School of Psychology
Ysgol Seicoleg

The relationship between shame, perfectionism and Anorexia Nervosa.

Thesis submitted in partial fulfilment of the requirement for the degree of:
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Supervised by: Dr John Fox & Dr Marc Williams

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Declaration

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Thesis summary

This thesis has been written in the format of three papers; a systematic review, an empirical paper and a critical reflection paper.

Paper one presents a systematic review into the relationship between subscales of perfectionism and Anorexia Nervosa.

Paper two presents a Grounded Theory study into the relationship between shame, perfectionism and Anorexia Nervosa.

Paper three presents a critical appraisal of the research process, and presents some personal reflections.

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Paper 1: Systematic Review

The relationship between subscales of perfectionism and Anorexia Nervosa: A systematic review

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Abstract

Background

Perfectionism has been consistently shown to be elevated in individuals with Anorexia Nervosa (AN). However, perfectionism is considered to be a multi-dimensional construct and it is not clear which dimensions of perfectionism are particularly related to AN. This review aims to assess which subscales of perfectionism are elevated in AN when compared to healthy controls (HC).

Method

A systematic review was conducted to summarise the findings of research that compared perfectionism scores of AN and HC. The quality of studies was appraised using the Appraisal tool for Cross-Sectional Studies (AXIS).

Results

Three databases for studies were searched and of the 1,393 papers retrieved, 16 met the inclusion criteria. The studies in this review found that Concern over Mistakes, Doubts about Action, Personal Standards, Parental Criticism and Self-Orientated Perfectionism are consistently elevated in individuals with AN. Other Orientated Perfectionism was not found to be related to AN, however there were only two studies looking at this domain. The results for Parental Expectations, Organisation and Socially Prescribed Perfectionism were less clear, with some studies showing elevated levels in people with AN and some studies finding no difference.

Conclusion

More research needs to be conducted into the subscales of perfectionism that are related to AN. Clinicians need to be more nuanced in their understanding of perfectionism in AN, to improve treatment.

Introduction

Anorexia Nervosa (AN) is an eating disorder characterised by persistent restriction of energy intake leading to significantly low body weight (DSM V, American Psychiatric association 2013). Other diagnostic criteria include an intense fear of gaining weight or becoming fat, and disturbance in the way one's body weight or shape is experienced (DSM V, American Psychiatric association 2013). AN is a serious condition with a high mortality rate (Arcelus et al. 2012), and NICE Guidelines (2004) state that AN has the highest mortality rate of any psychiatric disorder in adolescence (NICE guidelines 2004).

Perfectionism has been consistently found to be elevated in individuals with eating disorders when compared to healthy controls (HC) and when compared to other psychiatric conditions (Bardone-Cone 2007). Perfectionism has been defined as the setting of extremely high and demanding performance standards, which an individual strives for and bases their self-evaluation on (Lloyd et al 2014). Shafran, Cooper and Fairburn (2002) described a type of perfectionism termed 'clinical perfectionism' which they defined as "the overdependence of self-evaluation on the determined pursuit of personally demanding self-imposed standards in at least one highly salient domain despite adverse consequences". Shafran (2018) emphasises that the relentless pursuit of these high standards causes problems and results in significant distress to the individual. This type of perfectionism "involves basing your self-worth almost exclusively on how well these high standards are pursued and achieved" (Shafran 2018). This affects the individuals functioning and causes "practical difficulties and negative emotional consequences" (Shafran, Coughtrey & Kothari 2016).

The link between eating disorders and perfectionism has been so well established that perfectionism is included as an extra module in the extended version of CBT-E, which is the recommended treatment for eating disorders including AN (Fairburn 2008). While CBT-E concerns itself with the clinical levels of perfectionism described by Shafran et al. (2002), there are measures of

perfectionism that place it on a continuum. The two most commonly used perfectionism measures are the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al. 1990) and the Hewitt Multidimensional Perfectionism Scale (HMPS; Hewitt et al. 1991), which subdivide perfectionism into different domains. The FMPS looks at 6 dimensions of perfectionism which are; concern over mistakes (CM), doubts about action (DA), personal standards (PS), parental criticism (PC), parental expectations (PE) and organisation (O). The HMPS breaks perfectionism down into self-orientated perfectionism (SOP), socially prescribed perfectionism (SPP) and other orientated perfectionism (OOP).

The Childhood and Adolescent Perfectionism scale (CAPS, Flett et al. 2000) also breaks perfectionism down into self-orientated perfectionism and socially prescribed perfectionism, whereas the Perfectionistic Self-Presentation Scale (PSPS, Hewitt et al. 2003) – which is less commonly used - divides perfectionism into perfectionistic self-promotion, non-display of imperfection and nondisclosure of imperfection.

Given the prevalence of perfectionism in AN, it has been proposed both as a maintenance factor (Schmidt & Treasure 2006) and a risk factor for developing AN (Fairburn et al. 1999).

Aims of this review

Given that there are many dimensions of perfectionism, it is not clear which are most relevant to AN. There is now a body of literature that has looked at the relationship between some of these subscales of perfectionism and AN. However, the lack of consistency in how studies have operationalised perfectionism could be creating an unclear picture of the relationship between AN and perfectionism.

There has not been a systematic review that has looked at which of these subscales are relevant in AN. This systematic review looks at which of these subscales are related to AN, in the hope to provide information on which measures should be used in future research and which aspects of

perfectionism should be targeted in the treatment of AN. This review looks at studies that have reported scores on individual dimensions of perfectionism in people with AN and healthy controls (HC) to see which aspects of perfectionism are elevated in individuals with AN. The aims of the review are:

1. To assess the quality of the research into which subscales of perfectionism are related to AN.
2. To provide an outline of findings with respect to how scores on different perfectionism subtypes compare between AN and HC.
3. To consider directions for future research.

Methodology

Literature Search Strategy

A systematic search of peer-reviewed journal databases was conducted. The databases searched were PsychINFO, MEDLINE, and EMBASE up until October 2018. The PRISMA diagram details the process of appropriate paper identification (Figure 1).

The search terms were: “Perfection* AND Anorexia”, “Perfection* AND Eating disorders.”

These few search terms were used to ensure specificity, as only clinical samples were required. There is a large body of research looking at “disordered eating” or “eating difficulties” in a non-clinical population, however it was felt that by using these as terms the studies returned may not accurately reflect the relationship between perfectionism and AN as a clinical entity. In addition, “perfectionism” is a well-established term in psychology and it was reasoned that any studies using an established perfectionism questionnaire would be retrieved in a search of perfectionism.

Inclusion and Exclusion Criteria

Studies were perceived as eligible if they met the following inclusion criteria:

- Appeared in a peer reviewed journal.
- Used a clinical sample of participants with AN.
- Had a control condition with healthy participants with no diagnosed psychiatric problems, as measured by formal measures or clinician's judgement.
- Used an established reliable and valid questionnaire on perfectionism.
- Reported a comparison of subscale scores on the questionnaire measuring perfectionism of people with AN and HC.

Studies were excluded based on the following criteria:

- They used a generic eating disorders population and did not publish separate results for people with AN.
- They reported a composite perfectionism score but did report subscale scores.
- They did not include a HC group.
- All grey literature (e.g., unpublished dissertations and theses) was excluded.

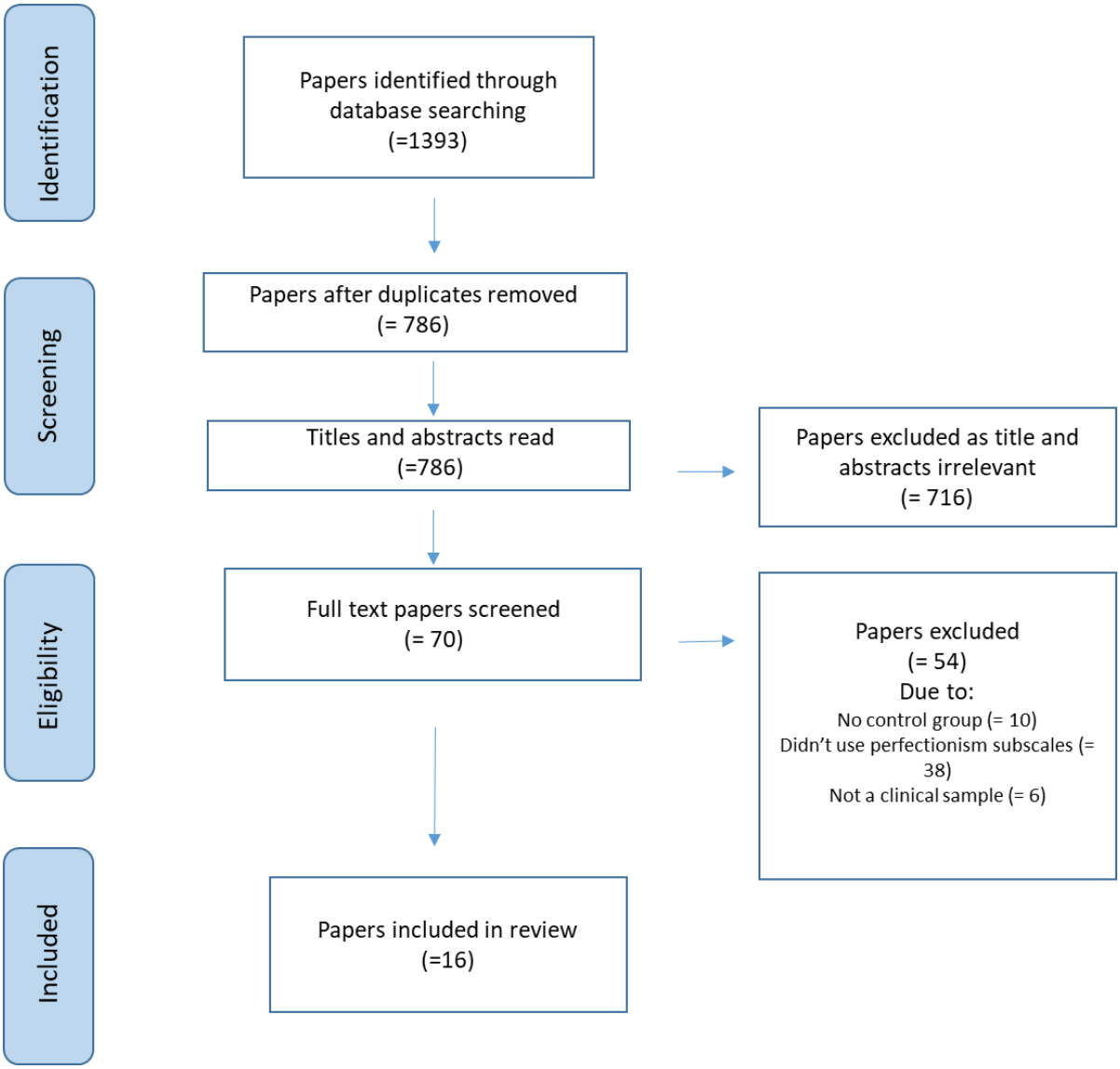

Figure 1: PRISMA diagram.

Assessment of Methodological Quality of Included Studies

The quality of studies was assessed using the Appraisal tool for Cross-Sectional Studies (AXIS) (Downes et al 2016). The AXIS was developed to appraise cross-sectional studies. It assessed the suitability of the study to answer the hypothesised question and the possibility of bias in the study. The AXIS has 20 questions which look at all areas of the study, including the aims and objectives of the study, the methodology, and the way the results are reported and interpreted. All questions are answered on a yes/no basis, allowing each paper to be scored out of twenty

Results

Overview of studies

There are 16 studies included in this review. All studies were of a cross-sectional design due to the nature of the review question. The studies took place across 9 countries; USA, Sweden, Belgium, Japan, Spain, Canada, UK, Germany and Australia. The sample size of individuals with AN ranged from 11-322, and ranged from 91.7% – 100% female, most studies having an entirely female AN sample. The mean age of the AN sample, where reported, ranged from 14.87 – 29 years, with most studies using an adult sample. The AN samples included inpatients, outpatients, attendees at a day hospital, twins on a registry and volunteers from an database.

Author (year)	Sample size and setting	Sex	Age	Location	Study Design	Perfectionism Measures	Results
Bastiani et al. (1994)	11 Underweight AN – inpatient unit 8 Restored body weight AN – inpatient unit 10 HC	100% female 100% female 100% female	Mean 23 Mean 25 Mean 25	Pittsburgh, USA	Cross sectional	HMPS – SOP SPP OOP FMPS – CM DA PS PC PE O	Underweight AN scored significantly higher than HC on SOP and SPP, but not OOP. Underweight AN scored significantly higher than HC on CM, DA, PS, PC and O but not PE.
Castro et al. (2004)	71 AN adolescents – some inpatient, some day hospital, some outpatients. 113 HC adolescents	100% female 100% female	Mean 15.3 Range 11-19 Mean 14.6 Range 11-19	Barcelona, Spain	Cross sectional	CAPS – SOP SPP	AN scored significantly higher than HC on SOP but not SPP.
Castro-Fornieles et al. (2007)	75 AN – inpatient unit 213 HC	100% female 100% female	Mean16.5 Mean 16.7	Spain	Cross sectional	CAPS – SOP SPP	AN scored significantly higher than HC and PC on SOP but not SPP

Cockell et al. (2002)	21 AN – inpatient and outpatient 21 HC – Hospital staff	100% female 100% female	Mean 29.0 Mean 28.7	Vancouver, Canada	Cross sectional	HMPS – SOP SPP OOP PSPS – Promote Disclose Display	AN scored significantly higher than HC on SOP and SPP but not OOP. AN scored significantly higher than HC on promote, disclose and display.
Davies et al. (2009)	30 AN – SLAM ED volunteer database 51 HC – adverts in libraries, leisure centres, supermarkets.	100% female 100% female	Mean 26.8 Mean 29.4	London, UK	Cross sectional	FMPS – CM PS PE DA O	AN scored significantly higher than HC in CM, DA, PS, PE and O.
Halmi et al. (2000)	146 Restricting AN (RAN) 116 Purging AN (PAN) 60 Binge eating and purging AN (BAN) All AN clinic and advertising 44 HC	100% female 100% female 100% female 100% female	 Mean 28.2 Range 14-65 Mean 26.1 Range 17-41	UK, Germany and USA	Cross sectional	FMPS – CM DA PS PC PE O	All AN subtypes scored significantly higher than HC on CM, DA, PS, PC and PE. RAN scored significantly higher than HC on O. RAN scored significantly higher than PAN on PC.

Hartmann et al. (2014)	24 AN – clinic and advertising 22 HC – commercial mailing list (from another study)	91.7 % female 68.2% female	Mean 25.8 Mean 29.05	Germany	Cross sectional	FMPS – CM DA PS PC PE O	AN scored significantly higher than HC on CM, DA, PS, PC and PE, but not O.
Kerr, Watkins & Jones (2016)	30 AN – outpatients 113 HC – from Castro et all 2004	100% female 100% female	Mean 14.87 Range 11-18 Mean 14.6 Range 11-19	UK	Cross sectional	CAPS – SOP SPP	AN scored significantly higher on SOP and SPP than HC
Lloyd et al. (2014)	81 AN – specialist services, mental health charities and self-help groups 72 HC – university circulars, online forums, adverts and schools.	Not reported	Mean 21.14 Mean 19.54	London, UK	Cross sectional	FMPS – CM DA PS	AN scored significantly higher than HC on CM, DA and PS.

Ochi et al (2007)	101 AN - outpatient clinic 130 HC	100% female 81% female	Mean 23.0 Mean 26.2	Osaka, Japan	Cross sectional	FMPS – CM DA PS PC PE O	AN scored significantly higher than HC on CM, DA, PS, PC and PE, but not O.
Pieters et al. (2006)	17 AN – inpatient unit 19 HC	Not reported	Mean 20.2 Mean 20.5	Kortenberg, Belgium	Cross sectional	FMPS –CM DA PS PC PE O	AN scored significantly higher than HC on CM, DA, PS, PC and O, but not PE.
Soenens et al. (2008)	37 RAN – inpatient unit 85 HC - students	100% female 100% female	Mean 19.92 Range 15-35 Mean 19.0 Range 17-25	Belgium	Cross sectional	FMPS – PS	AN scored significantly higher than BN on PS, and BN scored significantly higher than HC.

Sutander-Pinnock et al (2002)	73 AN – inpatient unit 44 HC – students	97% female 100% female	Mean 27.2	Toronto, Canada	Cross sectional	FMPS – CM DA PS PC PE	Poor outcome AN group scored significantly higher on CM, DA, PS, PC and PE. Good outcome group scored significantly higher than HC on CM, DA, PS and PC, but not PE. There were no statistical differences between good outcome and poor outcome group on any subscale.
Thornton et al. (2017)	22 twin pairs – from population based study and Swedish twin registry	100% female	Mean 31.7	Sweden	Cross sectional	FMPS – CM DA PS	AN scored significantly higher on CM, DA and PS than their unaffected twin.
Vall & Wade (2015)	28 AN – inpatient unit 181 HC – students	100% female 100% female	Mean 25.96 Mean 19.25	Adelaide, Australia	Cross sectional	FMPS – CM PS	AN scored significantly higher than HC on CM and PS.
Wade et al. (2008)	43 twin pairs – Australia twin registry	100% female	Mean 17 Range 13-24	Australia	Cross sectional	FMPS – CM DA PS O	AN twin scored significantly higher on CM, DA, PS and O.

