxiety, but rather described it as intensive perfectionism and obsessive-compulsive behaviour: "I worked obsessively hard and got good GSCEs" (Clark, *Provision*, p. 15, l. 36-37). Lucy Edwards described her obsessive-compulsive traits in the following way:

> Also obsessive-compulsive behaviour like re-structuring things, re-writing, eye blinking and swallowing. During high school I often thought about death. During those years I was self-destructive too (Edwards, *Provision*, p.47 l. 17-18).

The above excerpts seem to be consistent with studies in which Anderluh et al. (2003) and Jordan et al. (2009) found a comorbid link between AN and obsessive-compulsive traits and perfectionism. Kaye et al. (2004) found that obsessive-compulsive disorder (obsessive-compulsive disorder), social phobia and specific phobia were the comorbid anxiety disorders most often associated with AN and BN. They further suggested that in almost all of the cases, the anxiety disorder or traits preceded the onset of the AN. This then may indicate that having an anxiety disorder or traits increases risk for the development of AN.

Unlike the other participants, Sarah Adam seemed to be the only one exposed to abuse in her childhood. Her father's extreme violence toward her and her sister are described in the following excerpt:

> Other times my sister, Jane and I were made to work until late in the evening in the garden or carrying heavy logs, but if it was not done to my dad's perfection we would get a hiding with a wooden block attached to it that had silver studs in it (Adam, *Provision*, p. 24, l. 19-21).

The extract suggests that Sarah's father was preoccupied with perfection, as was Sarah later. Her father's violent behaviour may have been linked to impulsivity that, as mentioned above (5.2.3.3), has been associated with EDs in the literature. In a review of literature, Kavoussi, Armstead and Coccaro (1997) found that impulsive aggression was associated with reduced serotonin. Serotonin was described as having an inhibitory effect on aggression. Reduced serotonin and its association with mood disorders, anxiety disorders and EDs could suggest, that for Sarah, her mood and AN diagnoses may have been linked (both genetically and environmentally) to the impulsive aggression that her father displayed.

In summary, participants' stories described potential biological sources of vulnerability that they perceived as being related to the development of their AN. These vulnerability factors were described as presumed heredity and as comorbid

psychiatric disorders. These perceived sources of vulnerability are diagrammatically summarised in Figure 5.1:
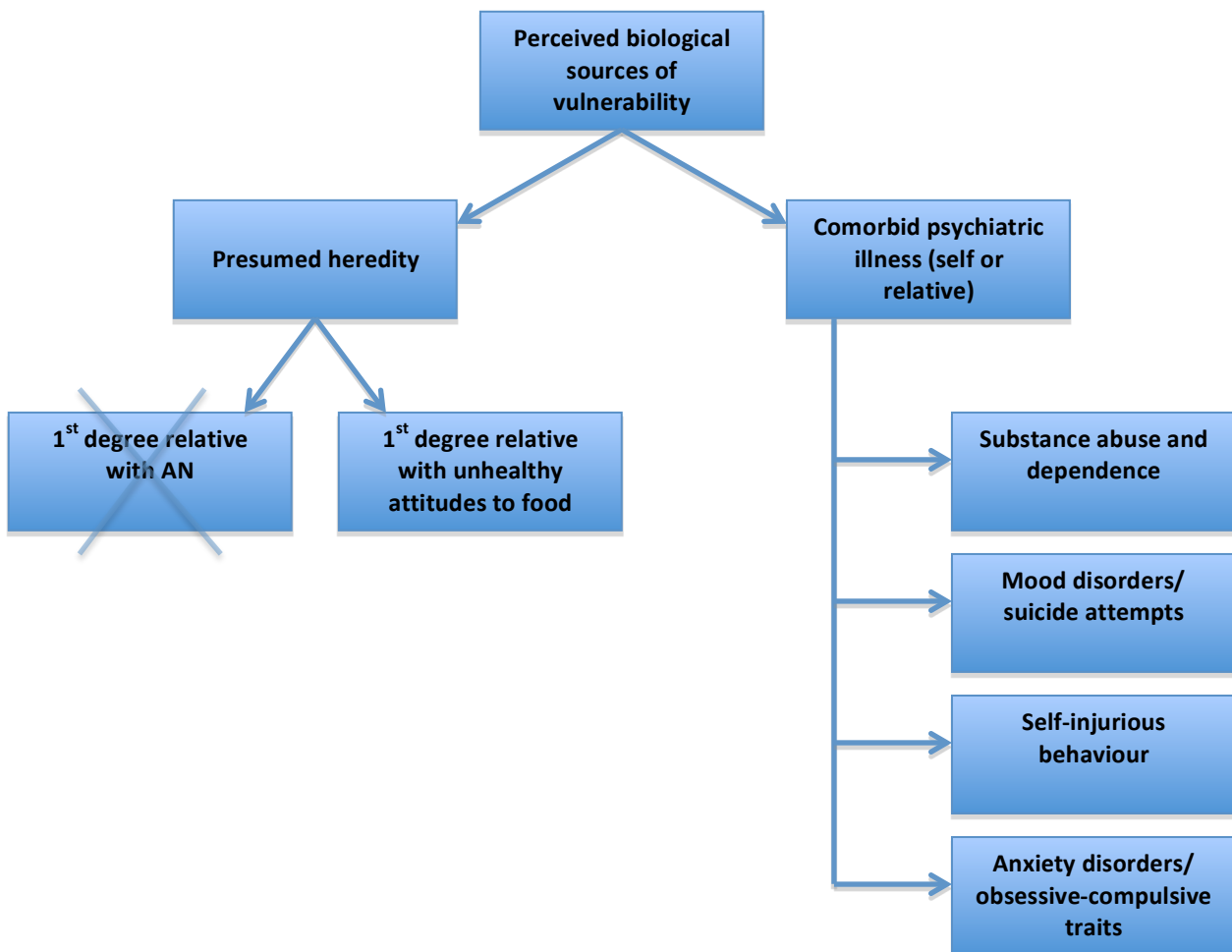
Figure 5.1. Perceived biological sources of vulnerability.

As Figure 5.1 illustrates, the participants perceived the following biological sources of vulnerability:

- Presumed heredity
  - Predisposition to an ED has been supported by a great deal of literature (Bould et al., 2015; Bulik et al., 2007; Bulik et al., 2010; Cloninger, 1987; Fairburn et al., 1999; Ho & Birmingham, 2001; Isky et al., 1997; Schmidt & Park, 2003; Steinhausen et al., 2015; Stice et al., 1999; Wade et al., 2000) and was expected to be a central feature in the participants' stories, but was not. Because heredity for EDs did not feature in any of

the stories, this subtheme was not further pursued. Notably, the current study was *not* statistically exploring heredity, but explored only the participants' perceptions of sources of vulnerability. For the nine individuals heredity was not perceived as a central vulnerability factor. These narratives suggest that heredity may be perceived as linked to traits that increase the vulnerability to AN rather than the disorder itself being inherited

- o Unhealthy familial attitudes toward food were included as a minor subtheme as only one participant made mention of this.

- Comorbid psychiatric disorders
  - o Comorbid psychiatric disorders were described in the stories as salient for participants and some of their first-degree relatives. There appeared to be four major comorbid psychiatric disorders, namely substance abuse and dependence, mood disorders (and suicidal behaviour), self-injurious behaviour and anxiety disorders (in particular obsessive-compulsive traits). This appears to be consistent with literature. Steinhausen et al. (2015), studied 2370 child and adolescent psychiatric patients and concluded that anxiety (in particular obsessive-compulsive disorder), mood and substance abuse disorders had the highest comorbidity with AN. The question of whether these comorbid disorders are the cause or the result of AN still requires further study. An alternative explanation may be that all these disorders have similar underlying personality traits which increase the risk for development of several psychiatric conditions, including AN
  - o Vitousek and Manke (1994) suggested that individuals with AN have personality traits that include being obsessive, having unstable moods and impulsivity. Thus, one could argue that these personality features appear to increase the risk of individuals developing several comorbid psychiatric disorders including substance abuse and dependence, mood disorders and anxiety disorders. All of these may further increase the likelihood of the development of AN.

5.4   PERCEIVED ENVIRONMENTAL SOURCES OF VULNERABILITY

Based on themes drawn from their stories, there were a range of environmental sources of vulnerability that participants perceived as contributing to the development of their AN. In addition to environmental factors constituting a source of vulnerability, participants also described impactful, acute, time-specific environmental events that would constitute environmental episode triggers. The vulnerability model described earlier (Zubin & Steinhauer, 1981; Rutter, 1997, 2002) in sections 1.2 and 2.1 proposes that trigger factors act on a vulnerable individual to provoke an episode of a disorder, if moderating factors cannot reduce the impact of the trigger on vulnerability. The sections below describe both general environmental sources of vulnerability as well as specific examples of episode triggers relating to each section.

5.4.1   Specific environmental sources of vulnerability

Specific environmental sources of environmental sources of vulnerability played a role in almost every participant's story. The environmental sources of vulnerability were divided into five subthemes based on the vulnerability's source:

5.4.1.1 Family environment

The first subtheme, 'family environment', has been used to describe family events that were perceived to be environmental sources of vulnerability for the participants' AN development. Amanda Lere, from a family that was high achieving, felt pressurised to perform:

> As the eldest of two bright, high-achieving sisters and daughters, I might have gotten indirect perfectionist messages from a family who wanted the best for me (Lere, *Provision*, p7, l. 26-27).

Alison Clark described her family's dynamics as expecting competition and good behaviour. Her quotation also suggests that her parents at times 'lost control' and suggest that she was exposed to parental discord:

> With my brother Mark we were more competitive. He was badly behaved sometimes. There was not room for me to be naughty, particularly as Peter needed stability when Mark was like this and our parents lost control (Clark, *Provision*, p. 15, l. 23-26).

Throughout Alison's story she described the discordant relationship that she had with her parents. She saw her parents as not being good disciplinarians due to their lack of boundary setting:

> I knew where I stood more with my grandparents than my parents – who couldn't discipline me – they didn't want me upset (Clark, *Provision*, p. 15, l. 20-21).

Alison's difficulty with her parents also extended to her eating habits:

> My parents see it as very bad when I eat more food than I should. They have frequently locked up food to try to stop me. It's upsetting (Clark, *Provision*, p. 16, l. 11-12).

Alison directly voices her disregard for her parents and accuses them of not providing emotionally for her:

> I resent my parents for not allowing me to feel safe and secure during adolescence (Clark, *Provision*, p. 18, l. 20-21).

Alison felt she did not have clear family boundaries and experienced discord which is in keeping with existing literature. Chan and Ma (2004) indicated that family discord was a major contributor to the development of AN. While there does not appear to be a great deal of post-1990s literature on family dynamics and the development of AN, Kog and Vandereycken (1989) conducted a study in the 1980s on ED families. They concluded that individuals with AN were often from families with boundary problems. In a review of literature conducted by Ward et al. (2000) insecure attachments with parents in early childhood appeared to be linked to the later development of AN.

Feeling insecure and unsafe seemed to be evident for Sarah Adam too. Her story was different from the others in that she described enduring emotional, physical and sexual abuse in her family:

> We weren't the happiest family growing up, in fact my father was an alcoholic and drank himself to sleep until my mum and I would take him to bed and undress him. He was abusive to us and my mum when we were children. He

would throw the food against the wall if it was not up to his standard […](Adam, *Provision*, p. 23, l. 17-20).

The described abuse by Sarah's father which is described as occurring frequently may have contributed in general as a source of environmental vulnerability, but in addition Sarah also describes a particularly abusive incident which may or may not have constituted an episode trigger for Sarah's AN:

> The one time I do remember quite clearly […] I was full and my mum said she will take the food away but my dad threw a fit and took the casserole dish with the food in it and broke it over my mum's head (Adam, *Provision*, p. 23, l. 21-23).

In addition to the family violence that Sarah was exposed to, she also endured molestation from her father that she detailed in her story:

> My dad and mum separated from the courts because he was arrested and pleaded guilty for sexually molesting me, based on evidence, as I was too petrified to talk to anyone, because I thought my dad would come and get me… (Adam, *Provision*, p. 24, l. 8-10).

For Sarah, the abusive family environments were multiple. After being molested by her father and physically abused by her mother, she was removed from the family home and placed in foster care. Her new family environment appeared to be another that was abusive:

> Shortly after that I went into foster care with Diane, but she treated me horribly […] I had to do all the cooking and cleaning, I felt like a maid. And during this time, my mum would go to the place, and my school, and scream at me (Adam, *Provision*, p. 25, l. 9-15).

Sarah's experience of physical abuse appears to be atypical of an individual with AN and possibly more common in BN (Schmidt et al., 1997). However, in the present study the discordant family appeared to be a perceived source of vulnerability of which the physical abuse was only one part. While most research conducted on physical and sexual abuse and EDs seems to emphasise the link between abuse and BN, Treuer et al. (2005), Vartanian et al. (2014) and Monteleone (2015) found links between AN and childhood trauma, physical and sexual abuse. Notably, the authors concluded that a

history of child physical or sexual abuse had a major impact on the development of body image distortion which then potentially increased susceptibility to the development of an ED. Body image distortion and its links to physical and sexual abuse should be further researched.

Kim Joseph appeared to be influenced by a family environment in which she was treated as being fragile:

> For the first few years of my life, I was spoiled and treated like a princess. I was my parents' first child and so they treated me like a piece of glass; a fragile, easily bruised thin piece of glass (Joseph, *Provision*, p. 36, l. 2-4).

Emily Hughes also appeared to develop ideas about illness and fragility from family members:

> My mom, as the female I was destined to model my womanhood after, was also an over stimulated emotional wreck. All the women on my mom's side of the family were weak, sickly, and tended to exaggerate their physical problems and walk around like they were wounded all the time (Hughes, *Provision*, p. 78, l. 1-4).

In both the above excerpts, the participants received messages about their fragility and susceptibility to illness from their families. This appears to be consistent with Minuchin et al.'s (1975) findings. They concluded that individuals were vulnerable to developing AN due to the existence of a certain type of family system in which somatisation was a covert communicational style and systemically encouraged.

In addition, a study conducted by Doba et al. (2013), of a sample of 25 families with individuals who had AN, found that emotional reliance on another family member was evident.

For Tessa Schaefer, her sister's attempted suicides through overdosing created anxiety for Tessa and her family. While not directly indicated as contributing to her AN development, these repeated incidents may have been continual stressors adding to an environment which may have been suited to AN onset.

My poor sister. She had always been incredibly temperamental but how could she have been in so much pain? Why didn't I do more to help her? How on earth were my parents going to be able to get through this, they were devastated!? Before we could even begin to comprehend what was going on, she did it again (Schaefer, *Provision*, p. 59, l. 21-24).

Concern for a sibling was also evident in Sarah Adam's story. In Sarah's case she felt responsible for her sister and felt it necessary to endure the abuse to protect her as is expressed in the example below which, though not directly stated, may have constituted an episode trigger for her AN due to the incident being acute and time-specific:

I fell asleep but somehow I woke up and saw my sister making noises, but I never suspected anything so I went to the toilet and came back only to see that this guy was again in our room but sleeping with my sister, so I took him off my sister and let him do the things to me instead (Adam, *Provision*, p. 26, l. 34-37).

As this section has outlined, several participants experienced their family environment as contributory factors in their AN vulnerability. Moving on from this to more specific family environments, the next subtheme explores participants' relationships with their mothers as contributing to their AN vulnerability.

5.4.1.2 Perceived complex relationships with mothers

Another area of family environment that warranted attention in the analysis was participants' perceived relationships with their mothers. In the following excerpt Alison Clark described her mother's over-involvement:

My mother was instructed to do my meal plan – and I got better – though my binging was the last thing to go. It was a hard road - CBT was hard work – but it helped – as did anti-depressants – though there seemed to be something missing. My mother was too involved somehow. I couldn't break away.
I switched from my ED to self-harm and overdosing (Clark, *Provision*, p. 20, l. 3-7).

While Alison did not directly suggest difficulty with her mother in the above quote, she experienced her mother as 'too involved somehow'. She seemed unable to identify why this was a problem for her. Possibly, she felt trapped as suggested in the words 'I couldn't break away'. The excerpt described Alison's AN treatment and how she

experienced her mother during this time. Her mother may have been understandably controlling out of concern for her ill daughter. Interestingly, Alison's excerpt indicates that she did not sympathise with her mother or understand how her mother's control may have been warranted given the clinical and emotional circumstances. This may suggest that Alison's description of her mother as controlling is only a perception and not reflective of her mother's behaviour and intentions.

Similarly, Sarah Adam described the complicated relationship that she had with her mother. Notably, Sarah is an atypical case, as her relationship with her mother was abusive. The incident described below may have constituted an episode trigger for Sarah's AN:

> Then one day my mum broke all my stuff, everything that I cherished, and ripped my clothing, anything she could get her hands on, I just stood there crying. She never touched any of my sister's things. My mum hated me. (Adam, *Provision*, p. 24, l. 37-40).

In several parts of her story, Sarah described her mother as being abusive. In the excerpt below she describes her mother's rage when Sarah informed the social worker that the mother's boyfriend had molested her. Rather than being protective of Sarah her mother lashed out:

> But all I knew was that my mum then really hated me even more, she really hated me and I don't blame her as I had destroyed her whole life again. She made me petrified about how the doctors were going to hurt me when they were going to do an internal to see the damage, she kept on telling me to drop the case. Eventually I did but it never helped our relationship, she kept phoning and threatening me that was going to kill me and she'll show me what abuse is (Adam, *Provision*, p. 27, l. 8-13).

Sarah described abuse throughout her story. The excerpts below give examples of the psychological and physical abuse she encountered:

> ...shortly after that my mum started drinking more and hitting me with a whip and was very angry with me calling me names like 'my father's wife/whore', 'pig' and 'bitch', and saying that it is my fault that we are living like that (Adam, *Provision*, p. 24, l. 31-34).

My mum would start attacking me verbally and physically, I can't even count how many times I was strangled, punched, jumped and thrown around. Social services did nothing, nobody did anything, they pretended nothing happened (Adam, *Provision*, p. 28, l. 22-26).

What seems evident in all the excerpts relating to problematic mother-daughter relationships is that the mothers seemed to have power over their daughters. While mothers in general have degrees of control over their daughters, the difference in these cases seems to be that the mothers seemed to have had the capacity to harm their daughters either physically or emotionally. This may have less to do with their mothers, and more to do with participants' sensitivity and susceptibility to perceive and internalise maternal control as harmful. Another example of this is taken from Tessa Schaefer's story. She described her mother having had an affair and leaving her father. Her mother's leaving was experienced as a relief:

I was heartbroken by the concept of our family falling to pieces, though by the time Mummy left, it was almost a relief. We had all had to walk on eggshells for so long and Mia and I were looking forward to having a little more of our father back again too! […] The world revolved around her [mother] and by some miracle she managed to spin things around and play the innocent victim in all of this (Schaefer, *Provision*, p 57, l. 4-9).

Tessa described her mother as being manipulative and being able to control her father and any situation around her, as described below:

My father tried his best to make up for her behaviour and he remained admirably loyal, always asking us to make allowances for her or give her time. It was completely as though the roles reversed, my mother acted like the child, and Mia and I the parent. We were expected to be understanding, forgiving and supportive. […] We longed to stay with Daddy, especially as we always felt like visitors at Mummy's house. I certainly never felt at home there and Mummy made us feel like parcels "no, it's my turn now!" "You've had them longer than me, it's not fair!" She always put my father down and used emotional blackmail at every opportunity (Schaefer, *Provision*, p 57, l. 9-19).

Kate Barlow described her mother's concern about her eating. While this is a relatively normal and understandable concern for mothers, in Kate's description below she remembers food-related rewards:

My mum was very aware of the food being so bad at school and she was often anxious I wasn't eating a proper lunch and would always bring me something from the bakery before she picked me up at 4.00 and I would eat it in the car. On Fridays if I got 10/10 in my spelling test we would also stop at the last 10 minutes of the car journey and she would treat me to a white chocolate magnum. I would always try my best to learn my spellings well (Barlow, *Provision*, p. 69, l. 12-17).

While the excerpt does not indicate a direct association with Kate's development of AN, Kate experienced her mother as using food as a reward. Her mother centralised food and weight, as Kate later did when she developed AN.

Emily Hughes felt that her mother was responsible for her developing AN and other psychiatric and physical conditions. Sarcastically she described her mother as influencing her:

My mom was an excellent caregiver. A very attentive mother. She made sure I got the most effective asthma drugs and lots of them. Never risking me having to find out I could breathe on my own for one minute. If I had only been taught to breathe on my own maybe what happened wouldn't have happened (Hughes, *Provision*, p. 77, l. 22-25).

Emily later describes her mother as being over-involved:

She [mother] was insecure and overcompensated by being excessively nice and involved in every aspect of my life. To illuminate the kind of exceptionally nice person my mom is, think of Stephen King's *Misery*. A person who is so nice you wonder how they can maintain it, and then they snap (Hughes, *Provision*, p. 78, l. 6-9).

Kim Joseph's relationship with her mother seemed enmeshed but more positive. Kim became emotionally dependent on her mother who became her focal point after the family moved to a new country:

The first 6 months were tragic for me. I became depressed and lonely, depending on my mother for everything, including friendship. I found comfort in food, putting on a bit of weight (Joseph, *Provision*, p. 36, l. 21-22).

Rather than Kim's mother being controlling or dominant, the excerpt suggests that Kim may have had a tendency to become emotionally dependent. This emotional dependence may have contributed to her vulnerability to AN development.

Alison Clark described her mother as over-involved and anxious:

> I didn't struggle to leave my mother to go to school. She was very worried though. She got me to meet a girl who was going to be in my class before I went, because she thought this would make it easier for me (Clark, *Provision*, p. 15, l. 13-15).

> My mother cared for me. This felt very claustrophobic (Clark, *Provision*, p. 15, l. 29-30).

Not all of the participants described negative relationships with their mothers. However, unsurprisingly it was evident that they were central figures in the participants' lives. Of greatest influence were the mothers who seemed to exert control over their daughters. This control did not appear to be well received by the participants.

Mothers exerting control over their daughters, as indicated in several excerpts above, seems to be consistent with early psychoanalytic research. Sours (1974) concluded that individuals with AN had mothers who were controlling and dominating. Bruch (1978) wrote that individuals with AN often felt the need to be perfect as a result of being in families with dynamics that focused on achievement and high standards. Lane (2002) found that individuals with AN tended to have mothers with obsessive-compulsive traits who discouraged their daughters from becoming independent. Conflicting psychoanalytic literature (Grigg et al., 1989; Klosinski, 1988) suggested that not all mothers of individuals with AN were controlling. Rather, they argued that there was no typical AN family system that could fully explain the development of AN.

A possible alternative to understanding the complexity of the mother-daughter relationship and its influence in the development of AN, is suggested by Murphy et al. (2000). In their study of individuals with AN and their siblings who did not have an ED, they concluded that the former perceived a greater amount of maternal control than did their non-ED siblings. This may indicate that it is not maternal control, but rather

the individual with AN's inaccurate and over-sensitive perception and experience of maternal control, that influences the development of AN. In addition, mothers with starving daughters may legitimately become more controlling as a result of increased concern for their child's health and well-being.

In summary of themes 5.4.1.1 and 5.4.1.2, participants appeared to experience their families as environmental sources of vulnerability in the development of their AN. A qualitative study conducted by Tozzi et al. (2003), asked individuals with AN to report on what they believed to be the cause of their AN. The study concluded that their participants perceived stress, pressure and dysfunctions within their family as contributors to the development of their AN. Doba et al. (2013) found that individuals with AN were from families with low cohesion and who had a tendency to emotionally rely on another family member.

Individuals with AN may well experience (and over-report) their families as being dysfunctional which may not be reflective of the 'true' family dynamics.

5.4.1.3 Friendships

Moving on from family and mothers, friendships also appeared to be experienced as potential sources of vulnerability for the development of AN in some participants' stories. Friendship experiences in general were described as contributing to participants' AN vulnerability. In addition, some specific short-term acute events with friends could have constituted AN episode triggers. Friendships, both as sources of vulnerability for AN and as specific episode triggers are explored in this section.

Amanda Lere described feeling rejected when a friendship ended. This affected the way she felt about herself and may have been an episode trigger for her AN:

> My life took a huge twist around the age of 16 when Jenny suddenly dropped me as her best friend. She found a new 'soul mate' at school and replaced me. She didn't want to have anything to do with me anymore. I was rejected, abandoned, left in innocence and left with a broken heart. I constantly questioned myself and started believing I was a worthless friend. My lack of self-esteem grew stronger by the day. For the very first time, I felt alone (Lere, *Provision*, p. 8, l. 3-7).

Amanda's sense of rejection and her feelings of being 'a worthless friend' seemed to indicate low self-esteem. This is in keeping with existing literature. Button et al. (1996) concluded that low self-esteem was a potential predictor in the development of AN. Kate Barlow also experienced loss of friendships. In her case this was not because her friends stopped liking her, but rather because she was separated from them when sent to boarding school, this experience may have been an episode trigger for her AN:

> The 10 of us closest girls all decided to make a special request to be in the same house at upper school but this was ignored and most of us were split up, all of them having a few close friends being with them in their house but in my house there was no one I could really consider a good friend. After my friends complained that we weren't put together and it was ignored, my parents made a formal complaint to the school who explained it was because I was good at making friends and so wanted me to be the one welcoming the new girls from other schools to settle in, completely disregarding how I felt starting a new school whilst being apart from all my friends who I had been so happy with. The teacher simply said I'm sure she will be fine, 'see how the term goes' (Barlow, *Provision*, p. 70, l. 26-34).

Because Kate was popular she was separated from her friends. This parting had a negative impact on her:

> After this I tried to let it go and not show my emotions, I told myself it might not be as bad as I thought so I tried not to worry until the next year came. Although secretly I was scared what to expect and knew even if I was unhappy it was unlikely I could ever change house so tried to convince myself it would be fine (Barlow, *Provision*, p. 70, l. 34-37).

> Although I did make friends within my house I always felt I would be happier if I was in a house with my other friends who I felt were on a different level and I could really connect to. I felt a bit like these new friends I had made I had almost convinced myself to like (Barlow, *Provision*, p. 71, l. 13-16).

> Behind the happy exterior I presented to the world I secretly felt all the time like I was missing out on the fun all my old friends were having in their house which was a good 10 minutes walk away from mine. I would make excuses and go out of my way so I could see them and teachers would tell me off for spending too much time in their dorms, not in my own (Barlow, *Provision*, p.72, l. 3-7).

Rather than being honest and expressing the unhappiness that she felt, Kate started to hide her emotions and displayed a 'happy exterior'. She retreated into herself and

became disconnected from her peers. Being disconnected from peers and potential sources of support, feeling isolated and harbouring feelings of unhappiness may have contributed to an environment which increased AN susceptibility and maintenance. Jane Harris states that she started dieting in an attempt to fit in and as a result of peer pressure. Peer pressure in this case appeared to be an environmental source of vulnerability for Jane's AN development. She felt the need to comply with her friends, which she identified as a key influence in the development of her AN:

> In the April of Std 9, my friends became very involved in dieting. I had never had a weight problem in my life and because I was so physically active, I didn't need to lose any weight at all. But I thought that I would just lose one or two kilograms for the fun of it because I had never tried to do such a thing. Well, little did I know, that it was going to be the biggest mistake of my life (Harris, *Provision*, p. 40, l. 15-19).

Paxton et al. (1999) found that individuals in friendship cliques that prioritised a certain body image and dietary constraints tended to have unhealthy attitudes toward food and also showed increased dieting behaviour.

Once she started dieting, Jane felt the desire to be the best by losing the most weight. This determined dieting led to a downward spiral which started her AN:

> I lost two kilograms and I kind of got a high out of it so I thought I would just lose another kilogram and so this went on and on. Before I knew it I was caught by the gremlin 'Anorexia Nervosa' (Harris, *Provision*, p. 40, l. 19-21).

The competitive dynamic apparent in Jane's excerpt could be seen as a striving for perfection. This is discussed in more detail as a separate theme in section 3.5.1. At this point the focus is on Jane's tendency to be influenced by her friends' dieting habits and how those habits encouraged her dieting and possibly increased her vulnerability to developing AN.

Feelings of disappointment, separation and competitiveness are probably relatively normal experiences for young women. However, for the participants, the impact of and response to these experiences seems unusually emotionally destabilising. This may

suggest that, not the experiences, but rather these individuals' pre-existing sensitivity and interpretation of events may have contributed to their AN vulnerability.

<u>5.4.1.4 Romantic relationships</u>

The next subtheme in the category of specific environmental sources of vulnerability is romantic relationships. Again, relationship experiences in general were described as increasing vulnerability to AN for participants, but certain specific key events with partners were also described as constituting episode triggers for AN. Both are described in this section.

Alison Clark experienced her boyfriend's suicide as an episode trigger that impacted not only on her AN development but also on her future relationships:

> He died. He stood in front of a train the same day I split up with him (Clark, *Provision*, p. 16, l. 31).

> Our relationship sadly ended after a year [...] *I miss Jake more than I can understand* (Clark, *Provision*, p. 17, l. 9-11).

> Following this I became somewhat isolated, lost direction and focus, and my anorexia and bulimia kicked in (Clark, *Provision*, p. 17, l. 17-18).

Kim Joseph described her feeling of rejection when her relationship ended:

> I was devastated and when I found out who she was, it made it so much worse. She was a pretty girl, but the first thought that came into my head was why her? What did she have that I didn't? She was bigger than me and I worked so hard at losing all this weight to look good and he leaves me for a bigger, fatter girl (Joseph, *Provision*, p. 37, l. 16-19).

The above excerpts suggest that participants may have experienced relationship difficulties as contributors in the development and maintenance of their AN. In addition, specific key events with partners also probably constituted AN episode triggers. Difficulties in social interaction (that form part of romantic relationships) are common in individuals with AN (Nilsson et al., 1999; Zucker et al., 2007). These difficulties in social interaction may provide an explanation as to why the participants in the current study experienced failed relationships. The participants may have lacked

the skills necessary to keep their relationships stable. Although relationships ending are a relatively normal social experience, what set these individuals apart from the norm is how they experienced breakups and how they overemphasised their negative feelings associated with these. While a normal individual may feel saddened by a breakup, for these individuals, the sadness seemed to be magnified and uncontainable.

General relationship difficulties, along with other environmental difficulties described in the preceding sections, may have been sources of vulnerability for AN. While it clearly should not be said that participants' breakups caused their AN, their breakups may well have been episode triggers for these individuals who were already vulnerable to developing AN.

5.4.1.5 Other exacerbating circumstances

The final subtheme related to specific environmental sources of vulnerability was termed 'other exacerbating circumstances'. It includes descriptions of environments that in general may have contributed to AN vulnerability, as well as specific triggering key events.

Sarah Adam described the experience of a policeman sexually harassing her. The experience may have constituted an AN episode trigger:

> After the incident my mum made friends with a policeman as he was always called out to our house and one day he came to my school to pick me up and I didn't think much about it as I thought I was safe being with a police officer but on our way home he started putting his hand on my leg and making his way up. I thought what is wrong with me, why do older people want to touch me? After that ride he used to wait outside my school everyday for me, I used to hide until he eventually left. I was scared (Adam, *Provision*, p. 29, l. 28-34).

Tessa Schaefer described how she felt after she received news of her horse dying. In class at the time, she went to great lengths to hide her emotions:

> On the outside, very few would guess there was anything awry; I remained calm and continued with my work. Inside, a part of me died in that moment. My world felt like it came to an end and it was as though someone had cut my oxygen supply. I couldn't breath, I couldn't comprehend what was happening and I just could not fathom how life could possibly continue without Twirler. I

was devastated, yet I shut down. I denied myself the permission to grieve, to cry, to express my pain (Schaefer, *Provision*, pp. 57-58, l. 39-1).

Kate Barlow seemed to develop an aversion to food as a result of unappetising school meals:

> The main thing I remember from this school was that the food was horrendous and I would arrange my piano lessons over lunch period so I could continuously everyday have an excuse to skip it, and on route to my music lesson would sneak into the canteen and take a packet of plain crackers to munch on the way. I never thought about the calories I would be missing by skipping lunch every day but in other times of the day I would eat large amounts (Barlow, *Provision*, p. 69, l. 8-12).

In another example, Kate was singled out and rewarded because her teacher thought it would encourage her to eat. At this point in her story she had not yet developed AN and could be seen just as a child who did not like boarding school food. After developing AN, she had already manifested the belief that not eating was equated with receiving attention and this may have contributed to her AN vulnerability:

> One lasting memory was in grade 2 when my form teacher made me sit in the cafeteria in front of a plate of plain pasta during second lunch slot once she had found out I hadn't been with my year in first lunch slot. She made me sit there for over an hour with all the senior years as all my year had left; I think I remember I ate 5 pasta spirals before she gave up. The next day in assembly I got a confirmation which is an award given for a big effort, there is one given out occasionally if a pupil has done well in something, things like in spelling tests, sports.... mine was for trying harder to eat something at lunch. I didn't think much of this award related to food at the time. I do remember that particular lunch though as it was horrible and I was crying and my friends met me in the playground afterward wondering what was wrong (Barlow, *Provision*, p. 69, l. 20-28).

From the above excerpts it seems that the feelings of loss, humiliation and fear were experienced as contributing to participants' AN vulnerability.

In keeping with literature, the link between childhood trauma (including sexual abuse, interfamilial discord, physical abuse and psychological abuse) and disordered eating have been seen as factors for AN (Garrido & Subirá, 2013; Monteleone et al., 2015; Rorty & Yager, 1996; Schmidt et al., 1997; Treuer et al., 2005; Vartanian et al., 2014).

The stories in the current study may suggest that it is not their exposure to trauma that triggered AN, but rather the individuals' heightened sensitivity during the events. Because the participants appeared unable to process these experiences adaptively, these may have contributed to increasing their vulnerability to developing AN. The examples above illustrate that it is difficult to categorise some experiences as vulnerability sources or episode triggers. The death of Tessa's horse may have been tragic enough to trigger her AN onset, however she does not explicitly state this. The death of her horse may thus also have been one environmental stressor, among several others, that together contributed to increased vulnerability to developing AN.

5.4.2   Explicit social comparison

A range of social comparison subthemes emerged from participants' stories. These have been grouped as the theme 'explicit social comparison' and subthemes below. These themes and subthemes describe further environmental factors that were described as potentially having contributed to participants' AN vulnerability.

5.4.2.1 Family comparisons

Several participants made bodily comparisons to their siblings. Kate Barlow, in comparing herself to her two older sisters, described a desire to be better than them:

> For some reason I felt inadequate and never as good as Kimberly and Avril. People always described THEM as 'the girls' not including me, I found this hard but never told anyone this, I got in my head that I was the ugly duckling compared to them – they were so pretty, slim and outgoing – it was so unfair – why was I made the awkward one (Barlow, *Provision*, p. 68, l. 19-23).

Lucy Edwards also compared herself to her sisters and thought them thinner than she. Family members voiced their opinions about Lucy's size:

> As a young child I was very aware of our [hers and her sisters'] bodies and the differences between us. I was taller than they were and more heavier built. In fact, by the family I was called 'the heaviest one of the three girls'. I felt uncomfortable by that and didn't like the way I looked. It made me very body conscious and insecure too (Edwards, *Provision*, p. 46, l. 5-8).

Lucy described her tendency to compare herself to her sisters as contributing to her food restriction:

> I "restricted" myself from eating what I felt I needed or wanted to eat. Instead of that I convinced myself that if I should eat the same as my sisters I would become as they were: thinner and more beautiful than I was. Then I wouldn't be so heavy anymore (Edwards, *Provision*, p. 46, l. 11-14).

Similarly, Sarah Adam was compared to her thinner sister:

> Jane was praised all the time as she was so slim and tall and had a beautiful complexion of a dark tan with curly black hair, the perfect body. My mum was always being told that she was fat and lazy [...] My mum and I were constantly told that we were fat and must lose weight, and asked, "why don't you look like your sister" (Adam, *Provision*, pp. 23-24, l. 41-5).

Literature related to this subtheme is discussed below due to the similarity of the two subthemes.

