

**THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-
DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS
BELIEFS, BEHAVIOURS, AND DIAGNOSIS**

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The Relationship between Shame, Social Rank, Self-Directed Hostility, Self-Esteem and Eating Disorders Beliefs, Behaviours, and Diagnosis

Kenneth Goss

Abstract

This study investigates:

- The relationship between shame, social rank, self-directed hostility, and self-esteem in a female eating disordered population.
- The relationship between anorexic and bulimic beliefs and behaviours and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem, and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem and anorexic and bulimic beliefs and behaviours.

Data was collected from 187 eating disordered females. They completed the Stirling Eating Disorders Scale (measuring anorexic and bulimic dietary cognitions and behaviour, low assertiveness, perceived external control, low self-esteem and self-directed hostility), the Internalised Shame Scale, and the Other As Shamer Scale. All met diagnostic criteria for Anorexia Nervosa, Bulimia Nervosa, Eating Disorder Not Otherwise Specified, or Multi-Impulsive Bulimia Nervosa.

The mean scores for all diagnostic groups on internal shame, low assertiveness, perceived external control, and low self-esteem were clinically significant. All diagnostic groups reported means for external shame higher than those found in previous studies with non-clinical samples. Internal and external shame was strongly related to aspects of social rank (low assertiveness and perceived external control), low self-esteem, and self-directed hostility.

Anorexic and bulimic cognitions and behaviours were common across eating disordered diagnoses. Results support a “transdiagnostic” approach to eating disorder assessment and treatment. A large minority of eating disordered patients experience clinically significant restricting and bulimic behaviours.

Clinically significant differences were found between participants with differing patterns of anorexic and bulimic beliefs and behaviours in levels of internal and external shame, low-assertiveness, perceived external control, low self-esteem and self-directed hostility.

These implications for evolutionary models eating disorders and clinical implications are considered. Methodological issues discussed and further areas for investigation suggested.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

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CHAPTER 1

1 INTRODUCTION

1.1 Background

This thesis will explore the relationship between various dimensions of shame to a range of eating disorders. There are good reasons for assuming that shame may play a major role in eating disorders because, as will be discussed later, eating disorders involve significant disturbances of self-perception, negative self-evaluation and how the self is perceived and evaluated by others.

1.2 Defining the Eating Disorders

Although there is some debate regarding the epidemiology of eating disorders (particularly Anorexia Nervosa) there is evidence that the prevalence of all eating disorders has risen over the past 30 years (Russell, 1995). The descriptions of eating disorder symptoms have also developed to the point where there are now four official DSM IV eating disordered criteria: Anorexia Nervosa (AN); Bulimia Nervosa (BN); Binge Eating Disorder (BED) and Eating Disorder Not Otherwise Specified (EDNOS), (American Psychiatric Association, 1994). Additional diagnostic categories have also been proposed, including Multi-Impulsive Bulimia (MI-BN), to address patients with eating disorder and co-morbid Borderline Personality Disorder traits (Lacey & Mourelli, 1986) and Machismo Nervosa, to address a primarily male preoccupation with weight training and muscle gain (Whitehead, 1994). In turn, many of these categories have been hypothesised to be subdivided by symptom presentation (Hall et al., 1992; Tobin et al., 1997), co-morbidity (e.g. with Seasonal Affective Disorder; Ghadirian et al., 1999) or to present differently cross culturally (Nagi et al., 2000).

1.3 Theories of Eating Disorder Development and Maintenance

The past 30 years has seen a dramatic increase in research into the aetiology and maintenance of eating disorders (see Szmulker et al., 1995 for a review). These have spanned the social and biological sciences and tend to fall into two major categories: aetiological theories and maintenance models. These models tend to polarise into biological, psychological, and social theories. Unfortunately, the Holy Grail of eating disorder theory (a unified definitive causal and maintenance pathway) remains as elusive as ever (Campbell, 1995). Kinder's (1991) analysis, that there is no single causative pathway to an eating disorder, appears to hold true 15 years on (see Jensen, 2001). Nonetheless, many theorists recognise it is only by understanding the *interactions* between biological, psychological, and social/cultural factors that will lead to greater clarity on cause and maintenance of eating disorders.

Part of the problem has been the tendency to treat people with eating disorders as a homogenous group, leading to the oversight of important individual variations that can compromise treatment (Waller, 1993). However, even models which do account for such variations tend to view eating disorders within specific psychiatric diagnostic classifications (e.g. AN and BN) with over-concern about size and shape and fear of fatness as paramount (Garner & Garfinkel, 1982; Fairburn & Cooper, 1989; Waller, 1993).

A number of authors have argued that the current classificatory system is unsatisfactory. Franko et al. (2004) note that there is no uniform agreement regarding the way in which AN and BN should be classified. Difficulties in identifying fear of weight gain in non-European samples (Lee, Ho, & Hsu, 1993, and Walsh & Kahn, 1997) and lack of amenorrhea in very low weight women (Cachelin & Maher, 1998) have brought two of the key diagnostic criteria for AN into question; although fear of weight gain in western samples may be important in diagnostic specificity and outcome prediction (Hambermas, 1996; Strober, Freeman, & Morrell, 1997). Similarly frequency and duration of binges may also have limited clinical utility in predicting outcome or distress and may also need to be re-evaluated in regard to their role in diagnosis (Franko, et al, 2004).

There is a significant dilemma in using AN or BN as a trait diagnosis. A number of authors have noted that these diagnoses are likely to be relatively fluid both in severity and symptom presentation over time. Braun et al. (1994) found that 25% to 33% of those with BN have a history of AN. Whilst 54% of women with AN are likely to develop BN over a 15.5 year period (Bulik et al., 1997). However it would appear that the overarching category of “eating disorder” remains relatively stable over time, regardless of initial diagnosis (Milos et al., 2005).

Even if one accepts the validity and utility of the current classificatory systems, they fail to account for the majority of patients seeking treatment. Estimates suggest that between 20% and 60% of those seeking treatment will fit into the somewhat vague catch-all category offered by DSM-IV-R (Anderson et al., 2001; Fairburn & Walsh, 2002; Turner & Bryant-Waugh, 2004). This may be particularly important as up to 50% may go on to develop AN or BN over a four year period (Herzog et al., 1993). Furthermore the levels of psychosocial distress and impact on psychosocial functioning appear to be as severe as that found in patients with AN or BN (Herzog & Delinsky, 2001).

EDNOS excludes those with diagnosed with BED ; which is presumed to have a prevalence rate of between 2% and 3% in community samples (Grilo, 2002). This group are also likely to experience high levels of psychological distress, have similar levels of psychosocial impairment, and may be equally concerned about size and shape as patients with alternative eating disordered diagnoses (Striegel-Moore, et al., 2000), particularly if they are seeking help for weight loss (Webb, 2000).

Several efforts have been made to overcome the perceived shortfall of the current classificatory system. This includes subtyping the existing diagnoses (for example by identifying those with AN who also purge, or bulimia with or without purging). An alternative approach has to base subtypes on personality or affective dimensions, rather than eating disordered symptoms. (See Franko et al., 2004, for a review). These approaches may offer a viable alternative eating disorder symptom based classification system and appear to assist in the

prediction of outcome and treatment response in both AN (Nagata et al., 2000) and particularly BN (Fichter et al., 1994, Johnson et al., 1990; Steiger et al. 1996; Wonderlich et al., 1994).

Franko et al. (2004) note that cluster studies of personality variables also provide relatively robust categorisations. These studies have identified three groups; a perfectionist high functioning group, a constricted over-controlled group, and an emotionally dysregulated group (Western & Hardnen-Fischer, 2001).

Interestingly each of these clusters was associated with a different pattern of etiological variables, symptomatic presentation, and level of adaptive functioning (Franko et al, 2004). Franko et al. (2004) conclude that current classificatory systems are likely to be inadequate and that further research should be directed at developing better taxometric analysis, longitudinal studies of biological factors (focusing on serotonergic functioning), and clinical course.

1.4 Fear of Fatness and Beyond

Many of the early studies of eating disorder, especially AN, saw a fear of fatness as lying at the heart of the problem, thus making it a form of phobia. When fear of fatness is noted as part of an eating disorder it is usually related to body appearance anxieties rather than health concerns. As noted earlier, more recently it has been recognised that cross-cultural and historical models which specifically focus on AN and BN do not find these 'core symptoms' to be universal. Studies using Chinese samples report self-starvation associated with both "fat phobic" and "non-fat phobic" symptoms (Lee, Ho, & Hsu, 1993; Nagi et al., 2000). Furthermore, these patterns of phobia appear to change over time for some individuals. There are also accounts of ascetic eating disorders historically and cross-culturally, where starvation states are related to religious or aesthetic concerns rather than to "fat phobia" (Szmulker & Pattern, 1995). Fear of fatness may not account for disordered eating more generally, particularly in men and patients who overeat, binge without purging or do not diet.

