A Multidimensional Treatment Model of Anorexia Nervosa

Patterns of Action Dissertation
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Introduction
Anorexia nervosa is a difficult condition to treat as patients are in an egosyntonic state, where they consider their behaviour to be reasonable and often have no wish to change which leads to involuntary treatment (Bowers, Evans, LeGrange & Andersen, 2006). A systematic review (Steinhausen, 2002) found a full recovery rate of 50%, however, 20-30% still displayed residual symptoms, 10-20% remained severely ill and 5-10% had died as a consequence of the illness. Various theories have attempted to explain and provide treatments for anorexia nervosa, but at present there is no evidence based on randomised controlled trials that any treatment has an exceptional outcome (Fitzpatrick & Lock, 2011). Theories of anorexia use their own theoretical paradigms to explain the illness which leads to certain aspects being subordinated and others amplified, thus the whole picture is not taken into account (Bemis, 1978). This essay will consider theory and evidence from various discourses and then incorporate these to create a multidimensional treatment model for anorexia nervosa. Due to the female predominance both in cases and research, this will be the main target group for the treatment model.

Anorexia nervosa is a relatively rare psychiatric illness. Recent figures show that 4 out of 100.000 people between the ages 10 to 39 suffer from the illness with a majority of females (Currin et al, 2005). DSM-IV has four diagnostic criteria for anorexia nervosa focusing on refusal to maintain or obtain a body weight at or above 85% of what is required for age and height, fear of gaining weight or becoming fat, body image disturbance and evaluating self in regards to body weight and shape, and lastly amenorrhea (absence of at least three menstrual cycles). Further division is made of restrictive and binge/purge subtypes (American Psychiatric Association, 1994). There is no consensus to what ‘recovery’ implies in anorexia nervosa (Bardone-Cone et al, 2010; Bulik et al. 2007), however, recent research agree that full recovery involves physical, behavioural and psychological restoration (Bachner-Melman et al., 2006; Bardone-Cone et al., 2010). The desired outcome of treatment is characterised by restored weight, menstrual function, normal nutritional status and improved mental state in relation to emotions and feelings about weight and shape, as well as rekindled relationships (Fitzpatrick & Lock, 2011).

The Biomedical Model
The biomedical discourse considers anorexia nervosa to be an organic or mental disease (Halse, Honey & Boughtwood, 2007), and various studies have found genetic influence but not enough to fully account for the illness (Holland et al., 1984; Stroeber et al., 2000). Genetic inheritance of personality traits such as extreme forms of perfectionism, need for organisation, cognitive rigidity and reward dependency have been seen in anorexics (Bachner-Melman et al., 2007; Fairburn et al., 1999; Wade et al., 2008). Fairburn et al. (2003) suggested perfectionism as both a maintenance and risk factor of anorexia nervosa, and further linked perfectionist traits to dichotomous thinking, weight and shape issues and conditional goal settings. This was supported by Lethbrigde et al. (2011) who found significantly prominent levels of these traits among anorexics in comparison to control. These traits occur in both males and females, but females are more likely to engage in the risk behaviour of dieting (Beumot, 2000).

Medical treatments are often drug based, and recent systematic reviews have concluded these treatments to be inappropriate and inefficient (Bulik et al., 2007; Keel & Bodell, 2010). Re-feeding is
considered the primary goal of treatment, with psychological and behavioural being secondary (Fenning et al., 2002). Re-feeding is essential and an effective part of treatment, but not sufficient on its own (Fitzpatrick & Lock, 2011). Clinical settings have been seen to promote consumption of large quantities of calories in order to reach a specified ‘target weight’. Gremillion (2002) considered this ineffective in terms of developing normal eating behaviour and thoughts. Large relapse rates of 44% after nasogastric re-feeding and 56% after only oral re-feeding have been found (Rigaud et al. 2007). In relation to this, a large proportion of anorexics develop bulimia nervosa (e.g. Eckert et al., 1995; Ratnasuriya et al., 1991; Russell, 1979). A plausible explanation may be that a combination of becoming used to consuming vast quantities of food but not effectively targeting cognitive distortions may result in binge eating succeeded by purging. However, this field requires further research.