Table 1. Included studies' sample characteristics, study design, perfectionism measures, and results.

Quality appraisal

All included studies were categorised as good on the AXIS in terms of their quality, as they scored at least 16 out of 20.

All studies had clear aims and objectives and all studies used an appropriate design for the stated aims. None of the studies justified their sample size.

All studies clearly defined their target population which was people with a clinical diagnosis of AN, however this was measured differently amongst studies. Some studies recruited participants from clinics who had a diagnosis of AN, however they did not use any measures to recheck the diagnosis at the time of data collection (Castro et al. 2004, Kerr, Watkins & Jones 2016, Soenens et al. 2008, Pieters et al. 2006). Some papers used the DSM criteria to assess for AN (Castro – Fornieles et al. 2007, Davies et al. 2009, Halmi et al. 2000, Hartmann et a; 2014, Lloyd et al. 2014, Ochi et al 2007, Pieters et al. 2006, Vall & Wade). Cockell et al. 2002 used the Eating Disorders Examination (EDE-Q) to assess for AN. Bastiani et al. (1994) used participants from an inpatient ward with a diagnosis of AN, and used the Eating disorders Inventory and body weight to confirm AN status. Thornton et al. (2017) used a self-report questionnaire based on the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (SCID). Wade et al. (2008) used a telephone interview which combined questions from the DSM and EDE-Q to determine eating disorder status. Sutandar-Pinnock et al. (2002) used participants who had been discharged from a clinic after an admission for AN. They categorised people as poor outcome or good outcome based on whether they currently met clinical criteria for AN based on their EDI scores. For the purpose of this review the participants they classed as “poor outcome” were used as the clinical participants due to them meeting diagnostic criteria for AN.

It was felt that all studies recruited participants from an appropriate population base that closely represented the target population.

Thirteen studies used selection processes that were likely to select participants that were representative of the target population. The three studies that did not (Cockell et al. 2002, Ochi et al. 2007 & Soenens et al. 2008) recruited participants from a single clinic.

Only seven studies undertook measures to address and categorise non-responders (Bastiani et al. 1994, Castro-Fornieles et al. 2007, Kerr Watkins & Jones 2016, Pieters et al. 2006, Sutandar-Pinnock et al. 2002, Thornton et al. 2017, & Vall & Wade 2015), this was the one of the most common weaknesses amongst studies.

All studies used outcome variables that were deemed appropriate to the aims of the study. All studies used established perfectionism measures as this was part of the inclusion criteria. All studies made it clear what was used to demonstrate statistical significance. All studies described their methods sufficiently so that they could be repeated. All studies described their data adequately in ways that was clear and made sense.

Three studies had a response rate that raised concerns about non-response bias (Cockell et al. 2002, Thornton et al. 2017 & Wade et al 2008).

Seven studies provided information on non-responders (Bastiani et al. 1994, Castro-Fornieles et al. 2007, Kerr Watkins & Jones 2016, Pieters et al. 2006, Sutandar-Pinnock et al. 2002, Thornton et al. 2017, & Vall & Wade 2015) but the other nine did not.

All studies reported results that were internally consistent. All studies presented the results of all the analyses reported in the methods. All of the studies' discussions and conclusions were felt to be justified by the results presented.

Fourteen papers discussed the limitations of their study. Two did not (Bastiani et al. 1994 & Sutandar-Pinnock et al. 2002).

No studies reported funding sources or conflict of interest that may affect the authors' interpretations of the results.

Fifteen studies reported on ethical approval and consent of participants being attained. One paper (Bastiani et al. 1994) did not report on whether ethical approval or informed consent was obtained; while this does not necessarily mean that ethical approval and consent were not obtained, without any report either way the paper could not be considered to meet this item.

All studies were considered to be of good enough quality to include in the review.

Summary of results

Concern over mistakes

The concern over mistakes domain is in the FMPS and has been defined as "negative reactions to mistakes, a tendency to interpret mistakes as equivalent to failure, and a tendency to believe that one will lose the respect of others following failure" (Frost et al. 1990).

Eleven of the studies included the concern over mistakes (CM) domain (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Sutandar-Pinnock et al. 2002, Thornton et al. 2017, Vall & Wade 2015, Wade et al. 2008). All studies showed an elevation in CM in people with AN. Thornton et al. (2017) and Wade et al. (2008) found higher levels of CM in people with AN when compared to their unaffected twin. The other nine studies (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Sutandar-Pinnock et al. 2002, Vall & Wade 2015) showed significantly higher scores on CM in their AN sample than those of HC.

Doubts about actions

The doubts about actions domain is in the FMPS and has been defined as "The tendency to feel that projects are not completed to satisfaction" (Frost et al. 1990).

Ten studies reported on the doubts about actions (DA) domain (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006,

Sutandar-Pinnock et al. 2002, Thornton et al. 2017, Wade et al. 2008). All studies showed elevated DA in people with AN. Thornton et al. (2017) and Wade et al. (2008) found higher levels of DA in people with AN when compared to their unaffected twin. The other eight studies (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Sutandar-Pinnock et al. 2002) showed significant higher scores on DA for those with AN compared with HC.

Personal standards

The personal standards domain is in the FMPS and has been defined as "setting of very high standards and the excessive importance placed on these high standards for self-evaluation" (Frost et al. 1990).

Twelve studies included the personal standards (PS) domain (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Soenens et al. 2008, Sutandar-Pinnock et al. 2002, Thornton et al. 2017, Vall & Wade 2015, Wade et al. 2008). All studies showed elevated PS in people with AN. Thornton et al. (2017) and Wade et al. (2008) found higher levels of PS in people with AN when compared to their unaffected twin. The other 10 studies (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Lloyd et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Soenens et al. 2008, Sutandar-Pinnock et al. 2002, Vall & Wade 2015) found significantly higher scores on PS in those with AN compared to HC.

Parental criticism

The parental criticism domain is in the FMPS and has been defined as "the tendency to believe that one's parents are overly critical" (Frost et al. 1990).

Six studies looked at the parental criticism (PC) domain (Bastiani et al. 1994, Halmi et al. 2000, Hartman et al 2014, Ochi et al 2007, Pieters et al. 2006, Sutandar-Pinnock et al. 2002). All studies showed elevated PC in people with AN. All six studies showed significantly higher scores on PC in

those with AN compared to HC. Halmi et al. 2008, found that people with AN who were categorised as a “restricting” subtype on the DSM-IV scored significantly higher on PC than a “purging” subtype.

Parental expectations

The parental expectations domain is in the FMPS and has been defined as “the tendency to believe that one's parents set very high goals” (Frost et al. 1990).

Seven studies looked at the parental expectations (PE) domain (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Sutandar-Pinnock et al. 2002). There have been mixed results on AN scores of PE. Five studies found significantly higher scores on PE in those with AN compared to HC (Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Ochi et al. 2007, Sutandar-Pinnock et al. 2002). Two studies found no difference between AN scores on PE and those of HC (Bastiani et al. 1994, Pieters et al. 2006).

Organisation

The organisation domain is in the FMPS and has been defined as “the tendency to feel that projects are not completed to satisfaction” (Frost et al. 1990).

Seven studies looked at the organisation (O) domain (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Hartman et al. 2014, Ochi et al. 2007, Pieters et al. 2006, Wade et al. 2008). There were mixed results on AN scores of O. Wade et al. 2008, found higher levels of O in people with AN when compared to their unaffected twin. A further four studies found significantly higher scores on O in those with AN compared to HC (Bastiani et al. 1994, Davies et al. 2009, Halmi et al. 2000, Pieters et al. 2006). Halmi et al. (2000) found significant higher O scores than HC in those they categorised as a “restricting” subtype of AN. They found no differences between HC scores on O and those they categorised as either a “purging” subtype or “binging and purging subtype” of AN. Hartmann et al. (2014) did not find a difference between AN and HC scores on O.

Self-orientated perfectionism (SOP), socially prescribed perfectionism (SPP) and other orientated perfectionism (OPP)

These domains are covered by the CAPS, HMPS and the IBM. Three studies used the CAPS to measure SOP and SPP (Castro et al. 2004, Castro-Fornieles et al. 2007 and Kerr, Watkins & Jones 2016). Two studies used the HMPS to measure SOP, SPP and OPP. (Bastiani et al. 1994, Cockell et al. 2007).

Self-orientated perfectionism

SOP has been defined as "critical self- scrutiny, unrealistic self- imposed personal standards, and requiring perfectionism of oneself" (Castro-Fornieles et al. 2007).

Five studies looked at SOP (Bastiani et al. 1994, Castro et al. 2004, Castro-Fornieles et al. 2007, Cockell et al. 2007, Kerr, Watkins & Jones 2016). All studies found elevated levels of SOP in people with AN when compared with HC.

Socially prescribed perfectionism

SPP has been defined as "perceiving that others are demanding perfection of oneself and the need to achieve standards and goals indicated by others" (Castro-Fornieles et al. 2007).

Five studies included the SPP domain (Bastiani et al. 1994, Castro et al. 2004, Castro-Fornieles et al. 2007, Cockell et al. 2007, Kerr, Watkins & Jones 2016). The results for SPP were mixed. Three studies found significantly higher levels of SPP in AN than in HC (Bastiani et al. 1994, Cockell et al. 2007, Kerr, Watkins & Jones 2016). The other two studies (Castro et al. 2004, Castro-Fornieles et al. 2007) did not find any differences between AN and HC on SPP.

Other orientated perfectionism

OOP has been defined as "setting unrealistic expectations for and stringent evaluation of others" (Cockell et al. 2002).

Two studies looked at OOP (Bastiani et al. 1994, Cockell et al. 2007). Neither study showed elevated OOP in AN when compared with controls.

Perfectionistic self-promotion, non-display of imperfection and non-disclosure of imperfection

Perfectionistic self-promotion, non-display of imperfection and non-disclosure of imperfection are domains in the PSPS. Only one study looked at the PSPS (Cockell et al. 2007). They found AN scored significantly higher than HC on all three domains.

Discussion

It is already well established that people with AN show elevated levels of perfectionism. Many studies use multi-dimensional tools to assess perfectionism, but often only report participants' total score. This systematic review aimed to; assess the quality of the research into which subscales of perfectionism are related to AN, provide an outline of the principal findings in this area and to consider directions for future research.

Quality of studies

All studies in this review used a cross sectional design, so the AXIS was used to measure the quality of the studies and these were all found to be good. The main methodological weaknesses were not justifying the sample size, not mentioning non-responders rates and not providing any information of non-responders in the results.

Relationship between subscales of perfectionism and AN

The studies in this review found that CM, DA, PS, PC and SOP are consistently elevated in individuals with AN. OOP was not found to be related to AN, however there were only two studies looking at this domain. The results for PE, O and SPP were less clear, with some studies showing elevated levels in people with AN and some studies finding no difference to controls.

With regards to PE, five studies showed a difference between AN and HC and two did not. Wade et al. (2007) found that unaffected twins of people with AN reported more parental conflict and control than the affected AN sibling, which they suggested may reflect a tendency for AN twins to understate discord in the family. Although they did not relate this to PE, there is a possibility that people with AN under report parental characteristics in general, which could account for the inconsistency with which a significant finding for PE was found. However, this does not explain why some studies found differences in PE and some did not. The two studies that did not find differences in PE (Bastiani et al. 1994 and Pieters et al. 2007) had smaller sample sizes than the studies that did find a difference. Therefore, they may not have had enough power to detect between group differences on this domain. Four of the studies that found a significant result used the DSM-IV to determine AN status (Davies et al. 2009, Halmi et al. 2000, Hartmann et al. 2014 & Ochi et al. 2007), and the other used the EDI. One of the studies that did not find a significant difference in AN and HC on PE did not check AN status of their participants (Pieters et al. 2006), which may explain the discrepancy, as their participants may not have met diagnostic criteria at the time of assessment. However, Bastiani et al. (1994) also failed to find a significant difference between AN and HC on PE and they used the EDI and weight to confirm AN status.

The authors of the FMPS reported that O was only marginally related to the overall perfectionism score and the other subscales (Frost et al. 1990) and therefore they concluded that it was not a core component of perfectionism. This has led to many studies not including the O subscale. However, five studies in this review found that O was elevated in AN. Only one study found no differences in O

when comparing HC and AN. Halmi et al. 2000, found significant differences on O scores between HC and those they categorised as a "restricting" subtype of AN. However, they found no differences between HC scores on O and those they categorised as either a "purging" subtype or "binging and purging subtype" of AN. This may suggest a more nuanced relationship between O and AN. No other studies divided their AN sample in to these subtypes so this may explain the discrepancy.

SPP was found to be elevated in AN in three studies, but not in two studies. Castro-Fornieles et al. (2007) did not find differences in AN and HC on SPP, and they excluded participants who had had AN for longer than a year as they wanted a sample who were less influenced by the chronicity of the disorder. It may be that SPP occurs after the onset of AN, when people have had AN for some time. They may perceive others as more demanding and pushing them to achieve goals as people try to encourage them to put on weight or seek treatment for their AN. However, the other study that did not find a significant difference between AN and HC (Castro et al. 2004) included a range of participants who were at various different periods of their treatment, some were inpatients, some attended the day hospital and some were outpatients, so it is likely some of these had had AN for some time. However, the authors do note that although all participants were diagnosed with AN they may not necessarily have met diagnostic criteria when they completed the measures as they did not assess this. Therefore, it is unknown what proportion of the sample actually met criteria for AN at the time of the study. It is possible that SPP only affects people when they currently meet diagnostic criteria for AN, this may be because they feel judged by others for having AN and looking underweight. Both of these hypotheses seem plausible and are not necessarily incompatible, it is possible that people with AN only perceive other people as demanding perfectionism when they are currently underweight (and when people may be putting more pressure on them to gain weight) and after they have had AN for a period longer than a year, as they may have received more demands and goals placed upon them over this time. Further research would need to be conducted to test both of these hypotheses.

Amongst the studies that did find a difference on SPP between AN and HC, one study included inpatients (Bastiani et al. 1994), one included outpatients (Kerr, Watkins and Jones 2016) and one included both inpatients and outpatients (Cockell et al. 2002) so it doesn't seem that this can account for the discrepancy between the studies reporting a significant finding in relating to SPP and those reporting a non-significant finding. The two studies that did not find elevated SPP in AN used the CAPS to measure SPP. Two of the three studies that did find elevated levels used Hewitt's MPS to measure SPP. This is because of the different ages of the samples as the CAPS is used for children and adolescents, whereas the Hewitt MPS is used with adult samples, it also may suggest that the questionnaires may be measuring slightly different things. However, Kerr, Watkins and Jones (2016) also used the CAPS with children and adolescents to measure SPP and did find elevated scores in AN compared to HC, so it doesn't appear that this discrepancy can be accounted for by the age of the participants.

Limitations of this review

The identified inclusion/exclusion criteria may have limited the extent of the review. The requirement to have a healthy control group was applied so direct comparisons could be made, however this meant that some studies with data on AN scores on the subscales of perfectionism had to be excluded. Studies that only included comparisons with other psychiatric population had to be excluded. Exclusion criteria also limited the search to papers that were published in English, this condition needed to be applied for practical reasons, however it may be that important research conducted in countries whose primary language is not English was missed. The review does include some papers from countries where English is not the primary language, such as Belgium, Sweden and Japan, however it cannot be denied that there may have been more research from these and other countries which has not been translated. Research has shown there are cultural differences in eating disorders (Miller & Pumariega 2001) so only including English studies may bias the results.

The AXIS tool, while providing a helpful checklist for assessing study quality, does not provide a set of categories for judging quality as low, medium, or high. This makes a judgement of quality very subjective, where 16/20 was deemed by the author to constitute 'good' quality. It also results in a lack of fine-tuned analysis of quality ratings. As a result, studies in this review did not weigh more heavily than others in terms of how much their results could be relied upon. In future, it might be beneficial to pre-specify certain items within the AXIS tool that are deemed 'critical' items for the purposes of quality with respect to the area under investigation, which would perhaps allow for a more nuanced assessment of paper quality and, therefore, reliability of their findings.

All of the studies in this review were of a cross sectional design which limits the quality of the research. It is not possible to make any conclusions about the direction of the relationship between perfectionism and AN. Due to the relatively low rates of AN in the general population longitudinal studies are rare. Longitudinal studies that have been conducted often use "disordered eating" rather than clinically significant AN (e.g. Soares et al. 2009). Other longitudinal studies begin at the point of diagnosis of AN and therefore do not provide any information on the onset of AN (e.g. Nilsson, Sundbom, E. & Hägglöf, B. 2008).

In addition, the majority of participants in these studies are female, which means that the findings may not extend to male populations. More research needs to be carried out on men with AN as it is now estimated that men account for 10% of people with AN (Weltzin et al. 2005).