Recent research supporting the “fear of fatness” model has also highlighted the role of shame as a core underlying belief system associated with eating disordered psychopathology. Cooper et al.’s (1998) study of 12 anorexic, 12 bulimic and 12 non-eating disordered women is indicative of this trend and has extended earlier cognitive-behavioural maintenance models of eating disorders (Fairburn & Cooper, 1989; Garner & Garfinkel, 1982) in an attempt to illuminate aetiological and maintenance factors. They used semi-structured interviews to investigate the negative self-beliefs of these female groups. They concluded that the eating disordered groups differed from normal participants in two major areas:

1. Higher levels of negative self-belief, which were “without exception, negative and unconditional,” focusing on themes of worthlessness, uselessness, inferiority, being a failure, abandonment and being alone.
2. Greater conditional beliefs about eating and the meaning of size and shape. The focus of these beliefs was on the relationship between weight and shape and self-acceptance.

Cooper et al. (1998) hypothesised that the purpose of dieting was to manage emotional difficulties arising from aversive early experiences and avoid abandonment or rejection. They noted that dieting helped individuals to feel more successful and in control, while bingeing appeared to provide a distraction from unpleasant thoughts, images, negative self-beliefs, and emotional states. They hypothesised that eating disorders represent types of schema compensation and cognitive and emotional avoidance. The negative beliefs elicited in Cooper et al.’s (1998) study are in line with current psychiatric and psychological theories of eating disorders. Primarily, patients were preoccupied with losing fat; anxious about gaining weight and self-attacking if they broke their personal eating rules.

Other theorists have highlighted the important *functional* nature of eating disordered behaviour at least in temporarily improving mood, or as disassociative strategies to avoid severe affect shifts (Polivy & Herman, 1993). It can also become a ‘friend’ in helping individuals feel protected, special and in

control (Serpall et al., 1999). There are also a number of eating disorders where fear of fatness does not seem a central element. These would certainly include BED (Striegel-Moore et al., 2000) and many recurrent obese overeaters (Markus et al., 1992), particularly those seeking treatment for their obesity (Webb, 2000). The eating styles of these patients are not currently included within DSM IV criteria (grazing, eating normal size portions more often when distressed, and choosing specific comfort foods). Although exercise is included in AN and EDNOS criteria the usual focus is on weight loss rather than muscle gain and dieting is usually considered to refer to restriction of food intake rather than deliberately ingesting foods, food supplements and drugs (e.g. steroids) to increase muscle mass. Patients who also deliberately eat to self-punish or to gain weight to avoid intimacy (Orbach, 1979) are also left out of current eating disorder models. Yet, research suggests that all of these groups of patients experience high levels of co-morbid psychopathology, disruption to psychosocial functioning and potentially lethal health risks (Telch & Stice, 1998; Webb, 2000). Preoccupation with size and shape may take second place, or not occur at all for some patients who use bingeing, purging, compulsive eating, and exercise as a route to affect management.

It appears that three key themes appear in the literature regarding the role of eating disordered symptoms:

1. To manage key themes of worthlessness, inferiority, failure and abandonment. These pervasive negative self-evaluations are central to shame cognition and affect.
2. To manage specific "fear of fatness" beliefs.
3. To regulate general negative mood states.

In summary, the evidence for the 'fear of fatness' model may hold for many women presenting for treatment for AN and BN to western treatment services. However, this overlooks historical and cross-cultural variations in disordered eating. It may exclude additional or alternate 'core cognitions' underlying similar symptom presentations or be too exclusive in addressing similarities between AN and BN and other patterns of disordered eating or activity (e.g. Binge Eating, Compulsive Eating, and Compulsive Exercise (to lose or gain weight)).

One way to move current models forward is to separate out what have been seen as core “eating disordered beliefs” from eating disordered behaviours and to explore the relationship between these factors and diagnosis. Williams and Power’s (1995) development of the Stirling Eating Disorders Scale reflects an attempt to address this issue. They developed an 80 item scale based on clinical expert opinion of core eating disordered beliefs and behaviours which were seen to discriminate between controls and eating disorder patients, and between AN and BN. These items were then assigned a weighted response based on their perceived contribution to each disorder. In addition they also developed four additional subscales of factors believed to be common problems across the eating disorders; low assertiveness, perceived external control, self-directed hostility and self-esteem. In their original validation study they found that the eating disorder subscales were able to discriminate between diagnostic groups. However the mean scores for both diagnostic groups on all but anorexic dietary behaviour were above the clinical cut-off thresholds used in the study. That is to say anorexic and bulimic dietary beliefs and behaviours appear to be common across these two diagnostic groups. Williams and Power (1995) did not report the percentage of patients who experienced these beliefs and behaviours across diagnoses.

The methodology, of separating core eating disordered beliefs and behaviours (at least those identified as central of eating disorders in a western sample), provides an interesting alternative methodology to diagnostic classification. Williams and Power (1995) also identified several specific difficulties, which based on their higher scores, discriminate eating disorder patients from controls, anxiety disorder patients (low assertiveness, perceived external control, self-directed hostility, and low-self-esteem) and from depressed patients (self-directed hostility). Williams and Power (1995) believed that the treatment of eating disorders should also address these additional difficulties.

This approach, of identifying clinically significant eating disordered beliefs and behaviours, may also facilitate research in relation to other factors that have been implicated in eating disorder pathology, including personality and psychobiological variables, as well as shame and social rank.

This model pre-dated more recent developments in theoretical and clinical approaches to eating disorder treatment which develop Garner and Garfinkel's (1982) theme of "core" psychopathology unique to eating disorders, based on weight and shape evaluations being central to self-evaluation. Fairburn et al. (2003) argue that there are common mechanisms involved in maintenance across eating disorder diagnoses. This "transdiagnostic" approach argues that low self-esteem leads to extreme concerns about shape and weight, which in turn leads to restrictive dieting, which is followed by binge eating and then attempts at compensation (e.g. vomiting, exercise). These attempts at compensation are likely to fuel the process so that it becomes a self-maintaining system; with a more restrictive pathway (leading to AN) or bingeing / purging pathway (leading to BN), and a recognition that these pathways are likely to vary over time. Fairburn et al. (2003) also identified several additional variables; which they believe act as an obstacle to change; perfectionism, low-core self-esteem, mood intolerance, and interpersonal difficulties. They have developed traditional Cognitive Behavioural Therapy to address these maintenance factors.

1.5 Distinguishing Self-Conscious Affect

The power of shame has been recognised for a long time and appears in various biblical descriptions. Shame is often linked to its opposite (honour and pride) and is seen as a powerful social, as well as psychological, process. However, detailed theory and analysis of shame is relatively recent. Indeed, Lewis (1971) called shame the 'sleeper' in psychopathology because it is so often unacknowledged. Shame is generally regarded as a self-conscious emotion, rather than a primary affect. Shame belongs to a family of self-conscious emotions, which includes guilt, humiliation and embarrassment but it is only recently that research has begun to understand the differences between these self-conscious emotions. Stated briefly shame involves a focus on the self as flawed or bad in some way with the expectation that others are looking down on the self.

Gilbert (1989,1998) and Goss et al. (1994) suggested that these two evaluative processes (what I think others think about me and what I think about myself) should be distinguished because they involve different attentional focus and processing systems. This is not a new view. Indeed, the interactions between 'what I think others think about me' and 'what I think about me given what I think others think about me' have been understood to be central to social behaviour for a considerable time. For example, Scheff (1988) notes that Cooley in the 1920s argued that:

"Many people of balanced mind and congenial activity scarcely know that they care about what others think of them, and will deny, perhaps with indignation, that such care is an important factor in what they are and do. But this is illusion. If failure or disgrace arrives, if one suddenly finds that the faces of men show coldness and contempt instead of the kindness and deference that he is used to, he will perceive from shock, the fear, the sense of being outcast and helpless, that he was living in the minds of others without knowing it, just as we daily walk the solid ground without thinking of how it bears us up." (As quoted by Scheff, 1988, p. 398)

Cooley coined the term the 'looking-glass self' to refer to the way we judge and feel about ourselves according to how we think others judge and feel about us. The looking-glass self has three cognitive aspects:

"The imagination of our appearance to the other person; the imagination of his judgement of that appearance; and some sort of self-feeling, such as pride or mortification." (As quoted by Scheff, 1988, p 398).

Gilbert (1998) labelled these two foci for shame evaluation *external and internal shame*. External shame is focused on believing that the other looks down on the self in some way whereas internal shame relates to negative self evaluation and inner experiences of the self.

While a shame (internalising) and submissive response can be an outcome of experiencing others as critical or hurtful to the self, this is not always the case.

Gilbert (1998) suggested that when a chosen defence is aggression and externalisation, the people blame others for the 'put-down' or attacks and seek revenge. This has been labelled a humiliation response. Thus the experience of humiliation is associated with external, rather than internal attributions.

Prior to more extensive research in to shame, self-esteem was considered to be a key variable in the development and maintenance of psychopathology (see Robson, 1989 for a review), including eating disorders (Fairburn et al., 1987).

Robson (1989) collapsed many definitions of self-esteem to describe self-esteem as:

“The sense of contentment and self-acceptance that results from a person's appraisal of his own worth, significance, attractiveness, competence, and ability to satisfy his aspirations.” (p.514).

Goss (1993) argues that self-esteem has been difficult to adequately define and measure. A number of studies have indicated that shame, rather than self-esteem, is more important in the development and maintenance of psychopathology (Cook, 1990; Goss et al., 1995).