Psychological Models

Cognitive-Behavioural Model
Cognitive-Behavioural therapy (CBT) addresses re-feeding through a mechanical perspective and (Garner, Vitousek, Pike, 1997), like most therapies, ignores the social aspect of eating (Wiggins et al. 2001). Additionally, CBT attempts to enhance motivation for change and actively engage the patients to identify maladaptive thoughts, making the patient an active agent on the road to recovery. CBT involves a trusting relationship with the therapist and focuses on working towards mutually constructed goals by changing beliefs and behaviours (Garner, Vitousek, Pike 1997). A systematic review looked at randomised control trials for CBT and found it to be equivocal to other compatible treatments and only superior to weak comparison treatments such as nutritional counselling (Keel & Bodell, 2010). On the other hand, CBT treatments have demonstrated lower drop-out rates compared to other treatments (Channon et al., 1989; Pike et al., 2003; Serfarty, 1999,), suggesting that patients consider CBT a more acceptable treatment method.

CBT has been found to be more effective in treating bulimia nervosa (Fairburn et al. 1995), yet the treatment designs share some overlaps such as focus on weight, shape and thinness. However, bulimic patients seldom gain weight during the therapy, whereas this is a central feature for anorexic patients. It may be that CBT does not efficiently address the physical and psychological consequences of gaining weight, or perhaps the main focus of weight and shape is not appropriate in treating anorexia nervosa. Schmidt and Treasure (2006) developed an evidence based, cognitive-interpersonal maintenance model that does not emphasise weight and shape. The model suggests that upon initial restriction of food behaviour is reinforced by improvement in mood, energy and well-being. The individual will then start to develop strict dietary and exercise rules reflecting rigid and perfectionistic traits. Breaking rules subsequently results in the feeling of failure, triggering negative emotions. This emotional state is further associated with food, and hence avoidance of food is reinforced. As the illness progresses to chronic starvation, consumption of food results in unpleasant physical consequences, such as feeling bloated and ill, and this is attributed to food resulting in further avoidance. However, due to the body’s evolutionary response to starvation, the anorexic patient becomes obsessed with food (cooking for others etc.). This obsession takes over and numbs the feeling of emotions. Initial compliments from close-others regarding weight loss reinforces the restrained intake and creates a feeling of being more attractive. When too much weight is lost, and close others start to express concern, this further reinforces the illness by providing attention. When the anorexic does not comply with pressure to put on weight this creates
tension for example in the family, resulting in negative emotion and criticism. The anorexic, who is vulnerable to negative emotions and criticism, avoids interaction with significant others and connects further to the security perceived in anorexia nervosa. The model predicts that recovery is hindered by longer symptom duration and that treatment does not necessarily need to focus on weight and shape concerns. In support for the latter, McIntosh et al. (2005) found that non-specific supportive clinical management was more effective than CBT with focus on weight and shape concerns. As a result, Schmidt and Treasure proposed that treatment instead should focus on reducing positive associations with anorexia nervosa, decrease the avoidance of emotions and reduce perfectionism and cognitive rigidity.

Psychoeducation, a component of CBT aimed at hindering obtrusive thought by educating the anorexic on the effects of starvation on body and behaviour (Bowers et al., 2006), is sometimes used in CBT but there is little evidence based research on the effectiveness. Randomised control trials should be carried out in order to assess if this aspect is beneficial. Additionally, Connan and Treasure (2000) suggest that it may be beneficial to explain to the anorexic patient about their set-point of weight, the stable weight range a person has when eating and exercising healthily to diminish fear of becoming overweight or fat. This aspect would also benefit from future randomised controlled trials.

**Psychodynamic Model**
Bruch, (1978) considered anorexia nervosa a consequence of lack of independence and development of self, prevented by overinvolved mothers. Anorexia nervosa becomes a way of gaining control over something in the environment. Although findings regarding family structures have not found single explanatory factors. various findings suggest ill-defined and dysfunctional roles within the family as well as dysfunctional communication (Minuchin et al., 1978; Polivy & Herman, 2002; Selvini Palazzoli, 1974; Steiger et al, 1996). Alternatively, Crisp (1997) suggested anorexia nervosa as a way of avoiding, or reversing, puberty and maturation. Either as a consequence of wanting to maintain family structure or as a response to childhood sexual abuse by providing the sense of greater ownership of the body (Crisp,1997). However, in a meta-analysis, Stice (2002) found no empirical evidence of sexual abuse in relationship to anorexic pathology.