5.4.2.2 Name-calling

The above excerpt is also an example of name-calling. Several other participants described name-calling and how the participants experienced it as leading to their negative self-assessment and harsh social comparison. Below are two examples of name-calling by fathers. In the first instance this was done negatively and in the second instance, the name-calling appeared a term of endearment:

> This was when my eating disorder started. My dad kept on calling me fat, and teasing me and they were always on diet. My dad did not want us to eat his food, locked the cupboards and my life was hell again. I eventually went to school with no breakfast, no lunch and waited for supper and ate what we were given and I ate hardly anything. I then started running early in the morning, afternoon and evening (Adam, *Provision*, p. 29, l. 41-44).

The above example is more clearly defined as an episode trigger for Sarah, she suggests that her ED started because of the above incident. While an abusive father may have contributed to her AN vulnerability, his name calling may have been the specific event that triggered her AN onset.

> I think my first insecurity related to weight and food was confirmed on one particular holiday when Daddy called me his steak sandwich which I instantly perceived as him agreeing with my initial feeling that I was chubby. I didn't tell him at the time that it had bothered me but recently I spoke to him about the comment that stuck in my memory, looking sad in response, he said he had called me that because he loved steak sandwiches and he loves me, nothing to do with weight or being overweight!' (Barlow, *Provision*, p. 68, l. 25-31).

In the above extract, Kate's friendly name-calling appeared to be a vulnerability factor rather than an episode trigger. Despite the one instance of name-calling above being negative and the other positive, both appeared to have the same result. The girls experienced weight-related comments negatively. In the latter excerpt, despite being endearingly termed 'his steak sandwich', Kate used the comment to reinforce her existing negative physical view of herself '...instantly perceived as him agreeing with my initial feeling that I was chubby'. Negative interpretations of weight-related comments, rather than name-calling alone, seemed to contribute to negative weight perceptions for participants which seem to have contributed to their AN vulnerability..

Name-calling by peers was also mentioned. Again, these examples are not easily or clearly defined as sources of vulnerability or episode triggers. They appear more likely to be sources of vulnerability that, along with several other vulnerability factors described in the preceding sections, seem to increase AN risk, rather than specifically triggering AN onset.

Kate Barlow described name-calling and mixed messages from her romantic partner:

> I was starting to lose weight while we were together through my running and starting to also restrict. Although he would continue to call me big bum but at the same time commenting that it was odd when he didn't see me in the dining room and sometimes questioned 'am I eating enough' (Barlow, *Provision*, p. 71, l. 32-35).

Another example of labelling (as a type of name-calling) from Kate's story is described below:

> ...one memory was that every time you would walk to lessons and walk past a group of boys they would rate you and you could hear numbers being called out ranking you from 1 to 10 on your appearance (Barlow, *Provision*, p. 71, l. 9-11).

Emily Hughes also experienced name-calling:

> He called me fat one day, and I was no such thing. The next day he'd laugh at me because I was so thin I had no tits. I feared the humiliation of what would happen if my family ever found out more than anything (Hughes, *Provision*, p. 79, l. 18-20).

Kim Joseph described her experience of name-calling and its lingering impact:

> My first thought about losing weight was when a boy in my class commented on my body, comparing me to a pillow. He called me "Squishy". I was devastated and he could see it on my face, however as much as he tried to take it back, it was too late. The words lingered in the air around me, echoing over and over again (Joseph, *Provision*, p. 36, l. 33-36).

As the excerpts suggest, the participants in the study appeared to be sensitive to social comparison and name-calling. While name-calling is not an unusual experience for young girls, the impact it appeared to have had on these particular individuals may have contributed to increasing their AN vulnerability given that they had other vulnerability factors already in place. Kostanski and Gullone (2007) and Lunner et al. (2000) explored weight-related name-calling and teasing. Both studies concluded that weight-related teasing in childhood had a negative impact on the teased individual's body image, eating restraint and BMI. Childhood name-calling appears to have been a contributing environmental AN vulnerability factor that encouraged weight loss attempts in these participants.

5.4.2.3 Peer comparisons

Name-calling and social comparison between siblings were discussed above. The next major area that emerged from the participants' stories related to social comparisons with peers. Like most adolescents, participants seemed to focus on how they compared to and competed with peers. These comparisons, while not triggering AN onset, may have contributed to an overall vulnerability to AN. Amanda Lere described her sense of inadequacy as 'fuelling' her AN and as such potentially increasing her vulnerability to the ED:

I felt inferior to the other students who were all excelling in one thing or another. That feeling of 'less than' fuelled my disease I guess (Lere, *Provision*, p. 7, l. 26-27).

In another excerpt, Amanda indicated that she felt different to her peers. This too seemed to contribute to her AN vulnerability:

My dark negative thoughts about myself stared to be fuelled even more. A few hurtful remarks from boys worsened the situation […] Being chubby (but muscular) and brown haired instead of the 'pretty skinny' blonde girls. I felt rejected and more ugly and worthless than ever before" (Lere, *Provision*, p. 8, l. 15-19).

Kim Joseph also described feeling that she was inadequate and different from her peers. This feeling motivated her desire to lose weight:

…most kids were Asian, or part Asian. They were small, skinny and fragile people with light skin and black silky hair. They were also smart and I felt like an outcast, a bigger, blonde, sporty girl (Joseph, *Provision*, p. 36, l. 27-29).

I knew I was bigger than most kids in my grade and I understood why too, however it all of a sudden became clear that I wanted to be small and fragile. Running and swimming and eating small healthy meals became my new routine. The kgs were falling off me and I was weighing 54kgs before I knew it (Joseph, *Provision*, p. 36, l. 34-37).

The second excerpt above, while seeming to contribute to Kim's AN vulnerability, may also have constituted an episode trigger. She describes that "it all of a sudden became clear" – which seems to be more a more acute and specific defining event potentially marking a trigger.

Sarah Adam described feeling inadequate, unattractive and different to her peers:

I stayed there a while, but during that time I had developed rapidly and hated the look of my body, I felt to fat compared to all the other children, my bum had stretch marks on it and I had acne that started to consume me. I felt ugly (Adam, *Provision*, p. 25, l. 29-31).

During that time in boarding school I was very self-conscious, I hated my body, I kept on comparing myself to others especially when one day the nurses came to

the school and we had to undress and get weighed and our eyes checked and injections. I was in STD 4 about 12 turning 13 years old. I had bigger breasts than the other girls and my thighs were huge and I hated the way I looked (Adam, *Provision*, p. 25, l. 36-40).

The excerpts suggest that the participants made social comparisons between themselves and their family members as well as their peers. These comparisons appeared to have increased their vulnerability to AN. While this behaviour is common in adolescent girls, Troop et al. (2003) found that individuals with EDs made unfavourable social comparisons and ranked themselves lower than others. This appeared to have an impact on the development and maintenance AN. Another study by Connan et al. (2007), argued that social ranking, as a result of childhood interpersonal adversity, was a strong risk factor for the later development of AN. A later study by Cardi et al. (2014) on individuals recovered from EDs in comparison to healthy controls, found that the ED recovered group had a heightened sensitivity to receiving and internalising unfavourable social comparisons. Thus, both individuals with active AN and those who are recovered from AN may be sensitive to weight-related social comparisons.

It appears that the participants in this study, and possibly individuals with AN, have a propensity for making negative social comparisons. This sensitivity may be associated with an negative body image, desire for weight loss and as such contribute to AN vulnerability.

5.4.2.4 Particular social groups

Several participants made social comparisons between themselves and particular social groups. Being in these groups appeared to encourage thinness and thus may have contributed to participants' AN vulnerability. Sarah Adam compared herself to teammates in her drum majorette group:

Being a drum majorette also made me weight conscious as we could not gain weight as the clothing was made to our fit. I had a uniform that I shared with my drum majorette teacher's daughter as she was the same size as me and she did individual sequences and doubles and needed my uniform to fit her (Adam, *Provision*, p. 28, l. 12-15).

Individuals with AN seem to make body size and shape comparisons within the sporting or co-curricular groups that they belong to. Connan et al. (2007) and Troop et al. (2003) found that individuals with AN compared themselves unfavourably to their peers, which increased their vulnerability to AN.

Kim Joseph was rejected when she attempted to join a modelling agency. This led to feelings of inadequacy:

> I was told about this agency that I would be perfect for and so I called them up to schedule an interview. I met with this man who took pictures and made me pose and walk to see if I had what they wanted. All he came back to me with was that I had terrible face skin and I was overweight for the job. I had needed to lose about 3kgs and fix up my skin and he'd reconsider. He broke my confidence and that was the end of my modelling (Joseph, *Provision*, p. 37, l. 23-27).

Kim's experience above, while not triggering her AN onset, appeared to contribute to her AN vulnerability by encouraging her to compare herself to other (more successful) models. Similarly, Lucy Edwards made social comparisons between herself and the group that she was studying with:

> The choice to go to the academy of physical education after high school gave me the hope that I would become more muscular. And therefore more beautiful. 'Cause thin, muscular, physically active people were my example (Edwards, *Provision*, p. 47, l. 21-24)!

Group membership and AN have been studied by Lukacs-Marton et al. (2008), Silverman (1979), Sundgot-Borgen (1993) who found increased incidence of EDs in ballerinas, athletes and models respectively. All three studies indicated that being a member of a group that prizes thinness appears to increase vulnerability to developing weight loss tactics, social comparison within the group and AN. An alternative interpretation may of course be that individuals already vulnerable to developing AN may be drawn to groups that prize thinness.

5.4.3 Implicit social comparison

This theme refers to underlying comparisons that stem from received messages in participants' lives. These comparisons also appeared to contribute to participants' AN vulnerability.

5.4.3.1 Family and peer messages

Tessa Schaefer received an implicit message regarding her weight from her family which appeared to contribute to her AN vulnerability:

> One message I had always grown up with was how much I could eat given how slim I was. I had always brushed this off without a moment's thought. However, after years of hearing it I started to think about it more and eventually became convinced that this was an expectation I had to maintain or live up to. My friends and family seemed so in awe of it I really began to feel under enormous pressure not to disappoint them! (Schaefer, *Provision*, p. 58, l. 33-37).

Tessa felt strongly about the way in which she was expected to act and look. She seemed to transform this idea into an expectation.

5.4.3.2 Media messages and 'thinspiration'

Several participants received media messages that encouraged thinness. Any material and media sources (including websites, blogs and television shows) that promote thinness have been popularised by the term "thinspiration" (Norris et al., 2006). Thinspiration websites, also termed 'pro-ana sites' include images, videos and tips that encourage thinness.

Sarah Adam describes receiving media messages that influenced her ideas of thinness and kept her motivated in her pursuit of weight loss. This appeared to be contributing to her AN vulnerability:

> I then started weighing myself everyday and aiming for a lower and lower weight. I would go on 'thinspiration' websites and get pictures and tips. I never thought that I was anorexic at all. I was just exercising (Adam, *Provision*, p. 31, l. 13-15).

Despite being aware of their detrimental effects, Emily Hughes described using pro-ana websites to encourage her AN ideals:

> I also discovered Pro Ana. Web sites that anorexic girls would build to aid each other in their pursuit of the ultimate skeletal body. Pictures of starving women and poetry about anorexia were the most frequently found triggers on the sites. Pro Ana sites get shut down frequently because they are so dangerous. But new ones always popped up (Hughes, *Provision*, p. 80, l. 22-26).

The media messages in these examples not only appear to have informed how the participants viewed weight, but also encouraged their maintenance of restrictive dieting which in turn contributed to increased AN vulnerability. Alison Clark also used thinspiration as a motivating factor in encouraging her dieting behaviour, and thus increasing her AN vulnerability:

> I remember around aged twelve or thirteen when I first started disliking fat on me. It was aged sixteen that I started dieting. I cut out pictures of thin people from magazines and stuck them by my mirror for motivation (Clark, *Provision*, p. 18, l. 36-38).

The impact of implicit messages received from family, peers and media has been explored by many authors. Carey et al. (2011), Austin and Smith (2008), Chan and Ma (2004) and Park (2005) explored the 'thin ideal'. The thin ideal concept describes the underlying messages about weight and appearance that women receive. Referring specifically to the impact of the thinspiration and pro-ana websites, research by Bardone-Cone and Cass (2007) and Norris et al. (2006) highlighted the negative impact that viewing these sites had on self-image and eating attitudes. They concluded that messages of thinness, control and perfection were dominant on pro-ana websites. An alternative argument from Keel and Forney's (2013) review of literature concluded that individuals who develop AN are prone to personality features (including emotionality and perfectionism) that incline them to internalising thin ideals from society. Thus, it may not be media's presentations of thin ideals that causes AN, but rather certain personality features in individuals that result in their internalising those ideals. Internalising ideals of thinness may contribute to AN vulnerability.

One participant, Emily Hughes, described the impact of religious messages on the way in which she saw herself. While this response was atypical in comparison to the stories of other participants, it has been included as an example of a belief system potentially playing a role in AN development. Emily described the expectations she derived from her religion:

> I had been told since I was two years old that Jesus had made me sick and that meant I was perfect. I should accept my state of constant illness because that was the way I was made. I had no other option. It was all I would ever know. I was told that the medications were necessary and that they had no side effects. I was normal somehow. Perfect (Hughes, *Provision*, p. 77, l. 33-36).

Emily interpreted from her religion, the belief that her illness was positive. This belief also seemed to be premised on the assumption that women are weak:

> I learned that women were not equal to men. That God wanted women to submit to their husbands. I had learned from these teachings that women were weak. That being female was not at all a good thing. I firmly believed that I was sick and weak by birth right as a woman. What else was I to believe? That was all I had seen of women. It was all I knew (Hughes, *Provision*, p. 78, l. 9-13).

In addition to her belief that women are weak, was her inherent lack of motivation to achieve:

> It's a sad fact that it was perfectly acceptable to live a life of underachievement and persist to be a failure in life as long as it was due to a medical cause. As was the way in my mom's side of the family, that is how life worked. Somehow I was a bit idolized. Being sick was akin to a higher state of grace in their perspective. I was not deterred from bad behaviour, instead I was encouraged and rewarded (Hughes, *Provision*, p. 80, l. 34-38).

Emily's illness was rewarded. She was medicated from a young age. This appeared to impact on her emotional state:

> As the drugs were stimulants and steroids I was an over stimulated emotional wreck. My mom, as the female I was destined to model my womanhood after, was also an over stimulated emotional wreck. All the women on my mom's side of the family were weak, sickly, and tended to exaggerate their physical

problems and walk around like they were wounded all the time (Hughes, *Provision*, p. 78, l. 1-4).

Emily developed the belief that medication was necessary for her survival. She also believed in displaying obedience to authority which may inadvertently have contributed to her AN vulnerability:

> I had learned at a very young age that the right thing to do was to obey my mother, and make her and the doctors happy by taking the pills that were prescribed for me. I knew nothing of any other existence. Why would such a good girl deflect from what she knows gets her praise? She wouldn't (Hughes, *Provision*, p. 81, l. 9-12).

The obedience to her parents was extended to submission:

> I clearly needed the word rape defined to me. Being absolutely unwilling and having a person perform a sexual act to me, not with me, if that's not rape I don't know what is. I ended up getting pregnant with my son at fifteen years old. Mostly because I didn't know that women were not supposed to submit. Not because I was a sexual deviant. But because I was too good for my own good. I had been a very obedient little victim (Hughes, *Provision*, p. 79, l. 21-25).

Emily seemed to have developed distorted beliefs about obedience, illness, weakness and submission. This impacted on the way in which she saw herself as a woman:

> I had to accept that I am a beautiful, strong, intelligent woman of many talents that has the capacity to do anything. I had seen a documentary with the program about female empowerment. I was hurt. I thought that if my religion had not made me believe I was weak... If my Republican upbringing had not made me believe that female empowerment was Femi-Nazi propaganda... If I had only been empowered to be a woman, just maybe I wouldn't have tried to run from my femininity (Hughes, *Provision*, p. 85, l. 17-22).

Emily seemed to perceive her religious belief system as a contributor to her AN vulnerability. Huline-Dickens (2000) explored ascetic ideals in Christian participants and found similarities to individuals with AN. Both groups subscribed to ideals of self-sacrifice, denial, self-punishment and abstention of indulgence. A study by Bennett, et al. (2004) on Ghanian secondary school students with AN, found that these students prized self-starvation and control due to their religion. In addition, Abraham and Birmingham (2008) found a positive correlation between Islamic affiliation and higher

than normal scores on the Eating Attitudes Test suggesting an increased likelihood for ED vulnerability and subsequent development.

The current study is unable to suggest a causal link between AN and religion, based on study design and on a single participant's perception of this apparent link. However, worth considering is the idea that some individuals already vulnerable to developing AN, may use values and ideas from their religion (like self-sacrifice, starvation and abstention of indulgence) to justify their AN behaviour.

For all the participants in the study, it appears that their cognitions (derived from societal, religious, political or family messages) contributed to an increased vulnerability to developing and maintaining AN. A diagrammatic summary of the theme 'perceived environmental sources of vulnerability is presented in Figure 5.2
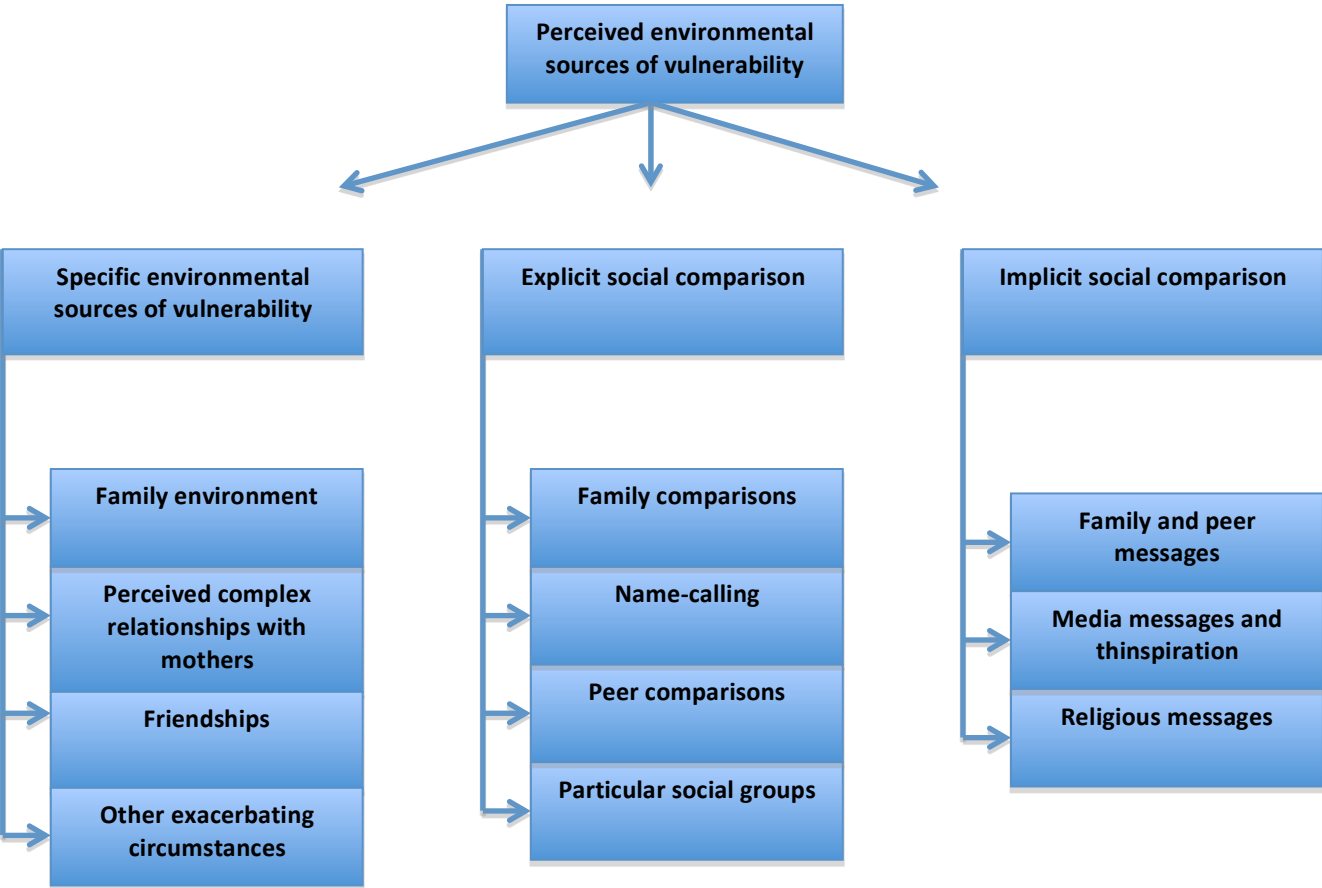
Figure 5.2. Perceived environmental sources of vulnerability.

Based on participants' described experiences, they seemed to perceive their AN development vulnerability as being associated with the following factors:

- Environmental triggers
    - Family, perceived complicated relationships with mothers, friendships, romantic relationships and other exacerbating circumstances)

- Explicit social comparison
    - With family and peers, as well as through name-calling, and specific group membership

- Implicit social comparison
    - Through underlying family, media and religious messages.

Notably, not only the environmental factors, but rather the participants' sensitivity to experiencing these as they did, seemed relevant to their AN vulnerability. This section has hopefully also shown, that certain environmental events, when acute and specific, may also have constituted AN episode triggers. However, as was evidenced in this section, distinguishing a specific trigger in participants' stories was not clear as many events that they described as being triggering, seemed more fitted to environmental vulnerability factors than actual AN episode triggers, largely because many of the descriptions focus on recurring events rather than on acute, specific single events.

In closing this theme, Kim Joseph succinctly highlights the possible dangers of certain environmental factors that increased AN vulnerability:

> Looking back at my life, I notice how people can affect someone so much without even intending on it. Losing friends, heartbreak, comments, and so much more all add to the stresses of people. I was only a teenager, choosing friends who never stayed, loving a boy who broke my heart, and choosing modelling as a job to hear the problems with my body and my terrible skin (Joseph, *Provision*, p. 38, l. 9-12).

Many women encounter the environmental factors Kim described without developing AN. This may suggest that those vulnerable to developing AN have special sensitivities

to these types of environmental factors, that are associated with their AN vulnerability and development.

5.5   PERCEIVED MAINTAINING FACTORS: ANOREXIA NERVOSA TRIAD

Analysis of the previous theme suggests that participants saw themselves as having special sensitivities that constituted a constellation of biological and environmental vulnerabilities to developing AN. The current theme aims to describe experiences and factors that seemed to maintain participants' AN. The researcher has termed this maintenance mechanism the Anorexia Nervosa Triad (AN Triad), which has three key elements, presented in 5.5.1, 5.5.2 and 5.5.3 below.

5.5.1 Internalised striving for perfection

The perceived biological and environmental sources of vulnerability described in section 5.3 and 5.4 seemed to be associated with participants' striving for perfection. Based on participants' stories, this striving for perfection was experienced and seemed to manifest in different ways, detailed below.

5.5.1.1 Centre of attention drive

One way of attaining perfection as described by the participants, was through becoming and remaining the centre of attention. Amanda Lere often positioned herself as esteemed by others or as the centre of attention. This was evident in the first paragraph of her story:

> …the cutest, most perfect, little first born (Lere, *Provision*, p. 7, l. 7).
>
> …daddy's little girl" (Lere, *Provision*, p. 7, l. 6).
>
> …truly living a life in the spotlight! (Lere, *Provision*, p. 7, l. 9).
>
> My father's love for me was immeasurable (Lere, *Provision*, p. 9, l. 15-16).

As she got older, this tendency to be esteemed carried through to her peer relationships:

I was loved by everyone, which felt so great (Lere, *Provision*, p. 7, l. 20).

Amanda appeared to be received and viewed by her romantic partners in a similar manner:

> He was a few years older, pretty mature and crazy about me, just what I needed to feel better (Lere, *Provision*, p. 8, l. 10-11).

> He was madly in love with me and offered me a ring after a few weeks (Lere, *Provision*, p.8, l. 32-33).

The last three excerpts seem to suggest that Amanda tended to use her social affirmations as a means of emotional regulation. This is suggested by her comments of 'feeling great' and 'feeling better' because of others viewing her positively. Later in her story she writes of her expectations of her husband:

> He'd treat me like a princess for the rest of my life (Lere, *Provision*, p. 10, l. 15-16).

Being the focal point and esteemed as the centre of attention, were central to how Amanda saw herself.

Tessa Schaeffer was also esteemed from an early age:

> I am not sure there was a single soul in the whole of England who was not aware of my birth; my father being so delighted, he could not help but share his happiness and excitement with everyone he could! From this day on, I was squeezed, cuddled and kissed by all; my family, their friends and even the nurses in the hospital (Schaefer, *Provision*, p. 55, l. 22-26).

> I was a very happy baby and toddler, "munçuk-ed!" (squeezed) by all and I apparently loved being the centre of attention. I was glued to my father and, in a way, had him wrapped around my little finger (Schaefer, *Provision*, p. 55, l. 34-36).

The negative result of being esteemed seemed to be associated with an internalised pressure to perform:

> Contrary to everyone else's beliefs, I found school very difficult. It was hard to obtain good grades and compete with others. I studied day and night, feeling I had to excel to please my parents (Lere, *Provision*, p. 7, l. 37-38).

> I put pressure on myself to be polite and kind, particularly around adults. Probably this was to please my mother, or because I wanted to be perfect (Clark, *Provision*, p. 15, l. 17-18).

In other excerpts from Alison Clark's story she defined herself as aiming to be perfect:

> So I behaved. I was perfect (Little, Miss!) (Clark, *Provision*, p. 15, l. 21).

> I felt with many people like everything I said had to be said in my head first – to be sure it was OK. I wasn't sure how to be happy, or to cope with being unhappy. Hormonal changes in my brain chemistry and my body left me feeling sad. I was still trying to be perfect. The two do not go together (Clark, *Provision*, p. 15, l. 38-41).

For Sarah Adam, her father's harsh expectations may have encouraged and contributed to her tendency to strive for perfection:

> Other times my sister, Jane, and I were made to work until late in the evening in the garden carrying heavy logs, but if it was not done to my dad's perfection we would get a hiding with his belt [...] we would then be told to redo it until he thought it was right (Adam, *Provision*, p. 24, l. 18-24).

It seems that Sarah had to be perfect as an attempt to please her father and to end his abuse of her. The lack of control over the abuse she endured seemed to be displaced onto an obsessive-compulsive control over her weight and exercise. Her thinness became something that she could perfect. In addition, by being thin, she received recognition:

> I became obsessed with how my bones felt and if I am getting thinner. I got a comment from a friend that was inside telling me when she saw me a while ago at my dad, that she could see I've lost lots of weight. It made me feel happy as someone had noticed (Adam, *Provision*, p. 33, l. 26-28).

Through psychotherapy, Sarah came to the conclusion that her striving for perfection was destructive:

> I have learnt from having anorexia and bipolar that there are people who understand you and people who judge, but not everyone is perfect.
> We are not perfect even though we strive to be perfect, we won't get there (Adam, *Provision*, p. 32, l. 3-6).

From the above excerpts, several participants seemed to be preoccupied with being the centre of attention.

A study conducted by Schmidt and Treasure (2006) on the cognitive-interpersonal maintenance of AN concluded that one of the maintenance mechanisms was the responses of close others. Individuals with AN tended to crave feeling visible and valued (Schmidt & Treasure, 2006). Being visible and valued is similar to the current theme 'drive to be the centre of attention'. Both themes may suggest that individuals with AN have a desire to be noticed. While most people have the desire to be noticed, in the case of an individual with AN, this desire seems also to require being seen as thin, and may be exacerbated by and contribute to the disorder's maintenance.

The current study further suggests that being the centre of attention made participants feel perfect. Perfectionism is not a new idea in the existing literature on AN. As discussed in sections 2.6.1 and 2.6.8, various studies have found that perfectionism is a common trait in the personality profiles of individuals with AN (Bastiani et al., 1995, Halmi et al., 2000; Wonderlich et al., 2005). Striving for perfection may also be associated with cognitive rigidity and inflexibility (Holliday et al., 2005; Steinglass et al., 2006; Treasure & Schmidt, 2013). Recent studies on set-shifting indicated that individuals with AN and those recovered from AN displayed set-shifting difficulties while their healthy sisters did not. This may suggest that it is not the presence of AN, but rather some trait (such as rigidity and inflexibility), common in individuals with AN, that results in set-shifting deficits (Galimberti et al., 2012; Roberts et al., 2010; Tenconi et al., 2010; Treasure & Schmidt, 2013).

While participants in the current study were not tested for set-shifting difficulties, their self-described rigidity and perfectionism seem to suggest set-shifting problems. Indeed, the alternative may also be true; set-shifting difficulties may be the result of

on-going perfectionism, rigidity and starvation that are characteristic of, and may maintain, AN (Lang et al., 2014).

5.5.1.2 Social admiration and achievement

In addition to being the centre of attention, several participants strove for perfection by gaining social acceptance and by seeking social admiration for their achievements. Success in sport, academic work and in their social lives was important to them:

> From the age of about 5 I started swimming, training most days in a week. I was good. I swam races and won medals and by 12 I was ready to do big swimming competitions (Joseph, *Provision*, p. 36, l. 11-12).

> I played interprovincial hockey and tennis which took up my whole week. I was invited to go and play in a tennis academy in America which was a real honour because there were only a few of us that were invited (Harris, *Provision*, p. 40, l. 1-4).

> I remember playing hockey, I would play for the first team if the second team were short of a player, then I would have to play for the second team as well. I played centre forward so I had to be fit because I would have to run that entire field flat (Harris, *Provision*, p. 40, l. 27-29).

Striving for perfection can be seen in the above excerpt. It was not enough for Jane Harris to play hockey for her team and to do well. She wanted to play for the first and second teams, and do well in both.

Kate Barlow described the attention she received for being her school's best runner:

> ...in one of my first athletics sessions when we were to run the 1500m I wasn't expecting to do particularly well but when I managed to beat Donna [the school's fastest runner] I remember she didn't talk to me for weeks. But I remember the feeling of being the 'best' at something, I was the talk of school and centre of attention on the athletics pitch and had now taken over Donna's role (Barlow, *Provision*, p. 70, l. 7-10).

It was not enough to do well in a race; Kate wanted to be the best. While this example does not display any direct pathology, it may be an example of a particular type of personality style in which perfection is sought. This striving to be the best was not easily sustained:

The sports coach contracted me and I was committed to intense training in preparation for the national championships I had qualified for that year and was desperate to make my dad proud, I came 4th in the big competition and although I remember feeling angry at myself for not pushing myself harder and coming 1st the feeling didn't last long and I was left content with my position (Barlow, *Provision*, p. 70, l. 12-15).

Success in academic work was also important to several of the participants. Jane Harris described needing to complete two years of schooling in one year, to regain time lost while in an AN facility:

Fortunately my school allowed me to do my standard 9 and matric in one year because my marks in the first term were very good. I always wanted to study medicine so I knew my marks would have to be extremely good (Harris, *Provision*, p. 43, l. 10-12).

Alison Clark and Lucy Edwards described their focus on academic achievement:

I've made lots of mistakes. It was a mistake to deal with the initial unhappiness I felt around age thirteen by being obsessive about schoolwork, and feeling that I needed to achieve highly (Clark, *Provision*, p. 18, l. 24-26).

I was always eager to learn and I loved school, so there was enough to enjoy. But to set boundaries at school tasks, to feel the feeling when I had done enough was very, very difficult for me. People were saying I wanted to be perfect, but I think it was (and still is) an inability to do differently (Edwards, *Provision*, p. 47, l. 1-4).

Lucy's desire to be perfect continued into adulthood:

For 17 years I worked in a primary school and I still do. In many ways I loved it but at the same time I struggled always. Couldn't limit myself with all the tasks I had to do, couldn't let go when I came home, never knew when I had done enough, wasn't good in setting boundaries or saying "no" in many ways (Edwards, *Provision*, p. 49, l. 24-27).

Sensitive as I am as a person to notice and fulfil the needs of others I was often busy doing so at school with all the children and when I came home with Sam. Not totally ignoring my own feelings or needs, but there just wasn't enough time to look inside and notice what I really felt and needed. I was always running ahead literally and in my mind *("I have to do this and that", "I should…", "I want…")* During these years I became more and more restless, always thinking

about all that had to be done, or should be done or that I wanted to be done (Edwards, *Provision*, p. 50, l. 3-8).

The above excerpts illustrate Lucy's desire to be a perfect teacher and a perfect wife. Tessa Schaefer also focused on achievement in her academic work and social life:

> I got on well at school, both academically and socially, with lots of friends, I was even quite the leader and very assertive with the others when it came to playing games or doing projects. I won a place at the Grammar school when I was 11 and then switched to another school at 13 (Schaefer, *Provision*, p. 56, l. 26-28).

Later in her story, Tessa described the joy and sense of social admiration that she experienced because of studying medicine:

> I loved being at University, gaining my independence, working enough but having an amazing social life. I think I may have stayed in a total of four or five nights in my entire first year. For my second year, I won a scholarship to study in America. This was one of the best years of my life. I absolutely loved America, the friends I made, life as a student, living on campus and my course (Schaefer, *Provision*, p. 58, l. 23-27).

> ...I also began my medical training to become a doctor. I had always dreamt of working with people, though had lacked the confidence to pursue this dream. However, the doctors and Psychologists I had been working with encouraged me to apply and to my delight I was awarded a place at Medical School. My first year whizzed by in a haze of lectures, time on the wards, hours spent amongst cadavers and specimens in the dissecting room and, of course, infamous medical school parties (Schaefer, *Provision*, p. 60, l. 14-19).

While the above excerpts do not indicate pathology, they contribute to a particular environment which may be suggestive of Tessa's striving to attain perfection and seek admiration from her peers.

Kate Barlow described wanting to outshine her sisters by becoming the centre of attention. She wanted to be socially admired and to outperform others, even if this meant being in situations that she may not have been ready for:

> At the age of 11 all my friends were taking exams to go to the senior school but although I was very happy there I wanted a change from all girls and so instead of being 14 which is when my sisters had moved to boarding school, I went at

the age of 11, again wanting to be independent and follow my sisters as soon as possible in the next stage keen to grow up and have new experiences (Barlow, *Provision*, p. 69, l. 29-33).

Kate continued her drive to follow in her sisters' footsteps:

> I felt as I entered the upper school, a lot of expectations of me. I was told constantly even before I started that my sisters were known in the school as the 'Barlow hotties' and that everyone was anticipating a third one to come when they knew I was joining the upper school. The pressure to impress was huge as I felt I was going to be a huge disappointment compared to them. I continued running that summer, not sure if I actually lost weight at this point but I remember I got positive comments on how I was looking (Barlow, *Provision*, p. 71, l. 2-7).

Kate strove to be the centre of attention at school. It was important for her to remain popular:

> Whilst I was at this school I was described in reports as being the popular girl everybody wanted to be, I was also voted form leader by the class. I never connected food to my body or weight at this time (Barlow, *Provision*, p. 69, l. 17-19).

> From day one I loved it, I fitted right in and was soon a main part of the in-crowd. It was also a day school and the majority of our year was day pupils with 12 girl borders including me, and 10 boy boarders. The boarders seemed to have all the fun and the day pupils would often question us on all our antics (Barlow, *Provision*, p. 69, l. 34-37).

> I was distracted from this unhappiness by the overwhelming attention I got from boys in the older years. I was already outgoing and confident and soon became very popular and girls in my year and upper years often told me they wished they were me. So I felt pressure to remain appearing happy (Barlow, *Provision*, p.71, l. 17-20).

There is relatively little literature describing need for achievement as a maintaining dynamic in AN. An early study by Weeda-Mannak and Drop (1985) concluded that individuals with AN had an elevated drive for achievement and resistance to failing. Sohlberg and Strober (1994) found that individuals predisposed to developing AN experienced emotional and social difficulties during adolescence and made use of reward-seeking behaviour. Goss and Allan (2009) described pride as a mechanism in

opposition to shame. They argue that individuals with AN are preoccupied with achieving and feeling that they have outperformed others by others. Participants in the current study seemed to seek social admiration and achievement; the desire to succeed was a strong driving force for them. While this drive on its own may not indicate pathology, these strivings in conjunction with the other environmental factors discussed, may have contributed to participants' vulnerability to developing AN. The same factors may also have been involved in maintaining the disorder after its onset.