Clinical Implications

Clinicians need to be more nuanced in their understanding of perfectionism, so different interventions can be developed that address these different aspects of perfectionism. If we are to develop more effective treatments for AN we need to know which areas of perfectionism to target. The discrepancies in these domains have led to researchers making very different conclusions about

the aetiology and treatment for AN. Bastiani et al. (1994) concluded that as there were no differences on the PE domain, perfectionism in AN is entirely self-imposed, whereas Hartman et al. (2014) state that a combination of PE and PC may be involved in the aetiology of AN.

Treatment for AN may not be targeting the most relevant areas of perfectionism. The perfectionism module in CBT-E addresses "clinical perfectionism" but does not specifically target CM or DA which have consistently been shown to be related to AN. More specific treatments may need to be developed that target the multiple dimensions of perfectionism that are elevated in AN.

Castro-Fornieles et al. (2007) conclude that eating disorder treatment should include a focus on SOP to the exclusion of other subtypes. However, this may miss an important part of perfectionism. If the hypothesis above is correct and people with AN only experience SPP when they are underweight, and the SPP is related to their AN, then this may not be a problem. However, this may not be the case, and SPP may play an important part in the aetiology and maintenance of AN. There is a lot of pressure in Western society to look a certain way and to be thin (Calogero, Boroughs & Thompson 2007), and if people with AN are more influenced by these messages for example, then not addressing their SPP may be problematic.

There is a high relapse rate in AN, and Berends et al. (2016) estimate it to be between 35-41%. Studies have also found that people who have had AN continue to show elevated levels of perfectionism even when they have regained weight and do not meet diagnostic criteria for AN (Bastiani et al. 1994, Sutandar-Pinnock et al. 2003). This untreated perfectionism may partly explain the high relapse rates.

Research implications

More research needs to be conducted to determine whether SPP, O and PE are related to AN. If studies assume these aspects of perfectionism are not important and do not include them then we may be overlooking important aspects of AN. It is suggested that researchers use all subscales on the FMPS and also include measures on SOP and SPP.

Future research should address the issues raised in this review about the quality of some of the studies. Ideally studies would only include people who have received a professional diagnosis of AN as this is more likely to be accurate, and ideally researchers would clarify this diagnosis at the beginning of the study to ensure participants still meet diagnostic criteria. In addition, researchers should make every effort to report on non-responders as this may tell us something further about their sample.

If new treatments are developed that do not include aspects of perfectionism that are relevant to AN, then much time and effort may be misspent researching ineffective treatments.

As mentioned above, ideally more longitudinal studies should be carried out. And also, more studies which include males with AN.

This review limited comparisons to HC. It may be beneficial to conduct a review comparing AN perfectionism sub scores with other psychiatric populations, to see if these elevated perfectionism scores are specific to AN.

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Paper 2: Empirical Paper

The relationship between shame, perfectionism and Anorexia Nervosa: A Grounded Theory study

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Word count: 7640

Abstract

Objectives: The aim of this study was to explore the potential relationship between shame, perfectionism and Anorexia Nervosa (AN) and their impact on recovery from AN.

Method: Semi-structured interviews were conducted with 11 people currently accessing services for AN. Interviews were transcribed and analysed using constructivist grounded theory methodology.

Results: A model was developed which found a vicious cycle between shame and perfectionism. Participants tried to alleviate their feelings of shame by striving for perfectionism, however failing caused them more shame.

Participants who disclosed childhood trauma believed their shame preceded their perfectionism. Participants who did not disclose trauma either believed their perfectionism preceded shame or they were unsure of which occurred first.

The pathways from perfectionism to AN were; needing goals, the need for a perfect life including a perfect body and AN being something they could be perfect at. The AN fed back into the perfectionism with people striving to be the "perfect anorexic". The pathways from shame to AN were; seeking pride, body shame, wanting to numb shame and punishing the self. AN fed back into the shame in two ways, when people had AN they felt ashamed when they broke their dietary rules, and also simultaneously people felt ashamed of their AN as they were not able to recover.

Shame and perfectionism influenced recovery in several ways. AN numbed the emotions of participants and became part of their identity. AN also brought respite from a constant striving towards perfectionism. The need for a perfect recovery also influenced their motivation to engage in treatment.

Conclusion: The findings of this paper show perfectionism and shame to both be important in the aetiology and maintenance of AN and to have an impact on recovery from AN.

Introduction

Anorexia nervosa (AN) is an eating disorder characterised by restriction of food intake leading to a significantly low weight, as indexed by a BMI of less than 17.5 (Diagnostic and Statistical Manual of Mental Disorders 5; DSM-V, 2013). Treatments for AN are only partially effective, with a review finding recovery in less than half of patients receiving treatment (Steinhausen, 2002). Zeeck et al. (2018) completed a systematic review of psychological treatments of AN and found that no one psychological treatment showed superiority over any other. The authors note that there are no studies on AN that have an untreated control group for ethical reasons, due to the high mortality rate, physical risks of the disorder and the danger of a chronic course, leading to the recommendation to treat AN as early as possible. This makes it difficult to establish the true efficacy of psychological treatments.

CBT-AN (Fairburn, 2008) considers the core feature of AN to be overevaluation of weight and shape, and the treatment therefore focuses therapists' efforts on addressing this element of a patient's presentation. There are other processes thought to maintain AN in some cases, including clinical perfectionism, which comprises an optional treatment module in Fairburn's treatment manual.

Relapse rates in AN are high, Berends et al. (2016) report that relapse rates vary from 6-57%, depending on the definition of relapse, the length of follow-up and the methodology used. The authors cite three similar studies with an 18 month follow up period that found relapse rates to be between 35-41% (Carter et al. 2004, Carter et al. 2012 & McFarlane et al. 2008).

These figures strongly suggest the need to develop further treatments for AN. Emotions and related processes have been seen as pivotal in eating disorders (Fox and Power 2009). These include shame and perfectionism.

Perfectionism

Shafran, Cooper and Fairburn (2002) defined clinical perfectionism as "the overdependence of self-evaluation on the determined pursuit of personally demanding self-imposed standards in at least one highly salient domain despite adverse consequences" (pg 778).

Perfectionism has consistently been shown to be elevated in individuals with AN compared to healthy controls and when compared to other psychiatric conditions (Bardone-Cone et al 2007.) Pieters et al. (2007) found that people with AN scored significantly higher than healthy controls on all items of the Frost Multi-dimensional Perfectionism Scale (FMPS, Frost et al 1990). There is evidence to suggest that perfectionism may be a causal factor in eating disorders, particularly AN. For example, Fairburn, Cooper, Doll, and Welch (1999) found that individuals with AN had higher rates of childhood perfectionism than healthy control's and psychiatric controls. Most studies in this area measure perfectionism retrospectively so there is a potential bias of recall, however longitudinal studies are rare and difficult to carry out due to low incidences of AN.

Shame

Self-conscious emotions, such as shame have also been proposed to be highly involved in eating disorders (Goss & Allan 2009). Shame is generally accepted to be a multifaceted experience. Gilbert's (2002) definition of shame which is widely accepted includes five components which are; a social or external cognitive component (thoughts that others are looking down on the self with a condemning or contemptuous view), an internal self-evaluative component (a global negative self-evaluation and internally shaming thoughts), an emotional component (including anxiety, anger disgust in the self and self-contempt), a behavioural component (often defensive behaviours such as a strong urge to not be seen, to avoid exposure or to run away), and a physiological component (involving heightened parasympathetic activity).

Researchers have described different subtypes of shame. Gilbert et al (1998) have made a distinction between internal and external shame. According to the authors, internal shame originates inside the self, and involves self-generated criticism and negative self-evaluation. Grabhorn et al. (2006) found that people with AN had higher levels of internal shame than patients with anxiety and depression. By contrast, external shame, originates outside the self and involves a distressing belief that others view the self negatively. Troop et al. (2008) found that external shame was related to severity of symptoms in AN.

There has also been research on body shame which has been proposed to be a causal factor in AN (Gilbert 2002). Troop and Redshaw (2012) conducted a rare longitudinal study and found that body shame predicted an increase in anorexic symptoms at a two and a half year follow up.

A review by Blythin et al. (2018) proposed that shame may be implicated in the onset of eating disorder presentations, as the eating disorder behaviours may be attempts to regulate negative affect and avoid negative feelings towards the self. Alternatively, the review proposes that shame could be a product rather than the cause of eating disorders. Unfortunately, there was a lack of longitudinal data so it was not possible to distinguish between these two explanations.

A qualitative descriptive study found that people with AN experienced shame as both a cause and a consequence of their eating disorder and thus created a shame-shame cycle (Skårderud, 2007). Participants in the study experienced globalised internal shame.

Aims of the study

Studies have consistently found both perfectionism and shame to be relevant in the development and maintenance of eating disorders, including AN. However, these constructs have always been considered separately when contemplating their role in AN. This study aims to explore the potential relationship between shame, perfection and AN using a Grounded Theory approach. It also aims to look at the impact of shame and perfectionism on recovery from AN.

Method

A constructivist grounded theory methodology was employed (Charmaz 2006). Grounded theory was chosen as the authors wanted to go beyond description and generate a theory about the relationship between shame, perfection and anorexia nervosa. Constructivist grounded theory was chosen as it fit with the first authors view that social reality is multiple, processual and constructed. This method takes the view that theories emerging from the research are constructed rather than discovered, and that the researcher's own views, experiences and ideas will influence the construction of these theories, sometimes in ways we cannot be aware of. This method encourages the researcher to hold in mind their part in the construction and encourages reflexivity about their actions and decisions.

Recruitment

The study received full NHS ethical approval and local R&D approval in four health boards in Wales. Participants were recruited from community mental health teams in these health boards. Ethics procedures were followed to ensure informed consent was obtained. Signed informed consent was taken prior to the interview.

Participants completed the Eating Disorder Examination questionnaire (EDE-Q 6.0) (Fairburn and Beglin 2008) and a demographics questionnaire immediately prior to the interview. Participants BMI was calculated from self-report data in the EDE-Q.

Inclusion criteria were as follows:

- Individuals aged 18 years of age or older
- People currently accessing community eating disorders service.
- People with a diagnosis of Anorexia nervosa
- Sufficiently fluent in English to be able to complete an interview for approximately one hour.

Exclusion criteria were as follows

- Those who did not have capacity to consent.
- Those who were deemed as too ill or too at risk by their clinical team.

Participants

Eleven women participated in the study. They were aged between 20 and 41 (mean 27.18 years). Ten participants were of White British origin and one was of white American origin. The age of onset of their AN ranged from 11 to 23 (mean 16.18 years). Participants BMI ranged from 15.4 to 17.5 (mean 16.65) with all participants BMI being 17.5 or under. Their education ranged from completing GCSE's to having a master's degree.

Table 1. Participant characteristics

Participant	Age	Age at onset of AN	Duration of AN	Highest level of education achieved	Marital Status	BMI	EDE-Q global score
1	25	23	2 years	Master's degree	Single	17	0.925
2	41	15	26 years	GCSEs	Married	16.5	5.5
3	37	12	25 years	Bachelor's degree	Single	16.7	4.82
4	22	15	7 years	1st year of university	Single	17.5	4.65
5	30	11	19 years	A levels	Single	17.5	6
6	20	16	4 years	A levels	Single	16	3.15
7	24	20	4 years	Bachelor's degree	Single	15.4	1.87
8	25	17	8 years	A levels	Single	15.6	4.91
9	22	15	7 years	Certificate of higher education	Single	17.5	3.95
10	22	15	7 years	A levels	Single	16.6	5.15
11	31	19	12 years	Degree	Single	16.9	6

Interview schedule

The interview schedule was developed by the research team after consultation with the relevant literature. The interview schedule had five sections; initial questions about AN, perfectionism, shame, comparison to others and ending questions. In these sections there were several prompts to elicit information from participants relevant to these areas. These questions were used as a guide and interviews were semi-structured, the interviewer was led by the participant and would ask follow-up questions based on the participants responses. In line with grounded theory the interview schedule was revised after 4 interviews, with more emphasis on childhood experiences and the origins of shame and perfectionism. Interviews lasted between 38.8 and 69.9 minutes (mean 52.95 minutes).

Data analysis

Six of the transcripts were completed by the first author and the remaining five were undertaken by a professional transcriber who ensured confidentiality of data. The data was analysed in line with constructivist grounded theory methods (Charmaz 2014). The data was initially coded on a line-by-line basis, this initial coding aimed to define what was happening in the data and to begin constructing ideas about what it means. The codes aimed to stay as close to the data as possible. The codes cannot be assumed to capture an empirical reality but instead represent the authors understanding of the what was happening. Attention was paid to actions and processes rather than themes and structure. Throughout the analysis attention was paid to searching for variation in the studied processes. The next stage of analysis was focused coding which involved studying and assessing the initial codes and making comparisons between them. This process of comparison allowed the author to consider what promising tentative categories were emerging. Again, this process was influenced by how the author interpreted the codes meanings. . During the coding process the author kept memos about the data and the concepts that were emerging. These emerging categories were then developed into an explanatory framework.

Reliability and validity

Guidelines produced by Elliot et al. (1999) were followed to ensure the quality of the study. The first author owned her own perspective and ensured that the emerging theory was grounded in the data. Credibility was ensured by the coding being discussed with both supervisors. In addition, one full transcript was sent to an independent rater with experience in qualitative methods to check the coding. The rater agreed with the first author on the majority of codes and where there was disagreement this was discussed and resolved. A sample of focused coding was sent to this same rater and there was agreement on all focused codes. Analysis, emerging themes and the developing model were discussed closely in supervision. The first author kept a reflective journal throughout the process.

Reflexivity

The first author (TH) is a 32-year old white, British trainee clinical psychologist. She does not have any personal experience of eating disorders and has not worked in specific eating disorders services. She has worked with adults who have experienced eating disorders and has worked with people with a history of trauma. The second author (MW) is a qualified clinical psychologist. He has worked in eating disorder services. The third author (DW) is also a qualified clinical psychologist and is currently working in eating disorder services and has done for a number of years. The fourth author (JF) is a qualified clinical psychologist who has extensive experience both working in eating disorder services and conducting research into eating disorders. He has conducted a number of studies using grounded theory methodology.

Results

An explanatory framework of the relationship between shame, pride and anorexia, and their effects on recovery was developed. Figure 1 provides a diagrammatic representation of the theory and the relationship between categories.

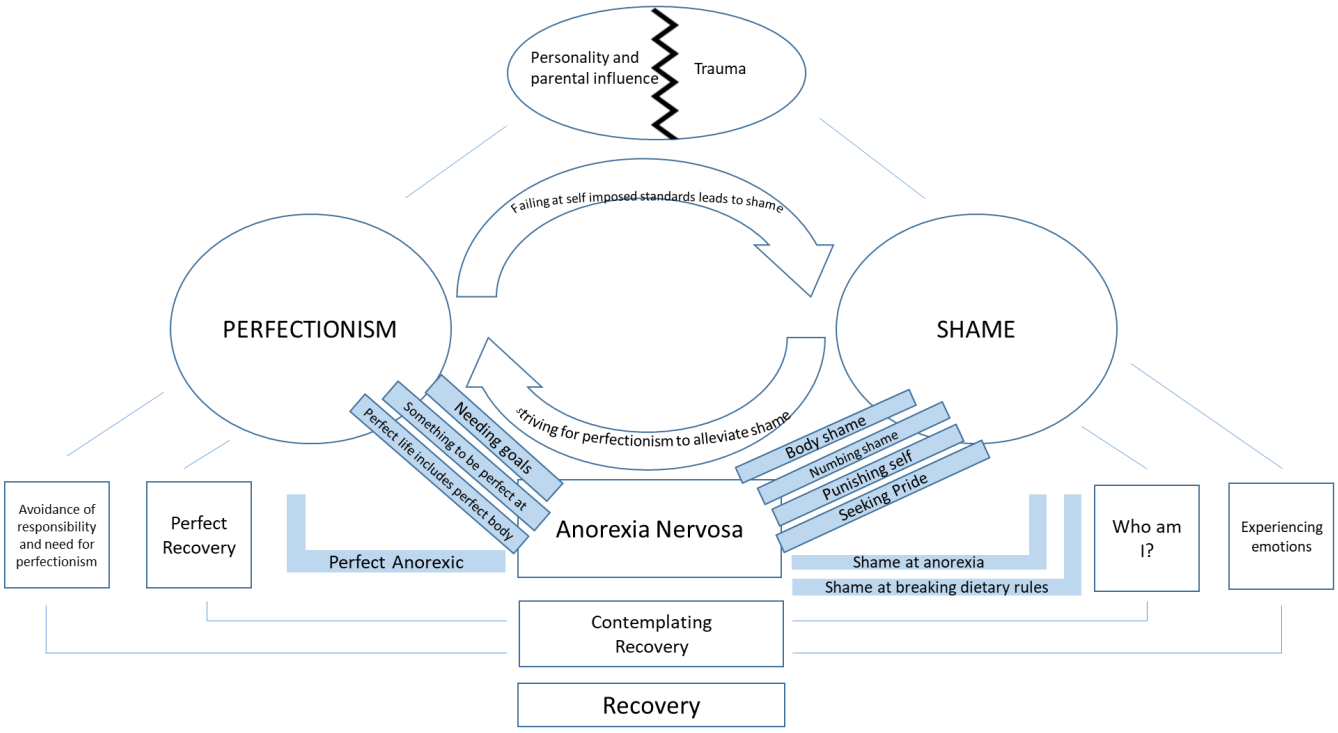

Figure 1. Model of the relationship between shame, perfectionism and AN

Overview of model

The main finding was that shame and perfectionism worked in a cycle. All participants described feeling shame and perfectionism. Participants tried to alleviate their feelings of shame by striving for perfectionism and then failing to meet self-imposed standards led them to feeling more shame. All participants acknowledged a link between shame and perfectionism and their AN.