Psychodynamic therapies attend to relationships and emotions in terms of dealing with deficits and dysfunctions that may surround these issues (Dare & Crowther, 1995). Crisp (1997) suggested that throughout the treatment procedure the patient will need support to cope with the panic that may erupt as a consequence of resuming food consumption. Additionally, the patient may need help with subsequent depression or anxiety due to high comorbidity with other mental health issues. He further suggested, that competence in other areas needs to be discovered in order to develop a sense of ownership of the body and expand a self that goes beyond physical appearance.

**Family Therapy**
Family therapy is currently the only treatment which has received a grade B from the National Institute for Health and Clinical Excellence (NICE) guidelines, and is the recommended treatment method for all child and adolescent anorexics (NICE, 2004). The aim is to treat the family as a whole, and by changing the family environment improve symptomatology (Keel & Bodell, 2010). An example is the Maudsley model (Dare 1985), which aims to teach parents effective means of taking complete control over the child’s eating and weight. The intention is that as the child starts to
comply with the parental authority, the control will start to diminish, progressively giving the child more control and ability to develop a healthy self. Most randomised controlled studies on family therapy are done comparing family therapies with each other. A recent Cochrane review found eight studies which compared against other family-therapies, and five which compared against other psychological treatments or treatments as usual. The results indicated that family therapy has some improvement in the short-term compared to treatment as usual, but there was no evidence in comparison with other psychological treatments for improved weight gain or cognitive distortions (Fisher et al. 2010). However, Russell et al. (1987) did see greater improvement among younger and less chronic participants for family therapy which is consistent with the prediction Schmidt and Treasure (2006) made that recovery will be made more difficult if the illness is chronic. Furthermore, worse outcomes of family therapy have been observed in cases where there is high levels of family criticism, especially if it stems from the mother (Eisler et al., 2007). Godart et al. (2012) found in a randomised control trial that family therapy targeting intra-family dynamics had a significantly better outcome on healthy weight and shape than family therapy focused on eating disorder symptomatology. This suggests that therapy targeted at creating a positive environment facilitates weight recovery better than those enforcing authority. However, this is based on one study only, and more research is needed.

**Socio-Cultural Theories**

70% of anorexics have been seen to enter their illness through dieting (Nevonen & Broberg, 2000), this reflects the socio-cultural view that anorexia nervosa is a reflection of western social and cultural ideas of food, fatness and the female body (Hughes, 2000). Content analysis of various media has revealed an increasing preoccupation with beauty, thinness and food (e.g. Klassen, Waner & Lassel, 1990; Wiseman et al., 1990). However, studies of media influence on self-esteem have revealed inconsistent results with some studies finding significant effect of media and other studies instead finding perceived pressure from peers to be significant (Harrison & Cantor 1997; Presnell, Bearman & Stice 2004; Thornton & Maurice, 1997). Hamilton and Waller (1993) found that after viewing magazine images, anorexics and bulimics overestimated their body significantly more than control, but the nature of the study does not allow to draw conclusions on media influence as a reason for the disorder. Interviews with pro-anorexia (pro-ana) web site users, sites which often use pictures of thin celebrities as ‘thinspiration’ revealed that the pictures worked as role models but were not singlehandedly considered sufficient to lead to anorexia nervosa, instead approval of others of initial weight loss was considered more influential (Fox et al. 2005).

In support of socio-cultural theories is the findings of a cross-sectional study carried out in Fiji (Becker et al., 2002), which found changes in attitudes of weight and shape among young girls three years after a widespread introduction of television. The study found that 77% of the girls claimed television had influenced their body image. Disordered eating was significantly more common after the introduction of television; self-induced vomiting had increased from 2.7% to 21.4%. 69% had engaged in dieting, a behaviour not otherwise present in traditional Fijian culture. To what extent this was due to media influence is hard to decipher considering that Fiji at the time was going through economic change with increased consumerism, and due to the cross-sectional method of the study it is difficult to infer the cause of increased dieting and disordered eating.