5.5.1.3 Perfection through weight loss

As suggested above, participants appeared to set high standards for themselves in sport, academic and social arenas. With the onset of dieting, weight became an area in which they would set themselves unattainable goals. These were unattainable because their goalposts continually shifted; no weight, regardless of how low, seemed low enough or perfect enough. Participants seemed to obsess about losing weight:

> It was too easy, so I thought, why stop there? And so I continued, smaller meals, restricting more and more, reaching 2 tiny meals a day as well as exercising. The number on the scale got smaller and smaller. Soon, I discovered smoking and coffee, all to increase my metabolism. Then, laxatives, making the number smaller, making me feel lighter, emptier, and skinnier. By the age of 16 I was weighing 50kgs and still aiming for lower. By my 17th birthday I was weighing 47kgs and I had never been so proud of myself, setting a goal and reaching it all on my own (Joseph, *Provision*, p. 37, l. 1-6).

Later in her story, Kim Joseph described AN treatment and subsequent weight gain. She experienced her increased weight as a failure (this treatment-failure paradox is further explored in section 3.5.3.4). Once out of treatment, Kim refocused on her weight loss goal:

> I ran again, every day, I ate once a day and took laxatives every night, 52, 51, 50, 49, 48, 47, 46, 45… it was great! It was winter and I thought I could use the cold to my advantage, sitting half naked in the wind, letting my body use up all its energy to get warm. Soon food was no longer a necessity in my life. I was eating once every 2 to 3 days as well as taking handfuls of laxatives every time I got the chance to. I was unstoppable! 45, 44, 43, 42. I was at my lowest weight, my bones showing, period stopping, and hair falling out. Bruises all over me. Every bone I saw, put a smile on my face, every 100 grams I lost, I was happy (Joseph, pp. 37-38, l. 34-1).

Despite admitting enjoyment of the taste of food, Lucy Edwards also set weight loss goals. She created rules as a way of reaching her goal weight:

> I got obsessed with it [weight loss and compensatory behaviours]. I became more manipulative, lying, sneaking and being dishonest. I *had* to follow the rules I had made up in my mind about food. *Use as little fat and sugar as possible. Fruits and vegetables were ok, but no banana. No butter on my bread…*Lots and lots of rules, but because I loved so many tastes of food, I loved eating food and I loved cooking! It was a hell of a battle. Always in my mind, always in my mind, always in my mind… (Edwards, *Provision*, p. 49, l. 3-7).

Emily Hughes was driven to lose weight through ascetic ideals:

> What else did my mom figure I would do if I was to be raised as a martyr? I would be a better martyr than she had been. Real saints starved. Jesus starved for 40 days and 40 nights. I could do it if he could. What good was sainthood if I was only chronically sick? I could do it better than the rest of the sick women in my family (Hughes, *Provision*, p. 78, l. 36-39).

Emily needed to be better than her family in her pursuit of martyrdom. This attitude seemed to encourage the development and maintenance of her AN. Emily developed other unhealthy religious-based behaviours:

> My religion based justifications were still very convincing. I retorted when I was told I needed to stop drinking, "Jesus drank." And I was right. "You expect me to be better than Jesus?" No one could tell me I was wrong. Jesus was still the standard for all (Hughes, *Provision*, p. 83, l. 5-7).

> I didn't want to be a female. I didn't want to have to be the puffed up on steroids, emotional basket case, that I was. Like my mom was. I decided at fourteen years old that I would get thin. I started to diet and exercise. I threw myself into it completely. It was a bid for independence. For freedom (Hughes, *Provision*, p. 78, l. 14-17).

> My ability to starve was power to me (Hughes, *Provision*, p. 80, l. 7).

Emily rebelled against the notion of eating as a necessary human need:

> I had developed the idea that people didn't really have to eat. That only weak people give in to their hungers. I didn't eat socially, ever. I was withdrawn and fearful of food. I hated people who did eat, which is pretty much all people (Hughes, *Provision*, p. 79, l. 2-4).

> I don't look at nutrition labels or touch scales, nor do I read anything about anorexia or look very hard at fashion models. I'm very competitive, I have a habit of beating the numbers until there's nothing left, or starving myself thinner than whoever (Hughes, *Provision*, p. 84, l. 32-34).

In summarising this subtheme it seemed that for several participants, reaching an ideal weight became a way of pursuing perfection. Once they started to lose weight, which may initially not have been drastic, the urge to lose weight seemed to continue and increase. With each kilogram lost, the desire to lose more increased, eventually creating a spiral potentially leading to AN. As such, losing weight, even before it becomes severe, may in itself, have contributed to AN vulnerability. Further, part of the drive to lose (and continue losing) weight was because weight loss seemed to offer participants a sense of control over their lives in the face of other underlying frustrations that made them feel out of control (further discussed in section 5.5.2). In keeping with this, Fairburn et al. (1999) and Liechty and Lee (2013) found that one of the factors contributing to AN vulnerability was the belief that dietary restriction provided a sense of control. This seems to be in line with the above descriptions from participants in the current study.

5.5.1.4 Resisting threats to perfection

Once participants felt that they had achieved perfection and were the centre of attention, they seemed to exhibit strong resistance toward anything or anyone threatening their position. Amanda Lere, being the first-born child, was her parents' focal point. She described feeling threatened by the birth of her sister:

> After a few years, I had to share the stage with my curly-haired little sister Donna. It goes without saying, I was initially not pleased. I did everything to get the attention of my parents and started dominating my sister (Lere, *Provision*, p. 7, l. 9-10).

Kim Joseph had a similar experience:

> A few years later, in July, my little brother was born. I was unhappy about this, knowing my limelight would now have to be shared with this little alien boy my parents called their child, my brother (Joseph, *Provision*, p. 36, l. 5-7).

Tessa Schaefer also experienced a feeling of threat from a younger sibling:

> Apparently I was wary of Mia, and the potential threat she posed to all the fuss everyone had always made of me from day one. She was quite the opposite of me; quiet, undemanding and, as she grew into a toddler, easily amused by herself. (Schaefer, *Provision*, p. 55, l. 38-40).

Lucy Edwards felt responsible for keeping her family happy and entertained. Failing at this seemed to threaten everything she was trying to achieve:

> At home I was the people-pleaser and the peacekeeper of the family. Sensitive as I was to atmospheres I found it awful when my parents had a fight again, or when I felt hostility. I wanted to be a good girl as well in behaviour as with the results at school. Didn't want to cause troubles or tension (Edwards, *Provision*, p. 47, l. 5-8).

Similarly, family crises were distressing for Tessa Schaefer. When her mother's extra-marital affair crisis occurred, Tessa and her family put on a happy façade:

> This continued for two years before my father found out. I remember those years; it felt like I was living in a bad dream I could not wake from. On the outside the whole world saw us as the "perfect family" and yet at home, behind closed doors, the atmosphere was stifling. Nothing was spoken about, the elephant in the room was enormous; eating away at us behind the fake façade we portrayed to the outside world (Schaefer, *Provision*, pp. 56-57, l. 38-1).

Tessa's family appeared to have a dynamic of not discussing troubling matters, choosing rather to maintain a happy exterior. This is consistent with Minuchin et al. (1975) who found that the AN family dynamic included conflict avoidance and poor problem recognition. Tessa seemed to internalise this dynamic of not discussing problems and learnt to hide her emotions:

> …so as my riding ability and desire to please others grew, I retreated into myself more. I felt like a fraud. I truly believed if everyone knew the truth, they would be so disappointed and realise I was not as special and loveable as they all believed (Schaefer, *Provision*, p. 58, l. 12-15).

In summary, this subtheme found that several participants defended against any potential threats to their being the centre of attention and perfect. This included compensating for the birth of new siblings, trying to control family discord and hiding family crises.

Bruch (1978), describing her cases, found that many individuals with AN came from families that had high social standing. This seemed to unintentionally result in their children feeling the need to not destroy the family's perfect image. This finding seems to apply to several participants who also focused on presenting their families as perfect. They compensated for or avoided anything that posed a threat to their family's façade of perfection.

In the previous subtheme of social admiration and achievement, the drive for rewards was also described in existing literature. Potentially conflicting literature by Harrison et al. (2010) suggested that it is not focusing on rewards that is central to individuals with AN, but rather focusing on avoiding punishment. Lavender et al. (2015) concurred that individuals with AN displayed punishment sensitivity/avoidance. This may be relevant to the 'resisting threats to perfection' subtheme described in section 5.5.1.4. No participant in the current study wrote directly of punishment, but it could be argued that they perceived loss of perfection as aversive (punishment). These findings are consistent with Treasure et al.'s (2015) review in which dysfunctions in reward, punishment and decision-making systems were highlighted in individuals with AN.

The subthemes and codes explored under the theme 'strive for perfection' can be diagrammatically represented in Figure 5.3 as follows:
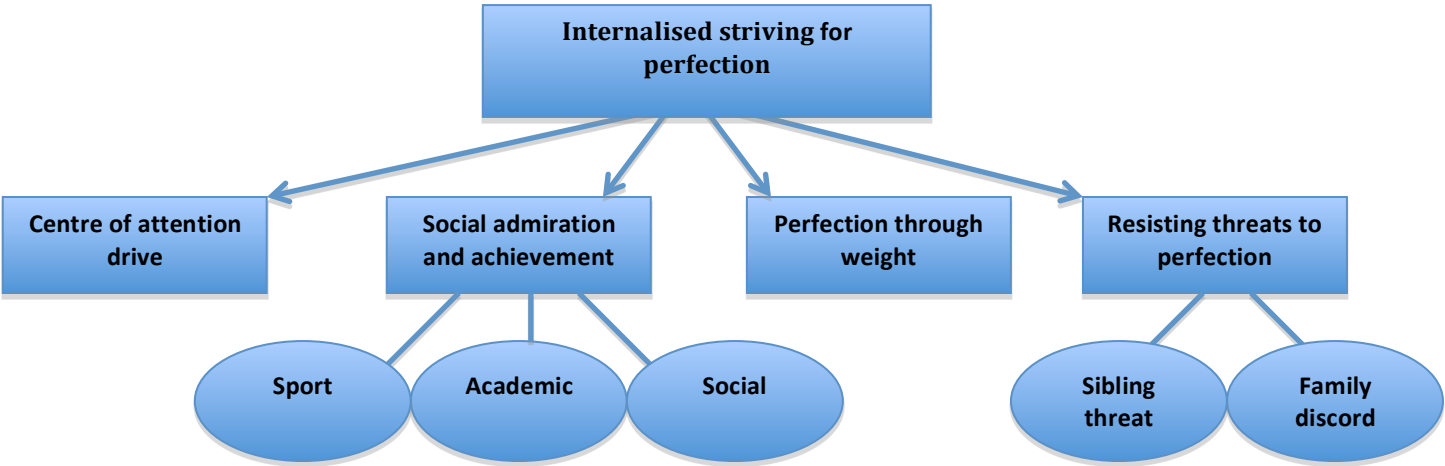
Figure 5.3. Internalised striving for perfection.

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As shown in Figure 5.3, this theme suggests that the participants were preoccupied with being perfect. In order to be perfect they had to:

- Be and remain the centre of others' attention
- Achieve success and maintain a sense of social admiration (through sport, academic work and social areas)
- Maintain low weight
- Resist threats (by siblings and of family discord) to their ideal of perfection.

5.5.2   Attained through control

Section 5.5.1 (Internalised striving for perfection) is the pinnacle of the AN triad (Figure 5.7) and described participants' drive to be the centre of others' attention, to achieve, to be socially admired and to gain perfection through weight loss.

The goal of striving for perfection was attained through the feeling of being in control. While this is described as a separate theme, it also appears to be an integral part of striving for perfection. They appear to be interrelated processes that occur simultaneously but are discussed separately here for the purpose of clarity.

Several subthemes emerged for the theme 'Attained through control' and these are outlined below.

5.5.2.1 Displaced control through starvation

Several participants attained a sense of control by limiting their eating. In situations where they felt they were unable to control life circumstances they displaced the control onto eating issues and particularly through self-starvation. This gave them a sense of success and achievement (discussed in section 5.5.1.3): "the weight loss mesmerized me" (Lere, *Provision*, p. 8, l. 24).

Amanda Lere seemed to have more 'success' controlling her eating than controlling her life:

> I turned to a perverse sort of self-control: an obsession with starvation and over-exercising gave me something to focus on that was so much 'simpler' than the real problems of life (Lere, *Provision*, p. 8, l. 39-41).

The description above indicates that there was something 'simple' about controlling weight that was not easy in other areas of her life. Amanda further describes this displacement of control:

> It [AN] was a way to regain that false, but so terribly compelling feeling of control (Lere, *Provision*, p. 9, l. 22-23).

Jane Harris' described AN as a coping mechanism that allowed her to feel in control:

> Anorexia became my 'best friend' because that's where I could escape all my worries, it gave me power, it gave me a high and most of all it was the 'one thing' that I had complete and utter control of or at least, that's what I thought (Harris, *Provision*, p. 41, l. 23-25).

Jane's AN was an 'escape' and a way for her to feel in control and empowered.

In summary, participants seemed to feel a sense of loss of control in their lives. Control seems to have been displaced onto their food consumption. Participants seemed to favour controlling food and weight over trying to control other aspects of their lives. This idea is consistent with Rezek and Leary's (1991) study in which they found that when placing AN individuals in situations where they perceived a lack of control, the participants showed increased food restriction.

The perceived control that individuals with AN experience as a result of food restriction, was argued by Lawrence (1979) to be paradoxical because intensified food restriction results in a feeling of being emotionally more out of control. This was also found in the current study, exemplified by Jane Harris stating: "...the 'one thing' that I had complete and utter control of, or at least that's what I thought" (Harris, *Provision*, p. 41, l. 25). The sense of control was only perceived. An internal sense of being out of control persisted. This pattern seemed to drive the participants to attain lower and lower weights that meant increased perceived perfection. Failure to control one area of life (family, friends or school) was compensated for by control in another, unrelated,

area of life (dietary restriction). According to narrative theory on AN, the individual loses control while Anna (the AN part of the individual) takes control (Epston, 2000).

5.5.2.2 Self-worth a product of self-control

Several participants described their self-control as increasing their sense of self-worth. The more control they had, the better they felt:

> My self-esteem or view of myself became more and more determined by my weight and shape. Things were OK, I was OK, provided I was thin, and provided my stomach was not bulging with food, things were OK. But I knew in a way I did not have much to say (Clark, *Provision*, p. 19, l. 12-14).

Alison described that everything was 'OK' when she restricted her diet. Conversely, her dieting did not remove her life stresses but rather added to them. AN seemed to give her a *false* sense of self-control and self-worth.

Lucy Edwards described her belief that restriction empowered her:

> The times when I managed to eat what I told myself to eat I was proud of myself and felt strong. Especially those moments when I was able to resist the urge to eat more. I felt strong because I could ignore and resist the feeling of hunger, not give in to that signal of the body. I think the affirmation of "*it was in my own power to become beautiful by eating less*" was created there (Edwards, *Provision*, p. 46, l. 31-35).

This restriction instilled a sense of pride in her:

> After one year, I was proud of the weight I lost! Proud at how I looked and for the first time in my life I got attention from boys. It made me feel very strong and proud of myself (Edwards, *Provision*, p. 48, l. 20-22).

The above excerpts, unsurprisingly, suggest that several participants felt better about themselves after controlling their weight and food intake. Triggermann and Raven (1998) investigated the assumption that individuals with AN appear to be preoccupied with desire for control. However, they found that individuals with AN did not have high scores on this desire, rather, their scores were significantly higher than normal controls on the scale for fearing loss of control. In a qualitative study Granek (2007), found that self-worth attainment through control of eating and weight was a dominant

theme. Granek (2007) further suggested that maintaining a low weight not only allowed the participants to feel a sense of distorted self-worth, but also a sense of achievement. This corresponds with the current finding that participants' self-worth and control were interlinked, and also contributed to their broader goal of attaining perfection (of which 'achievement' was discussed as a subtheme in section 5.5.1.2). In the current study, participants appeared to be focused on gaining control to increase their self-worth and their sense of achievement and perfection. While not directly indicated from the stories, using Triggermann and Raven's (1998) findings, it may be that participants focused on attaining self-control as a means of avoiding losing control and failure.

5.5.2.3 Perseverance

Perseverance is the final subtheme in this section on control. In addition to participants restricting their food intake to gain a sense of control, they also seemed to value their capacity to persevere. Determination to lose weight is illustrated by Amanda Lere:

> Determined to meet the criteria, I decided to lose weight. It seemed to be the only way to fit in. With a lot of perseverance, I lost over 20kgs in less than 3 months (Lere, *Provision*, p. 8, l. 20-21).

Jane Harris described her desire to control her weight as being obsessive:

> I would obsess 24/7 about food and my weight, I would get on the scale whenever possible, my parents even tried to hide the scale away from me but I would make it my mission to find it and if I couldn't then I would find a scale somewhere else (Harris, *Provision*, p. 40, l. 21-23).

> My food obsession became so intense that I would go through recipe after recipe and because my mom was in hospital, I started making three course calorie-laden meals [for her father and brother] (Harris, *Provision*, pp. 40-41, l. 41-2).

As seen in the above excerpts, perseverance involved obsessive determination and deceit and manipulation[6]: In the former area, participants were preoccupied with achieving lower weight and, because of this, feeling more in control. In the latter area, participants focused on deceit and manipulation to satisfy their obsessive determination for food restriction.

Persistence and obsessive determination, highlighted in the above excerpts, are consistent with literature previously discussed (section 5.3.2.4) on obsessive-compulsive features of AN (Bastiani et al., 1995; Bizeul et al., 2001; Castro-Fornieles et al., 2007; Davis et al., 1998; Friederich & Herzog, 2011; Halmi et al., 2000, 2012; Pinnock et al., 2003; Wonderlich et al., 2005). The participants may have had obsessive-compulsive traits and high persistence levels that may have enabled them to persist with their food restriction and AN maintenance.

Deceit and manipulation were integral to the obsessive determination described above. The participants were focused on losing weight and avoided anything that impeded this pursuit. Participants manipulated or lied to those that encouraged calorie increases. Three excerpts from Jane Harris' story illustrate this:

> I started hiding all my food. My maid would make me eat breakfast and because I had devised a plan of how I was going to get rid of it during the night, it became pretty quick and simple (Harris, *Provision*, p. 40, l. 35-37).

> When my dad did come home early and I didn't eat dinner, I would lie and say my friends and I had quite a lot to eat for lunch or I had eaten earlier or I would fiddle with the food on my plate and before I knew it I was hiding food right in front of people (Harris, *Provision*, p. 40, l. 39-42).

> I would just hide it [food that she did not eat when at home] and make sure that I disposed of it the following day at school or if it was over the weekend I would find anything to put the food in. I will never forget shoving my food into a Berroca Calcium Effervescent container (Harris, *Provision*, p. 41, l. 3-5).

The topic of resisting weight gain will be revisited in the treatment theme (5.5.3.4). At this stage it is only important to note that in trying to pursue absolute control (as a

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[6] The use of the term 'manipulation', despite its pejorative interpersonal connotation, is meant as a lay term in this context to denote using others for personal gain (Adenzato, Todisco, Ardito, 2012)

means of perfection) participants would lie and manipulate. Ramjan (2004) reported that nurses had difficulty working with individuals with AN because of the deceit and manipulation tactics these patients used. Hambrook and Tchanturia (2008) also found that individuals with AN used "Machiavellian" deceit and manipulation for self-gain (Hambrook & Tchanturia, 2008, p. 137).

In summary, the 'attained through control' theme and its corresponding subthemes can be diagrammatically represented as follows:
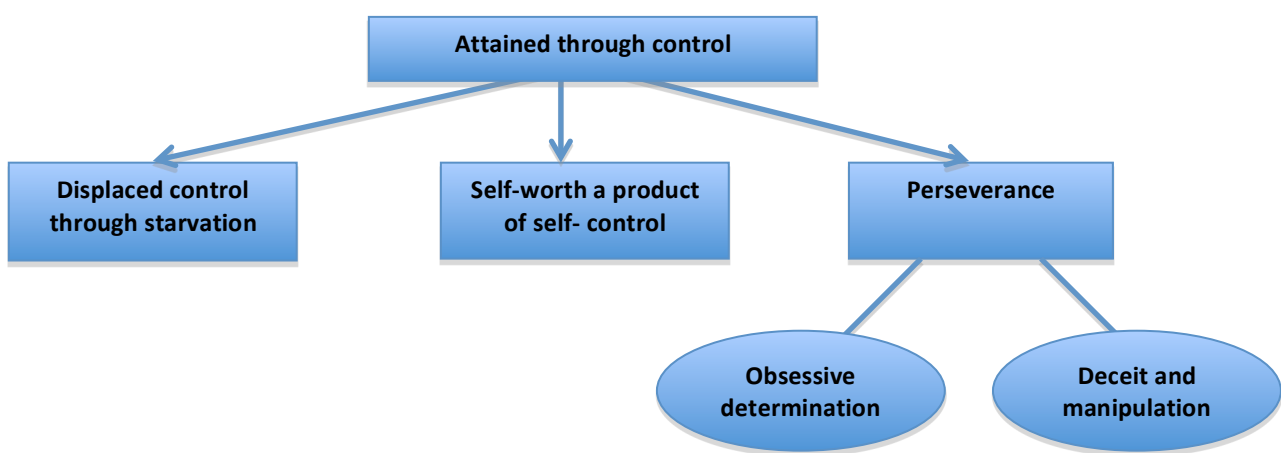
Figure 5.4. Attained through control.

As illustrated in Figure 5.4, the participants achieved their primary goal of perfection by intensified control. Their need for control arose through different situations in the participants' lives:

- Control appeared to be displaced onto starvation, the achievement of which made participants feel perfect
- Participants appeared to measure their self-worth through their self-control. Control through calorie intake was synonymous with perfection
- Participants' severe control of calorie intake was attained through perseverance (obsessive determination, deceit and manipulation).

5.5.3   Unattainability leads to failure

As explored in section 5.5.2, participants strove for perfection through attainment of control. The second factor in the AN triad explores the unattainable nature of this striving for perfection and control dynamic. Participants described their goal of perfection, achieved through starvation, as being unsustainable.

5.5.3.1 Unattainability in food restriction

Because participants felt out of control in their lives, they aimed to control their dietary weight in the hope of becoming perfect. However, the weight goals that the participants created were continuously reset which required lower and lower figures on the scale.

Alison Clark described her limited capacity to restrict:

> I remember the first time I binged. I had heavily restricted for months, and lost a lot of weight. Then one day I started eating and felt like I just couldn't stop. It was as if I was in a trance, like something had come over me. I found it frightening, to be honest (Clark, *Provision*, p. 16, l. 8-11).

In another excerpt, Alison described further failure to restrict and the resultant emotional impact:

> But it was challenging long hours, and annoyingly I was still unwell – I would binge in the evening and feel awful the next day (Clark, *Provision*, p.16, l. 21-23).

Alison's failure was inevitable because of the severe restriction targets that she had set for herself. Her inability to sustain her restriction resulted in bingeing. Similarly, Lucy Edwards described failing to sustain her food restriction because of her university lifestyle:

> I lived in a student house. Less control about food and alcohol made me eat in an uncontrolled manner sometimes and I also drank too much alcohol. Despite all the daily exercises I gained weight and I didn't like that at all (Edwards, *Provision*, p. 47, l. 30-32).

Later in her story, after completing university, Lucy felt disappointed with herself:

Coming back home was very scary because I had to face the truth. I had been gaining a lot when I was away and people obviously noticed that. I was so ashamed and embarrassed. How could I have let myself down so much? How weak I had been while traveling (Edwards, *Provision*, p. 48, l. 15-17)!

Restricting and compensating for calorie intake became the focal point of Kate Barlow's life:

I didn't engage with work or my friends and stopped making the effort to go see my friends in the other house. I didn't need them. I had my ED. At this point my illness was all I cared about, I used to skip lessons and in break times exercise in the loos, get rid of food, and walk alone to walk to lessons as I wanted to walk fast. I would march around the school grounds at any opportunity and was just in my head and was disconnected. I hated the things I felt I HAD to do and my friends hated seeing me like this- I wasn't the same Kate I used to be (Barlow, *Provision*, p. 73, l. 28-33).

Similarly, Jane Harris described her inability to sustain the level of restriction that she felt was necessary:

I eventually could not keep up with what and where I was hiding the food and my maid became very clever and would find the hidden food, which was extremely embarrassing and it caused numerous fights with my family (Harris, *Provision*, p. 41, l. 5-8).

Jane's excerpt above contains several themes that are interlinked. Her excerpt describes an inability to sustain restriction (5.5.3.1), interpersonal failure because of restriction (5.5.3.2) and deceit and manipulation (5.5.2.3).

5.5.3.2 Interpersonal failure

Several participants experienced difficulties in their interpersonal relationships that their AN behaviours may have contributed to. Kim Joseph described feeling unworthy of others:

Never feeling good enough for anyone, not even myself. I lived a life of unworthiness leading to a point where slitting my wrists with my razor sounded like Christmas and birthday on the same day (Joseph, *Provision*, p. 38, l. 12-14).

Similarly, Alison Clark did not feel worthy of relationships:

I isolated myself – intimate relationships were hard, partly because I wasn't doing much from which I could gain a healthy sense of self. I was living a fairly bizarre life. I became angry and frustrated with my parents – I wanted them to help – and yet they seemed unable to. My spell in hospital affected my confidence. I hardly contacted people. I was by myself, and paranoid (Clark, *Provision*, p. 19, l. 17-20).

For Kate Barlow, loss of interpersonal relationships exacerbated her AN behaviours:

These friends who knew me well picked up on my restricting and over exercising soon after it started and expressed their concerns and together we made a plan that at meal times I would sit on their house's side of the cafeteria with them, and that I would eat enough to compensate for my activity as I had always used to do. This helped hugely but was soon stopped when my head of house noticed and immediately started checking I was sitting on my houses table, despite this meaning me eating very little. I started skipping meals and being more secretive about food and exercise. Main meals soon turned to just dessert and dessert to just fruit. Soon it got so bad and I had lost so much visible weight that my head of house said she was so worried with the rapid weight loss I had to be out of school for a bit and referred me to an adolescents outpatients ED centre (Barlow, *Provision*, p. 72, l. 7-16).

Sarah Adam believed that if she could be perfect she would receive the interpersonal recognition that she desired:

After all the training I would come home, clean the dishes to their perfection and whole kitchen as if it was not cleaned properly they would throw the whole cupboard of dishes out again and we would have to do it again. Sometimes we would end up in bed after midnight, my schoolwork suffered but not badly because I still got good grades […] I tried my best in all the sports, got my honours in cross country, colours in leadership, colours in athletics and swimming, as well as certificates of distinction in my subjects but I never got any recognition (Adam, *Provision*, pp. 29-30, l. 44-8).

Emily Hughes succinctly described her life as being a failure owing to her loss of desire and her inability to sustain healthy interpersonal relationships:

My life was a series of failures. I had no romantic side. I had no feminine side. I had no instincts whatsoever. I had denied my nature and obsessed so utterly on my ability to starve myself that I did very poorly in all my classes, in all my relationships, and in my existence in general (Hughes, *Provision*, p. 80, l. 31-33).

The subthemes in 5.5.3.1 and 5.5.3.2 explored participants' food restriction and failing interpersonal relationships. Participants were striving for a perfection that was unsustainable. Shafran et al. (2002) described clinical perfectionism as an unachievable pattern of goal-setting. In clinical perfectionism, the set goals are either too difficult to achieve (in which case the individual criticises themselves) or achievable (the individual feels disappointed in themselves for setting the goal too low). Even when you win you lose.

The term clinical perfectionism (Shafran et al., 2002) could be used to describe the behaviour of the participants in the current study. Regardless of the goal they set out to achieve (in terms of weight or expectations in their behaviour and relationships), they failed because they would continuously redefine their goal to acquire perfection.

5.5.3.3 Emotional responses to failure

Failing (in their ability to restrict calorie intake and in their interpersonal relationships) resulted in two emotional reactions from participants. These are detailed below.

5.5.3.3.1 Fear

Jane Harris and Kim Joseph appeared to exhibit a fear-driven desire to lose more and more weight. Both were afraid of gaining weight:

> When it came to half time [at hockey matches], I was too scared to have even a quarter of an orange… (Harris, *Provision*, p. 40, l. 29-30).

> I would bake myself a tiny piece of fish with no form of spices etc on it, with a quarter of a baked potato and then still not even eat that because I just became far too scared to eat (Harris, *Provision*, p.41, l. 1-3).

> Losing my breath over the number on the scale, I had to fix it as quickly as I could (Joseph, *Provision*, p. 37, l. 32-33).

The excerpt below (previously quoted in section 5.5.3.1) illustrates Alison Clark's fear of losing control and inability to restrict:

> I remember the first time I binged. I had heavily restricted for months, and lost a lot of weight. Then one day I started eating and felt like I just couldn't stop. It was as if I was in a trance, like something had come over me. I found it frightening, to be honest (Clark, *Provision*, p. 16, l. 8-11).

Fear of weight gain, as expressed by the participants, is consistent with the findings of Ellison et al. (1998) who suggested that in individuals with AN, the fear and anxiety associated with high-calorie foods was akin to a food phobia.

Furthermore, as suggested in section 5.5.1.2 on achievement, studies (Harrison et al., 2010; Goss & Allan, 2009; Lavender et al., 2015; Weeda-Mannak & Drop, 1985) have found that individuals with AN were less preoccupied with achievement and more preoccupied with not failing. This is consistent with the current study in which participants' fear appeared to be of failing to restrict.

5.5.3.3.2. Guilt

The other emotion that participants described was guilt. Amanda Lere experienced guilt relating to her sister:

> I involved her in my mischievous activities, told her constantly what to do and blamed her for what I did wrong. Looking back at it, it's not really something to be proud of (Lere, *Provision*, p. 7, l. 11-13).

Amanda also experienced guilt relating to her parents and family:

> I felt I had no right to cry, complain or to be unhappy and so I smiled and bottled up most of my emotions (Lere, *Provision*, p. 7, l. 17-18).

> I had no reason to feel inferior or unhappy. Absolutely no reason. I had everything I needed to be happy. So I put on a mask that I would wear for years and speaking about how I felt or my emotions ceased (Lere, *Provision*, p. 8, l. 28-30).

Amanda experienced guilt when there were difficulties in her romantic relationships. She described an experience where her boyfriend spent a lot of her money and she felt used:

Guilty feelings arose. I felt abused and worthless and I didn't know what to do. It became too much to bear and I regressed back into my past emotional and physical torment again. Some days I starved myself and others I'd eat normally, but took laxatives to compensate (Lere, *Provision*, p. 9, l. 19-22).

Guilt seemed to be intricately linked with Amanda's AN:

My parents were alarmed by my sudden weight loss and I had to stop losing weight to pacify them (Lere, *Provision*, p. 8, l. 30-31).

Most friends around me had disappeared and relatives had become distant – they were disappointed that I 'hadn't made it'. Feeling abandoned again, my motivation and self-esteem was again at an all time low and guilty feelings accompanied with my feelings of worthlessness continued to torture me (Lere, *Provision*, p. 11, l. 18-22).

Later in Amanda's story she described feeling guilty because of her blessed life:

I had a supportive husband, lived a life of luxury on the other side of the world, had no financial issues, a caring family, travelled a lot and a fulfilling job where I felt respected. I had every reason to be happy right? But no matter how hard I tried, something in me prevented me. I kept feeling worthless... (Lere, *Provision*, p. 11, l. 34-37).

Alison Clark felt guilty after she ended a relationship and her boyfriend committed suicide:

He was my best friend. I spoke at his funeral. I gave statements and spoke at the inquest. It was hard to eat. The guilt and fear I felt at the time of his death and after is on a level above which I would think it would be possible to live. [...] I felt responsible for Dean's death. I could not be responsible for any more pain. Killing myself would have caused people pain. I couldn't do that anymore (Clark, *Provision*, p. 16, l. 32-37).

I couldn't take anymore guilt. Choices were no longer my own. I couldn't take anymore guilt (Clark, *Provision*, p. 16, l. 39-40).

Alison continued to experience guilt and fear in subsequent relationships:

Our relationship sadly ended after a year. I think it was my fault, for not realising how good I had it, or for being scared to commit due to past experiences (Clark, *Provision*, p. 17, l. 9-10).

Jane Harris described sadness and a guilty conscience at hurting her family because of her AN:

> One thing about Anorexia Nervosa, is that it's a very selfish disease (Harris, *Provision*, p. 42, l. 19).

> I became aware of just how much I was hurting my family and as much as it pained me to see them go through all the heartache I couldn't stop (Harris, *Provision*, p. 41, l. 9-10).

> One thing that I did hate and felt so guilty about was the fact that I would lie to the most important people in my life. I would try and fool myself that I was just telling a little white lie and it wasn't doing anyone any harm but in the meantime I was hurting my family so much (Harris, *Provision*, p. 41, l. 26-28).

Jane's story ends with her reflecting on a life without AN:

> I wouldn't be living with the guilt that I do because I feel so guilty about what I have put and am putting my family through – it's just a totally awful guilty feeling to live with (Harris, *Provision*, p. 44, l. 11-13).

Lucy Edwards describes her dishonesty and resultant guilt:

> Sometimes I felt guilty, especially when I had to face others again directly after vomiting. Putting on masks became second nature just as being dishonest had become. When I thought about that I felt horrible and guilty about my behaviour (Edwards, *Provision*, p. 49, l. 18-23).

> But at the same time because of my ED-behaviour (which I found disgusting when I thought about it) I felt progressively insecure and guilty. I put on masks so often, and I manipulated so often that when I thought about that I felt so embarrassed and ashamed (Edwards, *Provision*, p. 51, l. 7-10).

In addition to guilt, Kate Barlow and Kim Joseph experienced anger toward their families:

> ...my behaviour was also going downhill which at times even became aggressive and defensive when challenged with my food. Home life wasn't the same as at times I was out of control having tantrums about portion sizes. I hate myself now for what I put my family through, and how hard I made it for them all (Barlow, *Provision*, p. 73, l. 9-12).

> My dad, heartbroken and angry, blaming themselves for my actions. It made me mad to see them this way because I didn't want to feel guilty for doing what made me happy (Joseph, *Provision*, p. 38, l. 3-5).

To compensate for the guilt that she experienced from having a miscarriage, Amanda Lere punished herself with starvation:

> My world collapsed. The pain was unbearable. I blamed myself for my loss – I must have been too thin, not worth it, I killed my child – even though it was only a few weeks old. [...] I locked myself up and tortured myself. I had to be punished so I quit eating. Life had become so meaningless to me (Lere, *Provision*, p. 10, l. 31-36).

> I didn't deserve to enjoy a slice of cake or a pizza... I had no child, no job... (Lere, *Provision*, p. 11, l. 23-24).

Individuals with AN have been found to display more guilt and self-hate than healthy controls (Berghold & Lock, 2002; Bybee et al., 1996). Bybee et al. (1996) found that it was not just feeling guilt, but rather not processing this guilt effectively that resulted in individuals with AN becoming self-punitive and self-hating. This appears to be consistent with the current study:

> I locked myself up and tortured myself. I had to be punished so I quit eating (Lere, *Provision*, p. 10, l. 35-36).

5.5.3.4 Treatment failure paradox: Failure and success both amount to failure

Participants described their experience of treatment as paradoxical. Whether it was (clinically) successful or not, they experienced treatment as a failure.

5.5.3.4.1 Treatment failure

Several participants had experienced inpatient treatment where the primary goal was weight gain. For many of them, this intervention was unsuccessful as they were unable to gain or maintain the required weight. One possible explanation of treatment failure was because the environment was experienced as cold and clinical. Health care workers were described as refeeding-focused rather than being empathic. Another possible explanation of treatment failure was the detrimental effect that AN inpatients

had on each other. They shared unhealthy tips and tricks that were used to avoid weight gain and to manipulate their health care workers.

Both are described by Amanda Lere:

> For the very first time, at the age of 26, I reached out for help. What should have been a recovery and a new start resulted in a nightmare. They put me in an isolated dark room on an iron bed – it was just like a prison cell. The treatment went all wrong. The counsellor didn't reach my expectations and the behaviour of the other anorexic patients had an extremely negative impact on me. Instead of learning how to deal with food, they taught me the tricks of the trade and how to worsen my anorexia: cutting food into tiny pieces, hiding food in napkins etc (Lere, *Provision*, p. 10, l. 37-42).