Another self-conscious emotion that varies greatly from shame and humiliation is guilt. Guilt is regarded as a moral emotion, where the focus is on harm done to the other with a desire for reparation. To feel guilt one has to have some kind of empathy and sympathy for the other who is being harmed by one's actions. Sympathy is not necessary and is not involved in shame and humiliation.

This thesis will not focus on the dynamics of humiliation, embarrassment, or guilt but will be specifically focused on different facets of shame, social rank, self-directed hostility, and self-esteem.

1.6 Theories of Shame

There are a number of theories relating to the dynamics and nature of shame. Pines (1990) identified one of the earliest recorded shame stories as being told by the ancient Greek philosopher Protagoras. Here shame (Aidos) was seen as a gift from the gods. It involved a concern for the good opinion of others, which when combined with Dike, (a sense of respect for others) is crucial for social cohesion. Freud (1894) argued that shame was related to exposure to sexuality, and that guilt was more pathological. Sartre (1943) believed that shame could only develop in the context of social situations. He argued that as humans exist as objects for others, and are aware that they do so, they are able to experience shame. Thus one is shamed for what one is for the other.

Unfortunately the shame literature has been bedevilled by the confusion between shame and guilt (see Gilbert, 2003, for a review). Wallace (1963) and Jacobson (1964) reversed earlier theoretical notions about the relative pathogenic importance of shame and guilt. They argued that guilt-prone individuals have a healthy super-ego; whilst shame prone individuals rely heavily on others to uphold their self-worth and are frightened of exposing their (real or imaginary) inadequacies.

The concept of shame itself has been the focus of much debate. Tomkins (1963, 1987) argued that shame was an “auxiliary” affect (along with *dissmell*-a disgust response triggered by smell) to fear, distress, and anger. He argued that three primary negative affects (fear, distress, and anger); two positive affects (interest and enjoyment) and a neutral affect (surprise / startle) combine as biologically pre-programmed affect “scripts.” In this model shame is triggered by any stimulus that interrupts positive affects. Shame is viewed as a painful negative state. He believed that shame could be triggered in infants long before they have the cognitive capacity to label affect. This model has been criticised by researchers who view shame as a self-conscious emotion, rather than simply the interruption of positive affects (See Gilbert 1998, Schore, 1988).

Alternatively shame has been seen as a negative affect associated with anxiety (Lewis, 1986), anger, (Tangney et al., 1996), and disgust (Power & Dalgleish, 1997).

Lewis (1986) argued that shame involves a sense of scrutiny by a more powerful other(s), leading to feelings of inferiority, helplessness, and self-consciousness. She also argued that humiliated fury is part of the shame experience. In this model shame has a panic like quality, which overrides the capacity for rational thinking, with intense arousal of anxious affect being central to the shame experience. Not surprisingly the key desire in shame is to escape or hide.

Tangney and Miller (1996), building on Lewis' work suggest that in shame, "The self is both the agent and object of observation and disapproval, as shortcomings of the defective self are exposed before an internalised observing other" (p.1257).

A further dilemma in the definition of shame has been in deciding whether shame is a state, or trait phenomenon.

Andrews (1998) highlights a number of assumptions made by researchers developing measures of shame. She argues that shame scales and interviews have been designed to assess the degree to which people conform to the following types:

1. *Individuals who are especially sensitive to feeling shame in potentially shame-eliciting situations. (Shame-prone individuals).*
2. *Individuals who frequently or continuously feel generalised or global shame.*
3. *Individuals who are chronically ashamed of their behaviour or particular personal characteristic.*

She notes that although these categories are not necessarily mutually exclusive, the overlap between scales measuring these different phenomena is relatively low (with correlations ranging between 0.42 and 0.54).

Gilbert (1988) argues that shame involves complex cognitive-affective process involving both “fast-track” appraisals systems, and slower conscious processing and implicational reasoning (see Power & Dalgleish (1997) for a more detailed discussion of these issues).

Gilbert (2002), in summarising current theoretical and clinical models of shame argues that shame is a multi-faceted experience that includes:

1. A social or external cognitive component.
2. An internal self-evaluative component
3. An emotional component (including feelings of anxiety, anger, self-disgust and self-contempt).
4. A behavioural component (predominately involving behavioural inhibition and escape)
5. A physiological component.

1.7 External Shame and Internal Shame

Cooley’s early work at the turn of the 20th Century focusing on the “looking-glass self” was the forerunner of more recent developments in addressing the concept of shame as involving cognitive processing of the self, and others’ evaluations of the self. Goss et al. (1994), Tangney et al., (1995), and Gilbert (1998) have explored this process in more detail, focusing on the distinction and relationships between “internal” and “external” shame.

Internal shame relates to the sense of self as flawed inadequate, inferior, powerless, and personally unattractive. It is often associated with intense self-criticism, and even self-hatred (Gilbert, 2002). The concept of internal (or internalised shame) was originally developed by Kaufman (1989) and expanded by Nathanson (1994). They argue that shame scripts, memories and feelings are most likely to occur when social needs for love, affiliation, belonging, and status are thwarted (Gilbert, 2002, p.20). As this need tends to be thwarted by more powerful individuals (e.g. parents, teachers, superior peer group members,

etc.), it is difficult, if not impossible to attribute negative feelings (such as frustration, anxiety, rage and disappointment) to the other (due to fear of rejection). Rather individuals attribute the reasons for this lack of recognition / direct rejection to flaws in themselves (e.g. I am bad / unattractive) rather than to the behaviour of others (e.g. they are too busy to notice me, they are bullies etc.). The earliest models of shame tended to focus on and measure this aspect of shame. For example Tomkins' theory of shame focuses on internalised shame, and the Internalised Shame Scale (Cook, 1996) was designed to measure this.

External shame has predominantly been defined and measured as relating to the negative beliefs one creates in the mind of 'the other'. In external shame the person believes that others see the self as flawed, inadequate, worthless, and unattractive; often the primary anxiety is that one will be exposed to others, leading to social diminishment, devaluation or rejection (Lewis, 1992). Hence external shame has often been associated with attempts at concealment and submissiveness (Gilbert, 2002).

External shame is also closely related to the concept of "interpersonal sensitivity" and rejection sensitivity. Davidson et al. (1989) suggests that:

"Interpersonal sensitivity (IPS) is a construct that refers to an individual's hypersensitivity to perceived self-deficiencies in relation to others. It embraces sensitivity to rejection and criticism on the part of others; it also embodies a sense of personal inadequacy, inferiority, and poor morale. Such individuals are quick to take offense, are unduly sensitive to ridicule, feel uncomfortable in the presence of others, and show a negative set of expectations in their dealings with others" (pp. 357).

High correlations have been reported between internal and external shame, particularly in relationship to psychopathology (Allan et al., 1994; Goss et al. 1994). However this does not necessarily always need to be the case. For example it is possible that one may be aware that others negatively evaluate certain behaviour (for example stealing) and may reject or introduce social

sanctions if they were to discover you doing it; however this behaviour may not be a focus of internal shame for the individual. Indeed it may be a source of pride. Thus the individual may be concerned about the consequences of discovery but not ashamed of the behaviour in itself. Alternatively one may be afraid that they will be forced to give up their pride in stealing and adopt a more negative (re)definition of this behaviour.

A different example is of patients who may feel very ashamed of an aspect of their personality, feelings, or behaviour (for example crying). Whilst therapists may see this as a positive attribute (the ability to display feelings, release tension etc), patients may not and feel they have 'lost control'. Patients may fear that even if a therapist acts in a caring manner the therapist is still thinking negatively about them. This is because it is assumptions and beliefs about what is going on in 'the mind of the other' that is important – not just observable behaviour. Attempts at a redefinition of this behaviour (e.g. as a source of strength or emotional openness) by the therapist may be met with resistance, anger or avoidance (all examples of shame responses).

1.8 Evolutionary Models of Shame

A number of authors argue for the role of shame in controlling or cutting off positive affect (e.g. Tomkins, 1987). However, evolutionary theorists argue that shame is a complex cognitive-affective-behavioural *defensive* response to experiences of social devaluation. As such it is closely linked to the submissive profile of defences (Gilbert & McGuire, 1998; Keltner & Harker, 1998). These authors view shame as one way of regulating social interactions and occurring when individuals receive (or anticipate) excluding, rejecting, and hostile social signals. Shame is seen as a way of inhibiting challenges to more powerful others and signalling submissive behaviour to reduce attacks from other in-group members. It is seen as particularly important in animals that rely on such communication to regulate aggression. In humans the fear is less commonly focused solely on physical aggression. Instead it is also (and often

predominately) focused on symbolic social signals of put down such as verbal criticism, ridicule, or simply exclusion and 'not being chosen'.

Gilbert and Miles (1998) argue that in humans physical coercion offers one strategy to maintain group status, however humans have also evolved alternative strategies based upon being an attractive and valuable group member to regulate status. Shame is seen as a damage limitation strategy aimed at appeasement, or at hiding traits which may not be socially valued to guarantee continued group membership / maintain social status within a given group.