"it's a vicious circle in that, if I could get out of being perfectionist, and if I could get out of feeling ashamed of myself all of the time, my eating disorder would get better" Participant 6

Participants who disclosed childhood trauma believed their shame preceded their perfectionism and that's where they started the cycle. Participants who did not disclose trauma either believed their perfectionism preceded shame or they were unsure of which occurred first. These participants often mentioned critical and demanding parents or childhood bullying.

The pathways from perfectionism to AN were; needing goals, the need for a perfect life including a perfect body and AN being something they could be perfect at. The AN fed back into the perfectionism with people striving to be the "perfect anorexic". The pathways from shame to AN were seeking pride, body shame, wanting to numb shame and punishing the self. AN fed back into the shame in two ways, when people had AN they felt ashamed when they broke their dietary rules and also simultaneously people felt ashamed of their AN as they were not able to recover.

Shame and perfectionism influenced recovery in several ways. The AN numbed shame and this removed them from their negative emotions. People also spoke about not having a sense of identity without AN and the fear they may be nothing without AN. AN also brought respite from a constant striving towards perfectionism and participants were reluctant to give this up if they had to return to perfectionism. The need for a perfect recovery also influenced their motivation, as the tendency to withdraw from things they could not do perfectly was common (e.g. sports, academic qualifications, art).

Perfectionism

The findings showed high levels of perfectionism amongst the sample. The main themes were; setting unrealistic standards, feeling nothing was ever good enough, there always being room for improvement and avoidance of things they couldn't be perfect at. Perfectionism was considered both a good and a bad thing by participants, with many believing that without perfectionism they *would not achieve anything.*

"I would have to be in the perfectionist zone in order for me to carry out a task." Participant 11

However, they also noted the destructive nature of perfectionism in that it was exhausting and resulted in them missing out on things they could not do perfectly.

The very issue with perfectionism is that nothing is ever good enough, not even perfectionism:

"I'm not perfect enough to be a perfectionist" Participant 5

Shame

The data showed high levels of shame. Participants expressed both internal and external shame. Common themes were; shame at who they were as people, feeling inferior to others, feeling worthless and body shame.

"I'm not as good as other people, I'm not as clever as other people, erm, I'm not as honest as other people" Participant 3

Participants often felt globalised shame and were not able to identify anything positive about themselves.

"I'm just ashamed to be me" Participant 2

Feeling this shame was a driver for perfectionism.

Trauma, personality and parental influence causing shame and perfectionism

The participants who believe their shame preceded their perfectionism all disclosed severe childhood trauma. Participants disclosed their childhood trauma when talking about the origins of their shame, although did not explicitly say that they believed the trauma was the cause of their shame. One of the participants directly linked her trauma to perfectionism as her father was physically and emotionally abusive towards her and would punish her for making mistakes.

Participants who believe their perfectionism came first or believe they both started together did not disclose any trauma. They often were unsure of where their perfectionism came from and some said that they believed it was an inherent personality trait. Some of these participants described critical and demanding parents or bullying from peers, but they did not directly link this to their perfectionism or shame.

"When I do set myself standards that I think are good enough, there's always someone to say that it's not good enough, and usually that's my mother" Participant 10

Striving for perfectionism to alleviate shame

People described shame as a highly unpleasant emotion that they wanted to avoid or get rid of. Participants expressed they would strive for perfectionism to alleviate their feelings of shame, and to try and feel good enough.

"So, when I feel ashamed, I guess it pushes me to wanting to be good at something, so you just keep trying and trying… but it's never enough, you can always do better, I could never reach that perfection, I just couldn't get there." Participant 4

This sometimes came as a direct consequence of trauma, to avoid the negative repercussions of imperfections. Striving for perfectionism was also used as an attempt to suppress the criticism and demands from parents and to try and be good enough for their approval.

"Being in that perfectionist zone keeps me away from the shame. And as long as I can keep in there, I'm not feeling that shame." Participant 2

Failing to meet self-imposed standards leads to shame

Participants were all aware that perfectionism was unachievable and eventually they would make a mistake or do something less than perfectly. This led to intense feelings of shame.

"*if I am a perfectionist about something and I fall short of it I automatically feel ashamed*"
Participant 1

Participants expressed external shame at other people noticing their imperfections or mistakes that they made. They also expressed internal shame and said that failing to meet self-imposed standards confirmed their negative sense of self.

The link between perfection and shame was described as two-way process:

"*If I'm not perfect I feel ashamed and if I feel ashamed then I want to be perfect*." Participant 1

Many described this as a loop that was continuously repeating, so when they felt shame at failed perfectionism they would strive even harder for that perfectionism to alleviate their feelings of shame, this again would inevitably fail and they would feel even more shame.

Participants also expressed that even when they did meet their self-imposed they would continue to increase them.

"*Every time I got something right, it'd be like, oh okay, obviously I didn't set my standards high enough, let's go one higher. And then I'd just keep doing that until eventually it's too high, and there's no way you can get there"* Participant 9

Even when goals were met participants still felt ashamed at their imperfections.

Relationship between AN and shame

Seeking Pride

Participants described a globalised sense of shame and often said that they did not feel proud of anything in their life. In different ways participants described how AN can be a source of pride, and how they could seek pride in an attempt to suppress shame. Participants spoke about the sense of accomplishment in being able to restrict their eating and set targets that they were able to meet.

"it does give you a sense of accomplishment if you make a plan, I'm only going to eat this today, and then you achieve that, it does make you feel, it makes you feel like you have achieved something, even if you have achieved nothing else in the day." Participant 4

Participants also spoke about feeling inferior to others in almost every way, however one area they felt they could compete with others was with their body. They felt they were not as successful as others or worthy as others but they felt they could be as thin as others.

"I always felt inferior, and then, you know, I started losing weight, and that was the first time I ever felt, not better, but I felt like I didn't mind comparing myself to others." Participant 1.

In the early stages of anorexia many participants described being complimented on their weight loss and this gave them a sense of pride. They felt being perfect at AN was a way to alleviate their shame.

"I'd lost like a little bit of weight and everyone was saying, like oh you look really good, like you look amazing, erm so it just spurred me on even more." Participant 5.

Body Shame

Some participant's expressed strong feelings of body shame preceding their AN. They described a direct link between this type of shame and their AN. Body shame led people to want to lose weight which led to restriction.

"my body doesn't fit me, it's disgusting, I'm ashamed that I'm in this body and people have to witness it walking through town… I could just be thinking of my tummy area or something and then I have to restrict for days" Participant 2

This then linked in with their perfectionism as the perfectionism kept it going and continued past a healthy amount of weight loss.

Some participants expressed that they thought weight loss and having a better body would lead to social acceptance and to feeling better about themselves.

"I always put on this expectation when I dieted for prom that at the end of it, when I got to prom I'd look amazing, and then other people would suddenly turn around and like me and accept me. And when prom wasn't how I wanted it to be, I just felt like, oh, maybe I need to keep going, maybe I didn't do it hard enough." Participant 8

Punishing self

Some participants expressed that when they felt shame, they felt that they deserved to be punished and not eating was a way of punishing themselves.

"Well you can't eat, you don't deserve that" Participant 9

This need to punish the self was expressed by about a third of the sample of participants.

Numbing shame

As mentioned above, participants found shame a deeply unpleasant feeling and were unable to deal with this negative affect. Some people described just not knowing how to deal with emotional distress

"When you have a headache, you know, you hold your head. When you have a stomach ache, you hold your stomach. But when you feel sad, like, what do you hold, what do you do?" Participant 9

By restricting they were able to convert this emotional pain into physical pain which they felt was easier to deal with.

Participants spoke about AN generally numbing all emotions including shame.

"I think a big part of it is that if I engage in the anorexic behaviours, if I'm restricting, my emotions are numb, so I don't have to feel those emotions, it just numbs me from everything." Participant 5

They described this as a positive thing as it meant they did not have to deal with their negative emotions and feeling nothing was better than feeling shame. Some participants noted that the AN only gave a temporary relief from shame and when the feelings came back they came back stronger. In this sense these participants were able to see that numbing their shame with AN was problematic as it was an ineffective long term strategy. However, only one participant felt that numbing emotions in itself was a negative thing to try and do:

"You realise how bad it actually is to be numb to things, because… emotions are what make us human, aren't they? So you're kind of dehumanising yourself" Participant 7

Shame at breaking dietary rules

After people had developed AN and were trying to restrict their food intake, the AN would feed back into their shame and they would experience intense shame at breaking dietary rules or feeling as if they had over eaten. When participants had set dietary rules their perfectionism would feed back in and they would need to stick to them perfectly. Participants described feeling disgusted with themselves after believing they had eaten too much and this would lead to purging, further restriction, excessive exercise or striving for perfection to alleviate the shame. Not being able to stick to these dietary rules affected people's sense of self-worth as they were no longer perfect:

"If I have a biscuit it doesn't just mean that I have messed up my diet, it means that I have messed up everything in my life" Participant 8

Shame at having anorexia

Participants also expressed AN feeding back into shame by being shameful itself, and thus intensifying their feelings of shame. All participants expressed that at some time they had been ashamed of the fact they had AN. Some participants said they had moved past this now and wanted to be open about their AN to help others. However, other participants still felt ashamed of their AN and were still hiding it from others.

"obviously I'm ashamed that as a 41-year-old woman, that I can't pick up a knife and fork and eat a sensible meal" Participant 2

Participants also expressed shame at all of the things they had missed out on because their life had been dominated by AN. They spoke about comparing themselves to their peers and thinking about what their lives could have been like if they didn't have AN. They spoke directly about missing out on relationships, their career, having children etc. This related to their perfectionism as they felt shame at not having a perfect life.

"I think looking back, I see how much of my life has been overshadowed by the eating disorder, and yeah I am ashamed, I am ashamed of who I am and who I have become, who I have missed out on being and all of these opportunities that I missed out on… Maybe if I hadn't had the anorexia I would have met someone by now, a lot of my relationships have suffered because of the anorexia, I can't physically have children because I don't have periods, that is because of the anorexia." Participant 5

In addition, participants spoke about being ashamed at not being able to recover from AN. Many spoke about the impact their AN had had on their families and loved ones and they felt ashamed at the hurt they had caused. They felt ashamed that despite being aware of the impact of their AN they were not able to recover:

"I feel sad that, I feel ashamed that I see the wastage and I still don't stop it" Participant 5

Relationship between perfectionism and AN

Perfect life includes perfect body

Participants spoke about pervasive perfectionism and wanting to be perfect in every area of life. This included wanting to have the perfect diet, exercise regime and also having a perfect body.

"*I feel like I always have3 to have the perfect body and if I don't eat I'll become more beautiful"* Participant 10

People would strive towards what they thought was the perfect body and would restrict food intake and exercise to achieve perfection. Some participants were able to acknowledge that as the AN took hold their perception of a perfect body became distorted. Striving for this perfect body helped relieve their sense of shame.

"I think feeling ashamed of myself, or feeling embarrassed about myself, or feeling like I wasn't good enough, or wasn't worthy enough, it led me to developing a lot of habits, and to seek that perfection, that perfect lifestyle that all came together and you know I think that part of it was, the perfectionism in the diet and the way I looked." Participant 1.

Something to be perfect at

As mentioned above participants spoke about striving for perfectionism in all areas of life. They inevitably found that this always led to failure and shame as they were not able to be perfect. But one area where they felt they could be perfect was with their eating. Being perfect at AN seemed more obtainable than being perfect in other areas of life.

"To be perfect you have to have it all, and you have to have a great job, and have a great social life, have this perfect exercise and diet regime and, I wanted to be perfect in all aspects. The only part of

that I thought that I could control any part of was the diet and the exercise, so I felt that I had to get that perfect" Participant 1

Many participants spoke about wanting to have something they could control when other things in their life seemed out of their control.

"*I just couldn't control anything in my life at that moment, so that was the only thing I could control was what intake I was having. And yes, I thought life would be perfect if I lost weight." Participant 10*

Being out of control for participants seemed to mean that things were imperfect. Either something unexpected had happened, or they were just struggling to maintain perfection across their life.

"if I'm not happy with other areas like the house maybe, then I think that actually leads me to wanting to restrict more, because if I'm not doing well in that then at least I could be doing well in that." Participant 3

This increased their feelings of shame so striving to be perfect at AN helped to alleviate this shame.

Needing goals

Participants spoke about always needing goals and something to work towards to compensate for their shame. They felt they had to be continually striving to better and to improve themselves and to reach new targets. In contrast to the above where participants described striving towards AN when life became overwhelming, to avoid or counteract things in their life that they could not control, participants also described AN becoming dominant when they had no other goals and nothing else to focus on, and perhaps nothing else to relieve their shame.

"when I found myself in this job, which wasn't very fulfilling, I took that drive for progress or perfection, you know, I wanted to have a project to work on so I made it my running… you know find fulfilment or feel as if I was doing something." Participant 1

"Perfect anorexic"

Participants described the AN feeding back into their perfectionism, so when they had AN they wanted to be perfect at it and do it as well as they could. This linked into them not having anything else in their lives they could be perfect at, and also seeking pride for being perfect at AN.

"Well, now I'm committed, I've got to stick with it or now I've got to do my absolute best in it." Participant 3

Participants described always trying to be better and always trying to improve so they could relieve their feelings of shame. They could always do better, lose more weight or eat less food, or exercise more. Every time they achieved a diet or an exercise goal they would increase their target and strive to do even better.

"*with anorexia there's never, it's never going to be good enough, there's no end goal, no stopping, so you've never done enough, whereas, for someone on a diet, if they can have a certain diet plan and they follow it or whatever, they might be allowed, I don't know, 2000 calories a day, and if they stick to that they have achieved something, whereas with the anorexia, if you've got 2000 then you go down to 1000 and then you go down down, you know, it's 'cause it's not good enough."* Participant 5

Participants were aware of the impossibility and the dangers of wanting to be perfect at AN with one participant summing it up as;

"*The best anorexic is 6 feet under, you're never going to be perfect with it, where does it stop, how do you get out of the loop*" Participant 5

Effect on recovery

All participants spoke about the conflict between wanting to recover and wanting to continue with the AN. Participants were at different stages of contemplating recovery and also expressed that this motivation for change fluctuates.

"*It can feel like I'm caught between a rock and a hard place with that. I mean, on one hand I might feel shame because I'm maybe not doing as good as I can with my recovery, but at the same time, you know, if I'm not feeling shame about that, I'll be feeling shame about not following my anorexic thoughts or not doing the most I could with the anorexia, kind of failing as an anorexic."* Participant 8

Recovery and Shame

Who am I?

Participants spoke about their AN being part of who they were and it becoming part of their identity. People expressed that when they were contemplating recovery they questioned who they would be without the AN as they didn't feel they had a sense of self. Participants revealed that they feared they may be nothing without the AN and this linked back into their shame. The fact that they could be "perfect" at AN alleviated their shame and impacted on their sense of self, so participants were reluctant to give that up.

"Yes, it is frightening. Yes. You take them away. And then, you know, what if I am left with nothing? It's like jumping off a cliff. You don't know where you are going to land, or anything." Participant 11

This analogy about recovery being like jumping off a cliff was shared with another participant, but this participant was ready to jump;

"Like it's just the unknown I think. But I'd rather jump in to the unknown than carry on living with something that I know is not a nice way to be living." Participant 8

Experiencing emotions

As mentioned above, participants spoke about AN numbing their emotions. Participants did not want to lose this part of their AN as they did not know how else to deal with negative emotions. When contemplating recovery people questioned how else they would cope with life and life's

stressors. Some participants had taken steps towards recovery and then reverted back to AN when they experienced difficult emotions.

"Because something happens. And it is uncontrollable. Whatever happens is out of my control. It could be an argument with my partner. It could be a session of therapy that takes me back to something. It could be something that had happened where I felt shame before, or guilt. Or it could be having an argument with somebody. It could be anything emotional.… Happy… If I experience happiness, it could even send me into a binge, purge. It's how I am, how I deal with my emotions. I just want to be, you know, on autopilot. I find life easier on autopilot." Participant 11

Recovery and perfectionism

Avoidance of responsibility and need for perfectionism

The participants described a safety in the familiarity of AN, more than one participant described AN as a safety net. This linked in with it being part of their identity and not knowing who they were without it, and thus linked in with shame.

"Yes. I don't… I don't understand life, really. So, but I understand the anorexia. I understand the eating disorder. It's a safe place". Participant 11

Participants described being exhausted by the constant need for perfectionism and AN gave them respite from that. It was a safe place to be where they did not have to participate in the real world and succeed at things.