> Instead of giving me meal replacement shakes and supporting me, they put me on an intravenous catheter (via surgery, a tube was put through my veins: the scar will remain visible for the rest of my life, a constant reminder). I was stuck to my drip and isolated for 2 months – that meant no therapy or fresh air and I felt a sense of abandonment. The motivation to heal didn't come back. On the contrary, I didn't eat the additional food they supplied me as I didn't see the benefit as they were giving me the calories I needed through the drip. I felt empty (Lere, *Provision*, p. 11, l. 4-10).

Amanda's treatment seemed to be focused on restoring weight. There was little reported regard for the impact of weight gain on her emotionally and psychologically. Kate Barlow described the negative impact of other AN patients:

> The environment was very unhealthy and there were 17 other patients who were all critically ill, some sectioned on tubes and the majority were forced to be in treatment and rebelling against getting better (Barlow, *Provision*, p. 75, l. 7-9).

Colton and Pistrang (2004) described the impact that AN patients had on each other. They found that the patients' AN experience was normalised through mutual support but, in other ways distressing. Individuals made weight comparisons and learnt tactics to hide their lack of progress in weight restoration and gain.

Sarah Adam described her treatment experience as cold and clinical:

When I was in the state institution they tried to force me to eat but I knew exactly what to eat and I did not want to touch the food that was being served as everything was starch and that makes you fat if you don't exercise. I couldn't stand sitting around and doing nothing. I never saw a psychologist the whole time I was in the lock up ward for 3 weeks. I was promised but it was never fulfilled. The bath times in the hospital were terrible as you had nurses staring at you showering as well as other patients looking at you (Adam, *Provision*, p. 33, l. 18-23).

Tessa Schaefer described using tactics to evade weight gain:

In a way my thinking became increasingly irrational [while in hospital] as I resorted to more and more compensatory behaviours and falsified my weight, I am ashamed to admit, through water loading and weights (Schaefer, *Provision*, p. 60, l. 35-37).

Jane Harris' hospital admission was the most critical of all participants:

My mom and dad took me to my GP the one day because I was so nauseas and I had fainted a couple of times and he told them that they needed to take me to the hospital ASAP because my heart was weak and they couldn't even draw blood because I had no veins. When I arrived at the hospital they immediately admitted me into the ICU because while they were doing the ECG I went into heart failure. [...] I also had to have a blood transfusion because I was so anaemic, my haemoglobin levels were so dangerously low that if I didn't have a transfusion then I would have died (Harris, *Provision*, p. 42, l. 8-18).

In her writing about being hospitalised Jane did not comment on her experience of treatment. However, she indicated that despite being in such a critical condition, her focus was not on survival but on fear of weight gain:

The scariest thing was that even or although this happened [heart failure], I would still get rid of the Ensure they thought I was drinking or anything for that matter. I was too scared to even drink TAB because I didn't want to put a single kilojoule in my mouth. [...] I actually was at death's door but still was consumed by food & my weight (Harris, *Provision*, p. 42, l. 12-18).

Jane appeared to resist the treatment process. Her focus seemed only to be on avoiding calorie intake:

> I had seen numerous psychologists since my parents realized that I had a problem but I was stubborn and didn't get on with them so it was a complete waste of time and money for my parents (Harris, *Provision*, p. 43. l. 19-21).

Kate also resisted calorie intake despite insight into her condition's seriousness:

> During the second month in the hospital I lost a dramatic amount of weight to the point that I wasn't able to stand or sit up let alone walk or dress myself and ended up only being mobile by a wheelchair for 15 weeks. This was horrendous and felt as if I was disabled and had lost all dignity. [...] At one point the doctor told my parents I might not make it through the night and to prepare for me to die (Barlow, *Provision*, pp. 74-75, l. 39-2).

Kate's excerpt suggests that she was not invested in the process. It seems that clinical treatment was unsuccessful and worsened her state. Hospitalisation, with the purpose of refeeding, has been described as a necessary component of treatment for AN patients in critical condition (Ramsay et al., 1999; Sharp & Freeman, 1993). Conversely, APA (2006) concluded that, "[t]here is no available evidence to show that brief stays for anorexia nervosa are associated with good long-term outcomes" (p. 75). Herpertz-Dahlmann et al. (2015) further suggest that more research is needed to ascertain the effectiveness of inpatient treatment for AN. Hay et al. (2015) and Touyz & Hay (2015) similarly conclude that further research is needed to ascertain the effectiveness of outpatient treatment for AN and that new approaches to treatment need to be considered.

Meads et al. (2001) and Gowers et al. (2007) have questioned the effectiveness of inpatient versus outpatient treatment. They concluded that, with regard to long-term follow up recovery, there was a negligible distinction between outcomes based on inpatient and outpatient treatment.

For treatment of AN to be successful, Colton and Pistrang (2004) emphasise the importance of patients needing to be invested in a collaborative treatment process in which they feel understood.

These findings seem to be consistent with the current study in which participants described experiencing their unsuccessful treatment processes as cold and clinical.

Another explanation may be that participants experienced treatment negatively because of their resistance to and fear of treatment.

Haynes et al. (2011) found that many inpatients with AN experienced hospitalisation as disconnecting and impacting negatively on their sense of self and identity. Similarly, participants in the current study described preference for a nurturing and empathic treatment process.

Nordbo et al. (2007) and Zugai et al. (2013) indicated that strong therapeutic bonds with health care workers seemed to have a positive impact on the physical and psychological recovery of individuals with AN.

5.5.3.4.2 Treatment success is failure

Several participants in treatment successfully gained weight. For these participants the success was not interpreted positively as, by gaining weight, they felt, unsurprisingly, that they had lost control and thus perfection.

Kate Barlow and Jane Harris described their treatment weight gain as unsuccessful and as having a negative emotional impact:

> This was my first admission. So I was admitted and was there for 2 weeks before I was transferred to another centre where I stayed for 6 months. This was mentally very detrimental as I picked up a lot of very unhelpful ED eating behaviours, calorie orientated, as well as secret exercising. I got to my target weight though as their main aim is re-feeding and was discharged, returning back to school as a day patient. My mental state was worse than ever (Barlow, *Provision*, p. 73, l. 23-27).

> My weight had dropped so drastically that when they started me on the 1500 calorie diet, I lost and I eventually went up to their highest calorie diet which was 4500 calories. So I basically felt as if I was eating all the time because I was eating breakfast, tea with a sandwich, lunch, tea with cake, dinner and then I had to have a cup of the worst flavoured Sustagen or Ensure which we had to drink with warm milk and have two rusks with that so it was a hell of a lot of food to eat within a day (Harris, *Provision*, p. 43, l. 2-7).

Tessa Schaefer said that weight gain in treatment was not synonymous with healing:

I spent seven months in the Hospital and improved significantly physically. My head, however, did not keep up. I remained almost a "passenger" to the whole process; doing what I needed to do to get out as quickly as possible (Schaefer, *Provision*, p. 60, l. 27-30).

Emily Hughes described a perpetuating pattern of her manipulating treatment:

My mom took me to several doctors, a nutritionist, a psychologist, a psychiatrist. Although my obsession didn't stop in the least I realized that I couldn't be as thin as I'd like because I would be stopped. I could be forced to gain weight if I took it too far. If I just maintained a low weight while not exercising too much or under eating too much then I could bide my time until I could starve myself completely. Any improvement I had was just a ploy to starve myself later (Hughes, *Provision*, p.78, l. 23-27).

Although I had refrained from taking my eating disorder to the point of death or institutionalization, it was something I struggled not to do. Primarily for the sake of my son. I would get my weight up as much as 113 (pounds). Then I'd get scared. It would plummet back to 93 (pounds). I'd get my weight up to see the doctor about my pain pills, then I'd let it drop twenty (pounds) two weeks later. I'd repeat that cycle every month (Hughes, *Provision*, pp. 81-82, l. 37-3).

Kim Joseph's first experience of treatment was with a dietician:

My parents noticed the drastic weight-loss and so I was sent to a dietician to help me with meal plans and healthy eating. I put on weight and for about a year and a half remained at 50kgs. I learned to accept this weight, although my smoking, coffee and laxatives never stopped (Joseph, *Provision*, p. 37, l. 7-9).

Kim later described feeling positive about appeasing her family through weight gain. However, she felt that for treatment success to be lasting it would have to be the result of her own choice:

I try do the right thing and I am proud of myself for doing what my family wanted, however I am waiting for the day when I wake up and decide, "I want this! I want to be healthy and recover". The day that happens, I know it will be a whole lot easier and I'll be so much more motivated to get back to a healthy weight, with a good state of mind (Joseph, *Provision*, p. 38, l. 32-36).

This section has suggested that, for participants, an environment experienced as cold and clinical was ineffective in treating their AN. This may supplement literature referenced in section 5.5.3.4.1 that indicated the importance of a strong therapeutic

alliance in the successful treatment and recovery of AN (Nordbo et al., 2007; Zugai et al., 2013). Furthermore, Bezance and Holliday (2013) suggested that for AN treatment to have better outcomes, physical improvement of weight gain needs to be coupled with psychological improvements.

For participants in the current study, weight gain alone was perceived as ineffectual in long-term recovery as for them it resulted in a sense of losing control, detailed more fully below.

5.5.3.4.3 Loss of control

During treatment participants appeared to lose their sense of control:

> It was very difficult to say the very least because the other girls and guy (which made up a total of nine of us) I was with were all 'anorexic' and therefore didn't want to eat etc. but we had to sit around a supervised table with at least two nurses and some of the girls would still get rid of their food (Harris, *Provision*, p. 42-43, l. 39-2).

Jane Harris lost her sense of control because her food intake was "supervised". She described other AN inpatients as finding ways to hide their food while being watched. Despite wanting to get better, Jane appeared unable to release the control of her food intake.

Tessa Schaefer described the fear of gaining weight in treatment:

> I was desperate to get out though and being in NHS hospital where, by definition, Anorexics are often only able to be admitted below a BMI of 13 (?!?!/!) it was an extremely depressing place. Only one of the other patients was working on recovery; all the others were eating to gain weight, get out and continue "life" in their illness. The very idea of that terrified me (Schaefer, *Provision*, p. 63, l. 30-34).

Tessa made a significant distinction between treatment and recovery. The former is about weight gain alone; the latter is about healing holistically.

Offord et al. (2006) found that AN inpatients experienced less success in treatment approaches that were authoritarian. This treatment style made them feel ineffective,

isolated and worthless. The study concluded that collaborative approaches, which allowed inpatients to retain a sense of control over their AN, were preferable.

Westwood and Kendal (2012) found that individuals with AN perceived their disorder as a means of attaining control. Paradoxically the study concluded that their AN also controlled them, causing ambivalence toward treatment.

These findings seem to concur with the experiences of participants in the current study. Treatments that were focused primarily on weight gain were described as being less successful because these treatments required participants to relinquish control over their eating.

The theme of 'unattainability leads to failure' is diagrammatically summarised in Figure 5.5 as follows:
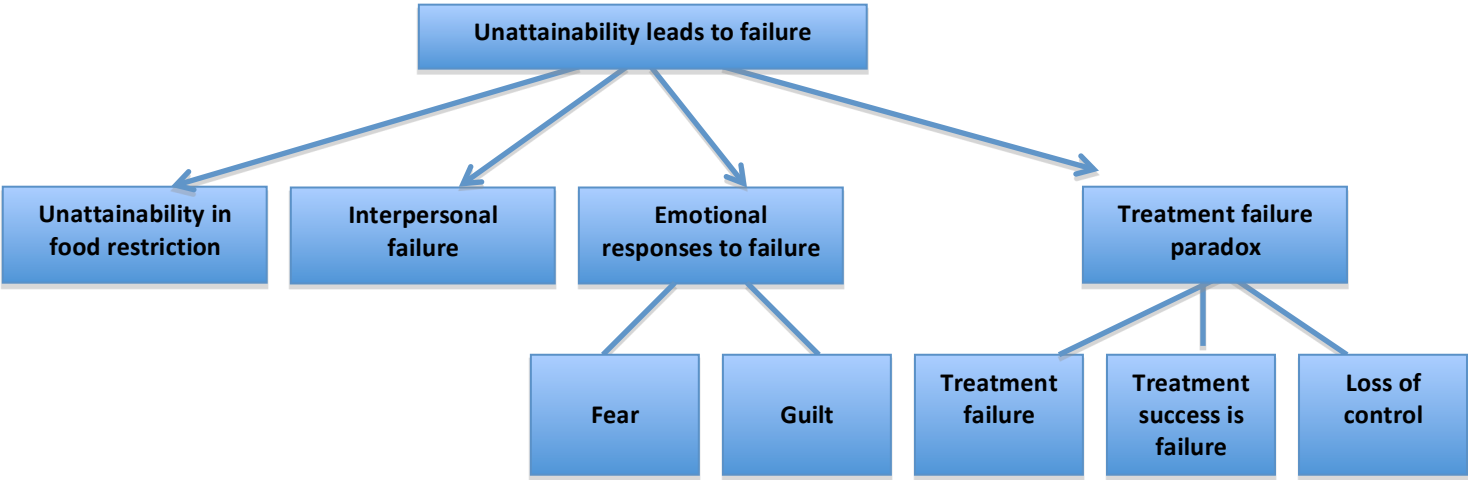
Figure 5.5. Unattainability leads to failure.

Sections 5.5.1 and 5.5.2 suggested that participants focused their attention on striving to be in control as a means of attaining perceived perfection.

Figure 5.5 indicates that the level of control and perfection participants aimed for was unattainable and due to this, their pursuits were destined to fail. Participants experienced failure in the following ways:

- In their ability to restrict food intake
- In their interpersonal relationships
- Because of their sense of disappointment in themselves. They experienced emotional reactions of fear and guilt
- In treatment, as described by the treatment failure paradox:
    - Participants' inability to make necessary weight gains constituted failure in treatment
    - Successful weight gain in treatment was paradoxically experienced as failure because in gaining weight, participants had lost their sense of control and perfection
    - A potential solution to the paradox might have been a coupling of physical improvement (weight gain) with psychological restructuring and intervention. This intervention could contributed to participants accepting a healthy weight.

5.5.4   Compensation: Restriction leads to perfection

The three factors in the AN triad, as discussed in sections 5.5.1, 5.5.2 and 5.5.3 are:

- Striving for perfection (attained through control)
- Unattainability leads to failure
- Compensation.

Review of sections 5.5.1-5.5.3 suggested that participants appeared to strive for their version of perfection. In order to achieve this goal they felt the need to be in control and, in doing so, controlled their food intake while avoiding life challenges.

Striving for perfection led to failure. Treatment attempts to restore weight were experienced as failures because of weight increases. Increased weight, for participants, was synonymous with loss of control and perfection.

When weight increases occurred, participants felt the need to compensate. The section below describes compensation; the final factor in the triad. Because the three processes appear to occur concurrently, some excerpts cited in sections 5.5.1-5.5.3 are revisited.

After moving countries, Kim Joseph struggled to adjust and ate as a means of comfort. Once she had gained weight, she developed the need to compensate:

> I soon found myself weighing 61kg at the age of 13, sharing my clothes with my mom. I was heartbroken and I couldn't bear the idea of this. I worked hard to be healthy and fit and soon I was back to a smaller, yet completely healthy weight (Joseph, *Provision*, p. 36, l. 22-25).

Later in her story, Kim described her weight gain as a failure that needed to be rectified:

> Losing my breath over the number on the scale, I had to fix it as quickly as I could (Joseph, *Provision*, p. 37, l. 32-33).

Both Alison Clark and Lucy Edwards described needing to compensate after over-indulging:

> Following my GCSEs, I started obsessively dieting. I had "allowed" myself to comfort eat somewhat during revision, justifying to my inner critic that it was OK because I would go on a diet once I took my exams (Clark, *Provision*, p. 16, l. 1-3).

> I often was *thinking* about food or about the next meal or snack time. I was often hungry and often *thinking* about eating a lot (*wishing* I could eat again and could eat a lot). With meals where I ate more than I promised myself to eat, I felt weak. Telling myself that I had to be stronger next time and eat less than I had done that moment (Edwards, *Provision*, p. 46, l. 27-31).

Later in her story, Lucy described needing to compensate and used purging strategies:

> I started to use laxatives, diet pills and teas and after about 2 years I also started to vomit (Edwards, *Provision*, p. 47, l. 32-33).

> So when I started new studies the big diet started. How very successful I was! I started to exercise more, restricting food a lot and progressively used laxatives. Occasionally I vomited (Edwards, *Provision*, p. 48, l. 18-20).

> Often I started cooking directly when I came back from school. While cooking I progressively started to eat and drink more than I normally would eat for

supper. Vomiting was the solution, so why wouldn't I? Why feel so hungry when there was a solution to eat without gaining weight? (Edwards, *Provision*, p. 50, l. 32-35).

Compensation allowed participants to temporarily maintain their low weights and thus their sense of control and perfection.

Brewerton et al. (1995) identified compulsive exercising, self-induced vomiting and/or laxative abuse as compensatory strategies used by individuals with AN. Similarly, Turner et al. (2000) found that individuals with long term AN diagnoses had increased risk of the abuse of laxatives. The use of compensation strategies to keep weight low is unsurprising, given that compensation is part of the APA diagnostic criteria (APA, 2013) for AN. Gümmer et al. (2015) suggest that high levels of physical activity in AN are an important factor in the disorder's maintenance and existence. In the present study, compensation allowed participants to feel a sense of control and perfection. Controlling weight was not the only method of compensation that participants employed. Controlling their behaviour and emotions was another means of compensation, discussed below.

5.5.4.2 Compensation through behavioural and emotional control

Perceived emotional and behavioural losses were also compensated for. Lucy Edwards' self-harm could have been interpreted as her way of punishing herself for her failures (in relation to over-eating, feeling negative or not performing as to her standards):

> I had self-destructive behaviour from an early age. Primary school age I bit myself on my arms before I fell asleep in the evening. Often feeling very sad or desperate. Also obsessive-compulsive behaviour like re-structuring things, re-writing, eye blinking, swallowing. During high school I often thought about death. During those years I was self-destructive too (Edwards, *Provision*, p. 47, l. 15-18).

When Tessa Schaefer heard of the death of her horse she felt unable to show her sadness and compensated for her feelings:

> On the outside, very few would guess there was anything awry; I remained calm and continued with my work. Inside, a part of me died in that moment. My

world felt like it came to an end and it was as though someone had cut my oxygen supply. I couldn't breath, I couldn't comprehend what was happening and I just could not fathom how life could possibly continue without Twirler. I was devastated, yet I shut down. I denied myself the permission to grieve, to cry, to express my pain (Schaefer, *Provision*, pp. 57-58, l. 39-1).

Tessa learned the dynamic of hiding her emotions from her family:

To my astonishment, life just seemed to carry on… everyone seemed to just brush all of the horrors under the carpet and continue as though none of it ever happened. Again, that familiar sensation returned to me, of feeling like a helpless witness to a slow-motion train crash. As though I was screaming inside but no one could hear me (Schaefer, *Provision*, p. 59, l. 29-32).

Tessa felt powerless because she was unable to control her sister's actions. Tessa restricted her food intake as a way of regaining her sense of control:

I remember one day as clear as if it were yesterday. I was driving back from visiting Mia in the hospital. I had not eaten in a ridiculous amount of time but I could not make myself eat a simple cereal bar. I remember the panic that came with feeling so powerless. I was completely incapable. It really felt like a switch had been flicked in that moment, almost as though part of me just disconnected from reality and I succumbed to the Anorexia that had been teasing me for years. I became her prisoner; the perfectly compliant puppet on strings (Schaefer, *Provision*, p. 59, l. 33-38).

McLaughlin et al. (1985) found that individuals with AN used rigidity as a way of compensating for their feelings of defective autonomy. Mountford et al. (2004) suggested that individuals with AN used compensation as a means of dealing with potential threats of negative affect. In a systematic review, Oldershaw et al. (2015) found that individuals with AN found it difficult to regulate their own emotions and that they suppressed unpleasant emotions for fear of the impact these would have on their social interaction. These findings are consistent with the current study, which described participants compensating when they felt unhappy because this unhappiness may have been perceived as a loss of control.

Figure 5.6 is a diagrammatic summary of the compensation theme:
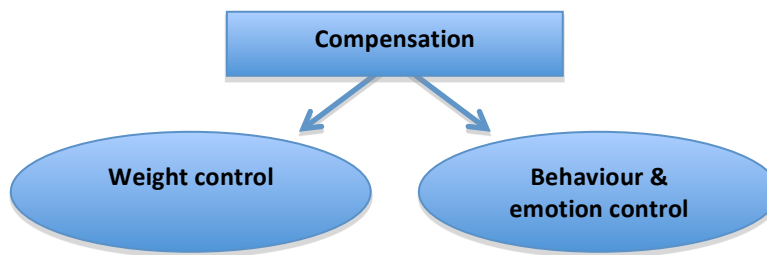
Figure 5.6. Compensation: Restriction leads to perfection.

Upon losing their sense of control and perfection, participants compensated for this by:

- Controlling their weight by restricting food intake
- Controlling their behaviour and emotions by displaying façades to hide their emotions.

5.5.5   Perceived maintaining AN Triad concluded: Even when you win, you lose

As the analysis of the AN triad (see section 5.5) suggested, participants aimed for a level of perfection that was unattainable. They exercised control and restraint as a means of achieving this perfection. Inevitably, their pursuit for control and perfection failed. Compensation was used to rectify and cope with failure.

Throughout this process, participants seemed unable to achieve a sense of satisfaction or fulfilment. No level of perfection was perfect enough; no amount of control was enough control. Even when participants achieved critical restriction (restriction severe enough to be life-threatening), they still experienced the desire to try harder. Jane Harris illustrated this lose-lose experience:

> The more and more my life became consumed by 'Anorexia' – ironically the happier I felt but in the meantime I became extremely unhappy. I became very withdrawn. I had no energy and lost so many friends (Harris, *Provision*, p. 41, l. 15-17).

Jane's excerpt suggests that she experienced some happiness at losing weight, but simultaneously became increasingly unhappy. Jane may have been happy about losing

weight, but also unhappy at becoming increasingly ill and incapacitated as a result of the weight loss. Jane realised that her AN awarded her only a false sense of perfection:

> 'Anorexia' is not a choice because I don't know of anyone in their right mind who wants to be 'Anorexic' – who wants to grow hair on their body because they are so cold, have purple extremities, be extremely pale, have sunken eyes and cheeks and the frightening experience of seeing your hair fall out in chunks. It's not a quest for beauty, perfection and being thin, it's a horrible disease that I would not wish upon my worst enemy (Harris, *Provision*, p. 43, l. 31-36).

Tessa Schaefer described the interplay between her restriction and her compensation as an attempt to display a façade of control and perfection. Inevitably, this dynamic had negative consequences for her life:

> As my restriction worsened my compensatory behaviour and planning became increasingly elaborate, in order to maintain my "I'm fine" front to the rest of the world. It was this in a way, my desperate attempts to remain constantly on the go so as to do my best to please everyone, that finally came between Den and I. He said he needed more of me and was not able to continue having just a small part of me and not enough of my time. I always wonder how different things could have been without Anorexia in the picture (Schaefer, *Provision*, p. 60, l. 8-13).

> Now looking back to this time, I can see how I was trying to "manage" my Anorexia whilst attempting to carry on a normal life. I learnt the hard way that my illness would not allow this and if I am not working towards recovery, my Anorexia does not stagnate. It is relentless in its pursuit of my demise (Schaefer, *Provision*, p. 61, l. 33-36).

In a final excerpt from her story, Tessa described her fear of dying:

> My denial grew by the day and I held on to any excuse I could in an attempt to justify how I really was not *that* ill, that close to death. I succeeded, until one night I had the luxury of being able to take a real shower in a hotel room. I had avoided mirrors for a long time so was completely caught off guard when I stepped out of the shower to be confronted by a horrific dark-eyed skeleton. I recoiled in fright before the reality dawned on me… that it was no ghost; simply the shocking, emaciated reflection of myself. I had never been fearful for my life but I genuinely believed there was a good chance I might not wake up the next morning. I was desperately frightened and cried myself to sleep eventually that night, though still the only sound I could hear was my heart thumping against my hollow rib cage in a desperate attempt to keep my body alive (Schaefer, *Provision*, p. 61, l. 7-16).

Tessa described her denial, and her fear of gaining weight and losing control as juxtaposed with the fear of dying through starvation. Both the prospect of gaining weight and continuing to lose weight appeared to be unbearable.

Sections 5.3-5.5 described the perceived risk (biological and environmental) and maintaining factors for AN as outlined by participants. Due to the multitude of subthemes and codes within these sections, a diagrammatic summary is presented below.

5.6 PERCEIVED VULNERABILITY AND MAINTAINING FACTORS MODEL FOR ANOREXIA NERVOSA

Figure 5.7 represents the themes and subthemes of sections 5.3-5.5 as a model that may explain participants' risk and maintenance of AN and how these factors impact each other:
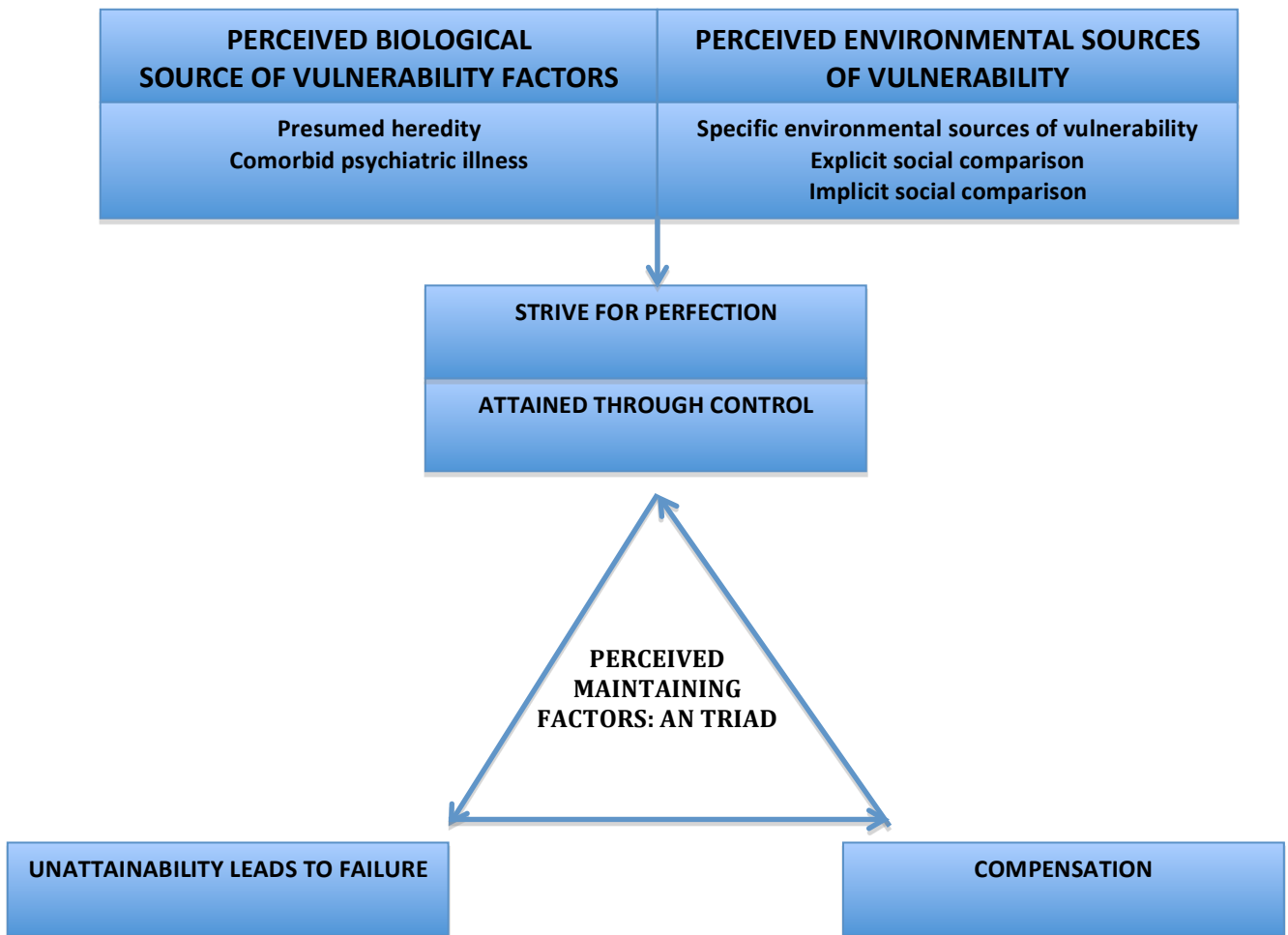
Figure 5.7. Perceived vulnerability and maintaining factors model for AN.

Vulnerability factors interpreted from participants' stories included:

- Perceived biological sources of vulnerability:
    - Presumed heredity not of AN but of unhealthy eating attitudes
    - Comorbid psychiatric disorders (including substance abuse and dependence, mood disorder and suicidal behaviour, self-injurious behaviour, anxiety disorders and obsessive-compulsive traits).

- Perceived environmental sources of vulnerability:
    - Environmental sources of vulnerability
        - Family, complicated relationships with mothers, friendships, romantic relationships and other exacerbating circumstances

- o Explicit social comparison
  - By family and peers, as well as through name-calling, and specific group membership
- o Implicit social comparison
  - Of underlying family, media and religious messages.

A sensitivity to experiencing environmental vulnerability factors, rather than the factors themselves, seemed relevant in participants' descriptions of how they developed AN.

Maintaining factors interpreted from participants' stories were described in the AN triad which consisted of:

- Internalised striving for perfection:
  - o Being and remaining the centre of attention, achieving success and a sense of social admiration, maintaining low weight, resisting threats to their ideal of perfection.
- Perfection, attained through control:
  - o Control displaced onto starvation
  - o Self-worth a measure of self-control
  - o Perseverance (through obsessive determination and deceit and manipulation).
- Unattainability leads to failure:
  - o Failure in ability to restrict food intake and in interpersonal relationships that leads to fear and guilt
  - o Failure to engage in treatment (both losing and not losing the necessary weight was experienced as failing).
- Compensation:
  - o For losing control and perfection
  - o Through restricted food intake
  - o Using façades to hide true emotions.

Figure 5.7 attempts to diagrammatically represent participants' experiences and descriptions pertaining to factors that they felt increased their risk of developing and maintaining AN. In section 5.7 participants' descriptions of perceived moderating factors are explored. Moderating factors were not included in the described model (Figure 5.7) because they are in contrast to the AN triad and offer a potential antithesis. They are presented more fully below.

5.7 PERCEIVED MODERATING FACTORS: TREATMENT, RECOVERY AND UNDERSTANDING OF PARTICIPANTS' ANOREXIA NERVOSA

Sections 5.3-5.5 described the factors that participants experienced as contributing to the development and maintenance of their AN. Participants also described several factors that they experienced as moderating their AN vulnerability and maintenance. These were predominantly associated with treatment.

Theme 5.7 utilised data from participants' stories and the questionnaires they completed after writing their stories and reading the narratives of other participants in *Provision*. The potential advantages and disadvantages of the current study's narrative tasks (writing and reading stories) are also explored in this theme.

The themes and subthemes that emerged in section 5.7 were narrative in style. For this reason, narrative tools (such as figures of speech, play on words and personification) were utilised in some theme and subtheme headings.

5.7.1 Writing stories: Writing the struggle

The first theme detailed the experiences that participants had in writing their stories and, in so doing, articulating their experience of AN and their struggle with it.

5.7.1.1 'Pros' and cons: Positives and pitfalls in writing stories

Writing their life stories appeared to generate both positive and negative experiences for participants. Some of these experiences were derived directly from their stories, and others from participants' completed questionnaires.

<u>5.7.1.1.1 Catharsis</u>

Several participants experienced the telling of their story as positive because it allowed them to articulate their struggle. Vocalising feelings was described as a necessary part of healing:

> By not vocalising any of my struggles I became more trapped and terrified of disappointing everyone. They all seemed so thrilled by my progress and reaching my target weight. How could I possibly tell them the truth? I had been discharged by the time I had been discovered and my restriction continued with a vengeance (Schaefer, *Provision*, p. 60, l. 38-42).

Tessa Schaefer's excerpt may suggest that being healed from AN is not only about reaching a target weight, but also about experiencing the necessary psychological healing through honest sharing.

Alison Clark and Lucy Edwards experienced writing their stories as positive:

> I didn't find it difficult to write. It's on my brain an annoying amount of the time, so it's actually quite good to get it on paper, out of my brain (Clark, Transcript 2, p. 3).

> Writing down always helps me to see things more clearly. It helps me to get more insight into myself; my thoughts, patterns…it also helps me to (continue) to focus on my recovery and makes me even more determined to work on that (Edwards, Transcript 6, p. 9).

Emily Hughes described her experience of writing her story as follows:

> Writing my story was liberating (Hughes, Transcript 9, p. 14).

> I've dealt with the emotions related to my experience. I have wrestled with a lot of anger and frustration. However today I have come to terms with myself as a whole (Hughes, Transcript 9, p. 14).

In summary, it seems that for several participants, the writing experience was a cathartic one that may have contributed to moderating their AN.

<u>5.7.1.1.2 Confronting difficult realisations</u>

In addition to having a cathartic effect on participants, articulating their stories also seemed to have encouraged them to confront realisations about their AN.

Alison Clark recognised that her AN had had both positive and negative effects on her life. This seemed to encourage a more realistic and holistic view of her disorder:

> Dear ED, thank you for what you've given me. You've kept me feeling safe, given me a buzz; you've kept me from depression and loneliness. You've allowed me to be happy by myself. I'm grateful to you for this. But – you make me angry also. You've kept me trapped in a bubble. You stopped me from seeing the beauty in things (Clark, *Provision*, p. 20, l. 29-34).

In addressing her AN, Alison deliberated over whether or not AN was responsible for losses in her life:

> You have made coming to terms with Dean's death even harder than it would have been otherwise. You arguably triggered Dean's death. You've put me in terrible situations with unstable people, and with this you have made me scared – for my life, and the lives of others. You've made me vulnerable (Clark, *Provision*, p. 20 l. 34-37).

Kim Joseph found writing her story difficult in that it forced her to confront the pain that her AN had caused others:

> [It was] difficult, took me back to my past, it also made me realize how much I have gone through and all the things I did to keep my eating disorder. I also realized the pain and hurt I caused my family (Joseph, Transcript 4, p. 6).

Despite the pain her AN had caused, Kim was able to reframe her understanding of it positively through the process of writing:

> I managed to see the bad in anorexia & how much it affected me as well as everyone around me. I hadn't fully realized what a great effect it caused on my family. […] It was a good exercise & I think I needed to look back and understand what I did and why (Joseph, Transcript 4, p. 6).

The writing process also encouraged Jane Harris, Lucy Edwards and Emily Hughes to reframe their understanding of their AN:

It was very thought provoking, it was hard in a way and good in another way because it made me think of and see my "Anorexia" in a totally different way. I realized that it's a disease that I use when I am falling completely apart and feel as if I have absolutely no control over anything (Harris, Transcript 5, p. 7).

I felt guilt and shame about my dishonesty to others, I felt compassion for myself because of the difficulties I had/have to face, I felt determined to keep fighting this illness, and I felt free and proud because of what I have learned and reached already by going into treatment (Edwards, Transcript 6, p. 9).

Anorexia had always been a "she" to me. I realized that if I wanted to recover from alcoholism I'd have to deal with why I had become alcoholic. I had taken the pills I had taken for the number one reason of staying thin. I had rendered myself incapable of coping with life in any other way than to starve or medicate. I was going to have to leave who had been my "lover" since I was fourteen years old (Hughes, *Provision*, pp. 83-84, l. 36-1).

Kate Barlow found the process of writing her story as an easy one:

No I didn't find it difficult to write, it came quite easily (Barlow, Transcript 8, p. 13).

The process of writing seemed to help Kate realise her losses:

I felt sad as when talking about all the hospital admissions and my constant battle with the anorexia it really made up a good chunk of my life story, dominating most of my adolescent years. It made me realize how much time I have wasted to this illness and this left me with feelings of regret and sadness (Barlow, Transcript 8, p. 12).

Notably, the above excerpts also illustrate the potentially negative experiences that telling their story could have on participants. Emotions of regret and sadness seemed to be evoked. If these are contained in a therapeutic environment, these realisations may be important to confront as this could encourage reframing; that is, seeing and understanding their AN in a different way. This process would need to be cautiously considered to avoid any negative effect on participants.