In this model successful engagement in social relationships inherently involves a degree of competition and individuals are seen to primarily invest in relationships which benefit them in some way. More importantly they are likely to disinvest in relationships with others that are seen as detrimental to their interests and are thus defined as unattractive (Tooby & Cosmides, 1996).

Thus humans are necessarily concerned with issues of social attractiveness (Leary, 1995). In order to track these "belonging" signals humans are likely to use social comparison to monitor differences between oneself and desirable (or undesirable) others (Gilbert, Price & Allan, 1995) and to be sensitive to cues from others that one remains an attractive object. Hence Gilbert (2002) argues rejection sensitivity is particularly important for humans and shame evolved out of more basic submissive defences to manage threats of social rejection and disengagement. Shame is not then seen as a failure to live up to an ideal self, or set of standards; rather it occurs when people feel they are becoming someone they do not want to be (Lindsay- Hartz et al., 1995). Gilbert (1998) sees shame as, "an involuntary response to an awareness that one has lost status and is devalued."

Gilbert has argued that inherent in the shame response is the active signalling of submissive behaviour, including desires to conceal the self, or potentially devalued behaviours, wishing to hide, avoid social contact and eye gaze and the inhibition of confident behaviour and feelings (Gilbert & McGuire, 1998, Keltner &

Harker, 1998). In addition people feel that their shame is deserved, rather than believe that they are powerless to prevent an unjust criticism (where they are more likely to feel humiliation and frustrated anger).

Once this shame response is internalised, individuals react to their own cognitions as if they were a more dominant other, that is to say beliefs that the self-is ugly, disgusting or worthless, can lead to an involuntary shame response without these comments being made by another person. Thus self-criticism, self-directed hostility, self-disgust and self-hatred may all perform the function of helping an individual remain in a high state of alert for potential rejection signals. A recent paper by Gilbert et al. (2004) appears to support this hypothesis. They found that self-criticising statements were generally aimed at self-improvement / or self-correction; whilst self-harming / persecuting statements were linked to taking revenge on a flawed, unattractive self.

Wanting to harm the self can be seen as the ultimate internalisation of a flawed and undesirable self, with the individual believing that the flawed self can no longer be hidden from others or corrected, and that punishment must ensue. These punishments may be far beyond what would be culturally acceptable (for example self-mutilation for upsetting others). However in this model it is seen as a way for the individual to signal others that they have been punished and wish to be “taken back” by a group which they believe will reject them.

1.9 The Focus and Forms of Shame

If shame is seen as a pro-social emotion, whose function is to help the individual integrate and find a place in a particular social group, then it is likely that the focus of what one finds internally or externally shameful will vary across cultures, and possibly across one’s life span. For example, the violence associated with football hooliganism may be seen by many as a focus of external shame and (for those who do not see themselves as violent), violent impulses towards opposition supporters may become a focus of internal shame. However for those within the “hooligan” subculture this violence (although not generally

socially sanctioned), may be a source of pride and status. Over time individuals may decide to become more closely allied with the wider culture, and their previous violent behaviour can become a source of internal shame. They may then try hard to conceal their violent history from their new peer group as they are aware that it may become a source of external shame.

Gilbert (1997, 2000b) has suggested that while shame can be seen as a global construct, clinically it is preferable to focus on what aspect of self actually is the focus for shame. He offers a number of possible shame foci:

- Body appearance shame.
- Body in action and body function shame.
- Shame of achievement failures.
- Shame and relationships.
- Shame of feelings/thoughts.
- Shame of belonging to a stigmatised group.

Although it is clear that what is considered attractive, or shameful, varies historically and cross-culturally, as yet there has been little investigation of whether these specific foci (or others) exist, the extent to which the focus of shame impacts on biopsychosocial functioning, or whether different foci are more or less amenable to psychological treatment.

Gilbert (2003) argues for at least two forms of external shame:

- 1 Discovery of the flawed self by the other. Here one is concerned that the other will see one as lacking in desirable qualities, 'not good enough' and unable to engage people in helpful or positive relationships. This is the shame of exclusion, where others move away from the self and are too distant. Here the self is experienced as lacking and others as rejecting/disinterested.
- 2 Definition of the self as flawed by an intrusive powerful other. Here there is a fear that a powerful other will get too close and become intrusive, forcing one into (re)defining one's behavior, beliefs or feelings in a negative way.

Gilbert links this to early high expressed emotion in families and where parents control and define/label their child (e.g., as good bad; clever stupid). Escape from the definitions and intrusive eye of others is key, but this may also provoke a fear of loss of attachment. Here others are experienced as intrusive and punitive, able to invoke shame in the self.

These forms of shame direct attention to the different foci for shame affect. They have yet to be explored empirically but may make sense of differing approach / avoidance and reassurance seeking patterns found in many psychological disorders.

1.10 Managing Shame

Gilbert (2002) argues that shame can be managed in a number of ways. These include:

- Attention: to potential threat.
- Aggression.
- Help-seeking: to elicit support and protection from others, this may include reassurance seeking.
- Submission: via inhibition of one's own feelings, thoughts, and behaviours.
- Concealment: of feelings, thoughts, and behaviours that one believes will lead to rejection or attack.
- Avoidance and withdrawal: this includes deliberate escape behaviour such as social withdrawal, however it may also involve cutting off from internal or external shame signals. This could include involuntary gaze avoidance but could also include increased cognitive dissonance and dissociation.
- Compensation / reparation: in terms of behaviours to avoid rejection (e.g. excessive care giving for others).
- Destruction of the object of shame: which may be closely linked to self-disgust and self-directed hostility.

1.11 Shame and Psychopathology

Many studies suggest that shame has relatively high associations with measures of psychopathology. This finding appears to hold true whether situational, or trait questionnaires or interview measures are used. The range of disorders that shame has been associated with is wide and includes:

- Depression (Allan et al., 1994; Andrews et al., 2002; Cheung et al., 2004; Gilbert & Irons, 2004; Harder et al., 1992; Tangney, Wagner & Gramzow, 1992). This had been a relatively robust finding despite Alexander et al.'s (1999) failure to find an association in one clinical sample.
- Social Anxiety (Gilbert, 2000).
- Body Dysmorphic Disorder (Veale, 2002)
- Post Traumatic Stress Disorder (Andrews et al., 2000; Cook, 1994; Leskela et al., 2002).
- Alcohol & Drug Misuse (Cook, 1994).
- Dissociation (Irwin, 1998).

Shame also appears to have specific biological consequences. It has been associated with a reduction in immune system responses (Dickerson et al., 2004) and Cortisol levels (Lewis & Ramsey, 2002).

1.12 Summary

Difficulties exist with current diagnostic systems used to distinguish between the eating disorders. More recent developments in identifying core eating disordered beliefs and behaviours (at least in western samples) and associated difficulties, has enhanced our understanding of potential aetiological and maintenance factors in eating disorders. Although these fall short of the recommendations by Franko et al. (2004) they may aid our understanding and assist in the development of new treatment approaches for eating disorders.

Although once thought of as an often overlooked “sleeper in psychopathology” (Lewis, 1971) shame has become an increasing focus for research and clinical interventions in the past 10 years. A greater clarity in distinguishing between shame and guilt (Lewis, 1986) has allowed a more focused approach to developing theoretical models of shame and research tools for measuring shame. In turn this has facilitated research exploring the relationship between shame and various psychopathologies, including eating disorders.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

CHAPTER 2

2 EATING DISORDERS AND SHAME

Shame-based clinical descriptions have appeared sporadically in the literature. Bruch's (1973) case description of Karol outlines her patient's feelings of being a failure and her desire not to become a "horrible person, a nothing", and her use of self-starvation to avoid this fate. This fits the idea that eating disorders take root in the context of a *general* sense of an unattractive self. Empirical studies of the relationship between shame and psychopathology have begun in the past 10-15 years.

Frank (1991), in one of the earliest studies exploring shame and eating disorders, used two measures of shame and guilt (The Personal Feelings Questionnaire, PFQ) and her own measure (The Shame & Guilt Eating Scale). The first scale was used to assess shame and guilt in general, the latter explored shame and guilt in relation to normal and over-eating.

Frank compared three groups on these measures; a normal sample (n=31) depressed sample (n=33) and an eating disorder sample (n=30; diagnosis unspecified). She found that both depressed and eating disorder patients experienced marked shame and guilt about eating, although the eating disorder population experienced significantly higher shame and guilt about eating compared the depressed group. She also found that the depression in the eating disorder group was significantly related to shame and guilt about eating. Interestingly the global measure of shame and guilt used (the PFQ) was not correlated with eating disordered symptoms, measured by the Eating Attitudes Test.

This study is severely limited in terms of the number of participants used. The PFQ has also been criticised for the small number of items used to measure shame and guilt, its difficulty on discriminating between these concepts, and the high level of intellectual ability needed to respond to the test items (see Tangney, 1990, for a review). It is therefore not surprising that this measure failed to detect correlations between shame and eating disordered symptoms. However Frank's work was significant in highlighting a specific foci of shame for eating disordered women (eating behaviour). It has paved the way for several subsequent studies exploring the relationship between shame and eating disordered cognitions and behaviour.