"*It takes you out of the real world into the world of anorexia. Like it's a closed bubble. Like I wasn't having to think about jobs and graduating and life, and like, being an adult and like, you know the real, scary world. Like in some ways, it was less scary to have an illness that's trying to kill you, which is like a bit of a paradox*" Participant 7

Perfect recovery

Participants spoke about the need for a perfect recovery. This became a barrier to recovery as people did not want to try until they could ensure they could fully commit to it. Participants felt that to try and not succeed meant they were a failure and this would evoke more shame, but if they did not try they could not fail and thus would avoid the feelings of shame.

"*Your intention is to recover, like I say you can become obsessed with perfectly getting better, and if you don't succeed, then you can beat yourself up*." Participant 7

Discussion

The aim of this study was to explore the relationship between shame, perfectionism and AN, and to see how these impact on recovery. The study found that there was a cyclic relationship between perfectionism and shame; in that people were striving for perfectionism to alleviate shame, which would then cause them to feel ashamed when they did not achieve perfectionism.

There were then various pathways from shame to AN. The idea that shame plays an important role in eating disorders is consistent with Goss and Gilbert's (2002) model. The model states that pride is an importance maintenance factor, which has also been reflected in this study's model as one way of moving from shame to AN. Gilbert (2002) also discusses the impact of body shame, and its contribution to many disorders, including eating disorders. Another way participants moved from shame to AN in this study was as an attempt to numb the unbearable feeling of shame, as they did not have any other strategies to deal with shame. This is consistent with research by Harrison et al. (2011) who found that people with AN have poor emotional regulation. The final way people moved from shame to AN was feeling they deserved punishment and therefore they were punishing themselves with AN.

Perfectionism led to AN in three ways; the need for the perfect life including the perfect body, the need for goals, and AN being something people felt they could be perfect at.

Participants differed in their view of where they felt they began this shame/perfectionism cycle, with some recalling perfection coming first and some recalling their shame coming first. This difference may be explained by their childhood experiences, in that those who experienced trauma disclosed their shame preceded their perfectionism. It is a well-established finding that childhood trauma leads to shame (Schimmenti, 2012, Gilbert 2009b). Participants who believed that their perfectionism came first were less clear on the origins of this, some believing that it was just part of their personality. However, some participants did describe critical or demanding parents and although they did not directly link this to their perfectionism and shame there has been a lot of research to suggest that criticism also leads to shame (Gilbert 2009a). Therefore, their striving for perfectionism might help them manage the shame that came from their trauma or critical parents.

With regards to recovery, this study found that both shame and perfectionism had an impact on recovery. Shame influenced recovery in two ways, firstly people were unsure of their identity and who they would be without AN, and went as far as questioning whether they would be nothing without AN. This is consistent with previous studies which identified that people can feel they have become defined by their AN (Granek 2007, Williams et al. 2015). Participants spoke about safety in familiarity and that recovery was a jump into the unknown, with some people feeling ready to jump and some not. Shame also impacted on recovery as when people weren't restricting and were heading towards recovery they would experience the full extent of their negative emotions including shame. This was difficult for people as they did not know how to deal with these emotions, and they felt they weren't ready to give up their coping mechanism for shame. This concept that AN is a coping mechanism is consistent with existing literature (Wagener & Much 2010).

Perfectionism also influenced recovery in two ways. Firstly, people spoke about the need for a perfect recovery, and not wanting to commit to recovery unless they were able to do it perfectly.

This led to them being reluctant to move towards recovery through fear they would not do it perfectly. Secondly, AN gave people respite from having to strive for perfectionism as they were seen as "ill". They were able to avoid adult responsibilities such as getting a job, living independently and forming relationships. Participants preferred to be in their bubble of anorexia than having to face the real world, again in case they were not able to do this perfectly. This desire to escape from perfectionism is in line with research by Shafran (2018) who notes the negative impact of perfectionism, and the detrimental effects it can have on people's wellbeing.

Limitations

Participants were all recruited from NHS services, and were approached based on whether the clinicians in the service felt that they would be appropriate to participate in the study. As a result, it is possible that not all participants who would have been interested in taking part in the research were asked. However, posters were also put up in waiting rooms to help increase the exposure of the study.

For ethical reasons it was important to be very open about the subject matter of the study. This may have led only certain individuals to volunteer for the study. Shame is an emotive topic and it is possible that participants who experienced very high levels of shame would not want to take part in the study. Conversely, it may be that only people that experienced high levels of shame and perfectionism took part in the study as these topics resonated with them. Therefore, the generalisability of these results needs to be considered cautiously.

The participants BMIs were taken from answers on the EDE-Q and were therefore self-reported. The decision was taken to not weigh individuals at the interviews as this may make participants feel uncomfortable and negatively affect engagement. However, research has shown that people with

eating disorders are relatively accurate at reporting their height and weight, although there is a slight tendency for people with AN to overestimate their weight (Meyer, Arcelus, & Wright, 2009).

Participants did not complete measures of anxiety or depression, this decision was taken to limit the amount of paperwork before the interview, and again to facilitate engagement. However, it has been reported that people with AN experience high levels of anxiety and depression (Bulik 2002). Therefore, it is possible that anxiety and depression may have influenced their views.

All participants were white females, therefore the results may not be generalizable to males with AN or people from BAME backgrounds.

Participants varied significantly in their presentation of AN. Their EDE-Q scores ranged from 0.925 to 6, and their duration of AN ranged from 2 – 26 years and this may have impacted the results.

Clinical Implications

The findings from this study highlight the importance of perfectionism and shame in the aetiology and maintenance of anorexia. This study also demonstrates how shame and perfectionism can be barriers to recovery. This study demonstrates the importance of clinicians assessing for and discussing shame and perfectionism during the course of AN. Treatments should focus on targeting both perfectionism and shame to successfully treat AN. Early research in using compassion focused therapy in eating disorders to increase self-compassion and reduce shame has had promising results (Goss & Allan 2014, Gale et al. 2014).

Participants spoke of a shame and perfectionism trap that they were unable to get out of. It was described as a never ending, self-perpetuating cycle. Clinical treatments would benefit from helping clients find a way out of this cycle. This could involve helping them manage their feelings of shame, and teaching them emotion regulation skills and encouraging them to seek pride in other areas.

Conclusions

The findings of this paper show perfectionism and shame to both be important in the aetiology and maintenance of AN, and to have an impact on recovery from AN. This suggests the need for interventions that tackle shame and perfectionism in AN.

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Paper Three: Critical Reflections on the Thesis Process

Tina Howard

Word Count: 4251

Introduction

This paper will critically reflect on the research carried out in papers one and two, and will also provide some reflections on the experience. This paper is not intended for publication.

Research subject

A range of research topics were presented to us at a research fair. The area of shame and perfectionism in AN immediately appealed to me. When I was an undergraduate I volunteered for B-eat, the eating disorders charity, and helped facilitate a support group for people with eating disorders. At that stage I was unsure what I wanted to do with my psychology degree, this volunteering role confirmed to me that I wanted to pursue clinical psychology, and thus I have always considered eating disorders as my first area of interest in clinical psychology. After I graduated and began working in the NHS, the opportunity to work in eating disorders services did not present itself and I pursued other interests. So when this project was presented, I was keen to return to this topic.

The area of shame has always been one that interested me. Before training I worked as a therapy assistant in high secure forensic services on a unit that was unpleasantly named the “dangerous and severe personality disorders” unit. The men on this unit had committed physically and sexually violent crimes. When working with them therapeutically it was interesting to me that nearly all of them disclosed very difficult childhoods and high levels of shame resulting from these experiences. One of the psychologists on the unit was trained in schema therapy and patients reported that they found this approach very useful, despite being very rejecting of other therapeutic approaches. I became interested in schema therapy and its ability to work with people with very difficult childhoods and the shame and difficult emotions that resulted from them. When on training I used my CPD budget to pursue training in schema therapy and I hope to pursue this further after training.

During training I also learnt about Compassion Focused Therapy (CFT) which spoke a lot about shame and its impact on individuals, and I could see how this could be a useful approach. CFT and schema therapy both pick up on the nuances of childhood which can affect us throughout life, so they highlight the impact of critical parenting or neglectful parenting as well as direct trauma.

Paper one: Systematic Review

Developing a question for Systematic review

My project is paired with another trainee's project who is investigating the relationship between shame, perfectionism and eating disorders using a quantitative methodology. It was felt that it would make sense for me to review qualitative studies and conduct a meta-synthesis and for the other trainee to review quantitative studies.

I wanted to review qualitative studies on shame and eating disorders, however an initial search only produced three relevant results. Evans (2002) notes that finding qualitative research on databases can be problematic due to the descriptive nature of the titles used in some qualitative studies, the variable information provided in abstracts, and the differences in the indexing of these studies across databases. I tried searching for the term "qualitative" as well as specific qualitative methods including "grounded theory", "thematic analysis" and "interpretative phenomenological analysis" but this did not produce any more relevant papers. I met with the university subject librarian for assistance on this, however she was not able to find sufficient papers to justify doing a systematic review.

I searched for all qualitative papers on eating disorders to see if there were enough qualitative papers on an appropriate topic, but nothing was found that matched closely enough to my empirical paper. Therefore, I had to look at quantitative papers instead. This was complicated by the fact the trainee doing the quantitative project on the same topic was also looking for a related review topic

and we had to ensure we did not cross over. It was decided that the other trainee would look at shame and I would look at perfectionism and eating disorders.

After reading some of the literature on perfectionism and eating disorders it became apparent that perfectionism was measured differently in different studies and there was no consensus on which aspects of perfectionism were related to eating disorders and which were not. We narrowed the focus down to anorexia nervosa (AN) for a more targeted review and to align it more closely with my empirical paper.

Search strategy

The databases that were searched were PubMed, PsycINFO and EMBASE. The search terms used were "Perfection* AND Anorexia", "Perfection* AND Eating disorders."

The decision was made to limit the search terms to these to make the review more manageable. There is a large body of research looking at "disordered eating" or "eating difficulties" in a non-clinical population, however it was felt that, by using these as terms, the studies returned may not accurately reflect the relationship between perfectionism and AN as a clinical entity.

Quality Assessment

Katrak et al. (2004) conduced a systematic review on quality appraisal tools and found that there is no gold standard critical appraisal tool for any study design, nor is there any widely accepted generic tool that can be applied equally well across study types. Crowe & Shepherd (2011) also noted that quality appraisal tools lack rigor and all have their problems.

Several quality appraisal tools were considered for the review. Firstly, the Effective Public Health Practice Project Quality Assessment Tool (EPHPP; Jackson & Waters, 2005) was considered, however this appeared to be designed for experimental studies and included items such as blinding and intervention integrity which weren't relevant for cross sectional studies. The CASP was also considered but had similar problems.

The AXIS (Downe et al. 2016) was developed as a quality appraisal tool to specifically appraise cross-sectional studies. As all studies in this review were cross sectional it was felt this would be the most appropriate tool to use. However, the AXIS does have its limitations, in particular it doesn't give any guidance on whether a study should be considered of good, medium or low quality based on its score. All studies in the review scored at least 16/20 and it was decided that this appeared to be a good score, however there is no official guidance on this.

Data synthesis

A narrative synthesis was chosen for this systematic review. It was felt that this best fit the review question, as the studies used different questionnaires to measure perfectionism and the purpose of the review was to look at which of these different measures of perfectionism were related to AN. In addition, a narrative synthesis was recommended by the research director of the course who felt that a meta-analysis was beyond the score of what would be required for a clinical doctorate synthesis. Guidance on how to conduct a narrative synthesis was followed (Popay et al. 2006).

Limitations of the systematic review

The systematic review only included published papers and excluded the grey literature. The problem with this is that there is a publishing bias, in that studies that find a significant result are more likely to be published. Therefore, there may be many studies which did not find a relationship between AN and perfectionism that were not published. However, it was felt beyond the scope of the paper to include unpublished studies as well.

The identified inclusion/exclusion criteria may have limited the extent of the review. We decided to only use studies that had a healthy control group so direct comparisons could be made, however this meant that some studies with data on AN scores on the subscales of perfectionism had to be excluded. This was a concern for me as I was worried that I was missing many important studies that could add to our understanding of AN and perfectionism. This was discussed in supervision and my

supervisors reminded me that the review could not include everything, and the aim was not to describe the whole complexity of the relationship between AN and perfectionism. We discussed how inclusion and exclusion criteria can feel arbitrary but these are important to give the review a clear aim and a clear focus. We did discuss the option of including studies which compared AN with other psychiatric controls but this would have increased the number of studies significantly and it was felt that the review may have lost its focus.

All of the studies in this review were of a cross sectional design and this was mostly due to the inclusion criteria specifying there needed to be a HC group for a direct comparison. This meant that we could not comment on the direction of the relationship between perfectionism and AN.

In addition, the majority of participants in these studies are female, which means that the findings may not extend to male populations.

Paper two: Empirical Paper

Background of research and decision to investigate the research topic

There are well established links between perfectionism and eating disorders. Cooper and Shafran (2008) summarise evidence that 'clinical perfectionism', 'core low self-esteem', 'mood intolerance', and 'interpersonal difficulties' are important in the maintenance of eating disorders. They also discuss evidence that some of these could be risk factors for developing an eating disorder.

The most commonly used intervention for people with eating disorders is an enhanced version of cognitive behavioural therapy (CBT-E). The broad form of CBT-E addresses these additional four areas of; clinical perfectionism, core low self-esteem, mood intolerance and interpersonal difficulties in separate "modules". (Although mood intolerance has now been integrated into the focused form of CBT-E) Fairburn (2008) states the focused version of CBT-E should be used as the default, but if it appears that one or more of these areas in the broad version is playing a key part in the

maintenance of a client's eating disorder they can address this directly with the additional modules. CBT-E achieves clinically significant improvements in about 50% of clients, indicating a need for improvements in psychological therapies (Steinhausen, 2002).

Shame and self-criticism are also known to be high in eating disorder populations (Troop, Allan, Serpell, & Treasure, 2008) but these are not addressed in CBT-E. Goss and Allan (2009) summarised the literature on shame and eating disorders and reported that people with eating disorders experience higher levels of both internal and external shame when compared to non-eating disordered individuals. And high levels of shame are associated with poor treatment outcomes in this population.

There has been a relatively recent focus on targeting shame and self-criticism in people with eating disorders (Gale, Gilbert, Read, & Goss, 2014). The results of these early studies have been promising, however much more research is needed to establish whether targeting shame is an effective treatment in eating disorders.

This study aimed to look at perfectionism, shame and AN in the hope to consider ways of improving treatment for this population.

Qualitative Methodological Approach

Options of both a qualitative and a quantitative approach were presented to explore the relationship between perfection, shame and AN. My choice for using a qualitative approach was twofold. Firstly, the qualitative project involved working with individuals with a diagnosis of AN and the quantitative project involved an analogue sample. I was passionate about using a clinical sample as I believed this would generate more clinically relevant research. Secondly, the richness and depth of the data

generated by qualitative studies would provide really useful insight into the nature of the relationship between these constructs.

Choosing Grounded Theory

Holloway and Todres (2003) highlight the importance of choosing a qualitative method that fits the research question, rather than being aligned to one methodological approach and using this approach regardless of the research question. Therefore, after establishing a research question I reviewed several methodological approaches to determine which was most appropriate for my study.

A narrative approach was considered to explore the lives of people with AN and their experiences of shame and perfectionism. A narrative approach allows for people's stories to be gathered through many different forms of data, including interviews, observations and documents. Individuals describe their lives and their experiences of the concepts of interest. Narrative research is best for capturing the detailed stories or life experiences of a single individual or a small number of individuals (Creswell & Poth 2017).

Thematic analysis was also considered for this study as it can be used flexibly to analyse, explore and report patterns in qualitative data. Thematic analysis allows for the data to be organised in key themes and then this data can be analysed for meaning.

However, we felt Grounded Theory (GT) would fit the research question best as we wanted to move beyond description and to generate a theory about the relationship between shame, perfectionism and AN. We wanted to focus on the processes and think about perfectionism and shame over time, and how they may be linked together.

Ethical approval

This study required full ethical approval from the NHS and Cardiff University. These had to be conducted separately and required the same information to be presented in different ways, which made the process somewhat arduous. The university ethics process was relatively quick and straightforward and approval was received after a few weeks. The Integrated Research Application System (IRAS) is what is used for gaining ethical approval for studies within the NHS. The application process was long and caused significant delay to the commencement of the study and the recruitment of participants. The panel did not seem to have a good understanding of mental health and questioned whether people with AN would be able to recognise and discuss AN. The panel asked for several minor amendments and clarifications which delayed the process further. When final approval was granted from IRAS I then had to apply to each health board's Research and Development (R&D) departments individually to get permission to carry out research in the health board. All health boards required their own checks to take place, and asked several questions that were already in the documents that they were provided. This was frustrating and again caused further delays.