5.7.1.1.3 Comparison and competition

Confronting difficult realisations (discussed in 5.7.1.1.2) described the potentially negative effect that telling stories may have had on participants. Recounting their

stories seemed to underline their inclination to compare themselves negatively to others. Explicit social comparisons (discussed in 5.4.2) detailed this tendency. This was consistent with literature indicating that individuals with AN were more inclined to make unfavourable social comparisons than were healthy individuals (Cardi et al., 2014; Connan et al., 2007; Troop et al., 2003).

Writing their stories, knowing that others would be reading them, seemed to trigger this negative comparison capacity for Sarah Adam and Tessa Schaefer:

> Yes, it was difficult to write as I am a self-conscious person, and telling a total stranger what it was like to be an anorexic is a very hard task at hand. [...] I found it particularly hard to write what happened to me as a child and how this life I lived in was not perfect the way I wished it would be one day. It was hard to be truthful to myself and to see myself from a different perspective (Adam, Transcript 3, p. 4).

> It is difficult for me to minimize what has happened in the past or how ill I have been. I worry others will judge me or think I am exaggerating. The hardest parts to write was when I was most ill. It was difficult 'finishing it', I always fear leaving bits out and it not being 'perfect' enough (Schaefer, Transcript 7, p. 11).

Sarah and Tessa seemed to be concerned as to how readers would receive their stories. They were preoccupied with writing perfectly which seems to be consistent with participants' striving for perfection (detailed in 5.5.1).

5.7.1.1.4 Emotional overload

Writing their stories seemed to have the effect of emotionally overloading participants. Tessa Schaefer described how writing her story encouraged the recalling of difficult memories. She says the writing was,

> ...a difficult but useful experience. I do not like thinking about the hard times from the past, though by avoiding them it keep me in a lot of denial. Having to reflect back is a useful reality check of the places my Anorexia takes me to if I remain ill (Schaefer, Transcript 7, p. 10).

Emily Hughes described the writing process as emotionally taxing:

> I had to take it slow writing my story. The first night after I'd spent time writing it I was utterly sleepless, which is not my norm. I found it difficult to not let myself get worked up over my story (Hughes, Transcript 9, p. 14).

In summary of 5.7.1.1 ('Pros' and cons: Positives and pitfalls in writing stories) participants found writing their stories both positive and negative. The writing process seemed positive because it was cathartic in engaging participants to vocalise their struggle and confront difficult realisations regarding their AN.

Pennebaker and Seagal (1999) and Pennebaker (2000) indicated that creating a narrative serves as a means for organising emotions and understandings and for having a positive impact on mental and physical health. White and Epston (1990) suggest that telling life stories allows the maps of meaning that individuals create in understanding their lives, to be exposed and explored. It is this exploration that presents an opportunity for the psychologist and the individual with AN to redefine their understandings (further explored in 5.7.1.2.2 on separating the person from the problem).

Despite the possible positive effect of articulating their stories, this experience also seemed to have the effect of overwhelming some participants, encouraging negative comparisons, and emotionally overloading them.

5.7.1.2 Go figure: Figures of speech in writing stories

The use of figures of speech and writing style in participants' stories lent itself to narrative exploration and an understanding of how they conceptualised their AN.

5.7.1.2.1 Enmeshed AN self

Several participants used personification to describe their AN. This was seen in excerpts quoted in 5.7.1.1 in which participants' AN was addressed as a person ('Dear ED'). It is however possible that the tendency to personify AN may have been a result of the researcher's probing question (Appendix 4: part 2 question 3) which asked participants to address their AN directly.

Amanda Lere and Tessa Schaefer, using personified descriptions of their AN, presented their disorder as being an enmeshed or intrinsic part of their identity:

> I'm truly in the grasp of Anorexia Nervosa (Lere, *Provision*, p. 7, l. 2).

> I succumbed to the Anorexia that had been teasing me for years. I became her prisoner; the perfectly compliant puppet on strings (Schaefer, *Provision*, p. 59, l. 37-38).

Participants tended to claim ownership of their AN, using terms such as 'my anorexia'. They also empowered their AN by capitalising the disorder's name.

Describing themselves as anorexics further enmeshed participants' AN with their identities. Arguably, their failures in treatment may have been associated with their AN and identity enmeshment. Participants' resisting and rejecting the disorder may have been synonymous with resisting or rejecting parts of their identity.

Consistent with participants' descriptions of their AN being part of their identity, White and Epston (1990) suggest that individuals with AN develop dominant stories about their AN which allow and encourage the disorder's existence.

5.7.1.2.2 Schism in AN self

In some instances, participants described their AN as being separate from themselves; split from themselves. Several excerpts involved participants addressing their AN as a distinct person. Amanda describes a cognitive dichotomy:

> Diabolic and angelic voices stayed in my head (Lere, *Provision*, p. 11, l. 42).

Amanda did not explain what she meant by this statement but an interpretation may be that the 'diabolic voices' are the unhealthy, life-destructing AN part of herself while the 'angelic voices' are healthier, life-affirming parts of herself. Alternatively, her description may describe her ambivalence toward her AN.

For Alison Clark, the process of writing appeared to encourage her seeing AN as separate from herself:

...it consolidated my feeling of separation from my ED (Clark, Transcript 2, p. 3).

Kim Joseph and Emily Hughes personified their AN as a romantic partner:

> ...fighting anorexia was like breaking up with the love of my life for all the
> wrong reasons. I miss this love every day and because going to rehab wasn't a
> choice I made, it makes it even harder to say goodbye (Joseph, *Provision*, p. 38, l.
> 17-19).

> Looking back I describe my relationship with anorexia as being in a relationship
> with a man who abuses me. I love "him" and although he "hits" me and puts me
> down, I stay because I have somewhat an addiction to his "love" (Joseph,
> *Provision*, p. 38, l. 24-27).

> It had always been an abusive relationship. It had been an evil "woman" who
> would promise me love and then give me an ultimatum. She'd always tell me
> that if I didn't eat it would all be okay. She forced me to over exercise and reap
> all kinds of havoc upon my body. I was finally ready to let go of my "lover." The
> romance had died (Hughes, *Provision*, p. 84, l. 1-4).

As indicated by the excerpts, encouraging participants to address their AN directly, allowed them to separate their AN from themselves. Kim's 'abusive partner' metaphor seems to capture an important conflict implicit in her AN; not being able to separate herself from something that she knows is hurting her. She likens her experience to that of an addiction.

White and Epston (1990) and Epston (2000) in the *Archives of Resistance* suggest that by externalising their disorder, individuals with AN separate themselves from their AN. This separation between the person and the problem was argued to be a first step in attacking and overcoming the disorder. Similarly, drawing on White and Epston (1990), Costin (2007) described a split between a healthy self and a disordered self in individuals with AN. By highlighting this split, AN patients in treatment were able to work towards recovery. Further, Dolhanty and Greenberg (2009) describe emotion-focused therapy which works towards the individual identifying the 'anorexic voice', and in so doing, becoming able to distinguish the healthy versus AN aspects of their identity. One challenge noted by Williams et al. (2015), and Fox and Diab (2015) is that individuals with AN see their disorder as an integral part of their identity. Marzola et al. (2015), acknowledging the adaptive function and intrinsic nature of AN in the

individual's identity, suggest that addressing AN directly allows individuals to explore their disorder and the meanings they ascribe to it more closely. In so doing, psychotherapists are able to encourage the restructuring of meanings in the hopes of encouraging AN resistance and, ultimately, recovery.

Being encouraged to separate themselves from their AN appeared to assist participants in the current study to resist their AN. This may have important implications for further study of the narrative treatment of AN.

Figure 5.8 provides a diagrammatic summary of the Writing stories: Writing the struggle theme.
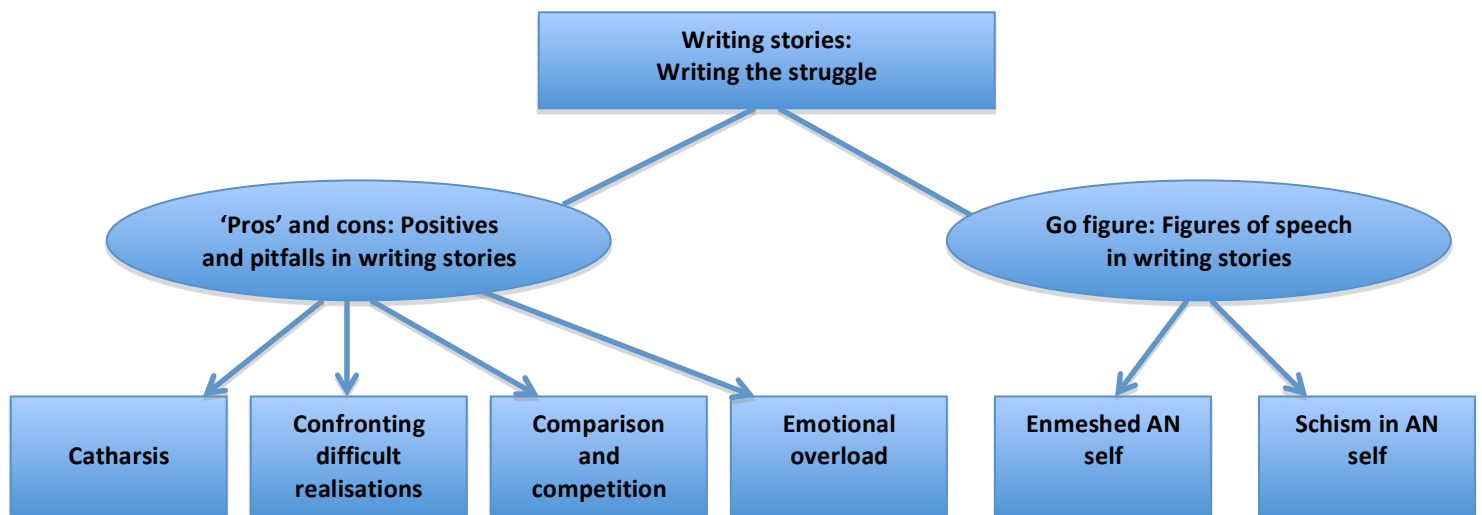
Figure 5.8: Writing stories: Writing the struggle.

Writing stories: Writing the struggle was divided into two subthemes:

- 'Pros' and cons: Positives and pitfalls in writing stories
    - o Catharsis: Participants found writing their stories cathartic as it was a means of sharing their AN story
    - o Confronting difficult realisations: Writing their stories encouraged participants to reframe their understanding of their AN. This was experienced as both positive and negative

- o Comparison and competition: Several participants made negative comparisons between themselves and the other writers. They felt compelled to write what they deemed to be a perfect story
- o Emotional overload: Memories that resurfaced through the writing process triggered negative emotions.

- Go figure: Figures of speech in writing stories
  - o Enmeshed AN self: Participants saw their AN as intrinsic to their identity. This may have had negative implications for their treatment because of reluctance to destroy their AN and identity
  - o Schism in AN self: Possibly due to the researcher's requesting participants to address their AN directly, they separated themselves from their AN. This separation between their AN and their identity allowed them to express resistance to their disorder. This may or may not also have been part of the therapeutic process they were all engaged in.

5.7.2   Encouraged resistance: Talking to Anna

Following 5.7.1.2, encouraging participants to view themselves as separate from their AN seemed to motivate resistance against AN.

5.7.2.1 No, Anna: Attacking AN

The first way in which participants appeared to display resistance toward their AN, was to directly attack it. Encouraging participants to address their AN directly seems to have resulted in them attacking it:

> If I could talk to my anorexia and tell her what I think: I'd tell her that I disapprove of her behaviour and highlight the consequences for her and others. I would drag her – kicking and screaming – in front of the mirror to show her how painfully thin she is and confront her with the pain and damage she has caused, the opportunities she's missed, where she has fooled herself. etc. (Lere, *Provision*, p. 13, l. 4-7).

> If I could talk to my anorexia, I would say leave me alone, I don't want to have anything to do with you anymore; you have destroyed my whole life. You have

destroyed my studies, made me depend on people and you have cost me a fortune and my family. If you were not in my life I would have had a great sports funding and would not have lost my bursary. I would not have spent every year in hospital and I would not be scared to eat what I want to and not worry about how fat I am and how other people are seeing me… (Adam, *Provision*, p. 34, l. 9-14).

If I had the opportunity to face my anorexia as a physical being, I would say to it that you are the devil itself; I might have people in my life that I don't particularly like but I don't hate anyone, I do however hate you and would not wish this awful disease on my worst enemy because I don't want anyone to experience this feeling of loneliness and helplessness because it's terrifying to say the very least (Harris, *Provision*, p. 44, l. 4-8).

If I could see my ED as a person I would say to him that although I had fallen in love with him (and his tricks) in the past, that at this time I hate him and that he is the worst partner some can ever imagine. Because he wants *all* of me for himself in a very unhealthy way and has made me become a dishonest person who lies and manipulates. I would say I would break up our relationship and that I never, ever want him to come back in my life. That I would wish him isolation and death! (Edwards, *Provision*, p. 53, l. 3-8).

Participants' resistance to their AN is indicated in the above excerpts.

Finally, Tessa Schaefer also addressed her AN harshly and confronted all that she had lost as a result of it. The intensity of her attack on her AN is not only clear from her story, but also by her underlining of words and use of exclamation marks:

How can you be so cruel!? When will you stop!? When will it be 'enough'!? You push and push and push… and <u>still </u>it is never enough!!! without me there is no you, yet you do everything in your power, every day!!, to kill me. You control me and make me live under your rules. If I break your rules I am filled with guilt and anxiety. With you there is no peace; I worry constantly about what might happen and how I should have done something differently, regretting the past. You also keep me on the 'go', I am not allowed to stop. The consequence of which is crippling exhaustion and no ability to just 'be', with you, my head is full of food (preoccupation), rather than my body, which is what actually needs it. You make me bend the truth and distance me from the real world by leaving me 'numb', disconnected from emotions and a spectator of life. You have robbed me of years of my life and made me lose so many precious things I measure dearly. As I have, thus far, failed to overcome you I continue to feel like a failure. I despise you and wish you would give up and leave me alone (Schaefer, *Provision*, p. 65, l. 23-35).

The above excerpts suggest that the act of encouraging participants to separate themselves from their AN (by addressing their AN directly), may fashion resistance toward their disorder. Epston (2000), describes anti-anorexia as the process of resistance through attacking AN and encouraging the re-authoring of healthier life narratives and understandings that discourage AN ideals.

Consistent with the current study, minor prompting from the researcher to participants (to directly address their AN) generated anti-anorexia narratives. This may suggest that participants had an intrinsic capacity to fight their AN and regain a healthier understanding of themselves without it. Alternatively, all participants were involved in treatment during this study in which they may also have been encouraged to identify and articulate anti-anorexia narratives.

5.7.2.2 Oh, Anna: Losses associated with AN

In addressing their AN, participants recounted many deep losses. In identifying previous losses, participants seemed encouraged to resist further losses because of having AN.

Amanda Lere, Alison Clark, Jane Harris and Kim Joseph described their losses as a result of AN:

> If I could talk to my anorexia and tell her what I think: I'd [...]confront her with the pain and damage she has caused, the opportunities she's missed, where she has fooled herself. etc. (Lere, *Provision*, p. 13, l. 4-7).

> You've kept me trapped in a bubble. You stopped me from seeing the beauty in things (Clark, *Provision*, p. 20, l. 33-34).

> It [AN] made me unable to do things that I wanted to do, and it lead to binge-purge cycles (Clark, *Provision*, p. 19, l. 6-7).

> I truly believe that if I had never got Anorexia Nervosa then my life would be completely different today because it robbed me of living/having the life that I had always dreamed of an aimed to have (Harris, *Provision*, p. 44, l. 9-11).

> ...fighting anorexia was like breaking up with the love of my life for all the wrong reasons. I miss this love every day and because going to rehab wasn't a

choice I made, it makes it even harder to say goodbye (Joseph, *Provision*, p. 38, l. 17-19).

Costin (2007), drawing on White and Epston (1990), suggested that narrative therapy should not be only about splitting the healthy self from the disordered self in an attempt to eradicate the latter. Rather, narrative therapy should aim to understand and explore why the disordered self became adaptive for the individual initially. Thereafter, replacing AN with an alternative coping mechanism can be explored (Costin, 2007).

Consistent with the current study, participants accepted their AN and reflected on what they had lost because of it. The process of letting go of their AN would arguably need be managed and treated respectfully in participants because to them it clearly served an important purpose as outlined in sections 5.7.2.2 and 5.7.2.3.

5.7.2.3 Go, Anna: Accepting AN

Attacking their AN (discussed in 5.7.2.1) encouraged participants to forcibly resist the disorder. Alternatively, in this section, participants subtly resisted their AN by realising and accepting that it had persisted because it served an important purpose. 'Go, Anna' describes participants' sympathy towards their AN; their applauding Anna for the important purpose she served.

For Amanda Lere, after voicing her attack on AN (quoted in 5.7.2.1), also displayed empathy toward it:

> I would be angry with her on one hand, but would reach out to her on the other. I would listen and support her (Lere, *Provision*, p. 13, l. 8-9).

Amanda's empathetic response may allude to her desire to receive empathy. Alison Clark and Emily Hughes voiced acceptance of AN by identifying that it served a purpose in their lives:

> Dear ED, thank you for what you've given me. You've kept me feeling safe, given me a buzz; you've kept me from depression and loneliness. You've allowed me

to be happy by myself. I'm grateful to you for this (Clark, *Provision*, p. 20, l. 29-33).

Today I am sober, healthy, and happy. I take no medications. I see a helper who helps me to release my negative energy. I'm 5'5" and 145 pounds today and that I weigh a human weight does not make me suicidal. I learned to embrace my crazy. To respect that my mind is irrational about food (Hughes, *Provision*, p. 84, l. 35-38).

Resisting their AN did not appear to be only about attacking it, but also about identifying and understanding why AN had persisted in their lives.

Figure 5.9 diagrammatically summarises the Encouraged resistance: Talking with Anna theme (discussed in 5.7.2):
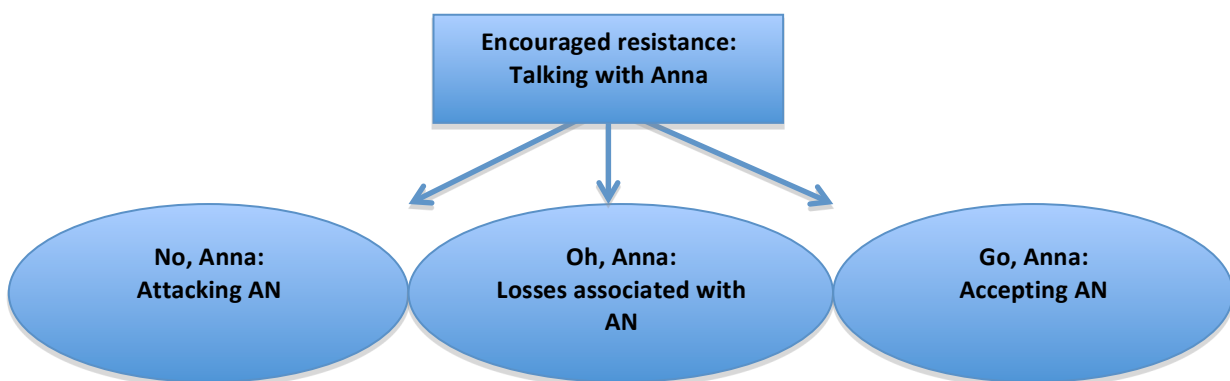
Figure 5.9: Encouraged resistance: Talking with Anna

Encouraged resistance: Talking with Anna, was divided into three subthemes:

- No, Anna: Attacking AN
    - Participants attacked their AN by voicing discontent for it

- Oh, Anna: Losses associated with AN
    - Previous losses associated with their AN were described and realised, and further losses were resisted

- Go, Anna: Accepting AN
  - Part of resisting AN was understanding and accepting that it existed for a reason and served an important purpose in defending participants from factors in their lives they were unable to deal with. By seeing the purpose that AN served in their lives, they may have been able to work on substituting a healthier coping mechanism or strategy.

5.7.3   Therapeutic bonds: Safe spaces set the scene for resistance

In order to process and manage their AN resistance, participants seemed to need a particular type of therapeutic environment.

5.7.3.1 Connectedness

Therapeutic environments that were experienced as nurturing, and those in which participants felt a strong sense of connection to their psychologist, seemed pivotal in participants' developing a positive attitude toward recovery.

Amanda Lere and Jane Harris positively described therapeutic environments that offered a sense of connectedness:

> Willing to recover and embrace life again, I googled an inpatient programme where I felt nurtured and welcomed, a lovely environment where I could be reborn and stop fooling myself. A programme in another country appeared on the screen and I was sold (Lere, *Provision*, p. 12, l. 6-8).

> I have an amazing supportive "team" which is my Psychiatrist and Psychologist and as I have said, I have wasted my time with so many Psychologists BUT I have eventually found a Psychologist who I can be totally open and honest with so it's wonderful to be able to confide in a person and know that what the two of you speak about, remains between the two of you (Harris, *Provision*, p. 44, l. 23-27).

Lucy Edwards valued a treatment process that was focused on personal growth:

> I decided to go in treatment for three months. I went to South Africa. Treatment there was the most precious gift I could give myself; it became a very beautiful personal journey (Edwards, *Provision*, p. 51, l. 36-38).

Later in her description of treatment, Lucy described the importance of a sense of connectedness in her psychotherapy:

> For the first time in my life [while in treatment] it was about *me*. I really re-connected again with *myself*. I learned to feel and recognize my feelings and needs again and to embrace them. For the first time in my life I even felt compassion for myself. I got insight about the eating disorder, about addictions, my past, my habits, patterns, beliefs, (in)abilities, triggers... (Edwards, *Provision*, pp. 51-52, l. 39-2).

Inpatient treatment (described in 5.5.3.4) and the current subtheme, explored the difficulties that participants had previously experienced in re-feeding programmes and their preference for therapeutic environments that were empathetic and nurturing.

Consistent with literature discussed in 5.5.3.4, treatment that focused on refeeding seemed to be described as having limited success, while alternative treatments that prioritised strong therapeutic bonds showed promise (Offord et al., 2006; Westwood & Kendal, 2012; Zugai et al., 2013). Ross and Green (2011), exploring the experiences of two individuals with severe AN, concluded that the individuals highlighted the importance of strong relationships with psychotherapists in their treatment and recovery.

5.7.3.2 Empowered self

Writing their stories and having strong therapeutic bonds seemed to encourage feelings of empowerment in participants. By addressing her AN, Alison Clark seemed to feel inspired and better prepared to let her AN go:

> I'm willing to give the world another go now. You have served your purpose. Your time is up. If I give the world a go and in ten or twenty years time it's not worth it anymore, I can go back to you. But I'm sure as hell going to give the world another shot. It's time to be healthy. (Clark, *Provision*, p. 20-21, l. 29-3).

Lucy Edwards and Alison Schaefer described their nurturing treatment as encouraging them to conceptualise of a life without AN:

> In treatment I learned that I could change my life with ED and live a healthier and more balanced life. I learned to see that I'm worth it *too* to have a happy life,

take time for *myself* and take more care of *myself*; to listen to *my* feelings and needs *too* (Edwards, *Provision*, p. 52, l. 7-9).

It [treatment] was an incredible experience, which helped me understand and tackle my Anorexia quite differently. Towards the end of my treatment my parents joined me, one at a time, for some very powerful conjoined sessions, which have had a lasting positive effect on my relationship with both of them (Schaefer, *Provision*, pp. 61-62, l. 41-2).

Treatment processes that were nurturing and empathic seemed to empower participants to consider alternative realties that did not prioritise AN. Offord et al. (2006) reported that authoritarian approaches to treatment of AN seemed ineffective because this treatment style caused patients to experience a sense of loss of control. Similarly, Kaap-Deeder et al. (2014) in a study on 84 AN female inpatients, found that health care workers and parents fostering autonomy-support to the AN individual was correlated with improved BMIs and greater motivation to recover.

In summary, therapies and family contexts that were nurturing and encouraged the autonomy and personal development of AN individuals may have a moderating affect on AN.

5.7.3.3 Recovery voice and alternative story

Participants described the development of a recovery voice. This voice seemed to express an increasingly autonomous agentic self which became increasingly aware of alternatives to a life that had AN as its centre:

It was good to feel safe. I was on the program, and developing my recovery voice (Clark, *Provision*, p. 18, l. 11-12).

Excerpts from Alison Clark, Lucy Edwards and Emily Hughes below, illustrate greater understanding, strength and hope regarding their AN. All of which contribute to the development of an alternative story and recovery voice:

It was good to write my story – to look at where my ED has come from – and where it has lead me. I would like to do another life story not mentioning my ED, to remember there has been a lot of good in my life too, its not all

ED/addictive behaviours, but obviously these had to be focused upon for this exercise. I don't want my life to be shaped by my ED! (Clark, Transcript 2, p. 3).

But I am determined not to fall back into my addiction again. I want to live that healthy and balanced life. And to stay that honest person I became in treatment [...] I also learned to see (especially after coming home) that I need time to continue that road of recovery (Edwards, *Provision*, p. 52, l. 11-15).

I want to be able to help other people recover by using the methods which saved my life and freed me. I learned to alter my environment to create the mood I'd prefer to have. The colors, sounds, textures, and smells I surround myself with have given me a window to sanity. Anorexia will always be a part of me. There are no "shoulda," "coulda," "wouldas," for me. I learned that I cannot deny my crazy. By contrast I must embrace it. To embrace my crazy means that I must respect my own boundaries. I do not concern myself with what could've been, because what I was has made me what I am today. "To thine own self be true" (Hughes, *Provision*, p. 85, l. 28-34).

White and Epston (1990), Epston (2000) and Shapiro and Ross (2002) argued that developing a recovery voice involved patients reframing their AN and creating an alternative story to contrast their dominant story. Their alternative story posed the potential for alternative outcomes and a healthier existence, not controlled or dominated by AN.

The theme therapeutic bonds: Safe spaces set the scene for resistance is summarised in Figure 5.10:
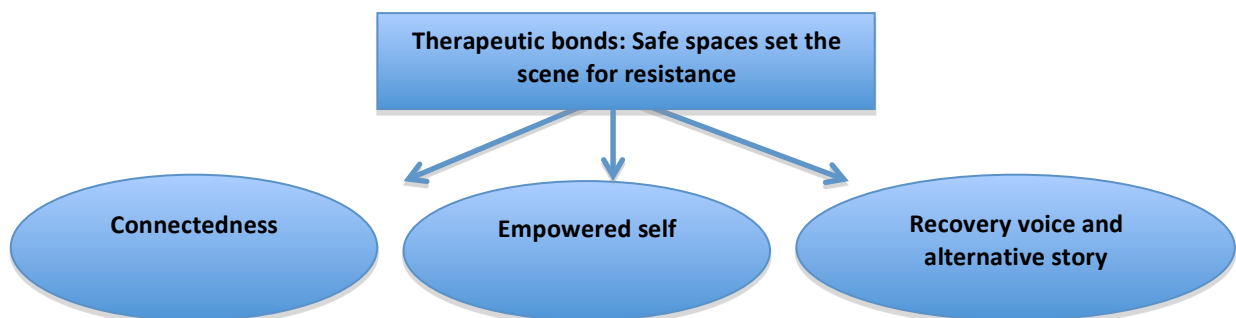
Figure 5.10. Therapeutic bonds: Safe spaces set the scene for resistance.

Therapeutic bonds: Safe spaces setting the scene for resistance was divided into three subthemes:

- Connectedness
  - o Participants thrived in therapeutic environments that prioritised empathy and nurturance from the psychologist
- Empowered self
  - o Psychotherapy processes that encouraged connectedness gave the participants the opportunity to feel empowered and encouraged
- Recovery voice and alternative story
  - o The nurturing and empathy provided by their psychotherapeutic processes allowed participants to consider alternative life stories in which AN did not feature.

5.7.4 Reading stories: Shared struggle

For this section, references to literature will be provided at the end of section 5.7.4 rather than after each subtheme because all the subthemes draw on similar literature and because there was relatively little literature on these ideas relating to AN.

A final moderating factor that emerged from participants' responses related to their experience of reading *Provision*. This included engaging in their and other participants' stories and in so doing sharing their AN struggle.

5.7.4.1 Normalised

Reading stories from other individuals who had endured a similar struggle, appeared to be normalising [7] for most participants and fortified a sense of camaraderie:

> I felt relief that I'm not the only one who suffers from Anorexia and that there are other people that also suffer in silence around the world. I also found that I'm not the only one with a perfectionism personality and a people pleasing person and also have OCD. I also felt that we all had our own version of how we viewed our lives and how different our lives are and the different family dynamics. I can identify with some of the stories but others I feel has more to do with relationship breakups of loved ones in which I have never experienced. However I also learnt that all of us have a different trigger for the disease and our misperception of what we feel of what other people tell us. We rely on other

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[7] Normalising can be defined as giving a person a sense of not being alone in their experience as well as giving them a sense of predictability and hope (Rini et al., 2006)

people's comments to base a reason for our living, that's my view (Adam, Transcript 11, p. 16).

I think it would be helpful as it will help family and people that don't understand the disorder understand what we experienced and that not all families are perfect and that anorexia does not just come from wealthy people, it can happen to anybody (Adam, Transcript 11, p. 17).

Similarly, Jane Harris identified a shared AN struggle and common participant personality traits:

I definitely think it will because I feel that it's helped me now. I actually wish that I could have read stories like these when I had started to fall prey to Anorexia Nervosa because I then could have spotted the warning signs, seeing everyone's very similar in character i.e. perfectionists (Harris, Transcript 12, p. 19).

Jane's excerpt above also makes use of passive language, 'fall prey to', possibly suggesting a perception that she developed AN out of a weakness.

Tessa Schaefer, Kate Barlow and Jane Harris described experiencing a sense of normalisation from reading *Provision*:

I felt extremely privileged to be able to read others' Life Stories like that. I have heard many fellow sufferers, some of whom have become friends, share their experiences over the years. However, I was still rather astounded by the similarities in the stories and how much I could relate to some of the others, in terms of experiences and feelings (Schaefer, Transcript 14, p. 23).

It was interesting hearing such different backgrounds and triggers for people – all very different – but one thing in common – an eating disorder (Barlow, Transcript 15, p. 27).

It was actually very interesting and it also made me feel better as I could relate to each story although they were all different but there were parts of all the stories that I could see myself in (Harris, Transcript 12, p. 18).

Jane also described the emotion of guilt as being normalised:

Yeah…so it made me realize that I am not the only one with this problem and I am not the only one feeling guilty about what I have put my loved ones through.

It gave me the time to self reflect and think about what this awful disease does and because I am in a very vulnerable stage and spiralling out of control with food, it gave me a wake up call because I know that if I don't pull myself together then I have had it and it probably will be the end of my life so it was a HUGE wake up call for me (Harris, Transcript 12, p. 18).

Jane described *Provision* as being potentially helpful to individuals with AN:

I would just like to say that it was great reading your book and I think that can be very beneficial for people who are starting to signs of the disease because it's a wake up call - I wish I had that when I started getting into the rut (Harris, Transcript 12, p. 20).

Kate described mixed emotions:

I felt privileged to have insight into others' personal lives and their battle with the disease, it made me have compassion and at times saddening to hear their stories but also reminded me of the reality of how destructive this illness is and the seriousness of anyone's situation who's suffering with it (Barlow, Transcript 15, p. 27).

Kate's excerpt may also indicate that, after being involved in the study, she saw her AN as a 'disease' and 'illness'. Arguably, this may highlight her distancing herself from her AN.

In summary, reading each other's stories appeared to have had a normalising effect on the participants; they felt less alone in their AN experience because they could see other women had had similar experiences. They seemed to experience a sense of camaraderie and compassion and appreciated their shared personality traits.

5.7.4.2 Intensified realisation

As highlighted in section 5.7.1, participants seemed to experience a need to confront difficult realisations. Difficult realisations refer to losses and pain secondary to their AN. This process appears to have intensified as a result of reading *Provision*:

It felt very emotional reading the book of stories. It made me realise more fully the damaging effect of anorexia on individuals and the courage people show in moving forward with their lives (Clark, Transcript 10, p. 15).

I'm angry at anorexia. It's an awful illness (Clark, Transcript 10, p. 15).

I will admit that, I did feel sad because I know that each and every one of those girls/women have potential, talents etc. but yet food has/is destroyed their lives – Anorexia Nervosa is truly an evil disease that no one asks for or sets out to have but if you have the predisposition for it then you are pretty much screwed if something in your life triggers it off (Harris, Transcript 12, p. 18).

As in 5.7.1, the responses to reading stories appeared to generate varied emotions and highlighted losses encountered because of AN:

Reading my story was totally different to writing my story because while I was reading it and because it was in a book, in a way, I felt like I was reading someone else's story that was exactly like mine. It brought up a lot of anger, hurt, pain etc. because I started to think about the way I had hurt so many people and because of me getting Anorexia Nervosa, I am now not in a place that I foresaw myself in i.e. I thought that I would be far better off now because I wouldn't have ended up in hospitals etc. and therefore I could have my degree, working in a position that pays me far better than I am currently being paid (I would have gone into medicine and not business which I don't enjoy) and I would either be in a very stable relationship or married with children that my mom could be proud of (Harris, Transcript 12, pp. 18-19).

Jane also realised that her AN could be viewed as an addiction and as a false sense of gaining control:

Yes, they most definitely have – I was always under the impression that I had gotten over my Anorexia Nervosa and I never saw it as an addiction as everyone proclaimed it to be, because people used to say that I will have it forever, just like an alcoholic i.e. "Once an Alcoholic then always an Alcoholic". Well, I guess that I was proven wrong because I have realized now that it's a fact of the matter – it is an addiction and I will have it for the rest of my life. I also realized that I use Anorexia Nervosa when I feel out of control, it is the only thing that does give me any form or sense of control and therefore when things in my life are going wrong then I turn to starving myself as a coping mechanism which is strange, scary but unfortunately true (Harris, Transcript 12, p. 19).

Despite having a normalising effect (section 55.7.4.1.), several participants described reading *Provision* as engendering a fear of relapse:

It is so mixed up! In one way I feel as if I have to beat that disease even more than before. Feeling more strong and determined to recover from it too. But

strange as it is, at the same time I feel discouraged too, as if it is impossible to beat ED and live my life free from it (Edwards, Transcript 13, p. 21).

Lucy suggested that how *Provision* was received seemed was dependent on the reader's mood:

> I really don't know. I think it depends on what mood one is in while reading it. Or it is food for your recovery-voice, or it is food for your ED!?!? I just honestly can't tell (Edwards, Transcript 13, p. 22).

The above excerpt may suggest ambivalence about the reading experience. The excerpt further suggests that if the reader was experiencing a strong recovery voice, *Provision* would have been received positively. However, *Provision* may have been demotivating if the reader was experiencing a weak recovery voice:

> I think it highlights the reality of living with anorexia. The only thing that might not be so helpful is that the people who wrote the stories are still ill and not yet recovered which doesn't give much hope by reading it to get over the illness (Barlow, Transcript 15, p. 27).

Kate described having realised the impact of AN on her life after reading *Provision*:

> I think it has definitely made me acknowledge how my life has changed from when it first took over and how much domination it has had on my life ever since. I sometimes imagine how different my life might have been without anorexia. It has had a big impact on me as well as those around me. I think I am aware of this now (Barlow, Transcript 15, p. 27).

In summary, reading *Provision* seemed to have intensified participants' insights into AN. These realisations were experienced positively in some instances (as having a normalising effect) and negatively in other instances (where participants feared relapse). Participants' insights seemed dependent on their emotional state at the time of reading *Provision*.

5.7.4.3 Critical comparison

Section 5.7.1.1.3 explored the experiences of comparison and competition felt by participants after writing their stories. The act of comparing themselves to other participants re-emerged after reading *Provision*.

Jane Harris described feeling embarrassed:

> I must be honest and say that I felt very embarrassed about the story that I had
> written because I know that I could have given a lot more information which
> probably could help someone because I wasn't specific and I never actually told
> my full story compared to the other girls (Harris, Transcript 12, p. 18).

This excerpt also suggests Jane's internalised striving for perfection (described in 5.5.1).