Cook's (1994) development of *The Internalised Shame Scale* (ISS) represents one approach to the measurement of shame. The ISS views internalised shame as a *global* self-construct. Although the scale was based upon Tomkin's (1963, 1987) and Nathanson's (1992) affect theory of shame, it is a negative self-cognition scale. It requires individuals to rate a series of statements related to how they see themselves (e.g., 'I see myself as inadequate'). Scores are then calculated to give an overall shame score. Cook used the ISS to compare scores of a number of psychiatric groups. He noted that eating disordered patients scored significantly higher on the ISS than all of the other clinical groups tested (Cook, 1994). Other studies measuring shame and guilt have produced similar findings (Garner & Garfinkel, 1985; Prissel, 1993; Sanftner & Crowther, 1998). Indeed shame cognitions and feelings, especially self-disgust, form part of the differential diagnosis criteria for BED (American Psychiatric Association, 1994).

Masheb et al. (1999) used the ISS to compare shame in a normal female population (n=74) and patients with a psychiatric disorder with medical implications (BED, n=72) and a medical condition with psychiatric implications (vulvodynia-vulvar discomfort, n=57). The authors felt that both of these conditions have the potential for negative self-evaluation based on body image and physical attractiveness; but hypothesised that the BED group would have higher levels of shame compared to the normal and vulvodynia group.

Masheb et al. (1999) found that both the BED and Vulvodynia group experienced high levels of shame, with the BED group scoring significantly higher than both normal and vulvodynia samples on the ISS. Interestingly the focus of shame varied between the two comparison groups. In the BED group shame was related to shape and weight concern, but not eating concern and weight (as measured on the Eating Disorders Examination Questionnaire (EDE-Q; Luce & Crowther, 1999). Shame was not related to Body Mass Index (BMI) or frequency of objective or subjective binge episodes. For the vulvodynia group shame was not related to pain frequency or severity, but was related to measures of physical and social functioning, emotional role limitations, and general mental health.

Waller et al. (2000) explored the cognitive content of 50 bulimic and 50 non-bulimic women using the Young Schema Questionnaire (YSQ, 1999) and an eating behaviour diary. They identified three distinct beliefs; defectiveness /shame, insufficient self-control and failure to achieve that discriminated between these groups. Emotional inhibition beliefs predicted severity of bingeing, whilst defectiveness / shame beliefs predicted severity of vomiting in the bulimic group. Although the YSQ was not explicitly designed to measure shame and its scales have yet to be compared with more robust measures of shame, this research was significant in identifying potential alternative symptom pathways relating to specific cognitions for eating disordered patients.

Webb (2000), studying an obese sample, found that participants with disordered eating behaviour were also likely to be highly internally (as measured by the ISS) and externally shame prone (measured by the Other as Shamer Scale (OAS), Goss et al., 1994). They also experienced marked psychological distress, at levels consistent with those of patients with an eating disordered diagnosis.

Shame studies using situational scenarios for measuring shame (rather than trait measures) have found somewhat lower correlations between shame and eating disordered pathology, but have identified shame about eating to be related to eating disordered pathology (Burney & Irwin, 2000).

A recent series of studies by Troop et al. (2001a, 2001b) indicate that shame and low pride (in oneself and behaviour), measured on a situational scale the Test of Self-Conscious Affect (TOSCA: Tangney et al., 1989) and a trait external shame scale (the OAS, Goss, et al., 1994), is significantly associated with eating disordered psychopathology for women currently experiencing or having recovered from an eating disorder. This appears to be the case even when depression is controlled for. Of clinical significance is the distribution pattern of shame scores: women with a current eating disorder reported the highest levels of shame, women who had recovered or were in remission from an eating disorder had an intermediate score, and non-eating disorder controls had the lowest shame scores. Troop et al.(2001b) conclude that “eating disordered women continue to suffer with increased levels of shame that persist even after remission and that these may indicate stable perceptions of the self as being of relatively low social rank” (p. 12).

Hayaki et al. (2002) found that for non-clinical (n=137) and clinical participants (n=30) higher levels of bulimic symptoms were associated with higher levels of shame, as measured by a situational measure of shame (TOSCA). However this relationship was not independent of depressed mood and guilt in the clinical sample. The relatively small clinical sample size and possible difficulties with sensitivity of the TOSCA to measuring trait shame, combined with the high number of shame items on the depression measure used in this study may account for this mixed finding.

Jambekar et al.’s (2003) study of 188 patients with BED, using a trait measure of shame (ISS) indicates a high correlation between internal shame and BED psychopathology. Interestingly neither frequency of bingeing or patients BMI predicted shame scores. Shame was associated with eating disordered attitudes. This study also indicated that differences in the foci of shame might be important. Men’s shame was related to body dissatisfaction; whilst women’s shame was associated with weight concern.

In general the data seems to suggest that those with an eating disorder have elevated rates of both internal shame (negative self-evaluations) and external

shame (feeling that others look down on them). Moreover situational shame measures (e.g., the TOSCA) suggest that they are likely to experience heightened shame responses in given imaginal scenarios (e.g., using concealment and making negative judgements about themselves).

2.1 The Focus of Shame in Eating Disorders

Clinical experience and a number of studies suggest that the focus of shame may play an important role in eating disorders.

2.1.1 Body Appearance Shame

Many people with an eating disorder can feel shame of their bodies. Fairburn (2001b) has recently highlighted the role that excessive bodily monitoring plays in eating disorders. For example, individuals who engage in excessive mirror checking, or pinching parts of the skin as a “fat test” almost invariably report that these tests and checks lead to feelings of shame and self-disgust that promote further attempts to control weight. Alternatively, individuals may take great pains to avoid seeing their body (or having others see it) to avoid body appearance shame. Many patients report avoiding mirrors/windows, in case they inadvertently see their reflection. They may also avoid public exposure of their bodies (e.g. in exercise and swimming classes, communal changing rooms etc.) for fear of activating shaming interactions from others.

Swan and Andrews (2003) found that compared with non-eating disordered women (n=72), recovered and symptomatic eating disorder women (n=68) reported significantly higher levels of body shame, and characterological shame.

2.1.2 Body in Action and Body Function Shame

Studies suggest that dancers and athletes who depend on low body weight to power ratios (e.g. distance runners, gymnasts) are at greater risk of developing eating disorders. Brownell (1995) notes a number of mechanisms that may

relate to shame of how the body performs in this group; in particular internal and external pressures to perform.

Bulimic and binge eating patients often report shame following periods of excessive eating. Indeed, similar processes occur in patients even when they have eaten objectively small amounts of food. Patients often describe feeling betrayed by their bodies' need to eat and may feel disgusted by the food they are ingesting. Shame responses can also be seen in individuals who deliberately purge (using diuretics, laxatives, or vomiting), as attempts to conceal these behaviours from others is common. This appears to be motivated by fears of shaming responses by other people if they were to be discovered. Swan and Andrews (2003) also found significant shame around eating in women who had recovered from an eating disorder or who were eating disordered compared to controls.

2.1.3 Shame of Achievement Failures

In eating disorders and disordered eating control over eating behaviour and/or body size is often the desired outcome. If these ideals are not reached this is often perceived as a personal failure, and may be linked to predictions of being shamed by valued others. Individuals who are unable to reach their standards often report feelings of shame, which further motivates attempts to control eating behaviour and body shape. This process has been outlined in the cognitive behavioural conceptualisation of eating disorders (Fairburn & Cooper, 1989), although shame is not specifically discussed.

Shame may also be the result of other perceived failures or fear of failure. Adolescence is seen as the peak age of onset for eating disorders. Many eating disordered patients report that feelings of failure or fear of failure in educational tasks precipitated their initial period of eating disordered behaviour. It is possible the feelings of failure in one area of one's life will be compensated for by trying to be successful in another, for example weight and shape control (Vitousek, 1996).

2.1.4 Shame and Relationships

Bruch (1973) and Schmidt et al. (1995) noted that women with BN appear to have difficulties in establishing intimate relationships with men. A number of studies have reported higher rates of interpersonal difficulties (Eldredge et al., 1998) social anxiety (Striegel-Moore et al., 1993) and need for approval and acceptance by others (Friedman & Whisman, 1998; Steins & Remy, 1996) in eating disordered groups. DeSilva (1993) notes that sexual difficulties are common in eating disordered women and in people who are obese, presenting differently dependant on diagnosis, gender, and body weight. Difficulties in social relationships can persist after the eating disorder has resolved (Norman et al., 1986).

Schmidt et al. (1995), note that eating disorders impact on a range of relationships, including those with parents, sexual partners, friendships and with children. Furthermore, eating disordered patients may find it difficult to access social support, and may have greater discrepancies between the social support they desire and that they receive, or are prepared to use. This is particularly found in BN.

Shame about the need to be dependent on others has been anecdotally reported, but has been relatively unexplored in the research literature. Some people may confuse necessary/useful reliance on others for care/support (care receiving) as forms of involuntary submission and fear that the self will come under the control of the other. This may be particularly problematic if individuals are being treated against their will; which can be the case in severe AN and hunger strikers. This may be less of an issue if individuals' voluntarily submit/comply to treatment. However it can still be a dilemma when they reach a point in treatment that involves making extremely anxiety-provoking changes in eating or behaviours. Serpall et al. (1999) note that trying to get patient's to submit to or comply with a treatment program can provoke ambivalence in patients, particularly if they are required to reveal aspects of their eating behaviour that they find shameful. The dependency and power imbalance that is

inherent in all therapeutic relationships may also activate shame responses as a defence against intimacy and the threat of rejection.