Participant recruitment and sample size

Initially three health boards were approached for R&D approval. The clinician from one of the health boards left before the commencement of the study and the clinician in another one of the health boards was not forthcoming with participants despite several contacts being made and him agreeing each time to help with recruitment. This left just one health board actively recruiting participants for the study. The clinicians in this health board were very helpful and managed to find ten participants for the study, however they were not able to find any more. Due to this we decided to make contact with a fourth health board to recruit more participants. Again, this was a lengthy process and involved me contacting IRAS to request an amendment and then having to contact the health board's R&D directly. This only left time to interview one participant from this health board, which

unfortunate. This gave me a sample size of 11, and we had aimed for 10-15 so we were satisfied with this. It proved very difficult to conduct research in the NHS within the scope of the DClinPsy, which is really unfortunate as it means many trainees are put off conducting research in the NHS which could be really insightful and clinically relevant.

Interviews

In line with grounded theory an initial interview schedule was drawn up and then adapted as interviews progressed. Initial questions were discussed and finalised in supervision and then evolved as data was collected and themes began to emerge. It was unfortunate that we were not able to get service user input on developing the interview schedule, however the prevalence of AN is relatively low and we wanted all potential participants to be interviewed. We felt that it would be more beneficial to have more interview participants than to consult service users with AN on the interview schedule, who would then not be able to be interviewed. In hindsight, perhaps I could have contacted an eating disorders charity to consult on the interview schedule. However, I did ask for feedback after each interview about how they found the questions and whether there was anything they thought was missing.

Connelly & Peltzer (2016) argue that qualitative interviews will only produce superficial data unless due attention is paid to the use of in-depth prompts and probes throughout the interview. This is something me and my supervisor reflected on in supervision after he had listened to my first two interviews. He noticed that I stuck too rigidly to the interview schedule and did not probe enough or ask enough follow-up questions. This is something that I worked on for the following interviews and improved on as I became more familiar with the research topic and enhanced my interviewing skills.

Elmir et al (2011) emphasise the importance of building of building a rapport with participants prior to the interview to enhance the quality of the information expressed. Bearing this in mind, time was taken to chat informally with participants before commencing the interview to build up a rapport and put them at ease.

Transcription

Bird (2005) argues that transcription is a key part of data analysis in qualitative research, and therefore I wanted to carry out all of the transcription myself. However, time constraints did not allow this and I was only able to transcribe the first six interviews myself. The final five were sent off to a professional transcription service. I was concerned that this may lead to me being more familiar with the first six interviews and relying too heavily on the data produced by those. However, I listened back to the interviews I did not transcribe several times with the transcript in front of me, both so I could check the accuracy of the transcript and to familiarise myself with the data.

Coding

Due to the controversies over using computer software to code data (Crowley, Harré, & Tagg, 2002) and my unfamiliarity with coding software I decided to code my data by hand. The first stage of coding was initial coding, where I went through the transcripts line-by-line assigning them codes, whilst sticking as close to the data as possible (Charmaz 2014). This was a very long process but was beneficial as it definitely increased my familiarity with the data even further. Some of these initial codes were discussed in supervision and advice was given to try and avoid using the same words as the participant. A full transcript was also checked by an independent researcher with experience in qualitative research who mainly agreed with the codes given. The next stage of coding was focused coding which was looking for the recurrent themes in the data, the same independent researcher checked one full transcript of focused codes and agreed with all of the codes given. Memos were written alongside the initial coding and focused coding. The focused codes were collated and discussed in supervision to create axial codes.

Developing model

The model was developed with close supervision and we continually referred back to the data to check all aspects of the model. Several versions of the model were drawn out before we settled on a model that best fit the data.

The interviews were conducted closer together than we ideally would have liked, and this was due to the tight time frame for interviews following the prolonged ethical approval. Ideally, we would have liked to begin sketching out the model earlier in the data collection process so we could see what was emerging from our data and follow up important points in subsequent interviews. However, we did discuss the data and the emerging themes in supervision between interviews, which allowed for the interview schedule to be updated and new areas explored. When developing the model it became apparent that we had not reached data saturation and there were some areas of the model that were not fully explained. This was frustrating as it felt like the process wasn't fully complete, and I could see how the research project could benefit from interviewing more participants to develop the ideas in our model.

Reflections on the interview process

I was very struck with how open and honest participants were with me, and how willing they were to talk about very difficult experiences. I was aware that historically people with AN had been known to want to please and people with eating disorders were referred to as "the pleasing child" (McSherry et al 1984). I wondered how much the participants wanted to participate in the interviews and how much they were just doing so to please me or to please their care team. Most people were willing to participate without asking any questions about the study, saying that they just wanted to help. I made sure I took time to talk them through the process so they knew what they were agreeing to, and all but one person who I met was willing to go through with the interview. I carefully monitored for signs that participants were becoming distressed or uncomfortable, however although they became emotional at appropriate times they did not seem to be distressed and seemed to enjoy

telling their story. The interviews were very emotive at times, as participants disclosed an intense dislike of themselves and a strong belief that they were bad people. It was sad to see their level of distress and how hard they tried for acceptance and approval.

I found the participants very easy to relate to and interact with, and a rapport was built very quickly with each of them. I wondered whether this was due to their willingness to please. After we had developed the model for paper two I reflected back on the interviews and wondered if participating in the interview was a way of seeking pride for the individuals. Many of them said they were happy to help as they felt it was important to try and develop treatments for people with AN, as they knew how destructive it could be.

Interviewing participants for a grounded theory project was very different to working with people therapeutically. I had a clinical background when coming on to training and did not have any research experience outside of my undergraduate degree. I was much more familiar with conducting therapy sessions with clients than I was interviewing participants and it was difficult not to shift into therapy mode at times. This was discussed in supervision and my supervisor advised me that the main difference was that with the interviews I was not trying to evoke change. This was difficult to resist when participants spoke about being really terrible people, it was hard to sit with this distress and not try and challenge their views. However, this has helped me in my therapeutic work as it made me realise that even in therapy it is important to sit with people's distress and hear what they need to say before trying to elicit change. I have recently started using a Cognitive Analytical Therapy (CAT) model on my elective placement where one of the main concepts is "recognition before revision". Therefore, first we need to help clients recognise and understand their patterns and where they come from, before they are able to make any changes.

Implications for Clinical services and practice

The model highlights the importance of both shame and perfectionism in the aetiology and maintenance of AN. It suggests that treatment for AN should target shame and perfectionism. This may help improve the efficacy of AN treatment and reduce relapse rates.

The study highlights the need for additional research into shame and perfectionism and AN.

Limitations of the Empirical Paper

Applying a qualitative methodology limits the generalisability of the findings. Qualitative research works on a much smaller sample size than quantitative research and so it cannot be assumed that the research is generalizable to all people with AN. However, GT acknowledges this and it does not believe it is a problem. As all of the findings are strongly grounded in the data that emerged from the interviews the model presented in paper 2 represents a model of the participant's experiences. It does not claim to be a model that will fit with everyone's experiences – this is the work of further research. It is also developed through the biases and the lens of my personal experiences and beliefs and this is acknowledged throughout the process.

In addition, there is likely to be a participation biases about who agreed to participate in the study. It may be that people with high levels of shame refuse to take part in the study as it is too painful and emotive for them. Or it may be that only people with high levels of shame and perfectionism agree to take part in the study as the concepts seem relevant to them. Given the high level of shame and perfectionism reported by the participants the latter hypothesis is most likely to be true. All participants expressed they had experienced shame and perfectionism and that it related to their AN. However, this could of course be why they volunteered for the study, and it may not be the case that everyone experiencing AN experiences the same.

Dissemination

It is hoped that both papers will also be published in Psychology and Psychotherapy, Theory Research and Practice. It is also hoped that the research will be presented at the next All Wales Eating Disorder Specialist Interest Group (AWEDSIG).

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Appendices

Appendix 1: Journal Guidance

PAPTRAP AUTHOR GUIDELINES

Sections

1. SUBMISSION

Authors should kindly note that submission implies that the content has not been published or submitted for publication elsewhere except as a brief abstract in the proceedings of a scientific meeting or symposium.

Once the submission materials have been prepared in accordance with the Author Guidelines, manuscripts should be submitted online at http://www.editorialmanager.com/paptrap

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Psychology and Psychotherapy: Theory Research and Practice is an international scientific journal with a focus on the psychological aspects of mental health difficulties and well-being; and psychological problems and their psychological treatments. We welcome submissions from mental health professionals and researchers from all relevant professional backgrounds. The Journal welcomes submissions of original high quality empirical research and rigorous theoretical papers of any theoretical provenance provided they have a bearing upon vulnerability to, adjustment to, assessment of, and recovery (assisted or otherwise) from psychological disorders. Submission of systematic reviews and other research reports which support

evidence-based practice are also welcomed, as are relevant high quality analogue studies and Registered Reports. The Journal thus aims to promote theoretical and research developments in the understanding of cognitive and emotional factors in psychological disorders, interpersonal attitudes, behaviour and relationships, and psychological therapies (including both process and outcome research) where mental health is concerned. Clinical or case studies will not normally be considered except where they illustrate particularly unusual forms of psychopathology or innovative forms of therapy and meet scientific criteria through appropriate use of single case experimental designs.

All papers published in *Psychology and Psychotherapy: Theory, Research and Practice* are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

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- Articles should adhere to the stated word limit for the particular article type. The word limit excludes the abstract, reference list, tables and figures, but includes appendices.

Word limits for specific article types are as follows:

- Research articles: 5000 words
- Qualitative papers: 6000 words
- Review papers: 6000 words
- Special Issue papers: 5000 words

In exceptional cases the Editor retains discretion to publish papers beyond this length where the clear and concise expression of the scientific content requires greater length (e.g., explanation of a new theory or a substantially new method). Authors must contact the Editor prior to submission in such a case.

Please refer to the separate guidelines for Registered Reports.

All systematic reviews must be pre-registered.

4. PREPARING THE SUBMISSION

Contributions must be typed in double spacing. All sheets must be numbered.

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The manuscript should be submitted in separate files: title page; main text file; figures/tables; supporting information.

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You may like to use this template for your title page. The title page should contain**:**

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- A short running title of less than 40 characters;
- The full names of the authors;
- The author's institutional affiliations where the work was conducted, with a footnote for the author's present address if different from where the work was conducted;
- Abstract;
- Keywords;

- Practitioner Points;
- Acknowledgments.

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Please refer to the journal's Authorship policy in the Editorial Policies and Ethical Considerations section for details on author listing eligibility. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the Project CRediT website for a list of roles.

Abstract

Please provide an abstract of up to 250 words, giving a concise statement of the intention, results or conclusions of the article.

Articles containing original scientific research should include the headings: Objectives, Design, Methods, Results, Conclusions. Review articles should use the headings: Purpose, Methods, Results, Conclusions.

Keywords

Please provide appropriate keywords.

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All articles must include Practitioner Points – these are 2-4 bullet points, following the abstract, with the heading 'Practitioner Points'. These should briefly and clearly outline the relevance of your research to professional practice. (Please include the 'Practitioner Points' in your main document but do not submit them to Editorial Manager with your abstract.)

Acknowledgments

Contributions from anyone who does not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section. Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

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As papers are double-blind peer reviewed, the main text file should not include any information that might identify the authors.

The main text file should be presented in the following order:

- Title
- Main text
- References
- Tables and figures (each complete with title and footnotes)
- Appendices (if relevant)

Supporting information should be supplied as separate files. Tables and figures can be included at the end of the main document or attached as separate files but they must be mentioned in the text.

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References

References should be prepared according to the *Publication Manual of the American Psychological Association* (6th edition). This means in text citations should follow the author-date method whereby the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page 1, and a DOI should be provided for all references where available.

For more information about APA referencing style, please refer to the APA FAQ.

Reference examples follow:

Journal article

Beers, S. R. , & De Bellis, M. D. (2002). Neuropsychological function in children with maltreatment-related posttraumatic stress disorder. *The American Journal of Psychiatry*, *159*, 483–486. doi:10.1176/appi.ajp.159.3.483

Book

Bradley-Johnson, S. (1994). *Psychoeducational assessment of students who are visually impaired or blind: Infancy through high school* (2nd ed.). Austin, TX: Pro-ed.

Internet Document

Norton, R. (2006, November 4). How to train a cat to operate a light switch [Video file]. Retrieved from http://www.youtube.com/watch?v=Vja83KLQXZs

Tables

Tables should be self-contained and complement, not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend, and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

Figures

Although authors are encouraged to send the highest-quality figures possible, for peer-review purposes, a wide variety of formats, sizes, and resolutions are accepted.

Click here for the basic figure requirements for figures submitted with manuscripts for initial peer review, as well as the more detailed post-acceptance figure requirements.

Legends should be concise but comprehensive – the figure and its legend must be understandable without reference to the text. Include definitions of any symbols used and define/explain all abbreviations and units of measurement.

Colour figures. Figures submitted in colour may be reproduced in colour online free of charge. Please note, however, that it is preferable that line figures (e.g. graphs and charts) are supplied in black and white so that they are legible if printed by a reader in black and white. If an author would prefer to have figures printed in colour in hard copies of the journal, a fee will be charged by the Publisher.

Supporting Information

Supporting information is information that is not essential to the article, but provides greater depth and background. It is hosted online and appears without editing or typesetting. It may include tables, figures, videos, datasets, etc.

Click here for Wiley's FAQs on supporting information.

Note: if data, scripts, or other artefacts used to generate the analyses presented in the paper are available via a publicly available data repository, authors should include a reference to the location of the material within their paper.

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For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association. The following points provide general advice on formatting and style.

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- **Abbreviations:** In general, terms should not be abbreviated unless they are used repeatedly and the abbreviation is helpful to the reader. Initially, use the word in full, followed by the abbreviation in parentheses. Thereafter use the abbreviation only.
- **Units of measurement:** Measurements should be given in SI or SI-derived units. Visit the Bureau International des Poids et Mesures (BIPM) website for more information about SI units.
- **Effect size:** In normal circumstances, effect size should be incorporated.

- **Numbers:** numbers under 10 are spelt out, except for: measurements with a unit (8mmol/l); age (6 weeks old), or lists with other numbers (11 dogs, 9 cats, 4 gerbils).

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Accurate and complete reporting enables readers to fully appraise research, replicate it, and use it. Authors are encouraged to adhere to recognised research reporting standards.

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Authorship

All listed authors should have contributed to the manuscript substantially and have agreed to the final submitted version. Authorship is defined by the criteria set out in the APA Publication Manual:

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Psychology and Psychotherapy: Theory, Research and Practice recognizes the many benefits of archiving data for scientific progress. Archived data provides an indispensable resource for the scientific community, making possible future replications and secondary analyses, in addition to the importance of verifying the dependability of published research findings.

The journal expects that where possible all data supporting the results in papers published are archived in an appropriate public archive offering open access and guaranteed preservation. The archived data must allow each result in the published paper to be recreated and the analyses reported in the paper to be replicated in full to support the conclusions made. Authors are welcome to archive more than this, but not less.

All papers need to be supported by a data archiving statement and the data set must be cited in the Methods section. The paper must include a link to the repository in order that the statement can be published.

It is not necessary to make data publicly available at the point of submission, but an active link must be included in the final accepted manuscript. For authors who have pre-registered studies, please use the Registered Report link in the Author Guidelines.

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If the authors cannot or do not intend to make the data publicly available, a statement to this effect, along with the reasons that the data is not shared, must be included in the manuscript.

Finally, if submitting authors have any questions about the data sharing policy, please access the FAQs for additional detail.

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For help with submissions, please contact: Vicki Pang, Senior Editorial Assistant (papt@wiley.com) or phone +44 (0)1243 770 410.

Author Guidelines updated 10th April 2019

Appendix 2: Appraisal tool for Cross-Sectional Studies (AXIS)

Critical appraisal (CA) is used to systematically assess research papers and to judge the reliability of the study being presented in the paper. CA also helps in assessing the worth and relevance of the study [1]. There are many key areas to CA including assessing suitability of the study to answer the hypothesised question and the possibility of introducing bias into the study. Identifying these key areas in CA requires good reporting of the study, if the study is poorly reported the appraisal of suitability and bias becomes difficult.
The following appraisal tool was developed for use in appraising observational cross-sectional studies. It is designed to address issues that are often apparent in cross-sectional studies and to aid the reader when assessing the quality of the study that they are appraising. The questions on the following pages are presented in the order that they should generally appear in a paper. The aim of the tool is to aid systematic interpretation of a cross-sectional study and to inform decisions about the quality of the study being appraised.
The appraisal tool comes with an explanatory help text which gives some background knowledge and explanation as to what the questions are asking. The explanations are designed to inform why the questions are important. Clicking on a question will automatically take you to the relevant section in the help text. The appraisal tool has areas to record a “yes”, “no” or “don’t know” answer for each question and there is room for short comments as well.