Cases of anorexia nervosa, for example saint Catherine of Sienna in 1347-1380, date back before the modern thin ideal woman (Hepworth, 1999). In addition, anorexia nervosa has not been found to be
constrained to socio-economic status, or racial and ethnic background (Becker, 2004; Gard & Freeman, 1996). Lee et al. (1993) stated that the criteria of diagnosis are highly westernised based on western assumptions of fear of fatness. He studied patients at a hospital in Hong Kong and found that a majority of patients did not report fear of fatness and instead reported epigastric bloating and similar issues as reasons. In a qualitative meta-analysis of changes in eating disorder incidents and an evaluation of the presence of eating disorders in non-Western cultures and historical background, Keel and Klump (2003) concluded that anorexia nervosa is not a culture-bound syndrome. In contrast, bulimia nervosa is. This may offer further explanation to why bulimic patients respond well to weight and shape concerned CBT, whereas anorexic patients do not. There appears to be a lack of evidence for cultural focus on thinness as a theoretical base for anorexia nervosa (Waller, 2000).

The Patient’s account
The egosyntonic nature of anorexia nervosa makes the disorder substantially hard to treat. Gooldin (2008) studied anorexics in a clinical setting in Israel and found that many expressed anorexia nervosa as a way of living they had chosen. This can be extended further by considering the growing web-based pro-ana community, promoting an ‘anti-recovery ‘discourse where the focus is not on recovery but on safe management of the dangerous condition (Fox et al, 2005).

Gremillion (2002) argues that the re-feeding methods used increase patient’s experience of lack of control, and this is supported by Gillespie (1996) who found that anorexics fight therapy and the therapist in fear of losing control. Jenkins and Ogden (2012) conducted a small scale qualitative study of patients who had recovered or were in recovery, with the focus on difficulties in the recovery process. Many found that there was too much focus on ‘target weight’ without addressing thoughts or taking the individual’s needs into account. On positive terms, the girls acknowledged that connecting with emotions and recognising that negative consequences of anorexia were overriding the perceived benefits facilitated recovery, hence supporting Schmidt and Treasure’s (2006) proposal of focusing on negative consequences in recovery. In a study asking patients why they did not wish to recover, it was found that the ‘perceived benefits’ of anorexia nervosa hindered acceptance of illness. Concerns in regards to what others would think and feelings of distress, anxiety and depression were also mentioned. The majority of the girls attributed a sense of security to anorexia (Nordbo et al, 2012). This was also seen in a CBT based writing task (Serpell et al 1999) where patients were asked to write two letters to ‘anorexia’, one as a friend and one as an enemy. These letters were then coded into ‘pro codes’ and ‘anti codes’ and ranked according to how frequently they occurred. The most significant and frequent pro code, representing 50% of all pro codes, was seeing anorexia as a guardian or a sense of security. Moreover, the feeling of control, attractiveness and avoidance of emotions were also seen to be significant. On the negative side, loss of friendships, a feeling of guilt, that their lives had been wasted, health problems, a feeling of depression and suffocation of emotion was noted in the negative letter. The study was only exploratory, but it does give an indication that accentuating the negative issues may increase motivation to recover by undermining the pro codes. Applying writing tasks to address specific features of anorexia nervosa has received further support (East et al. 2010)

Motivation
As discussed, many patients indicate reluctance towards recovery, and this may be an explanation for low recovery rates (Vansteenkiste, Soenens & Vandereycken, 2005). Wade, Frayne and Edward (2009) found that higher baseline motivation predicted a better outcome in decreasing eating
pathology, and significantly less people dropped out in comparison to treatment without motivational focus. According to the Transtheoretical model (TMC) (Prochaska, DiClemente & Norcross, 1992) there are five stages of change evolving around motivation. Pre-contemplation involves no desire to change, contemplation involves thinking about change, preparation involves planning towards changing, the fourth stage is one of action, and lastly there is a stage of maintenance. This model can be used in order to assess at what stage of motivation someone is in order to target the behaviour and increase motivation effectively (Prochaska, 1994, Prochaska, Redding & Evers, 2002). Nordboe et al. (2008) found that a sense of autonomy and insight into negative consequences of anorexia nervosa increased motivation to recover, hence applying this at baseline, by making the patient aware of negative consequences and explaining personal responsibility for recovery prior to engagement in therapy, may improve outcomes.