Lucy Edwards described a sense of hopelessness about maintaining her recently recovered state:

> Reading the stories made me feel more insecure about my own recovery. Made
> me have thoughts like: *Will I be strong enough to hold on to what I have to do to
> stay in recovery and not fall back in my ED?* To keep working at my recovery is a
> hard and difficult road, and some stories made me feel a bit hopeless about that
> (Edwards, Transcript 13, p. 21).

Lucy, having the largest and healthiest BMI (BMI of 18.31) of the participants, felt singled out:

> At first I was just thinking I didn't have such a difficult life than others! And
> because of that I think it has to be so much easier for me to cope and deal with
> this disease. But it isn't, I found it very hard ......so I feel quite confused now and
> a bit afraid and concerned. Will I ever feel (more) free from ED? (Edwards,
> Transcript 13, p. 21).

Tessa Schaefer had concerns regarding the misuse of a book such as *Provision*:

> Perhaps I would still worry that anorexics who are deeply in the grips of their
> illness could use such a book to drive themselves further into their illness and
> punish themselves for not being as "successful" (i.e. as ill!)? The difficulty is that,
> though there are many similarities between individuals with anorexia nervosa,
> we are all quite different in many respects, so can respond very differently to
> the same stimuli (Schaefer, Transcript 14, p. 25).

She does however qualify that, for her, the experience of reading *Provision* was positive:

I also found this process helped me try to reduce some of the guilt I feel for not being "better" yet. I feel I "should" be well after so many admissions, and having received so much treatment and incredible support over the years. This guilt only strengthens my anorexia nervosa, so remembering that I am not a bad person but someone with an illness, helps me continue working hard on my Recovery rather than punishing myself further. I do not judge others as I read their stories, so why am I so quick to judge and criticize myself? (Schaefer, Transcript 14, p. 25).

In summary, one of the potential dangers of reading *Provision* was the propensity of participants to critically compare themselves to each other. Another possible negative impact from reading *Provision* was that several participants felt unjustified in their struggle because of comparisons they made between themselves and other participants who seemed healthier. Several participants mentioned their weight and BMIs in their stories, allowing other participants to draw comparisons.

5.7.4.4 Encouraged acceptance and recovery

Reading *Provision* seemed to encourage a sense of acceptance and increased dedication to recovery.

Alison Clark and Sarah Adam described reading their own stories and feeling compassion rather than being self-critical as they expected to be:

> It felt emotional reading my story. My inner critic didn't want to read it for fear of seeing mistakes, or poorly constructed sentences. But I didn't see that. I just saw sadness, and a determination for wellness that was strong (Clark, Transcript 10, p. 15).

> I found it difficult at first but got the courage to read over it, I also found that I skipped some sentences and did not carry over what I meant at the end. I felt very guilty for what I wrote but at that time it was how I felt but I did not mean it in a bad way but it sounded like it. I also felt uncomfortable because I could not believe that I was the same person that wrote that story and how much I poured my heart out. But somehow I feel at peace as I have never addressed it to nobody. My psychologist never knew until I had given him the story I wrote (Adam, Transcript 11, p. 16).

Tessa Schaefer described feeling encouraged after seeing her story in print:

Reading my whole story, to my surprise, helped me to see past my anorexia. For so long, everything I have done in my life has been clouded by my anorexia nervosa, so it was moving to see beyond that for a change. I could recognise the positive things I have done in my life and it enabled me to feel slightly more proud, rather than shy or even guilty, of previous achievements. Seeing my story on paper helped me put enough distance from myself, to enable me to see my journey more objectively; essentially freeing me from some of the guilt that often overwhelms me (Schaefer, Transcript 14, p. 23).

Similar themes emerged as a response to both writing (as explored in 5.7.1) and reading stories (current theme). This may suggest that reading their stories intensified participants' feelings and experiences that emerged as a result of writing their stories. For example, when writing their stories, participants described the sense of catharsis (section 5.7.1.1.1) they experienced in being able to describe their AN. This catharsis seemed to be furthered by reading *Provision* and having their experiences normalised (section 5.7.4.1) and validated by reading that other participants had had similar experiences.

Similarly, confronting difficult realisations (section 5.7.1.1.2) dealt with participants' articulating some of their losses while writing their stories. This process seemed to continue when they read *Provision* as explored in Intensified realisation (section 5.7.4.2), when they were able to identify the losses that other participants experienced because of AN.

It is possible that the process that was begun in writing the stories was somehow completed in reading the stories.

Rini et al. (2006) argued that reading stories of others' experiences of illness could have the positive effect of normalising and preparing readers for future experiences. However, reading illness stories could have a negative effect if stories describe unsuccessful treatment. This was consistent with the current study in which participants had both positive and negative experiences after reading *Provision*. Figure 5.11 summarises the theme of Reading stories: Shared struggle:
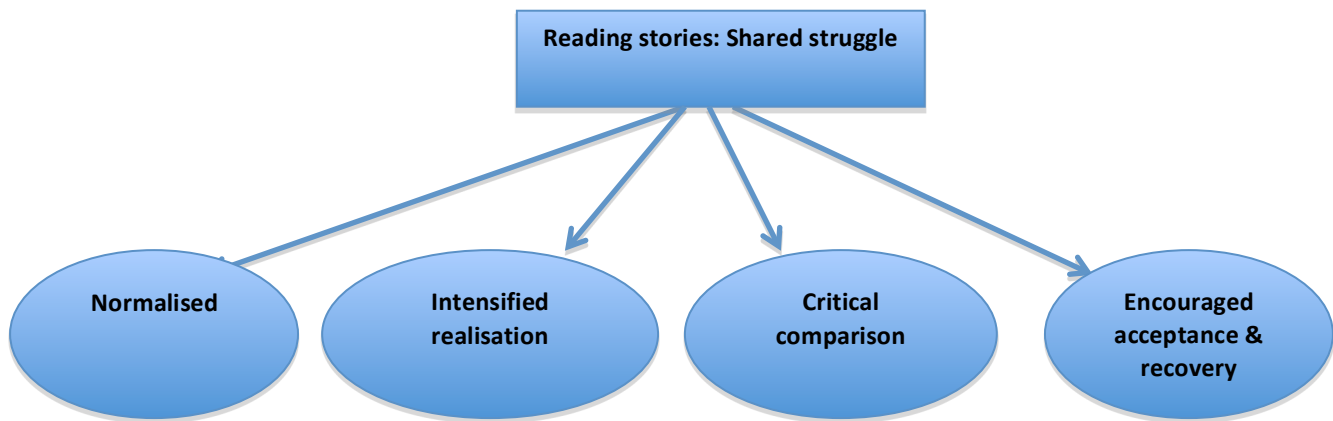
Figure 5.11. Reading stories: Shared struggle.

The theme reading stories: shared struggle comprised four themes:

- Normalised
    - Participants described reading *Provision* as a normalising experience
- Intensified realisation
    - Realisations that participants discovered in writing their stories were intensified in reading them
- Critical comparison
    - A negative effect of reading *Provision* was participants' tendency to be critical of themselves when comparing their story to that of others
- Encouraged acceptance and recover
    - Reading *Provision* encouraged participants to be more accepting of themselves and to focus more positively on their recovery.

5.7.5 Summary of moderating factors

This section aims to present a summary of the perceived moderating factors described by participants in section 5.7 (subsections 5.71-5.7.4), and how they are connected.

Figure 5.12 provides a diagrammatic summary of the perceived moderating factors described in 5.7:

Writing stories: Writing the struggle	Therapeutic bonds: Safe spaces set the scene for resistance
'Pros' and cons: Positives and pitfalls in writing stories Catharsis Confronting difficult realisations Comparison and competition Emotional overload Go figure: Figures of speech in writing stories Enmeshed AN self Schism in AN self	Connectedness Empowered self Recovery voice & alternative story

Perceived moderating factors

Encouraged resistance: Talking to Anna	Reading stories: Shared struggle
No, Anna: Attacking AN Oh, Anna: Losses associated with AN Go, Anna: Accepting AN	Normalised Intensified realisation Critical comparison Encouraged acceptance and recovery

Figure 5.12. Perceived moderating factors.

Perceived moderating factors consisted of four subthemes:

- Writing stories: Writing the struggle
    - o 'Pros' and cons: Positives and pitfalls in writing stories
        - ▪ Participants described feeling a sense of catharsis
        - ▪ The writing process appeared to result in them confronting difficult realisations
        - ▪ They also seemed inclined to compare themselves negatively to other participants
        - ▪ Participants had the propensity to become emotionally overloaded as a result of the reflective process that writing encouraged

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- Go figure: Figures of speech in writing stories
  - Participants described their identity as enmeshed with AN which caused resistance to treatment
  - Participants described a schism between their identity and AN This separating of the person from the problem indicated a positive shift toward distancing from AN.

- Encouraged resistance: Talking to Anna
  - No, Anna: Attacking AN
    - Participants expressed anger and resentment toward their AN.
  - Oh, Anna: Losses associated with AN
    - Participants focused on their AN-associated losses which fashioned further resistance of AN
  - Go, Anna: Accepting AN
    - Participants accepted and developed an understanding of their AN and its role as a coping mechanism.

- Therapeutic bonds: Safe spaces set the scene for resistance
  - Connectedness
    - Participants described benefiting from psychotherapeutic processes that valued connectedness
  - Empowered self
    - Feeling connected encouraged an empowered sense of self
  - Recovery voice
    - Developing a recovery voice allowed participants to consider the prospect of a life without AN.

- Reading stories: Shared struggle
  - Normalised
    - The process of reading *Provision* gave participants a sense of having a shared struggle

- o Intensified realisation
    - ▪ After confronting realisations post writing stories, participants intensified these realisations because of reading *Provision* and seeing the losses that other participants had endured and realising how much more they could still lose because of AN
- o Critical comparison
    - ▪ After comparing themselves post writing stories, participants became more critical in comparing their story to that of others
- o Encouraged acceptance and recovery
    - ▪ Reading *Provision* inspired participants and helped them focus on recovery.

Notably, theme 5.7 was narrative in nature as a result of the researcher encouraging participants to directly address their AN. The subthemes that emerged tended to have more descriptive and narrative-like titles. This appeared to occur subliminally and was only discerned by the researcher after completing the analysis. Narrative framing occurred implicitly; the research found herself applying narrative devices such as alliteration and personification used in theme and subtheme headings.

5.8   SUMMARY

The qualitative analysis generated many themes, subthemes and codes. Each theme was closely explored, substantiated by extracts from the data and discussed with literature. Chapter 6 describes the findings of the minor quantitative component of the study, and how these link to the qualitative analysis. Thereafter, in chapter 6 the analyses are summarised into a final discussion that is more compressed and succinctly describes central findings.

CHAPTER 6

CONCLUDING DISCUSSION OF RESULTS AND INTERPRETATIONS

6.1   INTRODUCTION

Because of the extensive nature of the results and interpretations presented in Chapter 5, this chapter will attempt to outline the key findings of the study.

The current study has drawn on nine sets of data for phase A and seven sets of data for phase B (see Figure 4.1). The nine sets of data for phase A included participants' stories and self-reflexive questionnaires exploring the writing of those stories and EDI scores. The seven sets of data for phase B comprised self-reflexive questionnaires exploring the reading of *Provision*. Emails, feedback from their treatment centres and biographical information for all participants added to the dataset. Collating the data and preparing it for analysis involved an intensive process in which the researcher tried to remain neutral, impose the least possible influence and ensure minimal respondent bias.

The data analysis process, because of the diverse sets of data, required a specific analytic method:

- A specific narrative analysis method was formulated from extant approaches to interrogate the particular type of data collected. The researcher drew on three predominant analytical models namely: McLeod (2000), Riessman (2002) and Braun and Clarke (2006):
    - o McLeod (2000) and Riessman's (2002) models are both narrative approaches and outline careful analysis of specific narrative components in the writing (including exploration of media influences and writing styles)
    - o Braun and Clarke's (2006) model is a general thematic analysis model that allowed for a careful process of drawing out themes, subthemes and codes

o   Drawing from these three models, the current study elicited multi-faceted themes and sub-themes.

Literature was consulted only after a preliminary analysis of the transcripts to avoid contaminating the process of deriving themes (Polit & Hungler, 2007). The researcher attempted to suspend all preconceived notions and understandings to allow for a data-driven analysis. Only after themes were derived, did the researcher seek and cross-examine literature for each section. This task was not as data-driven as the researcher had hoped, and preconceived categories, derived from Zubin and Steinhauer's (1981) vulnerability model, inadvertently filtered into the analysis. This can be seen in the similarity between the literature review and qualitative analysis chapters. Collapsing the analysis and the reporting of literature meant that the researcher could avoid repetition of themes, subthemes and codes in the discussion.

In this chapter, analysis has been compressed into the most central factors and aspects that emerged. These are summarised in Figure 6.1:
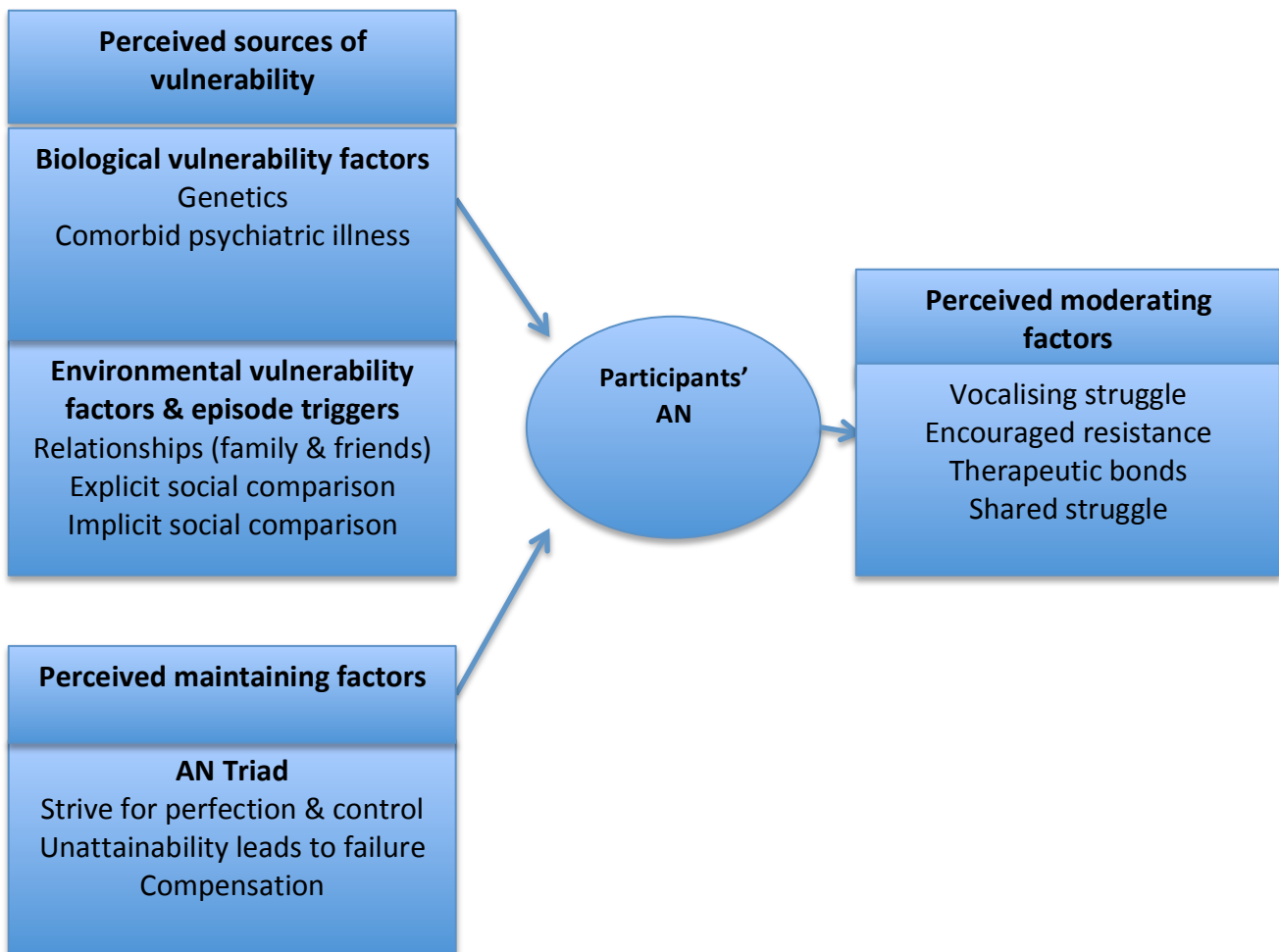
Figure 6.1. Perceived vulnerability, maintaining and moderating factors for participants'
AN.

- Participants understood their vulnerability to AN as arising from several
biological and environmental factors. Within the environmental
vulnerability factors, time-specific acute episode triggers were described as
activating AN onset. The idea of episode triggers as activating latent
potential or vulnerability to phenotypic disorder comes from Zubin and
Steinhauer's (1981) model, much of which seemed well aligned with the
findings and interpretations of the current study. However, in Zubin and
Steinhauer's (1981) model, applied to other psychopathology
(schizophrenia), the identification of an episode trigger was clear and
distinct. Based on the participants' descriptions in this study, their AN did
not seem as clearly and distinctly triggered by a specific event. Rather,
several environmental factors and events that participants discussed

seemed unclearly to constitute either or both a vulnerability factor or/and an episode trigger.

- Participants described their AN as being maintained through a process of striving for perfection and control. This seemed to lead to inevitable failure and a desire to compensate for it. The researcher termed this process the AN triad. Again, in this theme, the participants' descriptions deviated from (or could be seen as elaborating) Zubin and Steinhauer's (1981) vulnerability model, which excludes any discussion of maintenance factors which are components of the Maudsley model (Hurst et al., 2012; Treasure et al., 2009).

- Participants described factors that they perceived to have moderated their AN. These included having had an opportunity to write their struggle, encouraged resistance (through psychotherapy), forming strong therapeutic bonds and having a shared sense of struggle. Participants described some of these moderating factors as having been experienced through completing the narrative tasks in the study.

6.2   PERCEIVED SOURCES OF VULNERABILITY: WHERE DID ANNA COME FROM?

The first research question of this study (section 4.3) aimed to explore participants' understanding of factors that they believed contributed to their vulnerability to and development of AN.

Figure 6.2 (extracted from Figure 6.1) indicates perceived sources of vulnerability:
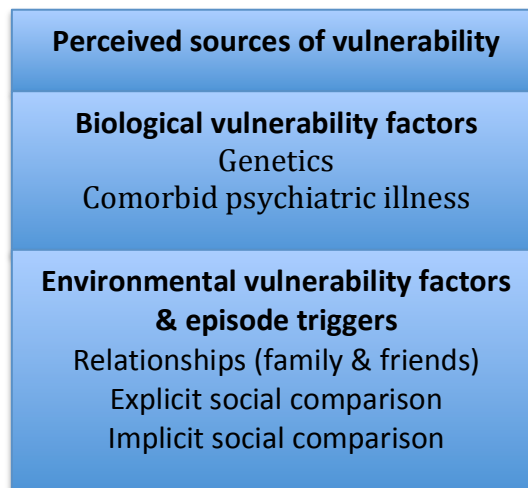
Figure 6.2. Perceived sources of vulnerability.

6.2.1   Perceived biological vulnerability factors

Participants perceived genetics and comorbid psychiatric disorders as biological vulnerability factors in the development of their AN. The impact of genetics was explored as a potential contributing factor in the vulnerability to AN development. In addition, participants or their relatives having pre-existing comorbid psychiatric symptoms and conditions were perceived as contributing to genetic vulnerability to AN. These other conditions may also have increased participants' perceived susceptibility to environmental stressors.

Contrary to literature that indicated a high prevalence of AN in first degree relatives (Bulik et al., 2010; Cloninger, 1987; Fairburn, et al., 1999; Ho & Birmingham, 2001; Isky et al., 1997; Steinhausen et al., 2015; Stice, et al., 1999; Wade et al., 2000), participants in the current study did not describe any first-degree relatives with AN. This does not necessarily mean that no participant had relatives with AN, but rather that no participant mentioned it because they may not have felt it was important in their describing their AN and its potential origins. Participants appeared to favour environmental explanations as associated with their vulnerability to AN (Dring, 2015). One participant did however make mention of a first-degree relative that appeared to have unusual attitudes toward food.

Rather than first-degree heritability of AN, participants described comorbid psychiatric disorders in first-degree relatives or in themselves. This is in keeping with Bould et al.

(2015) who identified parental anxiety, mood and personality disorders as increasing risk for EDs in offspring. In the current study, the following key psychiatric areas and disorders were identified: Substance abuse and substance dependence, mood disorders and suicide, self-injurious behaviour and anxiety disorders, and obsessive-compulsive personality disorder.

Substance abuse or *substance dependence* was described by participants as either being their own condition or that of their first-degree relatives. Substance use disorders (APA, 2013) have been linked to AN (Costin, 2007; Jordan et al., 2008), however they have generally been more frequently associated with BN (Jordan et al., 2008). Participants in the current study all had AN diagnoses and described difficulties in their next of kin with substance abuse and dependence. To explain this finding, the current study explored a central trait, namely impulsivity, which seemed to increase participants' addictive behaviour. The impulsivity personality feature has been associated with AN, BN and BED (Askenazy et al., 1998; Fichter et al., 2008; Garrido & Subirá, 2013). This poses the potential explanation that it may not have been substance abuse or dependence that was a factor in participants' AN development, but rather an underlying personality trait of impulsivity. This trait could also have been present in first-degree relatives with substance disorders, which participants described as encouraging the development of substance abuse or dependence and AN.

Mood disorders were described as existing in either the participants or their first-degree relatives. Both are relevant. Participants having a mood disorder may have contributed to their vulnerability to AN directly, while their first-degree relatives having these diagnoses may have increased participants' genetic susceptibility to AN. Symptoms (and reported diagnoses in some cases) of major depression and bipolar disorder were suggested from participants' stories. This was consistent with existing literature suggesting comorbidity between AN and major depression (Berkman et al., 2007; Bould et al., 2015; Costin, 2007; Kennedy et al., 1994; Wade et al., 2000; Watson et al., 2014). A weaker link has been suggested between AN and bipolar (I and II) with comorbidity to bipolar seeming more prevalent with BN (McElroy et al., 2005). Lunde et al. (2009) argued that while bipolar II had stronger comorbidity with BN, individuals

with AN were not excluded as many of them displayed bipolar II-like temperaments and personality features.

Several participants described suicidal ideation and suicide attempts in themselves or their first-degree relatives. A first-degree relative being suicidal or committing suicide may have contributed to participants' vulnerability to AN, either due to shared genetic factors leading to increased vulnerability to AN as an associated illness, or as an environmental stressor that exposure to suicidality might have created for participants. This is consistent with Bulik et al.'s (1999) findings, although they indicated that the suicide risk found in many individuals with AN was due to a comorbid mood disorder rather than AN. Another argument could be that because starvation has been found to increase mood difficulty (Costin, 2007), participants' mood disorder was preceded by AN. Participants having AN thus could be argued to have increased their risk for developing major depression and suicidal ideation (Watson, 2014) as secondary conditions.

Self-injurious behaviour was described in several participants' stories. This finding was consistent with existing literature that suggests a link between EDs (primarily BN and BED, but not excluding AN) and self-injurious behaviour (Thomas et al., 2002). Self-injurious behaviour in individuals with AN was argued to be associated with underlying personality features and personality disorders (in particular borderline personality disorder). Again, a particular personality type (including possible borderline traits) may have increased participants' vulnerability to developing AN and other comorbid psychiatric disorders.

Anxiety disorders and obsessive-compulsive personality disorder was referred to by several participants. Participants described anxiety associated with social interaction, academic performance and an obsessive-compulsive control over their eating and weight. The link between AN and anxiety (in particular obsessive-compulsive disorder and obsessive-compulsive personality disorder traits) is well described in related literature (Anderluh et al., 2003; Castro-Fornieles et al., 2007; Friederich & Herzog, 2011; Halmi et al., 2012; Jordan et al., 2009; Keel & Forney, 2013; Pollice et al., 1997; Treasure et al., 2015).

Kaye et al. (2009) found that in almost all ED cases (including both AN and BN), anxiety disorders (or features thereof) seemed to precede the development of the ED. Several participants in the current study described experiencing feelings of insecurity and anxiety as children, before the development and diagnosis of their AN.

In summary, participants perceived their AN as developed not directly from genetics, but rather from a specific set of personality characteristics that seemed to increase their AN vulnerability. This accords with several findings that argue that individuals with AN have a personality structure that incorporates traits of obsessiveness, impulsivity and unstable mood (Kaye et al., 2015; Keel & Forney, 2013; Silva, 2007; Vitousek & Manke, 1994). For the current study's participants, AN was perceived to originate from a complex array of biological vulnerability factors which included personality features of impulsivity, emotionality, sensitivity, anxiety and obsessionality.

6.2.2   Perceived environmental sources of vulnerability and episode triggers

Section 6.2.1 explored a summary of participants' descriptions of perceived biological sources of vulnerability. Participants also described several environmental sources of vulnerability that they seemed to associate with the development of their AN (either as general vulnerability factors, or in specific cases as episode triggers). This was the largest section of the qualitative analysis because of the multitude of environmental factors potentially associated with participants' perceived vulnerability to AN. Based on participants' stories, three dominant environmental sources of vulnerability were described: relationships (family and friends), explicit social comparison, and implicit social comparison.

Participants described *relationships* (including family relationships, relationships with mothers, friendships and romantic relationships) as strongly associated with their vulnerability to AN. Describing family relationships, participants identified family dynamics and relationships that were characterised by highly permeable or enmeshed interpersonal boundaries (Bruch, 1978). Participants saw these boundary problems in their families as contributing to their unhealthy relationship with food (Chan & Ma,

2004; Doba et al., 2014; Kog & Vandereycken, 1989; Tozzi et al., 2003; Ward et al., 2000).

Several participants described family members as being over-protective and as treating participants as fragile and illness-prone. Based on clinical experience rather than systematic study, Minuchin et al. (1975) concluded that many individuals with AN came from families characterised by somatisation instead of open problem identification and problem-solving, associated with the later development of AN. Similarly, a more recent study by Doba et al. (2013) concluded that individuals with AN tended to come from families that lacked cohesion and had a tendency to rely on others.

One participant's story included physical abuse, sexual abuse and violence. Violence, trauma, sexual and physical abuse have typically been associated more strongly, but not exclusively, with BN. Concordance between AN and abuse has also been reported (Monteleone et al., 2015; Schmidt et al., 1997; Treuer et al., 2005, Vartanian et al., 2015).

With regard to family dynamics, participants in the current study commented on complex relationships with mothers that they linked to their development of AN. Several participants described negative relationships with their mothers. The mothers were experienced as controlling and over-involved. The association between controlling mothers and the development of AN has been suggested in psychoanalytic work (Bruch, 1978). Sours (1974) described mothers of individuals with AN as emotionally dominating. Lane (2002) concluded that individuals with AN tended to have mothers who were obsessive and discouraged independence.

Several authors have argued that not all individuals with AN have controlling mothers, but rather that different potential family systems seemed evident in the development of AN (Grigg et al., 1989; Klosinski, 1988). In trying to resolve this conflict, Murphy et al. (2000) interviewed individuals with AN and their non-AN sisters. They concluded that the AN individuals *perceived* greater maternal control than did their non-AN sibling. This could suggest that it is not necessarily controlling mothers, but rather the

individuals' perception of their mothers as being controlling, that contributes to AN vulnerability. In addition, mothers may become controlling out of concern for their critically ill child, or to compensate for a detached father (Minuchin et al., 1975).

Participants described some friendships as contributing to the development of their AN. These friendships caused feelings of rejection and worthlessness that had a negative impact on self-esteem. Low self-esteem and being overly self-critical has been associated with the later development of AN (Button et al., 1996; Fennig et al., 2008; Goss & Allan, 2014; Oldershaw et al., 2015; Sassaroli & Ruggiero, 2005).

Participants in the current study were concerned about fitting into friendship cliques, some of which encouraged negative attitudes toward food. This is consistent with findings by Paxton et al. (1999) who found that being in a friendship group that encouraged dieting and unhealthy body image could increase vulnerability to developing AN.

Romantic relationships were experienced by participants as contributing to their development of AN. More specifically the experience of rejection, through relationships ending, was especially detrimental to participants. Individuals with AN face difficulties with social interaction (Nilsson et al., 1999; Zucker et al., 2007). Possibly, individuals with AN are more sensitive as teenagers and tend to over-react to situations in which they experience rejection or perceived rejection. As a result, their negative emotions are compounded which may contribute to vulnerability to AN. Individuals with increased vulnerability to AN experience oversensitivity to negative social interactions or social slights (Nilsson et al., 1999; Pooni et al., 2012; Winecoff et al., 2015; Zucker et al., 2007). While elements such as rejection in social interaction were described as general sources of vulnerability, specific acute instances of rejection may also have constituted an AN episode trigger. For example, an especially bad instance of social rejection such as a traumatic breakup may have been the necessary trigger to onset AN. As mentioned above, the distinction between sources of vulnerability and specific episode triggers was not always clear in the participants' descriptions of their experiences. This may suggest that this component of the Zubin and Steinhauer (1981) model does not fit these narratives well.

Other than the relationship triggers discussed above, another environmental source of vulnerability that emerged from participants' stories was *explicit social comparisons:* Participants appeared to have a tendency to compare themselves to their siblings and their peers. Name-calling was apparent from their stories in the form of names as terms of endearment, or negative name-calling referring to shape and weight. Consistent with existing literature (Kostanski & Gullone, 2007; Lunner et al., 2000), individuals with AN tended to show higher reported incidents of name-calling and teasing in childhood related to their weight than healthy controls. This was associated with a negative body image and lower body mass index in the teased individual. Again, name-calling may have contributed to overall vulnerability to AN when chronic or long term. However, a specific acute instance of name-calling may also constitute an episode trigger if AN proximally preceded the event.

Furthermore, participants seemed to be preoccupied with comparing themselves to their peers. These comparisons tended to be negative and suggested low self-esteem. This was consistent with existing literature indicating that individuals with AN tend to make unfavourable social comparisons and automatically rank themselves negatively when comparing themselves to their peers (Cardi et al., 2014; Connan et al., 2007; Kostanski & Gullone, 2007; Treasure et al., 2015; Troop et al., 2003).

The membership of specific reference groups, especially linked to sport and modelling, heightened further social comparison and presented opportunities for participants to push themselves harder and rank themselves negatively. Studies have confirmed that certain groups that require and encourage slim figures, had a higher reported incidence of AN (Druss & Silverman, 1979; Lukacs-Marton et al., 2008; Silverman, 1979; Sundgot-Borgen, 1993; Thiemann et al., 2015).

The final environmental source of vulnerability that emerged from the stories was *implicit social comparison.* This vulnerability factor focused on participants' sensitivity to internalising negative messages regarding weight and eating from family, peers, media and religion. Several participants described feeling that their family and peers expected them to be slim. This feeling appeared to intensify their drive to restrict calorie intake and to exercise excessively. This seemed to be reinforced by media

messages interpreted as encouraging slimness. The 'thin ideal' has been argued to characterise depictions of women in contemporary media, especially to young girls who are susceptible to such influence (Austin & Smith, 2008; Carey et al., 2011; Chan & Ma, 2004; Park, 2005; Rohde et al., 2014).

Several participants mentioned being inspired to continue striving for the 'thin ideal' through thinspiration and pro-ana websites. Norris et al. (2006) and Bardone-Cone and Cass (2007) found that the viewing of such sites had a negative impact on self-image and eating attitudes because of the promoting of messages of thinness, control and perfection.

The final area in which one participant in the current study seemed to internalise thinness ideals was religion. She focused on self-starvation as a quest to finding a God-like perfection. This participant's experience and belief is consistent with existing literature which draws an association between the ascetic ideals of self-sacrifice, denial, self-punishment and the abstention of indulgence. This could contribute to the later development of AN (Abraham & Birmingham, 2008; Bennett et al., 2004; Doumit et al., 2015; Huline-Dickens, 2000).

In summary, participants experienced and described several environmental factors that appeared to support the development of AN, many of which have also been described in the literature. A particular environment, characterised by family dynamics that were enmeshed and discouraged independence appeared to increase vulnerability to AN. AN seemed to thrive in an environment where participants experienced their mother as dominant, obsessive, overinvolved, and whose intentions seemed to undermine participants' independence. Notably, mothers may not have been dominant but rather, their AN-prone daughters may have had a heightened perception of, or sensitivity to, their mother's dominance. Another factor that was perceived to be associated with vulnerability to AN was heightened sensitivity to difficult experiences with friends and romantic partners. This could be characterised by participants' marked sensitivity to name-calling, feelings of rejection, and a tendency to make unfavourable social comparisons. Finally, participants' tendency to internalise implicit messages seemed to increase their vulnerability to AN. These messages from family,

peers, media and religion were internalised (not necessarily accurately) as encouraging thinness ideals.

While all the above environmental factors were experienced as sources of vulnerability to AN, specific and acute instances in some cases (for example name-calling and rejection) may have constituted episode triggers responsible for the onset of AN. However, as mentioned, participants' descriptions did not always elicit a clear distinction between vulnerability factors and episode triggers, possibly suggesting that in the case of AN in these participants, this distinction may not be as marked, possibly because 'triggers' were not acute but rather chronic and ongoing – i.e., vulnerability factors.

6.3   PERCEIVED MAINTAINING FACTORS: WHY DOES ANNA STAY?
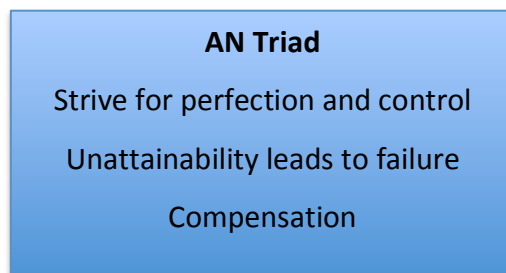
Figure 6.3. Perceived maintaining factors.

The second research question (section 4.3) enquired about participants' understanding and experience of maintaining factors in their AN. Having summarised factors perceived as contributing to participants' vulnerability to AN in section 6.2, this section focuses on factors that participants seemed to associate with the maintenance of their AN (Figure 6.3). The AN triad was drawn from participants' stories as their understanding of what maintained their AN. The triad consists of three interlinked factors: striving for perfection and control, unattainability resulting in inevitable failure, and compensation.

The pinnacle of the AN triad suggests that participants seemed to have a marked *striving for perfection*. This may have derived from the perceived sources of vulnerability (section 6.2) that described participants' proneness to unfavourable

social comparisons and feeling the need to perform better. Due to participants'
perceived obsessive-compulsive personality features (Holliday et al., 2005; Lang et al.,
2014, 2015, Steinglass et al., 2006; Treasure & Schmidt, 2013; Treasure et al., 2015)
and impulsive personality features (Askenazy et al., 1998; Fichter et al., 2008; Garrido
& Subirá , 2013), their sense of pressure to perform may have been magnified. At its
extreme, this pressure was expressed as striving for perfection (Bastiani et al., 1995;
Bizeul et al., 2001; Castro-Fornieles et al., 2007; Davis et al., 1998; Friederich & Herzog,
2011; Halmi et al., 2000, 2012; Pinnock et al., 2003; Wonderlich et al., 2005). Included
in participants' striving for perfection was a desire to be the centre of attention. Any
threats to being the centre of attention that participants experienced were resisted. .

Another element of the theme of striving for perfection was the desire of participants
to be socially admired. Participants appeared to set especially high performance goals
and responded negatively when failing to achieve them. Elevated drive for
achievement and associated perfectionism have been explored in literature on AN
(Goss & Allan, 2009; Lethbridge, 2011; Shafran et al., 2002; Sohlberg & Strober, 1994;
Watson et al., 2010; Watson et al., 2011; Weeda-Mannak & Drop, 1985). Consistent
with this, participants in the current study described a powerful desire to achieve and
to be socially admired and highly ranked (Cardi et al., 2014; Connan et al., 2007;
Kostanski & Gullone, 2007; Troop et al., 2003).

Conversely, Harrison et al. (2010) and Lavender et al. (2015) suggested that
individuals with AN were not preoccupied with achievement and rewards, but rather
that their preoccupation was with that of avoiding punishment and/or failure. This
seems to be consistent with data from the current study in which participants, while
wanting to achieve and to be socially admired, seemed more focused on not failing than
on attaining success (Treasure et al., 2015).