Appraisal of Cross-sectional Studies

	Question	Yes	No	Don't know/ Comment
Introduction				
1	Were the aims/objectives of the study clear?			
Methods				
2	Was the study design appropriate for the stated aim(s)?			
3	Was the sample size justified?			
4	Was the target/reference population clearly defined? (Is it clear who the research was about?)			
5	Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?			
6	Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?			
7	Were measures undertaken to address and categorise non-responders?			
8	Were the risk factor and outcome variables measured appropriate to the aims of the study?			
9	Were the risk factor and outcome variables measured correctly using instruments/measurements that had been trialled, piloted or published previously?			
10	Is it clear what was used to determined statistical significance and/or precision estimates? (e.g. p-values, confidence intervals)			
11	Were the methods (including statistical methods) sufficiently described to enable them to be repeated?			
Results				
12	Were the basic data adequately described?			
13	Does the response rate raise concerns about non-response bias?			
14	If appropriate, was information about non-responders described?			
15	Were the results internally consistent?			
16	Were the results presented for all the analyses described in the methods?			
Discussion				
17	Were the authors' discussions and conclusions justified by the results?			
18	Were the limitations of the study discussed?			
Other				
19	Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results?			
20	Was ethical approval or consent of participants attained?			

Appendix 3 Ethical Approval

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Dr John Fox
South Wales Doctoral Programme in Clinical Psychology
Tower Building, 11th Floor,
70 Park Place, Cardiff
CF10 3AT

Email: hra.approval@nhs.net
Research-permissions@wales.nhs.uk

03 September 2018

Dear Dr Fox

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**A grounded theory study into the relationship between shame, perfectionism and anorexia nervosa**
IRAS project ID:	**242069**
Protocol number:	**SPON 1667-18**
REC reference:	**18/SW/0154**
Sponsor	**Cardiff University**

I am pleased to confirm that HRA and Health and Care Research Wales (HCRW) Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

How should I continue to work with participating NHS organisations in England and Wales?
You should now provide a copy of this letter to all participating NHS organisations in England and Wales, as well as any documentation that has been updated as a result of the assessment.

Following the arranging of capacity and capability, participating NHS organisations should **formally confirm** their capacity and capability to undertake the study. How this will be confirmed is detailed in the "*summary of assessment*" section towards the end of this letter.

You should provide, if you have not already done so, detailed instructions to each organisation as to how you will notify them that research activities may commence at site following their confirmation of capacity and capability (e.g. provision by you of a 'green light' email, formal notification following a site initiation visit, activities may commence immediately following confirmation by participating organisation, etc.).

It is important that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details of the research management function for each organisation can be accessed here.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within the devolved administrations of Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) has been sent to the coordinating centre of each participating nation. You should work with the relevant national coordinating functions to ensure any nation specific checks are complete, and with each site so that they are able to give management permission for the study to begin.

Please see IRAS Help for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?
HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to obtain local agreement in accordance with their procedures.

What are my notification responsibilities during the study?
The document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

I am a participating NHS organisation in England or Wales. What should I do once I receive this letter?
You should work with the applicant and sponsor to complete any outstanding arrangements so you are able to confirm capacity and capability in line with the information provided in this letter.

The sponsor contact for this application is as follows:

Name: Dr Kathryn Pittard Davies
Tel: 029 2087 9277
Email: resgov@cardiff.ac.uk

IRAS project ID	242069

Who should I contact for further information?
Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **242069**. Please quote this on all correspondence.

Yours sincerely

Gurmel Bhachu
Permissions Service Manager (acting)

Email: Research-permissions@wales.nhs.uk

Copy to: *Miss Tina Howard*
Dr Jane Jones, Cardiff University

Appendix 4: Participant Information Sheet

Participant Information Sheet

A grounded theory study into the relationship between shame, perfectionism and anorexia nervosa

By Tina Howard, John Fox, Marc Williams and Debbie Woodward

Thank you very much for considering taking part in this study. In order to help you make the decision to take part we would like to provide you with more information about the study. It is a research study by a Trainee Clinical Psychology student at Cardiff University, who is interested in the relationship between shame, perfectionism and anorexia nervosa.
Please be assured that the study does not have any impact on the care and support you are receiving or will receive in the future. Before you decide whether to take part, we would like you to understand the purpose of the study and what it will involve for you.

The purpose of the study

This project is looking at shame and perfectionism in relation to anorexia nervosa, with a focus on exploring whether shame and/or perfectionism influenced or contributed to the onset of an individual's anorexia. It is hoped that this study will provide a clearer idea of the underlying mechanisms of anorexia nervosa as well as improving treatment.

Why have I been invited to take part?

You have been invited to take part because you are being seen in an eating disorder service and you have been identified as experiencing anorexia nervosa.

What will happen?

If you are interested in taking part, the lead researcher, Tina Howard, will contact you by telephone to discuss this further and answer any questions you may have. This will be an informal discussion and you are not committed to taking part in the study at this point, or at any further point. If you decide you may like to participate in the study then we will arrange a convenient time and place to meet (this will be at an NHS site, probably where you meet with your current care team.) You will have the opportunity to ask any further questions and make a decision about whether you would like to participate. If you decide to take part, you will be asked to complete two questionnaires; a demographic questionnaire (asking about your age, ethnicity, age of onset etc.) and the Eating Disorders Examination Questionnaire (which is a semi-structured interview asking about your eating behaviour over the past four weeks). After this you will be asked about your experiences of shame and perfectionism by the researcher. This will last for up to an hour and will be audio recorded. You will then have an opportunity to ask any questions at the end. The whole meeting should take about an hour and fifteen minutes.

What will happen next?

The interview will be typed up "word for word" and analysed looking for themes. These themes will then be compared with the other participants with the hope of forming a theory

about the relationship between shame, perfectionism and anorexia. Your participation will hopefully enable us to better understand these processes and how better to support individuals like yourself with anorexia nervosa.

Deciding to take part

It is entirely up to you whether you decide to take part in this research. There will be no negative repercussions should you choose not to take part. You will be able to withdraw from the study at any time and your data will be destroyed and not included in the analysis.

Will my taking part remain confidential?

All information will be made anonymous and you will not be able to be identified by reading the report. This means that names of participants, services and specific geographical locations will not be specified to protect your identity. Direct quotes will however be used in the final report but will not be paired with any identifiable information. Pseudonyms (made up names) will be used to replace your name and will appear next to the quotes only. Transcriptions and audio recordings will be stored on a computer which is password protected. Recordings will be deleted following transcription and the transcripts will be kept in a locked filing cabinet at the researcher's university base for 10 years after the study is complete.

The only time I cannot guarantee confidentiality is if I believe you are at risk of harm to yourself or to someone else. In these instances I will have to break confidentiality and inform members of your care team or your GP. This will only be done because I am concerned about you and your safety and I will, where possible, talk to you about this first if I did feel this was necessary.

What will happen to the results of the research study?

When we have finished the study, we can send you a summary of our findings if you would like. The results of the research will be submitted as part of a Doctorate in Clinical Psychology. It is also intended that the research will be published. No participants will be identified in any way as part of this process.

Who is monitoring the research?

The project has been approved by a NHS Research Ethics Committee. It will also regularly be monitored by my supervisors to ensure that quality, standards and safety are maintained.

Experiencing Distress

It is not anticipated that participating in this study will cause you any distress. However, of course we understand that these are emotive topics which may be difficult to talk about. If you were to experience any distress during the study, you can discuss this with the researcher at the time and/or choose to stop the interview. If you experience distress after your participation then you can inform your care team and they will do their best to provide you with appropriate support. You can also contact the researchers if you need to discuss things further.

Who is involved in this research?

Project Lead: Tina Howard
Trainee Clinical Psychologist
Cardiff University
11th Floor, School of Psychology
Tower Building
70 Park Place
Cardiff
CF10 3AT.
(02920) 870582

Academic Supervisor: Dr John Fox
Clinical Director
South Wales Doctoral Programme in Clinical Psychology
Cardiff University
11th Floor, School of Psychology
Tower Building
Cardiff
CF10 3AT

Academic Supervisor: Dr Marc Williams
Senior Clinical Tutor
South Wales Doctoral Programme in Clinical Psychology
Cardiff University
11th Floor, School of Psychology
Tower Building
Cardiff
CF10 3AT

Clinical Supervisor: Dr Debbie Woodward
Clinical Psychologist
Eating Disorders Specialist Outpatient Treatment Team
Global Link Building
Dunleavy Drive
Cardiff
CF11 0SN

What if I have concerns about this research?

If you have any concerns or complaints about this project, please direct these in the first instance to:

- Prof Reg Morris (Honorary Professor and Director of the Doctoral Programme in Clinical Psychology). Address: 11th Floor, School of Psychology, Tower Building, 70 Park Place, Cardiff, CF10 3AT. Telephone: 02920 870582

- You can also contact the Concerns Department at Cardiff and Vale University Health Board. Address: Cardiff and Vale University Health Board, Whitchurch Hospital, Park Road, Cardiff CF14 7XB. Telephone: 02920 336365.

THANK YOU FOR TAKING THE TIME TO READ THIS INFORMATION AND CONSIDERING TAKING PART IN THIS STUDY. IT IS VERY MUCH APPRECIATED.

Kind Regards,

Tina Howard
Trainee Clinical Psychologist (Project Lead)

Please keep the above information for your own records and return the reply slip below to the member of staff that gave you this information.

REPLY SLIP

Name: .....

Contact number: **.....**

I am **interested** in taking part in this research	

Appendix 5 : Consent Form

School of Psychology
Ysgol Seicoleg

South Wales Doctoral Programme in Clinical Psychology
De Cymru Rhaglen Doethuriaeth mewn Seicoleg Glinigol

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CONSENT FORM

A grounded theory study into the relationship between shame, perfectionism and anorexia nervosa

By Tina Howard, John Fox, Marc Williams and Debbie Woodward

Participant Identification Number:.....

Please initial each of the following statements if you agree:

	Please initial
1. I confirm that I have read and understood the information sheet for the above named study	
2. I have been given the opportunity to ask any questions, and have had any questions answered to my satisfaction	
3. I understand that my participation is voluntary and that I am free to withdraw from the study at any time, without having to give a reason, and without my healthcare and legal rights being affected.	
4. I understand that all the information I disclose will be kept confidential unless the researcher is worried about my or someone else's safety.	
5. I understand that my interview will be recorded and the recordings will be destroyed after the interview has been transcribed.	
6. I understand that the final report will be submitted for publication.	
7. I agree to take part in the above study	

Name of Participant Date Signature

Name of Researcher Date Signature

IRAS: 242069
Consent Form
Version 2 – 31/07/2018

Appendix 6: Interview schedule

1. Initial Questions
    - Tell me about your eating disorder
    - Could you describe the events that led up to it?
    - What factors do you think influenced it?
    - What have you struggled with most?
    - How do you think your emotions play a part in your eating disorder?

2. High Standards / Perfectionism
    - What does it take for you to fell as if you have succeeded at something?
    - Do you set high standards for yourself? **(Tell me more about this / can you give an example of this?)**
    - Do you expect more from yourself than others?
    - Do you fell you have to be perfect at everything to feel any worth?
    - What would it take for you to feel good enough?
    - Does not achieving perfectionism lead you to feel ashamed?
    - Does a desire to be perfect lead you to restrict your eating?

3. Shame
    - Can you think of a time you have felt ashamed?
    - Do you feel ashamed of yourself? (What about yourself causes you to feel ashamed?)
    - Do you feel ashamed when you make a mistake? **(Tell me more about this / can you give an example of this?)**
    - Do you feel ashamed when you fail at something?
    - Do you try and hide your imperfections?
    - Does feeling ashamed lead you to try and be perfect?
    - Does feeling ashamed lead you to restrict your eating?
    - Are you ashamed about your anorexia nervosa?
    - How do you feel your feelings of shame and perfectionism relate to your anorexia nervosa?

4. Comparison to others
    - How do you think you compare to other people?
    - Do you feel as successful as other people?
    - Do you feel you are inferior to others?

5. Ending questions
    - Is there something that you might not have thought about before that occurred to you during this interview?
    - Is there anything else that I haven't asked about that you think is important?
    - Is there anything you would like to ask me?

Appendix 7: EDE-Q

EATING QUESTIONNAIRE

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all the questions. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	On how many of the past 28 days …..	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1	Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3	Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4	Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5	Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6	Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6
7	Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
8	Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
9	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11	Have you felt fat?	0	1	2	3	4	5	6
12	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past four weeks (28 days) ……

13 Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?	……..
14 ….. On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?	……..
15 Over the past 28 days, on how many **DAYS** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?	……..
16 Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?	……..
17 Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?	……..
18 Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	……..

Questions 19 to 21: Please circle the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19 Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? ….. Do not count episodes of binge eating	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
	0	1	2	3	4	5	6
20 On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? ….. Do not count episodes of binge eating	None of the times	A few of the times	Less than half	Half of the times	More than half	Most of the time	Every time
	0	1	2	3	4	5	6
21 Over the past 28 days, how concerned have you been about other people seeing you eat? ….. Do not count episodes of binge eating	Not at all		Slightly		Moderately		Markedly
	0	1	2	3	4	5	6

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

	Over the past 28 days …..	**Not at all**		**Slightly**		**Moderate -ly**		**Markedly**
22	Has your weight influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23	Has your shape influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25	How dissatisfied have you been with your weight?	0	1	2	3	4	5	6
26	How dissatisfied have you been with your shape?	0	1	2	3	4	5	6
27	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28	How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

What is your weight at present? (Please give your best estimate.) .....

What is your height? (Please give your best estimate.) .....

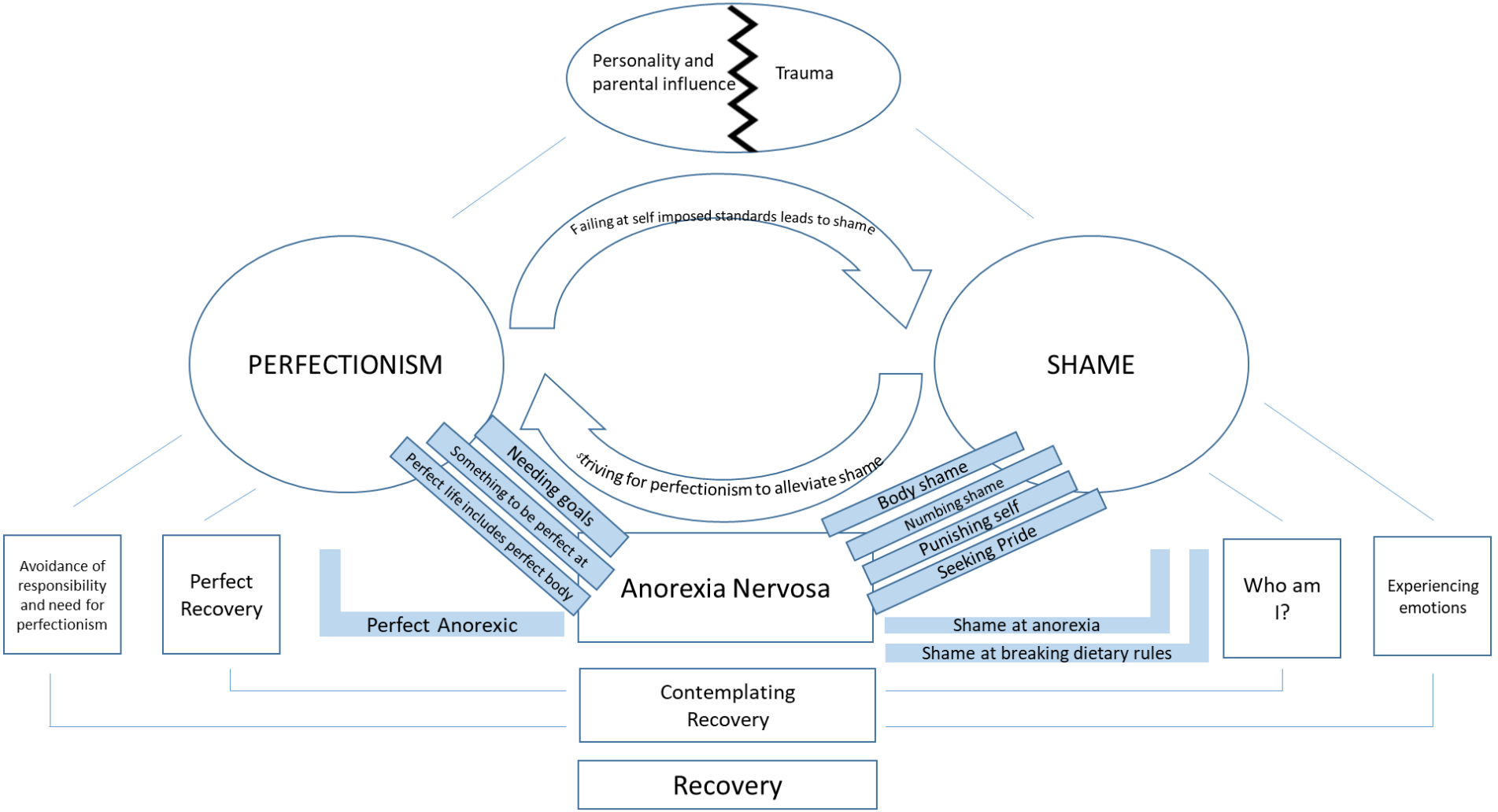
If female: Over the past three-to-four months have you missed any menstrual periods? .....

If so, how many? .....

Have you been taking the "pill"? .....