Multidimensional Treatment Model of Anorexia Nervosa

Due to the lack of evidence discussed, I will agree with Fairburn (2005) on the statement that ‘evidence based treatment of anorexia nervosa is barely possible’ (pp. 26). There is an extensive field of literature concerning anorexia nervosa, yet no treatment can be deemed superior and there is still need for further evidence and research. A reason for the lack of evidence is due to the rarity of the illness, as well as medical complications, need for extended treatment periods and that patients often express ambivalence towards recovery due to the egosyntonic nature of the illness (Agras et al. 2004). These issues make it difficult to conduct rigorous randomised control trials. Based on the theories, models and evidence discussed, I have created a multidimensional treatment model. However, as evidence is lacking in some areas, it can only be applied as a suggestion for further research. Each step described below can be linked to the model illustrated in figure 1.

1. Weight assessment is the first essential step. Only if the patient is out of immediate danger should this treatment model be pursued.

2. Based on Prochaska and DiClemente’s (1992) model, determining what motivational stage the patient is in, additional interventions to increase motivation at baseline can be made. The patient may belong to any of these stages and do not necessarily need to go through all of them.

2.1. The pre-contemplation stage is characterised by the patient being in an egosyntonic state. Nordboe et al. (2008) found that insight to negative consequences may increase motivation, hence a task such as Serpell et al’s. (1999) letter writing task can be implemented to make the patient observant of these.

2.2. When the patient has started to consider making a change, negative consequences such as mood and health problems can be emphasised further by implementing psychoeducation to explain how these relate to starvation. This field of research lacks studies and evidence and needs to be researched further to determine the effectiveness of psychoeducation.

2.3. At this stage a relationship with the therapist should be developed. Following Norboe et al. (2008), who found that a sense of autonomy may increase motivation to engage in treatment and Gillspie’s (1996) observation that patients fight recovery in fear of losing control, the patient should be made an active agent in setting up goals for therapy and take responsibility for these.

2.4. In the action phase the means of recovery should be given to the patient.
2.4.1. Research has shown that re-feeding is necessary and essential for recovery, but re-feeding in clinical settings has indicated large relapse rates. Thus I propose that re-feeding should be done simultaneously to other aspects of therapy as long as the patient’s health is not in immediate danger. Considering the evidence for cognitive rigidity and perfectionism found in genetic studies and suggested as a major role in the illness by Schmidt and Treasure (2006), a set numbers of calories or food is not to be encouraged to avoid reinforcing these traits. Yet the treatment needs to be firm in order to ensure consumption. Connan and Treasure (2000) suggested explaining the theory of set-point in order to reduce fear in regards to fatness, but future research of this is needed.

2.4.2. If the patient is under 18, family therapy has been considered somewhat beneficial. Evidence suggests that those over 18 and with chronic symptomatology do not benefit from family therapy, and hence this step can be excluded for this group. This is not absolute and can be changed depending on the individual and the family. Recent research has indicated that family therapy should focus on family structure and not symptoms. Self-reports have indicated that anorexia nervosa is considered a sort of security, and it may be relevant to create security in the family. Due to the anorexic patient often being sensitive to negative emotion and criticism it is important to address this aspect in family therapy, especially in terms of maternal criticisms as suggested by research.

2.4.3. Individual therapy should consist of two aspects.

2.4.3.1. CBT aspects have previously been focused on weight and shape concerns, however research discussed in this essay suggests that targeting perfectionistic traits and cognitive rigidity, which can be seen to encapsulate the illness, may be more beneficial.

2.4.3.2. The psychodynamic aspect should aim to address emotion, by helping the patient to address the initial problem which anorexia nervosa may be protecting them from, as well as aid in rekindling of relationships.

2.4.3.2.1. In combination, these steps should hopefully lead to full recovery, with re-feeding targeting physical health by restoring weight, menstruation and nutritional status. Behavioural and cognitive dysfunctions will be targeted by individual therapy by targeting emotions and extreme personality traits. Additionally, family therapy may lead to further improvements by addressing security and family dynamics.

2.5. The final stage is to ensure maintenance and prevent relapse.
Concluding comments
Due to the lack of evidence for shape and weight as the central concerns and maintaining factors in anorexia nervosa, this focus was reduced in this treatment model. It is hence suggested that the diagnostic criteria should be reconsidered and instead focus on perfectionistic traits and cognitive rigidity which appear to lead to and maintain anorexic behaviours and thoughts. In addition, I want to emphasise that there is a need for further research on the relationship between recovering from anorexia nervosa and developing bulimia nervosa as this may suggest flaws of treatments and could lead to further improvement.

References