The central feature of achieving perfection seemed to be associated with attaining
control. Participants appeared to believe that they could achieve ultimate control and
perfection through dietary restriction and described being mesmerised by their weight
loss. Intensified control over their eating seemed to be correspond with feeling a loss of
control in other areas of their lives. When they felt unable to control something in their

lives (e.g., family circumstances, social and romantic relationships, and academic performance), participants seemed to displace their control onto their eating. Displaced control gained through intensified food restriction has been found to paradoxically leave individuals with AN feeling out of control (Fairburn et al., 1999; Granek, 2007; Pollert et al., 2013; Rezek & Leary, 1991; Westwood & Kendall, 2012).

This was confirmed in the current study where participants described paradoxical feelings toward their restriction; on the one hand they felt a sense of achievement, while on the other hand they felt they were unable to stop it (and thus felt out of control). An alternative explanation may be that participants were not preoccupied with attaining control, but, rather, were preoccupied with not losing control (Triggermann & Raven; 1998). This seems to be an important distinction in the understanding of AN. For the person with AN, their life focus does not seem to be one of gaining control but rather one of not losing control. Similarly, individuals with AN's life focus does not seem to be achievement-orientated, but rather one of failure-avoidance. They seem driven to avoid a negative outcome rather than being driven to achieve a positive outcome.

In their pursuit of control and perfection, participants showed perseverance and persistence through obsessional eating restriction. This is consistent with literature that associates AN with obsessionality (Anderluh et al., 2003; Bastiana et al., 1995; Castro-Fornieles et al., 2007; Davis et al., 1998; Friederich & Herzog, 2011; Halmi et al., 2000, 2012; Jordan et al., 2009; Kaye et al., 2015; Keel & Forney, 2013; Pollice et al., 1997; Treasure et al., 2015; Wonderlich et al., 2005) discussed in section 2.6.1 above. Participants used deception and manipulation to sustain their obsessional weight loss regimes (Hambrook & Tchanturia, 2008).

The second factor in the AN triad was *unattainability leads to failure.* As discussed in the first factor of the AN triad, participants seemed to strive for ever-increasing levels of control and perfection which translated into ever-decreasing weight. Because the level of perfection and control they desired was consistently redefined, it was unreachable and resulted in failure. Participants seemed to be in a lose-lose situation: either they set unachievable goals (in which case they criticised themselves for failing),

or they set achievable goals (in which case they criticised themselves for setting too easy a goal) (Shafran et al., 2002). Ironically, participants thus seemed to be trapped in a perpetual cycle of failure.

Accompanying their pursuit of control and perfection was a feeling of fear and guilt Participants' fear appeared to be one of losing control and failing. Their guilt appeared to be related to not performing at a level they deemed perfect (Bergkhold & Lock, 2002; Bybee et al., 1996; Goss & Allan, 2014; Oldershaw et al., 2015).

Participants' fear of failure extended to their experience of treatment and seemed to result in another paradox: their success in treatment (which resulted in clinical weight gain) was interpreted as failing because of their experienced loss of control and subsequent loss of perfection because of weight gain. Participants' failure in treatment because of their not making expected weight gains was interpreted as failing because they disappointed their families. Whether treatment was clinically successful or unsuccessful, participants still experienced a sense of failure. Despite the need for hospitalisation because of critically low weights (Ramsay et al., 1999; Sharp & Freeman, 1993), participants described re-feeding focused hospitalisation to be less effective than treatment by health care workers who displayed warmth, compassion and understanding (Colton & Pistrang, 2004; Gowers et al., 2007; Haynes et al., 2011; Kaap-Deeder et al., 2014; Meads et al., 2001; Norcross & Wampold, 2011; Nordbo et al., 2007; Robinson et al., 2015; Schmidt et al., 2015; Trachsel et al., 2015; Zugai et al., 2013). Participants in the current study detailed their experiences of hospitalisation as being cold, frightening and ineffective. Whether such perceptions are predictive of future relapse, or are genuine pointers to necessary improvements in health care for AN is unclear but may be worth exploring in future research.

The final factor in the AN triad was *compensation*. As explored in the first two factors of the AN triad, participants inevitably failed in their pursuit of control and perfection and in their treatment (lose-lose regardless of weight following treatment). Participants described the need to compensate for their failure. Compensation occurred in two ways: firstly, it took the form of weight loss after treatment weight gains, or the form of 'slip-ups' where they indulged and gained unwanted weight. Secondly, participants

compensated through obsessive behavioural and emotional control in which they did not allow themselves to show weakness or to fail. Some participants described using compensation methods including the use of laxatives, compulsive exercising and self-induced vomiting (Brewton et al., 1995; Gümmer et al., 2015; Turner et al., 2000).

In summary, the AN triad offers a potential explanatory model of participants' experience of factors that maintained their AN. Participants appeared to be preoccupied with striving for perfection through control, motivated by a fear of losing control and of failing. Because they perpetually shifted goalposts, their quest for perfection and control was unattainable which resulted in inevitable failure and persistent feelings of guilt, self-hatred and ineffectiveness. Consistent failure was met with compensation. Compensation strategies were used to reclaim perfection and to regain control. The result seemed to be the maintenance of AN through a cycle of striving, failing, striving harder, failing, striving even harder without respite.

6.4 PERCEIVED MODERATING FACTORS: WHERE TO FOR ANNA?

> **Perceived moderating factors**
>
> Vocalising struggle
> Encouraged resistance
> Therapeutic bonds
> Shared struggle
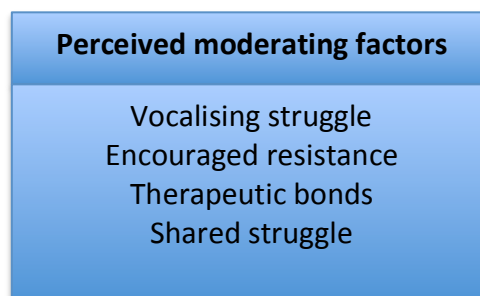
Figure 6.4. Perceived moderating factors.

The third research questions (outlined in section 4.3) explored participants' experience of writing and reading *Provision*. Sections 6.2 and 6.3 summarised participants' perceived sources of vulnerability and maintaining factors. This section describes possible moderating factors as depicted in participants' stories and completed questionnaires. Figure 6.4 indicates perceived moderating factors:

The greatest benefit for participants in writing stories seemed to be in *articulating their struggle*. In so doing they seemed to experience a sense of catharsis and were able to confront difficult realisations regarding their AN. Participants seemed to create new

ways of organising and understanding their thoughts about their AN (Pennebaker 2000; Pennebaker & Seagal,1999; White & Epston, 1990).

While participants described writing stories as having the above-mentioned benefits, they also described experiencing a strong urge to negatively compare themselves to other participants. In addition, they tended to feel emotionally overwhelmed by realisations discovered from writing stories. While these experiences were potentially negative, they may have raised important issues for participants to address in their on-going psychotherapy. For example the insecurities raised in reading *Provision*, and comparing their stories, may have presented the opportunity for participants to explore healthier ways of viewing themselves. Participants did not comment on this directly, nor did the researcher have contact with participants or their psychologists after the data collection was completed to confirm this.

Another perceived benefit of writing stories and encouraging dialogue with their AN seemed to be that it encouraged participants to distance themselves from their AN. By addressing their AN, they seemed to separate themselves from it and see the potential of an AN-independent identity. One of the difficulties with treating AN appears to be how ingrained AN becomes in the individual's identity (Dolhanty & Greenberg, 2009; Fox & Diab, 2015; Williams et al., 2015). Addressing their AN directly in the study was described by participants as being beneficial. This may be because the experience encouraged participants to separate themselves from their AN and create alternative stories for their lives (Epston, 2000; Marzola et al., 2015; White & Epston, 1990).

The second emergent moderating factor was *encouraged resistance*. Participants appeared to verbally attack their AN and accept their failures. This was consistent with Epston (2000), who described that fostering anti-anorexia was encouraged in the narrative treatment of AN.

With only slight prompting by the current study's questions, such as 'what would you say to your anorexia if you could talk to her?', an anti-anorexia stance was encouraged. The potential for self-understanding and compassion, which were evident in

participants' responses, may have positive implications for future psychotherapeutic intervention studies.

Therapeutic bonds were described as moderating AN. Those who had had positive therapeutic experiences described their path to recovery as fostered by a sense of connectedness between participant and psychologist. This connectedness was experienced by participants as encouraging an empowered sense of self and a strong recovery voice. Non-authoritarian treatment approaches to AN that are premised not on forced refeeding but on warmth, understanding, nurturance and quality of life (Robinson et al., 2015; Schmidt et al., 2015; Touyz & Hay, 2015; Trachsel et al., 2015) and the development of autonomy and a recovery voice have been recommended (Kaap-Deeder et al., 2014; Offord et al., 2006; Shapiro & Ross, 2002; Westwood & Kendal, 2012; White & Epston, 1990; Zugai et al., 2013).

A final moderating factor that emerged from the study was related to *shared struggle* through reading stories. Participants described the experience of reading *Provision* as normalising, intensifying realisations and as one of promoting acceptance and recovery. The experience of reading seemed similar to the experience of writing their stories. This may suggest that reading the stories continued the process that writing their stories had started.

While little literature exists specifically on AN and *reading* the stories of other AN individuals, some participants in the current study described the experience as normalising (Rini et al., 2006). Potential risks to reading others' stories were also identified by participants. They described experiencing a sense of hopelessness from reading the other stories, as well as a tendency to critically compare themselves to the other writers (Rini et al., 2006).

To summarise this section on moderating factors, participants described benefitting from therapeutic processes governed by understanding and warmth. Some participants described the experience of writing and reading their stories in this study as being beneficial. The narrative tasks may have helped participants to separate themselves from their AN and encourage healthier alternative stories. Furthermore,

participants appeared to experience the narrative tasks as cathartic, allowing them to redefine some of the meanings and understandings associated with their AN. Participants also described experiencing a feeling of normalisation after reading similar stories, plus an increased potential for developing a recovery voice.

Some participants, however, described negative experiences related to the narrative task. These negative experiences included critical comparison to other participants, an increased feeling of hopelessness and a sense of being overwhelmed by emotions because of perceived losses resulting from their AN. Arguably; these negatives may be mitigated in that they could encourage exploration and the discussion of fears in their ongoing psychotherapy.

6.5   SUMMARY

In addressing the research questions pertaining to how participants perceive their AN (its origins, maintenance and moderation), this study utilised narrative analysis to explore themes and subthemes in participants' stories.

Participants appeared to perceive several sources of vulnerability in the development of their AN. These were divided into biological (including existence of comorbid illnesses, disorders and traits in participants and their relatives) and environmental factors (including particular family, social and societal factors). Environmental factors were described as constituting either a general source of vulnerability or a specific episode trigger, the distinction of which was not always clear.

Based on an interpretation of participants' descriptions of potential maintenance factors, the AN triad was conceptualised. The AN triad comprised participants striving for perfection through trying to attain unattainable goals, leading to inevitable failure and resulting in the need to compensate.

Participants' perceived moderating factors were described as resulting largely from therapeutic experiences which encouraged vocalising their struggle and their resistance to their AN. Participants favoured strong therapeutic bonds and seemed to

benefit from sharing their story with other individuals with AN. Potential risks in sharing stories were also described.

Zubin and Steinhauer's (1981) vulnerability model, comprising vulnerability and moderating factors seemed a reasonably suitable model to apply to organising the data from the current study. This model does however exclude maintaining factors (Hurst et al., 2012; Treasure et al., 2009) which appeared relevant in the current study. Trigger factors, however, were not as easily discerned from the narratives as expected, and may be more relevant to other disorders than to AN.

CHAPTER 7

LIMITATIONS

7.1 INTRODUCTION

This chapter will outline limitations of this study. General limitations as well as those pertaining to the different stages of the research process are presented.

7.2 LIMITATIONS IN REVIEW OF LITERATURE

The study was completed over five years. The initial literature review was compiled in the first year. The process of completing the methodology and obtaining ethics approval took a year (owing to several approvals required before final ethical clearance cold be issued, including proposal review and postgraduate approval). Data collection took two years. Once the initial stages of data analysis were completed and the researcher returned to the literature review, four years had lapsed which posed the following problems:

- The literature review needed revision and more recent research findings were required.
- With the release of DSM-5 (APA, 2013), new diagnostic criteria were added.

7.3 LIMITATIONS IN DATA COLLECTION

The process of data collection involved several limitations:

- Many psychologists and psychiatrists and related service providers, contacted by the researcher in order to identify potential participants, were unwilling to offer their patients access to participate in the study. While frustrating for the researcher, this may suggest that health service providers who work with individuals with AN were protective of their clients and did not want to expose them to anything that they perceived as being potentially harmful. However, it poses a limitation for researchers studying individuals with AN. This work is thus limited in that it is based on AN patients only from service providers who were open to having their patients engage in research.

Working with selected inpatient treatment facilities that value research and offer support to patients who choose to be involved in research is recommended. Although provider protection of their clients is lauded ethically, the field cannot develop a better evidence base unless research is more broadly supported to reduce selection bias.

- Because participants were receiving treatment at the time of the study, with the majority of them receiving in-patient treatment, their BMIs were at that time higher than their lowest recorded BMIs. This meant that one participant fell into the normal BMI range at the time of the study and may thus not have as clearly reflected all AN features.

- Clinicians, not known by the researcher, provided all diagnoses. This means that, apart from administering the EDI, the researcher placed trust in the clinicians' diagnostic reliability and validity. Future studies should use additional measures (such as the EDI-2 or the SCID or EDE), to independently confirm accuracy of diagnosis. Where the researcher is unable to do so in the interests of the study (as in the current study where the researcher did not want to have any face-to-face contact with participants), third party expert diagnosis should be made by credible expert clinicians.

- The EDI was used for diagnostic confirmation due to its availability. The EDI-2, SCID or EDE would have been preferable as diagnostic measures but were not available to the researcher due to budget constraints.

- Having limited the study to those who identified English as their first language placed a restriction on inclusion criteria. Given the expressed desire for diversity, it may have been preferable to list English at a specific grade level, rather than English as a first language as an inclusion criterion.

- Participant retention in the study was less than 100%. Five potential participants signed up to be in the study but withdrew before writing their story because they reported finding the experience too emotionally intense and

time consuming. Participants who were inpatients at the time of the study seemed to cope better than those who were outpatients. This may be because they had more support and time to focus on their recovery. Conversely, for some outpatient participants, balancing their lives and their recovery, while working on the study, seemed difficult, so researchers should be aware of imposing burdens on recovering persons. Future researchers exploring AN narratively should probably aim to recruit participants enrolled in specific inpatient treatment facility programmes. These individuals are likely to have more time to dedicate to their recovery, as well as psychotherapeutic support in order to contain difficult emotions potentially resulting from participation. On the other hand, this imposes selection bias that seems difficult to avoid.

7.4   ETHICAL LIMITATIONS IN DATA COLLECTION

Because the study required participants to have an independent current AN diagnosis, the following ethical risk/benefit concern was considered: Completing the narrative tasks may have caused participants distress and negatively affected the treatment process they were engaged in at the time of the study. These ethical risks were hopefully mitigated by the inclusion criteria which required prospective participants to be engaged in psychotherapy for the duration of the study. Their service providers were required to confirm the AN diagnosis and their continued psychotherapeutic intervention for participation in the study. Because their service providers permitted their patients to consent to study participation, any potential adverse experiences could be discussed in psychotherapy.

7.5   LIMITATIONS IN DATA ANALYSIS

Limitations that arose in the data analysis process were as follows:

- During the analysis process the researcher paid close attention to suspending preconceived ideas regarding AN. Complete suspension of one's frame of references is not possible and there were times when the researcher felt more literature-driven than data-driven (Polit & Hungler, 2007).

In an attempt to curb this limitation, the quantitative component was included to triangulate findings from the qualitative component. A second reader was employed to analyse one of the stories to help the researcher confirm that derived themes were similar.

- Further to the implicit challenge of trying to suspend preconceived ideas while conducting data-driven analysis, was the inherent challenge of trying to suspend predetermined categories from literature while conducting analysis. The UKZN postgraduate approval and ethics review process requires a detailed literature review along with all research proposals. Thus the researcher was unable to obtain and analyse data without already having completed the literature review. The research supervisor had also suggested the Zubin and Steinhauer (1981) and Rutter (1997, 2002) papers as a way of organising the literature review. Because of this, the researcher went into analysis already having the vulnerability model proposed by Zubin and Steinhauer (1981) vaguely in mind. All efforts were made to suspend this knowledge while conducting the analysis of the stories, however themes linked to vulnerability still found their way into the analysis. If this is because sources of vulnerability genuinely emerged from the data, or because the researcher inadvertently looked for these remains unclear.

  Worth noting, despite many of Zubin and Steinhauer's (1981) vulnerability factors emerging in the analysis, other factors that are not part of their model also emerged and were included and discussed in the analysis. The main example of this is the maintenance factors that emerged in the analysis, which are not part of Zubin and Steinhauer's (1981) model.

- Popular narrative analysis options, such as Wengraf (2005), were explored however, no single narrative analytic method was found that could accommodate the range of different data gathered presented in the current study.

The researcher therefore implemented an analytic method that drew on the strengths of three models, McLeod (2000), Riessman (2002) and Braun and Clarke (2006). Future narrative researchers are encouraged to tailor-make their analysis models to their specific data. This may have inherent consistency and reliability problems, limiting comparability with other work.

7.6   POTENTIAL LIMITATIONS TO NARRATIVE TASKS IN RESEARCH

Due to the potentially intensive demands placed on participants engaged in narrative tasks, dropout was expected. The following should be carefully considered:

- Participants who have low energy levels resulting from undernourishment (and secondary depression) may not have the stamina necessary to complete narrative tasks. Referring practitioners might be asked to consider this more carefully before referring research candidates.

- Researchers should ideally recruit participants who are interested in narrative work. This may be difficult to determine in individuals before they have tried narrative tasks. However, individuals who enjoy and are open to journaling and writing are likely to be favoured over those who find writing an arduous task. The process of writing and reading stories may not appeal to all individuals. Those who do not enjoy reading or writing at length, may not be interested in participating in a study that requires it.

- While ambitious, it would also be beneficial to recruit participants who are descriptive in their writing in order to provide rich data. This may also require that participants possess some insight into their AN. Narrative research, such as the present study, may thus be limited in that it favours those capable of generating rich reflective narratives.

- Due to narrative tasks having a potential risk of overwhelming participants, possibly more than quantitative research tasks do (Wassenaar & Mamotte, 2012), ethical responsibility falls on the researcher to ensure that participants

are drawn from inpatient treatment facilities or are sufficiently emotionally supported throughout the research process.

- Narrative tasks in research will likely involve the requirement of writing and describing experiences. For individuals with AN, this process may trigger the desire for perfectionism and social comparison which could potentially result in some performance anxiety that participants should explore with their referring psychologists.

7.7 LIMITATIONS OF NARRATIVE THEORETICAL FRAMEWORKS

While the narrative approach to understanding disorders hopefully offers some novel insights, it has been argued to have the following limitations:

- Individuals' descriptions of a phenomenon are not always synonymous with the phenomenon in question. Narrative descriptions are reflective only of an individual's conceptualisation and understanding. While participants described their understanding of their AN vulnerability, maintenance and moderation, these are not necessarily generalisable views of AN as a nosological and psychopathological entity as defined in DSM-5 (APA, 2013).
While the researcher was aware of the theoretical limitations of narrative theory, these were justified because the study was directed at narrative exploration and understanding. It is accepted that this understanding is not the only way to comprehend participants' experiences and conceptualisations of AN.

7.8 PERSONAL REFLECTIONS

The process of completing the research study evoked a number of personal feelings and experiences for the researcher:

- Being a registered Counselling Psychologist that works psychotherapeutically with AN in private practice, I found myself needing to suspend my psychotherapeutic reactions to the stories. On receiving the stories from the participants, I felt a strong inclination to contact them, reflect on their process

and assess their wellbeing. Conversely, while conducting the analysis, I found myself asking my own AN patients (none of whom, by design, were participants in the study) questions based on findings that had emerged from the stories. I wanted to see if my patients experienced similar dynamics to those emerging from this study as it unfolded. I frequently needed to remind myself that my role as psychologist and my role as researcher required very different responsibilities. This awareness also reminded me of the ethical importance of not engaging with one's own patients in the dual roles of service provider and researcher (Wassenaar & Mamotte, 2012).

- Reading the *Provision* stories evoked sadness and a sense of helplessness. It felt like the problem of AN was so complicated and pervasive that finding any understanding that might inform treatment seemed impossible. The stories imparted an overwhelming sense of large periods of lost life opportunities and suffering for the participants. I found that I was less inclined to want to take on new AN patients during parts of the study (especially when reading the stories). I felt as if I was trying to distance myself from AN and the deep losses, sadness and frustrations associated with AN.

- Following on from wanting to distance myself from AN, were my feelings as a woman relating to food and weight. While I have never been unduly concerned about food or weight, I found that during the study I would pay more attention to food. When eating a carbohydrate, I would experience a fleeting thought relating to the participants' discomfort of eating carbohydrates. Interestingly, without realising it initially, a colleague and I chose to treat ourselves to dinner out, as a reward, after the data collection for each participant was complete. Retrospectively, I wonder if I was eating for them, in a displaced attempt to give them the nourishment I felt that they needed!

 I felt strongly about this research being data-driven. I wanted it to be about the participants: their stories and their lives, uninfluenced by me. This meant avoiding direct contact with them during data collection. This seemed to be effective in that they did not appear to be as concerned about what I would

think of them as they might have been had we had direct face-to-face contact. I also hoped that this would not distract them unduly from their own therapeutic processes. However, this did make the process more difficult. I was reliant on psychologists to collect data. I could not control how they would go about collecting the data. While I encouraged them not to influence their patients, this was largely at the psychologists' discretion and out of my control.

- During data analysis I felt concerned that preconceived literature-driven thinking might contaminate my analysis and re-presentation of participants' words. Recognising this, I tried to keep analysis as data-driven as possible.

- Revising the write-up through supervision was challenging. I experienced disappointment when my supervisor suggested substantive revisions – was my work 'not to the expected standard'? I came to see the process as supportive and academically-focused rather than personal, and had to learn that the work was about developing robustness and rigour rather than just about affirming my own ideas.

- I had trouble learning to write less creatively and more scientifically. This was especially evident in the write-up of the analysis, which was particularly descriptive. Retrospectively, I wonder if my 'non-scientific' writing was mirroring participants' writing?

7.9 SUMMARY

Conducting a study on AN using narrative tasks had several limitations and potential risks to participants. Hopefully, advantages outweighed limitations. A wealth of data were attained, and an intricate analytic process was followed that hopefully generated some insights that may not have been discovered through quantitative study. Participants had the opportunity to express themselves in an uninfluenced manner. This type of research should be encouraged, but careful consideration is warranted when constructing narrative designs. Research methods that maximise benefits but minimise potential harm to participants should be crafted. This could include the use of participants that are in active treatment so that they have full access to necessary

independent professional support throughout the research process (Fox & Diab, 2015; Williams et al., 2015).

CHAPTER 8

CONCLUSIONS

8.1   INTRODUCTION

This chapter outlines interpretations, conclusions and possible contributions of the study. Recommendations for future studies are presented.

8.2   OVERVIEW OF INTERPRETATIONS AND ANALYSIS

The interpretation of the participants' stories and questionnaire responses were integrated into a model for describing their understanding of their AN. Zubin and Steinhauer (1981) and Rutter (1997, 2002) proposed that psychological disorders be understood by integrating biological, psychological and social factors leading to vulnerability. Vulnerable individuals may also have moderating factors (resilience) that in turn could also be biological, psychological and social. Vulnerability may lead to an episode of frank disorder or illness after exposure to a trigger event. Analysis of participants' narratives revealed their perceptions of their many sources of vulnerability. Several moderating factors were also disclosed. However, a distinct separation between vulnerability factors and episode triggers were clear from participants' descriptions. In addition, maintaining factors, which emerged from participants' stories, not mentioned in Zubin and Steinhauer's (1981) model, were explored as those factors seemed to be perceived by participants as maintaining their AN.

Primary conclusions drawn regarding perceived vulnerability, maintaining and moderating factors are summarised below.

- Regarding *perceived sources of vulnerability*, this interpretation of participants' stories suggested the existence of specific personality features that were perceived as increasing vulnerability to developing AN. These features included perfectionism, rigidity, impulsivity, emotionality, heightened sensitivity to internalising and perceiving negative feedback from their environment,

obsessive-compulsive traits and increased risk for comorbid disorders such as mood, self-injurious behaviour, anxiety and substance disorders.

Participants described the following environmental factors as associated with their experienced vulnerability for developing AN: 1) families characterised by low cohesion, boundary issues, overprotectiveness, and dominant mothers (and atypically in one participant, abuse) 2) rejection from peers and partners, 3) name-calling, 4) exposure to environments associated with unfavourable social comparisons and 5) exposure to thin ideals from peers, media and religion. In describing these environmental vulnerability factors, it seemed possible (if not likely) that it was not the described environmental factors *per se* that increased AN vulnerability but the individual's tendency to over-emphasise and magnify these negative experiences and beliefs. Furthermore, while the above-mentioned environmental factors were described as associated with AN vulnerability, specific and acute experiences in some of the above domains (for example, name-calling) may also have constituted episode triggers that were responsible for the onset of AN, though these descriptions of potential episode triggers were not clearly defined by participants.

- *Perceived maintaining factors* were those factors that were perceived as allowing or encouraging AN to persist. The AN triad was developed from the narratives to highlight participants' descriptions and beliefs about how their AN was maintained. The AN triad suggests that participants were preoccupied with an obsessive-compulsive drive to perfection which was achieved through control. They experienced marked fear of failure and inevitably failed in all pursuits of perfection and control because these pursuits were, by their very nature, perfectly unattainable. Because of failing, they used compensatory strategies to repetitiously attempt to reach perfection and control. The cycle seemed to perpetuate; striving led to failure, which led to compensating, which led to more striving, which led to failure and so on.

- Participants described *perceived moderating factors* largely as those resulting from treatment approaches that allowed them to feel connected and

understood. The narrative tasks participants completed in the current study seemed to present risks and benefits. Participants seemed at risk of becoming overwhelmed and discouraged because of writing and reading the stories. On the other hand, some positive experiences described catharsis, normalisation, redefining meanings and understandings of AN, and separating the person from the problem. In some sense these negative and positive emotional experiences of narrative tasks can be seen as analogous to the challenges and benefits of psychotherapy (Fox & Diab, 2015; Williams et al., 2015).

8.3   CONCLUSIONS

This study proposed and attempted to develop an integrated approach to understanding AN. Zubin and Steinhauer (1981) proposed that sources of vulnerability, offset by moderating factors, activated by episode triggers (not clearly supported by this study), can assist with understanding psychological and psychiatric disorders. This framework was used to integrate some of the vast literature describing myriad facets of AN, and also influenced the analysis of the narrative data on participants' own experiences of AN as elicited by the narrative tasks. Perceived vulnerabilities were existence of comorbid illnesses and disorders in participants and their relatives and particular family, social and societal factors. Perceived maintaining factors were construed as an AN triad comprising striving for perfection through trying to attain unattainable goals, inevitable failure and compensation. Perceived moderators were empathic therapeutic experiences which encouraged vocalising struggle and AN resistance. Trigger events were harder to identify in the narratives, suggesting a limitation of the Zubin and Steinhauer (1981) model applied to this sample of persons with AN. This integrative approach to understanding AN seemed useful in understanding participants' descriptions of their AN experience. The following main conclusions were reached:

- Related to the research questions (section 4.3): Several perceived vulnerability, maintaining and moderating factors were identified (and discussed in section 8.2.1). Perceived vulnerability involved biological and environmental factors. Perceived maintaining factors were operationalised in the AN triad. Perceived

moderating factors related to treatment associated with a sense of interpersonal connectedness.

- The use of narrative tasks was described by participants as being beneficial in that they encouraged resistance, increased awareness and insight and resulted in normalisation. Potential risks however, included risk of being overwhelmed and feeling discouraged.

8.4   CONTRIBUTION OF THE STUDY

The current study hopefully contributes to existing literature on AN. Few studies have used narrative methods to understand AN or subjected participants to completing narrative tasks. This study was novel in that it elicited and examined in-depth accounts of the participants' own understanding of their AN with minimal influence from the researcher.

The process of writing stories, reading stories and reflecting on both processes is still relatively new in the field of research on AN (Fox & Diab, 2015; Williams et al., 2015). The process resulted in rich data and allowed for comprehensive analysis.

Rather than the application of standard bio-psycho-social, family systems, psychodynamic or cognitive behavioural models in understanding and organising participants' responses, an integrative approach was attempted (Zubin & Steinhauer, 1981).

Participants seemed to describe a potential AN personality type which was experienced as contributing to the risk of developing AN. This personality type was characterised by features outlined below. These contribute to the AN triad (striving for perfection through aspiring to unattainable goals resulting in compensation) which attempts to account for the maintenance of AN. Psychotherapy characterised by connectedness and warmth, and the use of narrative tasks were described as possible moderating factors, providing hope for recovery and cure.

8.5   RECOMMENDATIONS FOR FUTURE STUDIES

- Exploring and understanding AN in a more integrative manner may result in novel findings regarding the risk, maintaining and moderating factors of AN. Researchers may need to suspend preconceived models for understanding AN and adopt an approach that is neutral, humble and encouraging of unique narratives of illness and recovery, so that key elements and relationships between them can be identified.

- Future studies on AN could further explore application of Zubin and Steinhauer's (1981) vulnerability model to AN. In particular, close exploration of episode triggers which Zubin and Steinhauer (1981) proposed as central in the onset of psychopathology should be carefully explored in the case of AN. This study found that the distinction between sources of vulnerability and specific episode triggers was unclear in the present sample.

- The use of narrative tasks when researching AN provides in-depth information from individuals with the disorder. Narrative methodology encourages a comprehensive and insightful exploration for both participant and researcher.

- Much research has been conducted on the existence of an AN personality (e.g., Bulik et al., 1999; Garrido & Subirá, 2013; Kaye et al., 2015; Silva, 2007; Vitousek & Manke, 1994; Winecoff et al, 2015).This study found that participants perceptions of themselves corresponded with many of the traits and personality dimensions typically described in the literature and described themselves in ways that correspond to an AN personality. More qualitative research could be done on individuals with AN's perception of themselves and factors associated with their AN development..

- Despite the contemporary shift in studies to a focus on the genetic transmission of AN, Joseph (2003) cautions against reductionist genetic explanations for psychopathology:

> Familial, social, cultural, political, and psychological environments play a crucial and dominant role in shaping who we are. Behavior genetic and psychiatric genetic research is a house of cards that falls down in the face of critical examination (p. 346).

The present data suggest that qualitative studies focusing on personal and interpersonal experiences of individuals with AN should be conducted to complement the growing focus on neuroscience and genetic models by keeping a focus on the patient as an experiencing person.

- Participants in the current study perceived their experiences of hospitalisation as largely ineffective. Future studies could explore whether having such perceptions are predictive of future relapse and negative treatment outcome, or are genuine pointers to necessary improvements in health care for AN.

- The AN triad, proposed as a maintaining mechanism for participants' AN, could be explored in larger-scale research to identify if this process could enhance insight into the factors that maintain AN.

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APPENDICES

Dear Colleague

I am a Counselling Psychologist currently working on a PhD study. The name of the research is _Eat Your Heart Out : A Narrative Approach to Understanding Anorexia Nervosa_ and as the title suggests, the project deals with a narrative exploration of Anorexia Nervosa. The research is essentially divided into two sections. The first section deals with the process of writing a story about the experience of having Anorexia Nervosa. The second section aims to explore the potentially normalizing experience of reading other similar stories written by individuals diagnosed with Anorexia Nervosa.

In order to be a part of the study, the following inclusion criteria need to be met: individual needs to be above age 18, currently diagnosed with Anorexia Nervosa and presently receiving psychotherapy for Anorexia Nervosa. Please note that participants' identity will be kept anonymous. All names and identifying factors from the stories will be changed. Participants' choice to be a part of the study is entirely voluntary and they are able to withdraw from the study at any point of the process with no negative consequences whatsoever.

The psychotherapist's involvement in the study will be as an intermediary only, and thus will not constitute a conflict of interest for his/her role as the client's psychotherapist. Should the client wish to share information regarding the study with in the therapy space, this will be their prerogative.

The project will entail the following steps for the participant:

Time frame	Task
5 min	Read and sign an informed consent form stipulating the details of the research, also indicating that the respondent is able to pull out of the study at any point of the process.
20 min	Complete the Eating Disorder Inventory (EDI), a simple self-report questionnaire detailing eating habits and attitudes.
2 hours	Write a 6-20 page story regarding his/her experience of anorexia nervosa (Guidelines are provided to aid the process).
15 min	Answer a brief questionnaire regarding the process of writing the above story.
2 hours	All the stories written by the 6-10 respondents will be printed and bound in a booklet. Each respondent will receive a copy and be required to read this.
15 min	Answer a brief questionnaire regarding the process of reading the booklet of stories.
20 min	Repeat the Eating Disorder Inventory (EDI).

Your assistance would be much appreciated. Should you have any further questions, queries or concerns, please feel free to contact me.

Kind Regards,

-

_____   _____

Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar
Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

APPENDIX 2: CONSENT FOR USE OF DIAGNOSIS

Consent for use of the diagnosis

As the diagnosing practitioner please can you consent to the researcher making use of this diagnosis for your client (assuming the individual consents to this herself/himself).

I_____ (print your name), am currently treating _____
(print client's name) for Anorexia Nervosa. I consent to the researcher using this diagnosis.

_____

Psychotherapist signature

Please sign and email back to s.antonakas@gmail.com, or fax to 086 5087589

Kind Regards,

_____   _____

Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar
Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

Dear _____

I am a Counselling Psychologist currently working on a PhD study. The name of the research is *Eat Your Heart Out : A Narrative Approach to Understanding Anorexia Nervosa* and as the title suggests, the project deals with a narrative exploration of Anorexia Nervosa. The research is essentially divided into two sections. The first section deals with the process of writing a story about the experience of having Anorexia Nervosa. The second section aims to explore the potentially normalizing experience of reading other similar stories written by individuals diagnosed with Anorexia Nervosa.

In order to be a part of the study, the following inclusion criteria need to be met: individual needs to be above age 18, currently diagnosed with Anorexia Nervosa and presently receiving psychotherapy for Anorexia Nervosa. Your psychotherapist_____ (name) has confirmed that you meet these criteria and that you may be interested in being a part of the research. Please note that, should you agree to participate, your identity will be kept anonymous. All names and identifying factors from the stories will be changed. Your choice to be a part of the study is entirely voluntary and you are able to withdraw from the study at any point of the process with no negative consequences whatsoever.

Your psychotherapist's involvement in the study will be as an intermediary only. You will have no face-to-face contact with myself or anyone else who is part of the study. All

data provided will be either through your psychotherapist or over email. The study is not related to your psychotherapy and you are not required to share any details regarding the study with your psychotherapist. However should you wish to share information regarding the study with him/her in the therapy space, this is entirely fine too and your prerogative.

If you agree to be a part of the study, the following steps will be required of you:

Time frame	Task
5 min	Read and sign an informed consent form stipulating the details of the research, also indicating that you are able to pull out of the study at any point of the process.
20 min	Complete the Eating Disorder Inventory (EDI), a simple self-report questionnaire detailing eating habits and attitudes.
2 hours	Write a 6-20 page story regarding your experience of Anorexia Nervosa (Guidelines will be provided to aid the process).
15 min	Answer a brief questionnaire regarding the process of writing the above story.
2 hours	All the stories written by the 6-10 respondents (including yourself) will be printed and bound in a booklet. Each respondent (including yourself) will receive a copy and be required to read this.
15 min	Answer a brief questionnaire regarding the process of reading the booklet of stories.
20 min	Repeat the Eating Disorder Inventory (EDI).

Your assistance would be much appreciated. Should you have any further questions, queries or concerns, please feel free to contact me.

Kind Regards,

_____   _____

Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar

Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

If you agree to all of the above, and would like to be a part of the study, please read and sign the informed consent below.

<u>INFORMED CONSENT</u>

I _____ (print name) have read the above and consent to being a part of the described study. I understand the limits to confidentiality and the potential emotional drawbacks that are implicit in participating in the study. I also understand that I can withdraw from the study at any time.

Sign:_____   Date: _____

Please provide the email address at which I can contact you as well as a postal address where I can post the booklet of stories once these are printed.