2.1.5 Shame of Feelings/Thoughts

Polivy and Herman (1993), and DeSilva (1995) note that binge eating and bulimic binge eating episodes can be triggered by negative affective states and can be seen as a way of regulating painful thoughts and feelings, of which feelings of shame (and its associated cognitions) may be among the most powerful. These behaviours may appear to be effective, at least in the short term, although in the longer term may lead to weight gain and more shame.

Shame of feelings/thoughts has not been directly explored in people with eating disorders. However, it does appear that anorexic women are more likely to suppress their own emotional needs to protect their interpersonal relationships by not expressing negative emotions (Geller et al., 2000). This is probably fear of rejection issue, and interestingly it is associated with attempting to present oneself as perfect. Eating disordered patients also tend not to communicate their feelings, and find it harder to identify them (Troop et al., 1995). In addition, some patients can feel ashamed of just how much they think about eating or size and shape at the expense of relationships, work, or family.

One can make sense of these processes in terms of learning theories of affect development and affect discrimination. The relatively traumatic histories of some eating disordered and disordered eating individuals (Schmidt et al., 1997; Welch et al., 1997) may mean that they have either not been given the opportunity to learn alternative methods for discriminating between and/or regulating affective states, or that the expression of negative emotions may have lead to actual or perceived physical rejection or attack (Ferster, 1973). This could also be generalised to more “positive” emotional states, such as sexual feelings. The experiencing/expression of certain feelings may have been particularly dangerous in relationships that were sexually abusive or that ran a high risk of rejection (e.g. if one has been labelled or perceives oneself to be sexually unattractive).

2.1.6 Shame of Belonging to a Stigmatised Group

Perhaps the most common experience for clinicians working with people with an eating disorder is the denial of symptoms or symptom severity. Patients often say, "I don't have an eating disorder." One way of making sense of this is in terms of the stigma and shame associated with having a psychiatric diagnosis.

Swan and Andrews (2003) note that 42% of their eating disordered sample did not disclose salient information relating to eating to professionals caring for them. This pattern was highly associated with shame. This difficulty has given rise to a number of approaches to engage people with an eating disorder in treatment, including group psycho-education (Olmsted & Kaplan, 1995) and motivational interviewing (Blake et al., 1997). The idea that shame may be a key reason for denial is not always addressed however, nor is the fact that confronting a person with a diagnosis may not only intensify shame but also activate any defences against feeling shame.

The evidence for stigmatisation of mental illness and for obesity in western cultures is unequivocal (Falkner et al., 1999). Belonging to these groups is usually perceived to be culturally undesirable. Eating disordered and disordered eating patients may be seen to be trapped in trying to avoid actual discrimination and hostile acts by avoiding being categorised as belonging to one group (the overweight) by engaging in behaviours which may place them in another stigmatised group (the mentally ill). The dilemma is to manage one's observable group belonging characteristics (overweight) but to hide the behaviours used to control weight. Clearly the potential for being shamed by others or shaming oneself for failing to achieve this balance is a tightrope that it is almost impossible to walk.

2.2 The Temporal Nature of Shame in Eating Disorders

Sanftner and Crowther (1998) used a time sampling approach to measure daily fluctuations in shame, guilt, positive and negative affect to compare bingeing and non-bingeing women drawn from a non-eating disordered sample. Their

results suggest that women who binge experience significantly greater fluctuations in self-esteem, negative affect, shame, and guilt.

They found that shame and low state self-esteem significantly differentiated women who binged from those who did not. Interestingly their methodology measured fluctuations in these (and positive / negative affect) every 4 hours for seven days. They found that women who binge experience greater daily fluctuations on these measures. Positive self-esteem and affect increased *prior* to binge episodes. This may be consistent with a self-nurturance model (eating to feel better) and the hypothesis that bingeing provides a means to escape from the intense negative affect associated with shame (Heatherton & Baumeister, 1991). This study suggests that “shame” may not be a permanent affective state, but can vary over time, particularly if strategies are used to ameliorate the affect and manage shame cognitions. Such studies can contribute to our understanding of the complex interactions between affective states, eating behaviour, and biological changes during food consumption.

2.3 The Role of Shame in the Aetiology & Maintenance of Eating Disorder

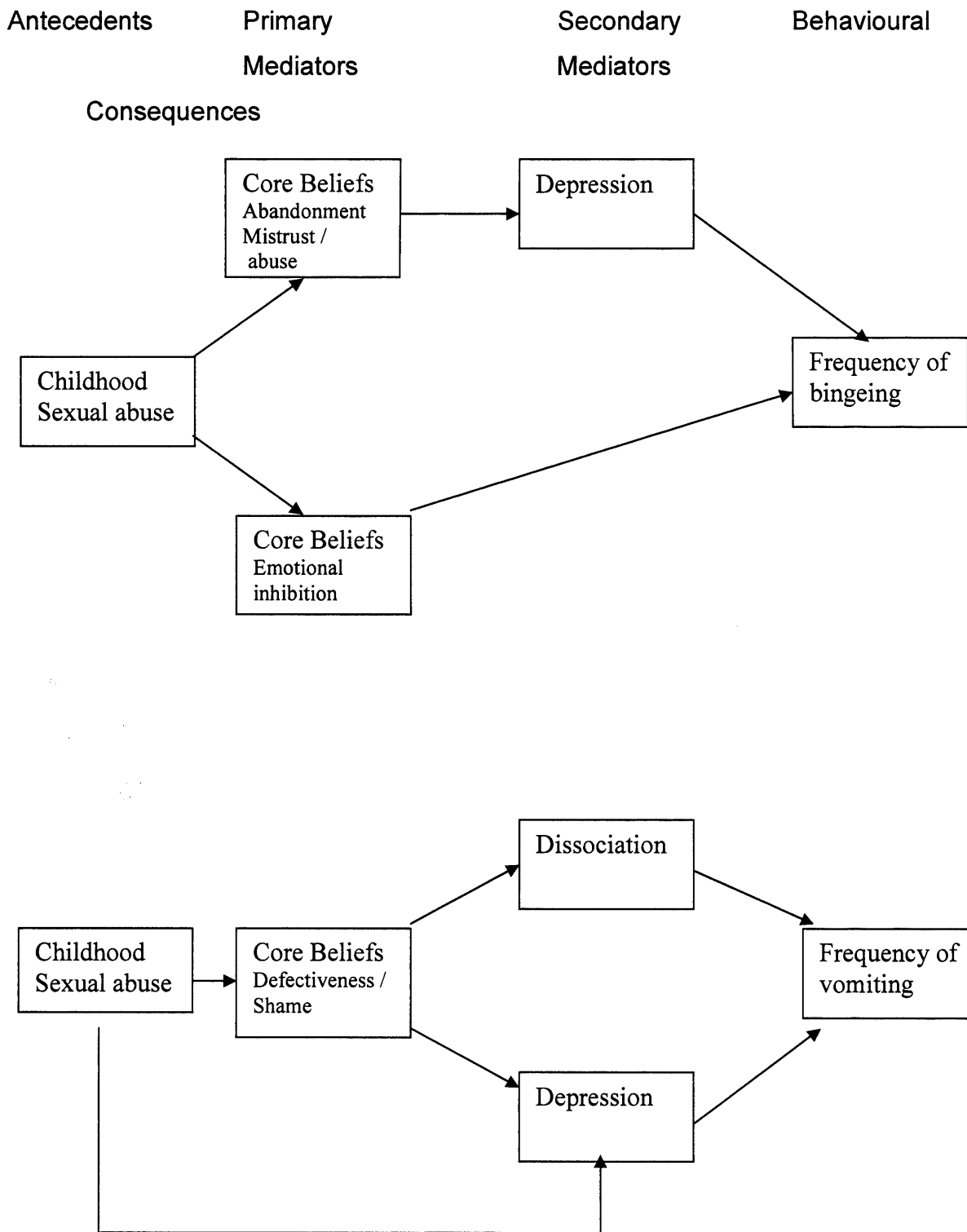
2.3.1 Pathways into Shame and Eating Disorders

Relatively few papers have explored the role of shame in the development or maintenance of eating disordered symptomatology. These studies have focused on the role of reported sexual abuse, family dysfunction or eating disorder symptoms to regulate affect, including shame.

Andrews (1997) explored the relationship between bodily shame and childhood sexual abuse and BN in a community sample of 69 women. She used an interview rather than self-report questionnaire approach to data collection. She found that self-reported childhood sexual abuse is highly associated with BN; a relationship that was not accounted for by general body dissatisfaction. She found that bodily shame might act as a mediator between early abuse and BN.