THANK YOU

Appendix 8: Grounded Theory model



Appendix 9: Transcript example

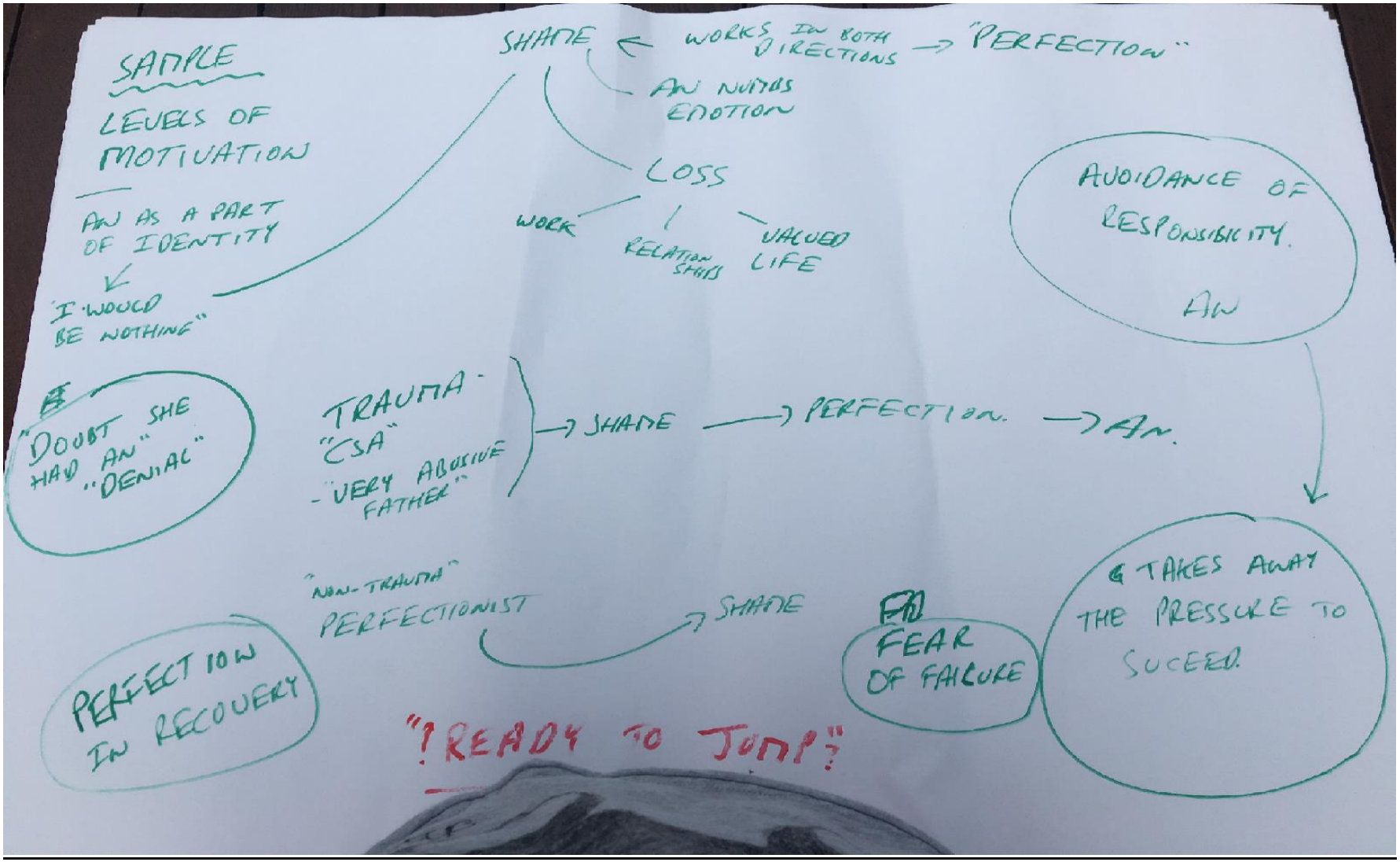
Transcript	Initial Coding	Focused coding
TH: Was there anything that you have done that you didn't feel you had to be brilliant at, or do you always feel that it's not worth doing unless you are going to be fantastic?		
P5: Yeah, like I, I tend to like if I know I'm not going to be good at something I just won't do it, so I only do stuff if I think I'm going to be really good at it, but yeah. I am getting better now, like I have learnt to like chill out a bit more and like I'll go, me and my friend will go to a dance class and just sort of have a bit of a laugh at it, as we know that neither of us are going to be amazing, we just kinda like go, but yeah, when I was younger I just wouldn't like do it, unless I knew, I guess that's what happened with the running, like once I'd started I thought like this is it now I've got to keep going and going and going.	Avoiding un-perfect activities Engaging only when good Relaxing rules Trying out un-perfect activity Avoiding uncertainty Unable to stop	Avoiding imperfection
TH: And why do you think that is? What do you think is pushing you to keep going?		
P5: I really don't know. I don't know.	Unsure of motivation	
TH: Do you know what it would take for you to feel good enough at something?		

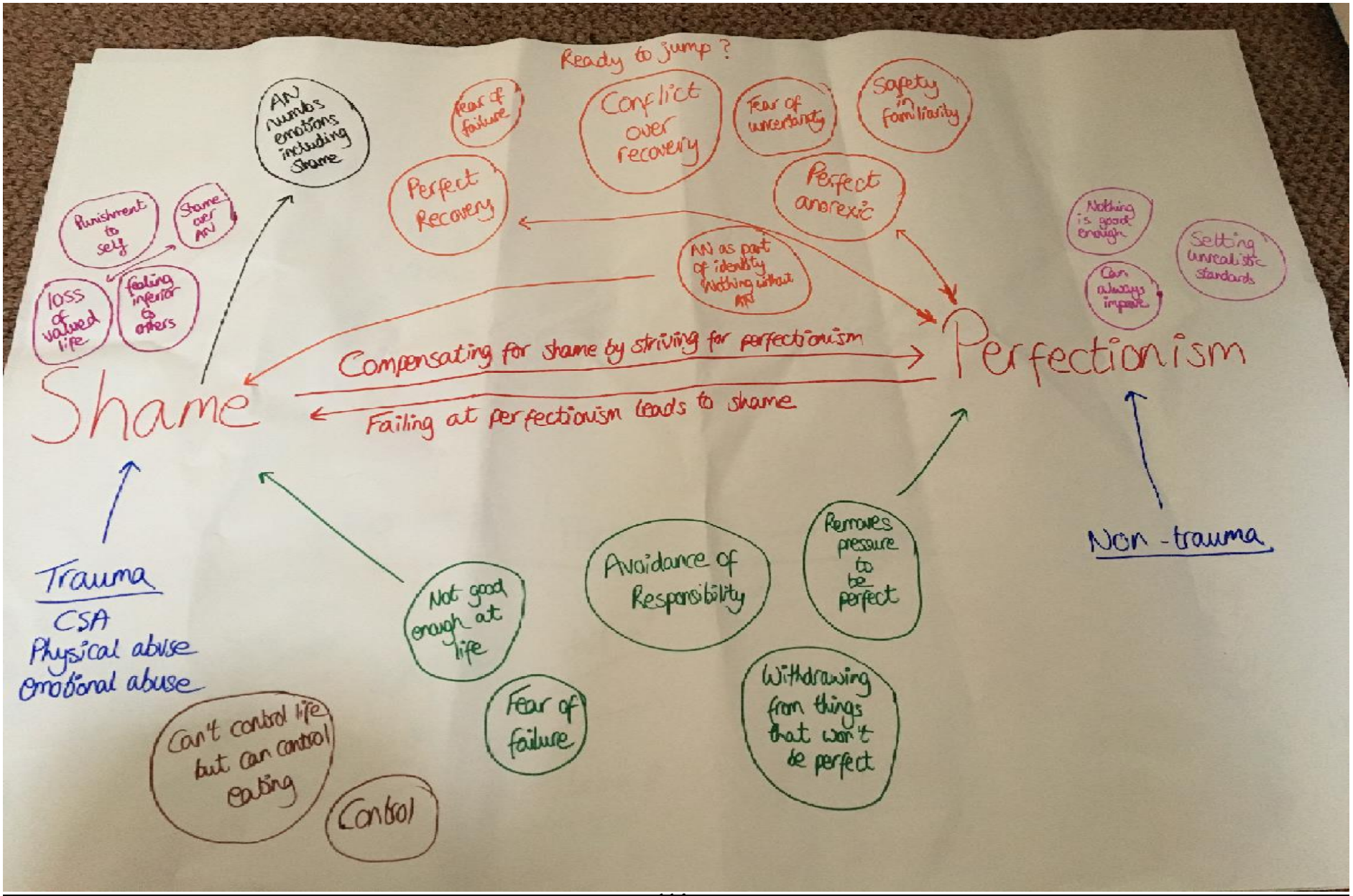
P5: Erm…. I honestly don't know. TH: Do you think there is anything that you feel like you know, you feel good enough at that? Not perfect, but actually it's good enough.	Good enough unimaginable	
P5: Erm, I don't know, like, hmmmm. Now I've kinda stopped doing a lot of things, since I was, like since I went really low in weight, I kinda stopped, like I gave up all of my piano, I gave up all of my guitar, the running, stopped competing, erm, so I guess like my job and stuff, I get by in that, I don't think I'm amazing at it, but I can do my job, erm. TH: And how does that feel with your job? Do you feel as if you are good enough at your job?	Withdrawing Giving up music after weight loss Giving up competing/ Good enough at job	Withdrawal from imperfection
P5: I always get really like, if I have to do a class or something, I get really really nervous, I get quite a bit of anxiety, and like I never feel good enough at anything, I just kinda have to, just do it.	Anxiety at work Never feel good enough	Nothing good enough

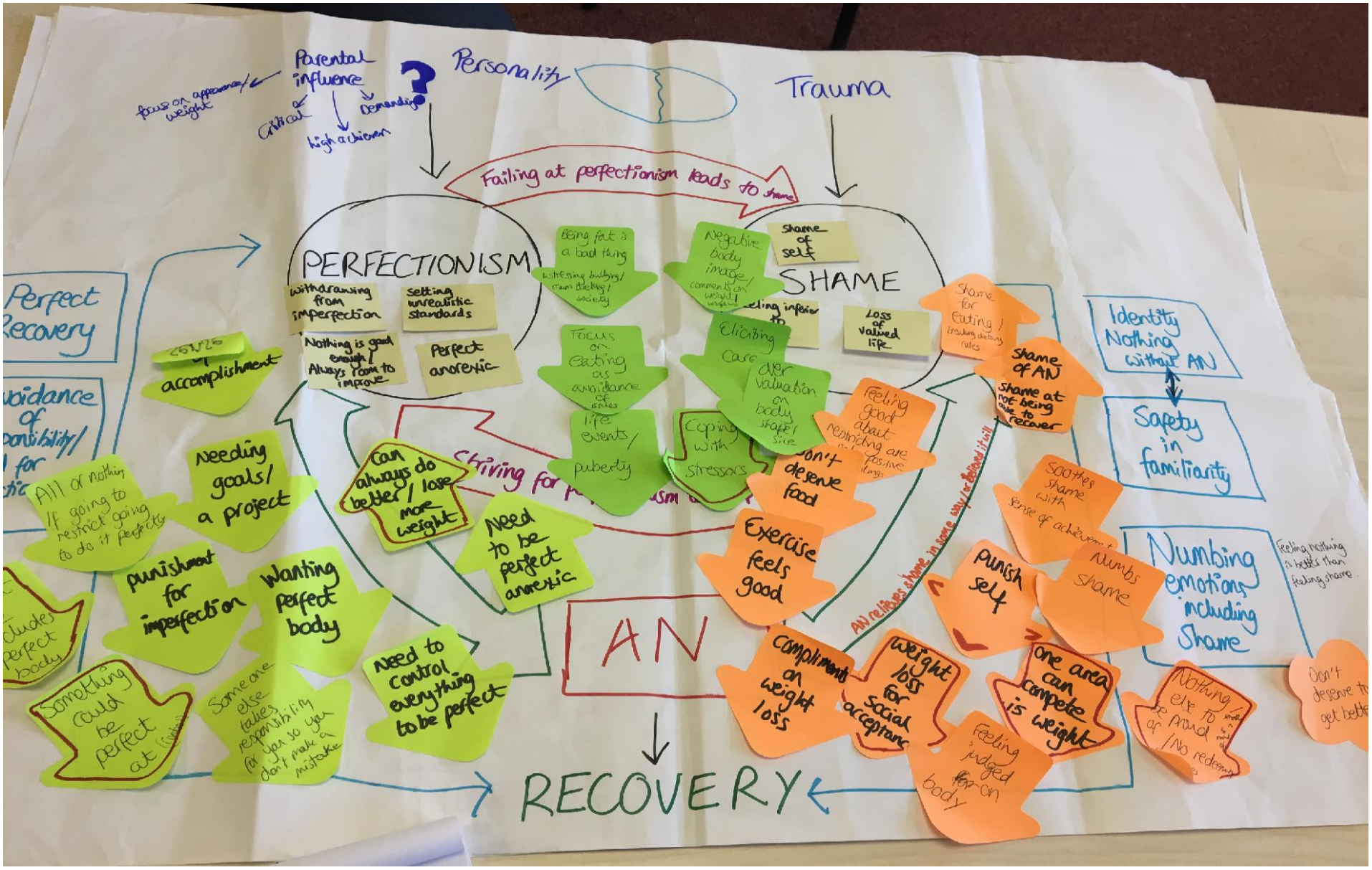
TH: And I guess, I wondering how, with the nature of your job, how that kind of affects you? 'cause obviously being a fitness instructor is kind of, erm, well a guess a part of your job isn't it is to advise healthy eating and encourage exercise and things.		
P5: Yeah, yeah it's quite hard really, and like, it is hard. It's like I know what to do to be healthy, I can easily sit there and tell someone else what they should be doing but when it comes to me, it's like, it's a different, yeah it's different.	Knowing how to be healthy Unable to apply to self	Barrier to recovery
TH: So, you feel you know what you need to do because of your training and things, but actually, there's something stopping you applying that to yourself. P5: Yeah.		
TH: Do you know what that is? P5: I guess it's just fear I think, of changing, because I've been like this for so long and even though I'm not happy like this, I'm just so used to it, it's just hard to change sometimes, like, to do stuff different, like it took me like a good, like two or three hours of agonising whether to like stop wearing my fitbit or not, like it was,	Fear of changing Familiarity Agonising decision making	

the decision was like agonising, but now I've done it I'm like agghh (sigh of relief) I still feel a bit lost but like, I know it's going to be better in the long run, so it's just making those changes.	Feeling lost with change Long term benefits	Fear of recovery
TH: I guess there's some familiarity there with your current situation, you say you've been this way since you were 15, that's a long time, I mean it is your whole adult life isn't it that you've been this way. Does it feel like change is scary, perhaps you don't know what it would be like to be any different?		
P5: Yeah, yeah I think it is a bit. It's kinda like a safety net, but I do need to let go of it now, it's just letting go of it is hard.	Safety net	
TH: Do you know what your biggest fear is if you did let it go?		
P5: Erm…. don't really know, I guess it's not really knowing who you are.	Losing identity	Lack of identity – who am I?

Appendix 10: Previous permutations of the model




Ready to jump ?
AN numbs emotions including shame
Fear of failure
Conflict over recovery
Fear of uncertainty
Safety in familiarity
Perfect Recovery
Perfect anorexic
Punishment to self
Shame over AN
Loss of valued life
Feeling inferior to others
AN as part of identity "Nothing without AN"
Nothing is good enough
Can always improve
Setting unrealistic standards
Compensating for shame by striving for perfectionism
Shame
Perfectionism
Failing at perfectionism leads to shame
Trauma
CSA
Physical abuse
Emotional abuse
Not good enough at life
Avoidance of Responsibility
Removes pressure to be perfect
Non - trauma
Can't control life but can control eating
Fear of failure
Control
Withdrawing from things that won't be perfect


Parental influence
Critical
Demanding
High achiever
Personality
Trauma
Failing at perfectionism leads to shame
PERFECTIONISM
SHAME
Withdrawing from imperfection
Setting unrealistic standards
Nothing is good enough / Always room to improve
Perfect anorexic
Being fat is a bad thing
Negative body image
Shame of self
Loss of valued life
Focus on eating as avoidance of issues
Life events / puberty
Coping with stressors
Eliciting care
Over valuation on body shape / size
Feeling good about restricting are positive things
Don't deserve food
Exercise feels good
Shame for eating / breaking dietary rules
Shame of AN
Shame at not being able to recover
Identity Nothing without AN
Safety in familiarity
Soothes shame with sense of achievement
Numbs shame
Punish self
Numbing emotions including Shame
Feeling nothing is better than feeling shame
Don't deserve to get better
Nothing else to be proud of / No redeeming
Feeling judged for on body
Compliments on weight loss
Weight loss for social acceptance
One area can compete is weight
AN
RECOVERY
Perfect Recovery
Avoidance of responsibility/ for
All or nothing If going to restrict going to do it perfectly
Needing goals/ a project
Punishment for imperfection
Wanting perfect body
Includes perfect body
Something could be perfect at
Someone else takes responsibility for you so you don't make a mistake
Need to control everything to be perfect
Can always do better / lose more weight
Need to be perfect anorexic
Striving for
AN relieves shame in some way is defined it will
accomplishment