Email: _____
Postal address: _____

Please sign and email back to s.antonakas@gmail.com, or fax to 086 5087589

_____

APPENDIX 4: WRITING STORY GUIDELINE SHEET

Dear _____

Eat Your Heart Out : A Narrative Approach to Understanding Anorexia Nervosa

Guideline sheet for story

Thank you for agreeing to participate in this project.

The aim of this exercise is for you to describe and explain, in detail, important aspects of your life with Anorexia Nervosa. You can write your story in any style you wish. There are no limits or constraints; write whatever you feel about your experience. You are urged to use a pseudonym in your story, and to change the names of any meaningful people, places or details that could identify you. If you would not like to do so, the researcher can make these changes for you at her own discretion. I will forward these back to you before printing and sending out to the other respondents.

Below are some guidelines regarding what I would like you to write about in your story. If you don't want to, there is no obligation – these are just suggestions for getting you going:

1) When do you first remember becoming preoccupied with food /weight /thinness?

2) When do you first remember 'becoming' anorexic?

3) Describe your relationship with anorexia?

4) How did anorexia affect your self-esteem and your view of yourself?

5) How did anorexia affect your relationships with family, friends, partners?

6) How did anorexia affect your schoolwork/work?

7) Where are you at now in relation to your anorexia nervosa?

8) What has been your experience of therapy?

Thereafter, as a 'PART 2' to your story please write about the following:

1) Where do you see yourself in the next 5 years?

2) If anorexia nervosa is not in your life, where would you be now?

3) If you could think about your anorexia nervosa as being a person apart from you, what would you say to her/him?

4) How would your story be different, especially the part about your future, if you could separate yourself from anorexia nervosa?

Your story can be as long as you like. As a general guideline, please make it anywhere from 6-20 typed or handwritten pages.

Within 24 hours of completing your story, please fill in the attached questionnaire, and kindly email the story as well as the questionnaire to me (s.antonakas@gmail.com) .

Kind Regards,

_____   _____

Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar

Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

APPENDIX 5: AFTER WRITING STORY QUESTIONNAIRE

Questionnaire after completing writing of story

Dear _____

Please take a few moments to answer the following questions regarding the process of writing your story. You can type / write your answers in the space provided and email / fax back to me (details below).

1) What was the experience of writing your story like?

2) What emotions did it evoke? Please explain?

3) Did it make you think of your anorexia nervosa in a different way? If so, how and which parts of the exercise had this effect?

4) Did you find it difficult to write? If so which parts?

5) Any other comments you may have?

Please email back to s.antonakas@gmail.com, or fax to 086 5087589

Kind Regards,

_____   _____
Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar
Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

APPENDIX 6: AFTER READING BOOK OF STORIES QUESTIONNAIRE

<u>Questionnaire after reading the booklet of stories</u>

Dear _____

Please take a few moments to answer the following questions regarding the process of writing your story. You can type / write your answers in the space provided and email / fax back to me (details below).

1) How did it feel reading the book of stories?

2) How did it feel reading your own story? Please elaborate.

3) Have your feelings regarding anorexia nervosa changed in any way, if so how?

4) Do you think reading a book like this would be helpful or not, to other people who have anorexia nervosa?

5) Any other comments you may have?

Please email back to s.antonakas@gmail.com, or fax to 086 5087589

Kind Regards,

_____   _____
Sia Antonakas - Counselling Psychologist   Supervised by Prof. Doug Wassenaar
Email: s.antonakas@gmail.com   Email: Wassenaar@ukzn.ac.za

EATING DISORDER INVENTORY
David M. Garner, Ph.D.
Marion P. Olmsted, M.A.
Janet Pollvy, Ph.D.

Thank you for completing this questionnaire. You are assured that all details will be regarded as confidential. Before turning over, please complete the following details. Thank you for your assistance.

Name: _____

Date of birth (dd/mm/yy): _____

Gender: _____

Approximate height: _____m

Current approximate weight: _____kg

Lowest adult weight: _____kg

Home language: _____

Race group: _____

Marital status: _____

Place of residence (town or city): _____

Employment / field of study: _____

Number of siblings: _____

Mother's occupation: _____

Father's occupation: _____

This is a scale which measures a variety of attitudes, feelings and behaviours. Some of the items relate to food and eating. Others ask you about yourself. THERE ARE NO RIGHT OR WRONG ANSWERS SO TRY VERY HARD TO BE COMPLETELY HONEST IN YOUR ANSWERS. RESULTS ARE COMPLETELY CONFIDENTIAL. Read each question and place an (x) under the column which applies best for you. Please answer each question very carefully. Thank you.

ALWAYS	USUALLY	OFTEN	SOMETIMES	RARELY	NEVER	
						1. I eat sweets and carbohydrates without feeling nervous.
						2. I think my stomach is too big.
						3. I wish that I could return to the security of childhood.
						4. I eat when I am upset.
						5. I stuff myself with food.
						6. I wish I could be younger.
						7. I think about dieting.
						8. I get frightened when my feelings are too strong.
						9. I think my thighs are too large.
						10. I feel ineffective as a person.
						11. I feel extremely guilty after over-eating.

A L W A Y S	U S U A L L Y	O F T E N	S O M E T I M E S	R A R E L Y	N E V E R	
						12. I think that my stomach is just the right size.
						13. Only outstanding performance is good enough in my family.
						14. The happiest time in life is when you are a child.
						15. I am open about my feelings.
						16. I am terrified of gaining weight.
						17. I trust others.
						18. I feel alone in the world.
						19. I feel satisfied with the shape of my body.
						20. I feel generally in control of things in my life.
						21. I get confused about what emotion I am feeling.
						22. I would rather be an adult than a child.
						23. I can communicate with others easily.
						24. I wish I were someone else.

A L W A Y S	U S U A L L Y	O F T E N	S O M E T I M E S	R A R E L Y	N E V E R	
						25. I exaggerate or magnify the importance of weight.
						26. I can clearly identify what emotion I am feeling.
						27. I feel inadequate.
						28. I have gone on eating binges where I have felt that I could not stop.
						29. As a child, I tried very hard to avoid disappointing my parents and teachers.
						30. I have close relationships.
						31. I like the shape of my buttocks.
						32. I am preoccupied with the desire to be thinner.
						33. I don't know what's going on inside me.
						34. I have trouble expressing my emotions to others.
						35. The demands of adulthood are too great.
						36. I hate being less than best at things.
						37. I feel secure about myself.
						38. I think about bingeing (overeating).

ALWAYS	USUALLY	OFTEN	SOMETIMES	RARELY	NEVER	
						39. I feel happy that I am not a child anymore.
						40. I get confused as to whether or not I am hungry.
						41. I have a low opinion of myself.
						42. I feel that I achieve my standards.
						43. My parents have expected excellence of me.
						44. I worry that my feelings will get out of control.
						45. I think my hips are too big.
						46. I eat moderately in front of others and stuff myself when they're gone.
						47. I feel bloated after eating a small meal.
						48. I feel people are happiest when they are children.
						49. If I gain a pound, I worry that I will keep gaining.
						50. I feel that I am a worthwhile person.
						51. When I am upset, I don't know if I am sad, frightened or angry.

A L W A Y S	U S U A L L Y	O F T E N	S O M E T I M E S	R A R E L Y	N E V E R	
						52. I feel that I must do things perfectly or not do them at all.
						53. I have thoughts of trying to vomit in order to lose weight.
						54. I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close).
						55. I think that my thighs are just the right size.
						56. I feel empty inside (emotionally).
						57. I can talk about personal thoughts or feelings.
						58. The best years of your life are when you become an adult.
						59. I think my buttocks are too large.
						60. I have feelings that I can't quite identify.
						61. I eat or drink in secrecy.
						62. I think my hips are just the right size.
						63. I have extremely high goals.
						64. When I am upset, I worry that I will start eating.

Thank You!

APPENDIX 8: BOOK: *PROVISION*

See provided book of anonymised stories (examiners only).

APPENDIX 9: PARTICIPANT EXAMPLE: AMANDA LERE RAW DATA

NOTE: Some raw data collected for one participant has been provided to illustrate part of the qualitative data analytic process that took place. The same material is available on request for the remaining participants. This participant was selected simply because she was the first participant to consent to being in the research study.

APPENDIX 9.1: EDI SCORES

The Eating Disorder Inventory

Client name: Amanda Lere
Client gender: Female
Date assessed: 24/09/2012

	Scores	BMI
Current weight (kg)	37.9	12.52
Lowest weight (kg)	31	10.24
Height (m)	1.74	

(BMI below 18.5 = Anorexia)

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
11.7	14.9	13.8	3.6	5.1

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
2.8	10.9	8.1	0.3	1.7

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
13.4	16.7	15.5	6.3	9.7

EDI SUBSCALES	ITEM No.	SCORE	TOTAL
1) Drive for thinness	1*	2	13
	7	1	
	11	3	
	16	3	
	25	2	
	32	0	
	49	2	
2) Bulimia	4	0	0
	5	0	
	28	0	
	38	0	
	46	0	
	53	0	
	61	0	
3) Body dissatisfaction	2	0	11
	9	0	
	12*	2	

4) Ineffectiveness

Item	Value
19*	2
31*	1
45	0
55*	3
59	0
62*	3

18

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
9.9	13.3	12.1	3.1	2.3

5) Perfectionism

Item	Value
10	2
18	2
20*	0
24	2
27	2
37*	2
41	2
42*	2
50*	3
56	1

11

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
7.7	9.1	8.6	6.6	6.4

6) Interpersonal distrust

Item	Value
13	0
29	2
36	3
43	0
52	3
63	3
15*	2
17*	1
23*	2
30*	2

13

AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
6.2	6.6	6.4	1.9	2.4

	AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
7) Interoceptive awareness	9.9	12.2	11.4	2.1	2.3

Item	Score	
34	2	10
54	2	
57*	2	
8	2	
21	2	
26*	2	
33	1	
40	0	
44	1	
47	1	
51*	0	
60	1	
64	0	

	AN Restricters	AN Bulimics	AN Total	Recovered AN	Fem College
8) Maturity fears	5.7	5.6	5.6	1.1	2.2

Item	Score	
3	1	9
6	0	
14	1	
22*	3	
35	1	
39*	2	
48	1	
58*	0	

SCORING:
Score 3 for most extreme answer, followed by 2 for next, 1 for next and 0 for remaining 3.
* Indicate reverse score items.

APPENDIX 9.2: EXAMPLE OF INITIAL INDIVIDUAL ANALYSIS

Stage 1: Attending

Amanda Lere was born on 01/07/1982. According to her EDI results (Appendix 9, p22-24) her height is 1.74 meters. At the time of writing her story (October 2012) her weight was 37.9 kilograms (BMI 12.52). Her lowest adult weight was 31 kilograms (BMI of 10.24). At the time of the study she was married, her and her husband reside in Belgium and are both Dutch. Her profession is a language teacher. She has two sisters. Her mother was a housewife and her father an auctioneer.

At the time of the study Amanda was in and in-patient treatment facility called Oasis Counselling Centre which is a unit that deals with rehabilitation of addiction. While their primary focus is on substance addiction, they do treat the occasional AN patient. Amanda had been in treatment completing their 12-step program when she wrote her life story.

In her story Amanda spoke of a number of treatments options she had been through before the 12-step program she was enrolled in at the time of writing her life story. This included out patient treatment with psychotherapists and psychiatrists as well as intensive hospitalization and re-feeding through catheters & tubes when she was at her lowest weight of 31 kilograms. Her experience of treatment, prior to her current treatment in the 12-step program, was largely negative as evidenced by the following quotations from her narrative:

> For the very first time, at the age of 26, I reached out for help. What should have been a recovery and a new start resulted in a nightmare. They put me in an isolated dark room on an iron bed – it was just like a prison cell. The treatment went all wrong. The counselor didn't reach my expectations and the behaviour of the other anorexic patients had an extremely negative impact on me. Instead of learning how to deal with food, they taught me the tricks of the trade and how to worsen my anorexia: cutting food into tiny pieces, hiding food in napkins etc (Lere, Provision[8], p. 10, ln37-42)

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[8] For all 'Provision' references refer to Appendix 8 – the bound book.

Amanda's account seems to indicate that treatment had a negative impact on how she understood and managed her AN. In an account of another treatment experience, she eludes to a similarly negative experience as follows:

> Instead of giving me meal replacement shakes and supporting me, they put me on an intravenous catheter (via surgery, a tube was put through my veins: the scar will remain visible for the rest of my life, a constant reminder). I was stuck to my drip and isolated for 2 months – that meant no therapy or fresh air and I felt a sense of abandonment. The motivation to heal didn't come back. On the contrary, I didn't eat the additional food they supplied me as I didn't see the benefit as they were giving me the calories I needed through the drip. I felt empty (Lere, Provision, p. 11, ln4-10).

Treatment in this last description not only seemed to yield a negative outcome, but also seemed to have the effect of making Amanda feel isolated and thus resistant to recovery and treatment in general.

The 12 step program she was enrolled at during the time of the present study seemed to have a more positive impact on her and was appealing to her because it appeared to have a more holistic and understanding approach to treatment as evidenced in the following quotation:

> Willing to recover and embrace life again, I googled an inpatient programme where I felt nurtured and welcomed, a lovely environment where I could be reborn and stop fooling myself. A programme in another country appeared on the screen and I was sold (Lere, Provision, p. 12, ln6-8).

The above quotation may indicate Amanda's desire, and potentially the desire of individual with AN in general, to seek out treatments that are more nurturing in their approach and less stereotypically clinical/medical.

Stage 2: Telling
The only prompting regarding her story that Amanda received was Appendix 4. The psychotherapist who was the mediator between her and the researcher was careful not to give any other prompts. She had no contact with the researcher at all before or during the process of writing her story. The first contact that was made between her

and the researcher was an email to get a physical address to which to post the booklet of stories as she had returned home by that point in the study (April 2013).

Stage 3: Preliminary analysis

The core narrative of Amanda's story can be diagrammatically represented in the following diagram:
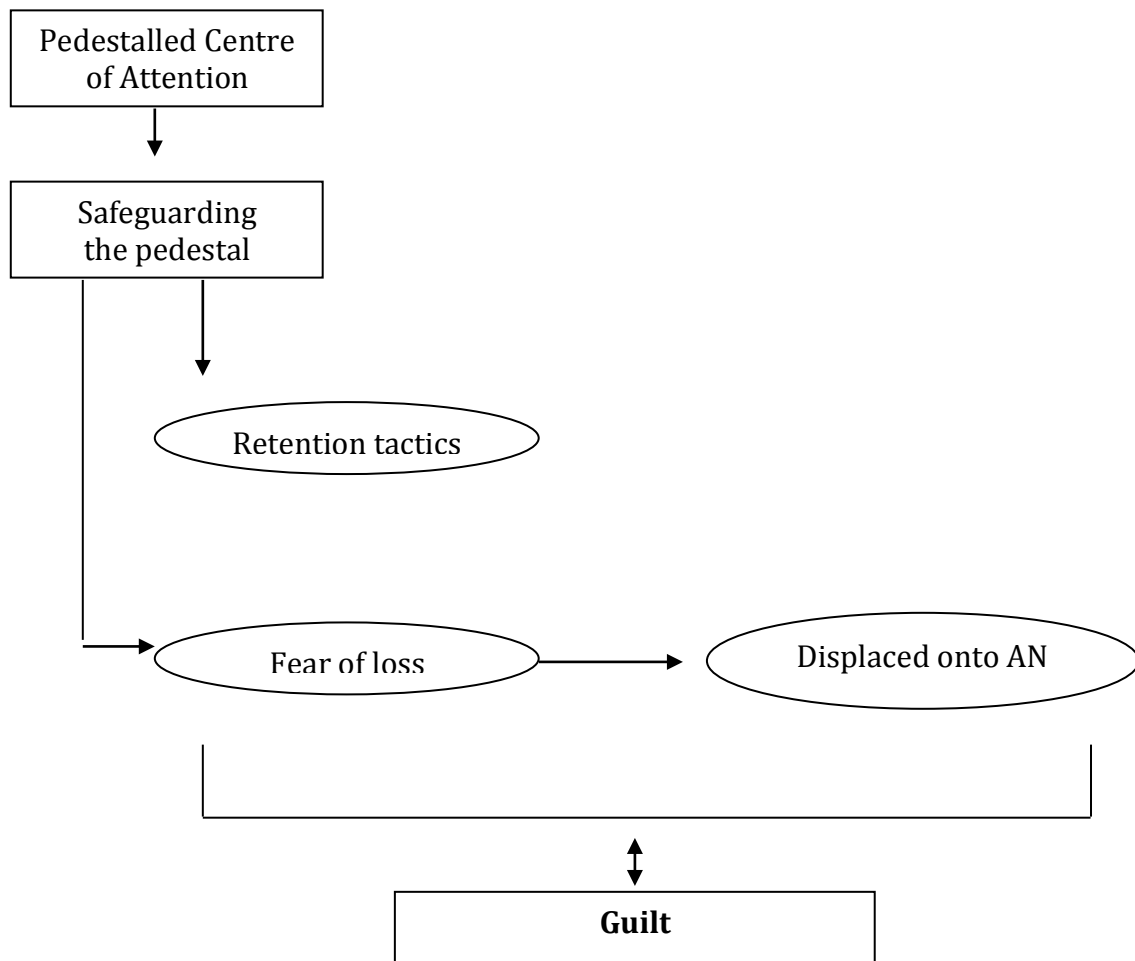

Diagram 1: Diagrammatical representation of core themes in Amanda Lere's narrative

As the diagram indicates, Amanda's life story appears to have a common thread that runs through it in which she is 'pedestalled' and placed as the centre of attention. The result of this appears to be Amanda's desire to safeguard this way of being received by others. Trying to safeguard this status results in Amanda employing a range of tactics to retain her position on her pedestal as well as a level of anxiety implicit in the fear of losing this status. This fear, being difficult for Amanda to cope with, is displaced onto

her eating and appear to result in her development of AN. Having AN and her fear of losing her status both result in guilt. All these emergent themes can be further explored as follows:

Pedestalled centre of attention

In Amanda's story she often positioned herself as 'pedestalled' or as the centre of attention at different times in her life from different people. This was immediately evident in the first paragraph of her story where she described herself at her birth with this thread carrying through her entire story:, "...the cutest, most perfect, little first born" (Lere, Provision, p. 7, ln7), "...daddy's little girl" (Lere, Provision, p. 7, ln6), "My father's love for me was immeasurable" (Lere, Provision, p. 9, ln15-16) and "...truly living a life in the spot light!" (Lere, Provision, p. 7, ln9). Moving into the social setting as she got older this tendency to be well-liked and pedestalled carried through to her peers as evidenced in the following quotation: "I was loved by everyone, which felt so great" (Lere, Provision, p. 7, ln20). When she moved into her teenage years and began to date, Amanda appeared to be received and viewed by her romantic partners in a similar manner as evidenced by the following: "He was a few years older, pretty mature and crazy about me, just what I needed to feel better" (Lere, Provision, p. 8, ln10-11). Interestingly in the last two quotations, it becomes clear that Amanda tended to use her social affirmations as a means of emotional regulation to uplift her mood. In the last two quotations she wrote about 'feeling great' and 'feeling better' as a result of others' viewing positively or pedestalling her. Her social pedestalling continued into later relationships too as evidenced by the following quotation, "He was madly in love with me and offered me a ring after a few weeks" (Lere, Provision, p.8, ln32-33). Later in her story she goes on to write about her husband, he too seemed to pedestal her, "He'd treat me like a princess for the rest of my life" (Lere, Provision, p. 10, ln15-16). Being a focal point to others and being esteemed as the centre of attention, placed on a pedestal, was a thread that ran through Amanda's entire story and seemed central to her view of herself.

Safeguarding the pedestal

Amanda appeared to enjoy the benefits of being viewed as the centre of attention and resisted losing this status. This can be evidenced early on in her story when she describes the arrival of her younger sister as follows:

> After a few years, I had to share the stage with my curly-haired little sister Donna. It goes without saying, I was initially not pleased. I did everything to get the attention of my parents and started dominating my sister (Lere, Provision, p. 7, ln9-10)

There appears to have been an initial resistance to sharing her pedestal with a sibling. This resistance to lose her standing on her pedestal appeared throughout her story as evidenced in the following quotation: "Nothing and no one was going to get in my way. I felt so powerful" (Lere, Provision, p. 10, ln1-2). Amanda appeared to use certain tactics to avoid losing her status and implicit in this is the fear she felt of this possible/impending loss. These two subthemes will therefore be explored together.

Retention tactics / Fear of loss

In an attempt to keep everyone around her happy and her on her pedestal, and also to alleviate the fear of the potential loss of her status as the centre of attention, Amanda tended to employ 'retention tactics'. An example of this is her doing what others wanted her to do even when this was not in line with what she actually wanted. This is illustrated in the following quotation, "Although I didn't feel like going to any of these boutique schools I pleased my parents" (Lere, Provision, p. 7, ln30). Another tactic which Amanda would employ would be to push herself to perform to the absolute best of her ability, even when this felt out of her reach. This is illustrated in the following quotation:

> Contrary to everyone else's beliefs, I found school very difficult. It was hard to obtain good grades and compete with others. I studied day and night, feeling I had to excel to please my parents (Lere, Provision, p. 7, ln37-38).

Amanda appeared to push herself to perform better than others, possibly because being on a pedestal required her to do better than others and therefore work harder than other. Another similar quote suggesting the same pattern is as follows, "With

probably more effort than others, I managed to pass every year with distinction" (Lere, Provision, p. 8, ln26). This tendency to push herself beyond what she felt capable of spread into her social life too, she seemed to again do things that she did not feel happy to do in order to ensure that she pleased others. This can be evidenced by the following quote about her romantic relationship:

> Once again, kisses and hugs were not enough after a while and he wanted to have sex. I started to believe I was really abnormal as I still didn't feel ready. Instead of listening to my inner voice – who told me not to give in – I succumbed and pretended to share the same feelings. I lost my virginity to him – something I would regret for the rest of my life (Lere, Provision, p. 8, ln34-38).

This accommodating nature that Amanda tended to employ, seemed to continually result in loss for her which seemed to leave her feeling regretful. At other times, another tactic Amanda used was rushing into certain experiences in a desperate attempt to hold onto a situation in which she felt empowered and pedestalled. This can be evidenced by her pushing to be married to the man she was with who made her feel pedestalled. She appeared to be fearful of losing this and therefore pushed to attain a greater hold and sense of security. This evidenced in the following quotation:

> Not more than 1 year later, I thought it'd be a good idea to get married – I wanted to stay this lucky forever. I approached him about this prospect but he told me he believed that we needed to give it more time. However I kept speaking about it as I was sure it would happen anyway [...] Strangely, my inner voice told me to give it more time, but my mind said it was a sparkling idea" (Lere, Provision, p. 10, ln9-14).

In summary one can see that for Amanda, being placed on a pedestal created a drive within her to remain on that pedestal which inadvertently came with the fear of losing this standing and therefore tactics being employed to ensure the pedestal status is upheld.

Displaced onto AN

The fear and anxiety that appeared to be implicit in Amanda's trying to maintain her pedestal status seems to have been transformed and displaced into the creation of her AN. She seemed to strive for the perfection that everyone saw her to have, this evidenced in the following quotation: "As the eldest of two bright, high-achieving

sisters and daughters, I might have gotten indirect perfectionist messages from a family who wanted the best for me" (Lere, Provision, p7, ln26-27). Whenever Amanda felt that she was losing her standing on the pedestal or not being perfect she felt out of control and fearful, this seems to be part of what fuelled the onset of her AN as evidenced in the following quotation: "I felt inferior to the other students who were all excelling in one thing or another. That feeling of 'less than' fuelled my disease I guess" (Lere, Provision, p. 7, ln26-27). A similar sense of inferiority occurred for Amanda when she lost a friend at school, a relatively common experience for teenage girls. However, for Amanda, being used to having a great deal of attention, this occurrence was flavoured with marked despair and internalized as a negative self-reflection. This can be evidenced in the following quotation:

> My life took a huge twist around the age of 16 when Jenny suddenly dropped me as her best friend. She found a new 'soul mate' at school and replaced me. She didn't want to have anything to do with me anymore. I was rejected, abandoned, left in innocence and left with a broken heart. I constantly questioned myself and started believing I was a worthless friend. My lack of self-esteem grew stronger by the day. For the very first time, I felt alone (Lere, Provision, p. 8, ln3-7).

A similar internalizing of negative emotion and negative self-view continued when she experience a romantic breakup as evidenced in the following quotation:

> My dark negative thoughts about myself stared to be fuelled even more. A few hurtful remarks from boys worsened the situation [...] Being chubby (but muscular) and brown haired instead of the 'pretty skinny' blonde girls. I felt rejected and more ugly and worthless than ever before" (Lere, Provision, p. 8, ln15-19).

The social commentary of peers and stereotyped societal messages of what it is to be attractive (back up with literature) seemed to play a negative role in how Amanda viewed herself. The idea she had of what it meant to be perfect (and thus what she needed to remain on her pedestal) appeared to become more and more out of reach for her. This led to the beginning of her starting to lose weight as evidenced in the following quotation: "Determined to meet the criteria, I decided to lose weight. It seemed to be the only way to fit in. With a lot of perseverance, I lost over 20kgs in less than 3 months". (Lere, Provision, p. 8, ln20-21). In this manner, Amanda's fears of not

attaining what she had decided was the requirements for remaining on her pedestal in the major areas of her life, were displaced onto trying to attain a level of perfection through her weight. This is fittingly expressed by Amanda as follows:

> Deprived of the feelings of self-value by my life circumstances, I turned to the number on the scales as a measurement of self-worth. Every day I wanted to manage the day of zero nutrition, another mile on the treadmill and another kg lost. It took my mind off whatever troubles were plaguing me (Lere, Provision, p. 8-9, ln41-2).

In some way, it appears as if controlling her eating felt to be more in her control than trying to control the other areas of her life where she felt she was falling short of attaining her standing on her pedestal. She seemed to experience a sense of 'success' in losing weight, "the weight loss mesmerized me" (Lere, Provision, p. 8, ln24) and,

> I turned to a perverse sort of self-control: an obsession with starvation and over-exercising gave me something to focus on that was so much 'simpler' than the real problems of life (Lere, Provision, p. 8, ln39-41).

Amanda mentions the control link repeatedly, another example is as follows, "It (AN) was a way to regain that false, but so terribly compelling feeling of control" (Lere, Provision, p. 9, ln22-23). Even after Amanda become aware of the fact that she was battling and sought out treatment, she tended to set herself unattainable goals for her recovery, yet another opportunity to 'fall from her pedestal' as evidenced in the following quotation:

> I woke up every day with the hope and willingness to get better and to start over again. I would seize the day! I started breakfast very well, tried to do my best during the day, but soon returned to my anorexic habits. Every evening I cried myself to sleep. I felt like a failure and that I had failed (Lere, Provision, p. 12, ln3-6).

AN appeared to be the defense mechanism onto which she displaced her need to be in control and sense of being perfect. Ironically, she ultimately experienced failure in this respect too – as AN, by its very nature appeared to set unattainable and unrealistic goals.

Guilt

Her lack of ability to attain the required level of perfection to remain on the perceived pedestal, her tactics to remain there failing and her AN as well as her perceived failings in attaining the unattainable standards of AN all resulted in Amanda's overarching experience of guilt. More than any other emotion, guilt is the one that seems to be scattered all over her story in almost every area of her life. Guilt is perceived right in the beginning of her story where she is hard on herself about not responding well to the arrival of her baby sister as is evidenced in the following quotation: "I involved her in my mischievous activities, told her constantly what to do and blamed her for what I did wrong. Looking back at it, it's not really something to be proud of" (Lere, Provision, p. 7, ln11-13).

Due to her parents and family being supportive, Amanda often felt that she needed to hide how she felt as evidenced in the following: "I felt I had no right to cry, complain or to be unhappy and so I smiled and bottled up most of my emotions" (Lere, Provision, p. 7, ln17-18) and

> I had no reason to feel inferior or unhappy. Absolutely no reason. I had everything I needed to be happy. So I put on a mask that I would wear for years and speaking about how I felt or my emotions ceased (Lere, Provision, p. 8, ln28-30).

When Amanda experienced difficulties in her romantic relationships she also tended to internalize guilty feelings. In one instance she describes an experience where her boyfriend spent a lot of money and she felt he may be using her, this experience appeared to be immediately followed by guilt as can be seen in the following quotation:

> Guilty feelings arose. I felt abused and worthless and I didn't know what to do. It became too much to bear and I regressed back into my past emotional and physical torment again. Some days I starved myself and others I'd eat normally, but took laxatives to compensate (Lere, Provision, p. 9, ln19-22).

Guilt seemed to be an emotion that was intricately tied into Amanda's AN. In one instance this was linked to trying to control the weight loss to appease her family and friends, "My parents were alarmed by my sudden weight loss and I had to stop losing weight to pacify them" (Lere, Provision, p. 8, ln30-31), and

> Most friends around me had disappeared and relatives had become distant – they were disappointed that I 'hadn't made it'. Feeling abandoned again, my motivation and self-esteem was again at an all time low and guilt feelings accompanied with my feelings of worthlessness continued to torture me (Lere, Provision, p. 11, ln18-22).

In another instance, the guilt seemed to arise for perceived failures in her life in which case restriction of food was a form of self-punishment. This evidenced in the following quotation describing her emotions and thoughts after having a miscarriage:

> My world collapsed. The pain was unbearable. I blamed myself for my loss – I must have been too thin, not worth it, I killed my child – even though it was only a few weeks old. [...] I locked myself up and tortured myself. I had to be punished so I quit eating. Life had become so meaningless to me (Lere, Provision, p. 10, ln31-36).

This seeming 'failure' of not producing a child and the associated guilt needed to be punished and this occurred through food, "I didn't deserve to enjoy a slice of cake or a pizza... I had no child, no job... (Lere, Provision, p. 11, ln23-24). What Amanda had in the way of support, seemed to increase her sense of guilt and impending low self-esteem. This can be evidenced in the following quotation:

> I had a supportive husband, lived a life of luxury on the other side of the world, had no financial issues, a caring family, traveled a lot and a fulfilling job where I felt respected. I had every reason to be happy right? But no matter how hard I tried, something in me prevented me. I kept feeling worthless... (Lere, Provision, p. 11, ln34-37).

The guilt and the AN seemed to be inextricably intertwined. Amanda felt guilty about her eating behaviours and how they were negatively impacting her and those around her. This guilt however resulted in increased restriction of food in an attempt to feel in control and combat the feeling of guilt by aiming for perfection in her eating – an unattainable goal which would ultimately result in failure and thus a sense of guilt. The negative loop would begin again.

Stage 4: Micro-analysis

Looking at the structure and form of Amanda's story, clear paragraphs separating ideas are clear. Her story tended to follow a logical chronological form. Interestingly

however she tended to jump back to the past when referring to adult negative experiences. This possibly due to a regressive tendency in light of difficult experiences. At the end of the story, she lists, with bullets, all the things she wished could be different in her life – possibly indicating that she is acutely aware of all that she has lost and how different her life could be.

In terms of the figurative use of language in Amanda's narrative, she at times personified her AN. This can be evidenced in the following quotation, "I'm truly in the grasp of Anorexia Nervosa" (Lere, Provision, p. 7, ln2). An interesting use of personification entailed Amanda describing her experience of her AN as follows: "Diabolic and angelic voices stayed in my head" (Lere, Provision, p. 11, ln42). While she does not go on to explain what she means by this it can be assumed that the 'diabolic voices' are the unhealthy, life-destructing AN part of her mind while the 'angelic voices' are her healthier, more life-affirming parts of her mind.

Amanda uses personification at the end of the story too, however this is due to the researcher's prompt to do so as listed as one of the reflective guides. Her personification in this instance is as follows:

> If I could talk to my anorexia and tell her what I think: I'd tell her that I disapprove of her behaviour and highlight the consequences for her and others. I would drag her – kicking and screaming – in front of the mirror to show her how painfully thin she is and confront her with the pain and damage she has caused, the opportunities she's missed, where she has fooled herself. etc. I would be angry with her on one hand, but would reach out to her on the other. I would listen and support her (Lere, Provision, p. 13, ln4-9).

This potential of seeing the anorexic part of oneself as separate to the other more healthier parts of the self allow a potential distance between the two as opposed to viewing the anorexic part of self as central to one's identity (and thus much harder to 'remove'). Use of 'different voices' (signs of separating person from problem).

With regards to cultural and media-informed narratives, Amanda seemed particularly sensitive to the socio-economic status messages that appeared when she shifted to

what she termed a "boutique school" (Lere, Provision, p. 7, ln30) as reference to more upper-class schools. She suggests that,

> Having come from another, less prestigious school, not knowing anyone, being less-fortunate and not excelling in a subject or sport, I felt inferior to the other students who were all excelling in one thing or another (Lere, Provision, p. 7, ln31-33).

In addition to this, the school she had come from had been much smaller and she had a great deal of popularity. The shift to a new environment of greater class had left her in a different social standing as evidenced by the following, "I only had a handful of friends at college – A big change after being the most popular girl at school for more than 6/7 years" (Lere, Provision, p. 7, ln33-35).

Stage 6: Reading & writing

With regards to Amanda's experience of writing her narrative, this appeared to have two distinct outcomes. On the one hand the experience of writing was overwhelming and difficult to deal with as evidenced by the following: "It was really painful to revive my past and be confronted with the pain I caused myself and others. I was overwhelmed by feelings of guilt, anger, pain, sadness, worthlessness, emptiness etc." (Lere, Appendix 10, p49). On the other hand the experience of writing appeared to have a positive impact in helping to bring the fore links that may not previously have been recognized: "I however learned a lot from it. I discovered new triggers, returning patterns in my behaviour… It helped me to look at the underlying issues of my illness, enabling me to work more successfully on my recovery" (Lere, Appendix 10, p49). Amanda also commented on how the experience of writing helped her to view her AN in a different light as evidenced in the following quotation:

> I learned that anorexia is actually a reaction to intolerable emotional pressures and that the self-starvation is a destructive consequence of it. Not the other way around. I realized that the psychological effects of starvation helped me to numb unbearable emotions. Starving me outright produced a feeling of detachment and emotional neutrality (Lere, Appendix 10, p49-50).

APPENDIX 9.3: AFTER WRITING STORY QUESTIONNAIRE

1) <u>What was the experience of writing your story like?</u>

Tears flowed.

It was really painful to revive my past and be confronted with the pain I caused to myself and others.

I was overwhelmed by feeling of guilt, anger, pain, sadness, worthlessness, emptiness, etc.

I however learned a lot from it. I discovered new triggers, returning patterns in my behaviour...

It helped me to look at the underlying issues of my illness, enabling me to work more successfully on my recovery.

2) <u>What emotions did it evoke?</u>

Unbearable emotions, such as:

- pain

- guilt

- shame

- worthlessness

- ingratitude

- anger

3) <u>Did it make you think of anorexia nervosa in a different way? If so, how and in which parts of the exercise had this effect?</u>

I learned that anorexia is actually a reaction to intolerable emotional pressures and that the self-starvation is a destructive consequence of it. Not the other way round.

I realized that the psychological effects of starvation helped me to numb unbearable emotions. Starving me outright produced a feeling of detachment and emotional neutrality.

4) <u>Did you find it difficult to write? If so which parts?</u>

It was easy to state the facts, but very hard and painful to connect with the feeling. The consciousness of the severity of my disease was extremely painful.

5) <u>Any other comments you may have?</u>

None

APPENDIX 10: ETHICS APPROVAL LETTER

**UNIVERSITY OF
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18 January 2012

Ms A Antonakas (202514991)
School of Psychology

Dear Ms Antonakas

PROTOCOL REFERENCE NUMBER: HSS/0902/011D
PROJECT TITLE: Eat your heart out: A narrative to understanding anorexia nervosa[1]

FULL APPROVAL NOTIFICAITON – COMMITTEE REVIEWED PROTOCOL
This letter serves to notify you that your response in connection with the above study has now been granted full approval by the Social Sciences & Humanities Research Ethics Committee.

Any alteration/s to the approved research protocol I.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

Best wishes for the successful completion of your research protocol

Yours faithfully

Professor Steven Collings (Chair)
Social Sciences & Humanities Research Ethics Committee

cc Supervisor Professor D Wassenaar
cc Mrs B Jacobsen

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