Waller et al. (2001) further explored the relationship between a reported history of childhood sexual abuse and women with BN. In a study of 21 bulimic women with reported sexual abuse, they used the Young Schema Questionnaire (1999) to explore the role of core beliefs in mediating the relationship between sexual abuse and bulimic psychopathology. The authors identified two distinct pathways which mediated the relationship between reported childhood sexual abuse and bingeing / purging behaviour. This model is outlined in diagram 1 below.

Diagram 1: Waller et al. (2001): Results of regression analysis, showing the role of core beliefs, depression, and dissociation as hypothesised mediators in the abuse-bulimic behaviour relationship.



The sample size of this study significantly limits the conclusions that may be drawn; however it represents a movement away from correlational studies and highlights the potential for differential shame pathways to particular symptom patterns.

Murray and Waller (2002) applied a similar analytic model to explore the role of shame as a mediator between reported sexual abuse and bulimic attitudes in 214 non-clinical women. They found that internalised shame (as measured by the ISS) was a partial mediator between reported sexual abuse and bulimic attitudes. However, when the reported sexual abuse was interfamilial, shame was found to be a perfect mediator between this form of reported sexual abuse and bulimic attitudes.

Murray et al. (2002) explored alternative pathways into an eating disorder in their study of 139 non-clinical women. Their study suggested that shame proneness acted as a moderator and internalised shame was a perfect mediator in the link between recalled parental overprotection and bulimic attitudes. The limitations of using a non-clinical sample may compromise the clinical validity of these findings, but again it represents a general trend in highlighting shame as a potential mediating or moderating variable between aversive life experiences and eating disordered behaviour and beliefs.

Meyer et al. (2001) explored the role of borderline personality symptoms (e.g. affective instability and impulsivity) in mediating the relationship between early maladaptive schema (measured on the YSQ) and bulimic symptoms in a non-clinical sample. They found that borderline symptoms were a perfect mediator between defectiveness / shame beliefs (on the YSQ) and bulimic symptomatology. The limitations of the YSQ as a shame measure, and the non-clinical sample, may restrict the generalisability of these findings. It does appear that shame plays a significant role in eating disorder behaviour for this group. Meyer et al. (2001) suggest that bulimic symptoms may be used to regulate painful shame affect, particularly for people who struggle to manage strong emotions.

Despite clinical experience that suggests that shame may play an important part in the aetiology, maintenance, and recovery from eating disordered psychopathology, the evidence base is promising but remains relatively small. It is only recently that researchers and clinicians have begun to explore gender differences, shame foci, and the functional role of eating disordered thoughts and behaviour in moderating affective states (Goss & Gilbert, 2002). With the exception of BED, the majority of recent research has used non-clinical samples, making it difficult to generalize these findings to a clinical population. Moreover, studies have tended to explore single diagnostic categories (e.g. BN), making comparisons between eating disordered populations difficult. To date no study has explored the role of shame in the population most likely to be seen by clinicians; those with a diagnosis of EDNOS.

2.3.2 Coping with Shame and the Maintenance of Eating Disordered Behaviour

If shame affects are seen as early warning signs of potential social rejection or put-down, then individuals will not only need to have rapid ways to detect and cope with these threats, but also work out longer term strategies. Ability to cope with shame-based problems will be affected by the nature of shame (whether it is internal and/or external) and the focus of shame. At this point, there are no empirical studies exploring how people with eating disorders/disordered eating cope with shame.

The following suggestions are made from clinical observation and based on the various defensive behaviours outlined by Gilbert (2002).

2.3.3 Attention

Detection and attention to potential threats is the first element in threat-coping sequences. It is clear from studies on anxiety disorders that attention mechanisms are important for onset and maintenance of disorders (e.g., Clark, 1999). To date there has been some research on attentional mechanisms in eating disorders, using designs such as the Stroop test. Findings generally support the view that eating disordered people do show attentional and

processing biases to food and weight stimuli, although as Vitousek, (1996) notes it is unclear if such biases are related to other state factors such as hunger or chronic starvation rather than trait factors.

A number of cognitive strategies may be utilised to act as early warning systems of potential failure and to sensitise individuals to specific threats. For eating disordered patients and disordered eaters these may include; increased sensitivity to size, shape and food related information; increased attention to external social cues from others regarding size, shape and weight; increased social comparison (particularly with other people's weights); development of catastrophic imaginal scenarios, linked with anxious arousal, related to the negative consequences of failing to live up to the ideal; and increased attention to bodily cues relating to body weight and shape. Currently these are speculative hypotheses. Troop et al. (2003) found that eating disordered patients reported significantly higher levels of unfavourable social comparison than normal controls (n=101).

2.3.4 Aggression

Tangney, Wagner, Fletcher, and Gramzow (1992) found that shame is associated with increased anger proneness - but guilt is not. Destructive, non-assertive ways of dealing with conflict and anger have also been found to be associated to shame but these forms of anger tend to increase interpersonal conflicts and shame (Tangney et al, 1996).

Anger problems have not been well-studied in eating disorders. Aggression is probably best viewed as a rapid onset, short-term, defensive strategy. People with eating disorder can be hostile of others who criticise their size, shape, or eating behaviour. Some may express anger if challenged. More passive forms of anger can include resistance, sulking, and non-compliance with therapy programs aimed at changing eating and activity patterns.

2.3.5 Help Seeking

It is important to acknowledge that many people do actively seek help to change their eating disorder. This can be extremely difficult to obtain, and in general practice patients with severe AN may have only a 50% chance of receiving help, whilst for BN patients the chances are less than 1 in 100 (Hoek, 1995).

A number of patients speak about the difficulties in giving up their eating disorder, particularly AN, as they find it a way of eliciting support and care from others. The rise of pro-anorexia and self-harm web sites suggest that alternative help seeking, to de-shame behaviours that are more widely devalued, also occurs.

2.3.6 Submission

Many people with an eating disorder report difficulty with assertiveness and involuntary submissive behaviour (Williams et al, 1990, Williams et al., 1993). Troop et al. (2003) note that eating disorder patients (n=101) have higher levels of submissive behaviour than controls (n=101). Interestingly submissive behaviour and negative social comparison were significantly related to the severity of eating disordered symptomatology, even when depression and other psychopathology were accounted for in this study.

It is also possible to see similar models of submission, or apparent submission, to therapeutic authority (for example high levels of compliance with therapeutic inpatient programs) which can lead to later therapeutic difficulties (e.g. high relapse rates post in-patient admission).

2.3.7 Concealment

This can involve concealing what is actually eaten (or not), bingeing, vomiting and laxative use. People may conceal hiding and hoarding food (which is common for AN patients on supervised re-feeding programs). Body concealment may involve wearing excessively baggy or dark clothes. Many

patients report the need to conceal their desire and need to eat from others, and from themselves, and may feel deeply ashamed of their hunger.

2.3.8 Avoidance and Withdrawal

There are a variety of avoidance behaviours that can be used by eating disordered patients to cope with shame and other problematic feelings and thoughts. For example; avoiding food and food related stimuli (to avoid the triggers for eating), withdrawal from eating situations particularly in the presence of others, and avoidance of size and shape related information (e.g. avoiding looking in mirrors or being weighed). There can be avoidance of public bodily exposure (e.g. undressing in public changing areas and going swimming), and avoidance of intimate relationships that involve body observation or contact (e.g., sexual relationships).

Avoidance may also include non-attendance or disengagement from therapeutic programs, or withdrawal from friends and family who remind the individual of their difficulties.

2.3.9 Destruction of the Object of Shame

This strategy appears closely linked to self-disgust and self-directed hostility. For individuals with an eating disorder/disordered eating it can lead to extreme methods to rid oneself of the undesired object (e.g. body fat) by extreme food restriction, self-mutilation or suicide. Others can be co-opted into this process, for example as “dieting buddies”, or at the more extreme, using potentially hazardous surgical procedures to reduce or change body shape or remove fat (e.g. gastric stapling, jaw wiring).

2.3.10 Compensation / Reparation

Many eating disorder patients believe they are not entitled to eat, or must compensate for being a bad person by providing excessive care and consideration for others. They frequently talk about the need to compensate for

their lack of attractiveness by submissive behaviour in relationships or over-performance in other areas of their life (e.g. at work or academically).

2.4 The Role of Shame and Pride in the Maintenance of Eating Disorders

Evolutionary and social psychologists agree that social acceptance and social approval are among the most salient of reinforcers and people will work hard to earn the appreciation and praise of those who are important to them and avoid rejection. There is also a competitive element to this which links success to pride. Pride is the affect associated with social success and feeling approved of or admired by others. Internal pride is feeling the same for one's own attributes and talents (Mascolo & Fischer, 1995).

Restriction, both of foods and other desires/impulses, is frequently culturally encouraged and associated with positive self-esteem and pride in the self. Fasting has long been used in attempts induce religious experiences, or bring one closer to God. Success at these forms of control can be linked to pride and self-esteem whereas losing control can be associated with shame and guilt. Szmulker and Patton (1995) suggest widening the criteria for self-starvation "caseness" to allow great cross-cultural understanding to include, "participants who become emaciated through restriction of their dietary intake for whatever reason, this restriction is deliberate, and the subject positively values the resulting state."

There have been many studies linking restriction and control to increased self-esteem (see Vitousek, 1996). However there are no published studies on the experience of pride in eating disordered behaviours that many patients report.

Pride in eating disordered behaviour and size / shape / affect control is core to some of earliest accounts of eating disorder psychopathology. Bruch (1973) presents the case of Celia who initially began to lose weight to please her husband but "...it now became her own project. There was a sense of glory and pride in the self-denial and feeling hungry" (p. 268). Macleod (1981), writing

about her own AN, comments on the increasing sense of energy and interpersonal power that her eating disorder helped her to achieve.

Thus the behaviour that has been designed to reduce shame can become a valued (and often overvalued) ideal. This can result in the denial of any problem with eating, particularly if it requires the individual to give up his/her behaviour. This can be particularly difficult for individuals who exercise excessively, where the endorphins released can also lead to biological addiction-like behaviour.

2.4.1 Social Competition

As noted by Gilbert (1998) some forms of pride often involve a social comparison and competitive element, of feeling that one is outperforming others, or winning in some kind of competition. Abed (1998) has suggested that one of the reasons eating disorders have increased in the western world is because of the intensification of competition among females for certain young-looking and nubile body shapes, fuelled by the media.

Wallace (1986), writing about the tragic story of the Gibbens twins, notes how their eating disorders (both AN and BN) helped them to not only define their own sense of identity (as a couple) but also helped them to feel powerful by competing with each other over who could keep up or go one step further with their eating disordered behaviours. This form of pride-competition can sometimes be observed in in/day patient settings, or complicate the treatment of patients who are related to or co-habit with an eating disordered person. It may also work to produce a counter-culture of esteem giving signals by sufferers which can protect individuals against the interventions of others designed to alter their eating behaviours (for example pro-anorexia web sites). There are also various anecdotal reports of how some people with AN compete with siblings or parents with an eating disorder.

2.4.2 Resistance / Rebellion

Refusing to 'give in' to external authority and change behaviour can also be seen as a source of pride to some eating disordered patients. The functional nature of

these behaviours (the ability to resist both internal impulses and external directives) appears linked to self-esteem and identity - a process clearly outlined by Wallace (1988). It is paradoxical that although the function of controlled eating behaviour may first have been to elicit approval or avoid rejection, subsequently people will become so focused on their own need for control and ability to resist others control, that now they will risk severe social sanction and even death. "You can't make me" will be a familiar sentiment to many that work in this area. As Littlewood (1995) notes, the control over the body may represent personal resistance when one experiences a limited degree of personal agency.

Clearly, resistance and rebellion are not necessarily unhealthy and dysfunctional. Indeed, they have been regarded as an essential part of personality development to enable children to develop an individual identity and sense of self. Nonetheless, it obviously matters greatly what values people adopt in this regard.

Several systemic therapists have attempted to channel this resistance into a personal and political force to challenge eating disordered beliefs and behaviour. In particular "externalising" the eating disorder is seen as providing the individual a way of "fighting back" against their difficulties. This may occur at an individual level during therapy (Kayrooz, 2001) or at a more political level (e.g. The "Anti-Bulimic League, Madigan, 1994).

2.5 Social Ranking Theory, Shame and Eating Disorders

A number of authors have suggested that shame is an evolved response to managing social rank (Gilbert & McGuire, 1998; Leary, 1995).

Troop et al. (2003) argue that ranking occurs in all social species to regulate competition for resources and to maintain group cohesion. Currently no studies have investigated both shame and social rank in an eating disordered population. Several studies have linked these social ranking phenomena to other forms of psychopathology (Allan & Gilbert, 1997; Cheung et al., 2004;

Gilbert & Miles, 2000). The findings of these studies indicate that shame and social rank are highly related and significantly correlate with a wide range of psychopathology, and in particular depression in student samples, and in depressed patients (O'Connor et al., 2002) and in those who hear voices or experience delusions (Birchwood, et al., 2002).

Gilbert & McGuire (1988) offer a social ranking theory of shame. Here shame is seen to inhibit up-rank challenges when one suffers defeat in the competition for resources (food, mates etc). The biological correlates and behaviours of shame (gaze avoidance, behavioural inhibition etc.) are aimed at signalling to the dominant other that one is no longer a threat, so as to ward off attacks or social exclusion by the dominant other. They argue, that human relationships are so complex, and interdependent, compared with that of other species, that attention to potential social exclusion is paramount. They believe that to manage issues of social rank and fear of exclusion, humans have primarily focused on social attractiveness, rather than aggression, hierarchies.

Gilbert and McGuire (1998) argue the focus on appearing attractive to others is an alternative to the fear based social ranking system found most often in animals. In the attractiveness system the aim is to be viewed by others as desirable; thus the behavioural strategies will include showing talent and role competence. The primary strategy here would be affiliative, with the aim being to inspire and attract others, in essence stimulating positive affect in others. They believe that shame occurs when one believes they have lost their attractiveness to the other(s), this may be due to active feedback from others (e.g. criticism or rejection), to a mismatch between expected and received signals of attractiveness (e.g. others not valuing one's achievements or personal characteristics) or in response to one's own beliefs about their attractiveness to others (self-criticism and self-directed hostility). In this case one is likely to signal submission to the group and attempt to regain attractiveness in the eyes of the group by changing one's behaviour in the direction of socially acceptable or desirable characteristics, so as to avoid social rejection and exclusion. Shame and submissive response are likely to be intensified when the individual

believes that escape from negative evaluations (and thus potential social exclusion) is impossible.

Treasure and Owen (1996) note that several animal studies support the hypothesis that “wasting diseases” in animals may reflect similar process to those found in humans with AN. They cite “thin sow syndrome” in which pigs who have been defeated in social competition when joining a new social group reduce their eating, show a preference for bland foods and become hyperactive (despite the presence of a range of adequate food).

Several studies suggest ranking theory may be important in eating disorders. Troop et al. (2003) argue that indicators of low social rank include feelings of inadequacy, and low self-esteem (Joiner et al. 1997), personal ineffectiveness (Garner et al., 1983; Williams et al., 1993), lack of assertiveness and the belief that others are powerful and controlling (Williams, 1993) are often reported by eating disordered patients. As noted earlier, several studies have found evidence for the relationship between shame and eating disorders. Troop et al. (2003) found that eating disorder patients report significantly higher levels of submissive behaviour and unfavourable social comparison compared to student controls. However this study did not explore the differences between specific eating disorder diagnostic groups. Attempts to change behaviour or feeling state by self-criticism and self-directed hostility has also been implicated as a way of managing social rank violations (Gilbert et al., 2004) and has also been frequently identified in eating disordered patients (Williams et al., 1993).

Cross-cultural studies have identified loss of social status, particularly in cultures under-going rapid social change, as a risk factor in the development of eating disordered psychopathology (Nasser et al., 2001)

To summarize; shame has been identified as one mechanism via which issues of social rank and status can be regulated. Shame and social rank have both been implicated in the aetiology and maintenance of eating disorders. Self criticism, and particularly self-directed hostility, has been identified as one mechanism by which social rank violations can be managed and has been

identified as a feature which discriminates eating disordered populations from clinical and non-clinical controls (Williams and Power, 2005).

2.6 Eating Disorders and the Management of Shame.

Goss and Gilbert (2002) offer a model based on the functional role of eating disordered beliefs and behaviours in the management of shame. They outline a process model based on risk factors which may predispose an individual to developing both shame proneness and eating disordered proneness. They suggest that different patterns of eating disordered behaviour may be differentially associated with internal shame and external shame.

Goss and Gilbert (2002) identified a number of background factors that may set the stage for an eating disorder. These include genetic predispositions, personality (e.g., neuroticism, interpersonal sensitivity), early attachment history and experiences of rejection or abuse, as well as cultural factors that intensify competition for certain body shapes and appearances. They argue that these factors give rise to various forms of external shame cognitions, accentuate interpersonal sensitivities, also influence internal shame, self-perception and identity. Thus individuals who feel vulnerable to these negative social outcomes (e.g. rejection) seek ways to defend themselves against these threats by attempting to change body weight and shape towards an actual or perceived culturally desirable body weight or shape. They argue that this pattern is particularly important in eating disorder patients with restrictive, rather than purging, eating disorders. This model predicts that patients with a more restrictive behavioural pattern are likely to be both internally and externally shame prone.

Goss and Gilbert (2002) argue that the main problems in bulimic disorders are the needs to control affect and coping with unstable and negative affects, especially in interpersonal contexts. They believe that internal, rather than external shame, may be the main problem for this group. Sanftner and Crowther (1996) found that planning a binge is associated with positive affect and sense of

control. Patients also report a sense of excitement when planning a binge. Moreover, the very fact that these behaviours are going to be conducted in private ('I can do things others can't know about or stop me') may increase a sense of a separate self-identity outside the gaze of others. There can also be a sense of rebellion; in that one is doing something one knows others would disapprove of. In these cases, the ability to deceive others and hide things (and get away with it) seems to strengthen a sense of self-identity and power. In the longer term a person may also feel disgusted by their behaviour, fearful of discovery and needing to conceal, and worry about harm they may be doing to themselves. While deceiving others and keeping binges/vomiting secret can at first feel empowering, it can also be isolating. The person may come to feel their behaviour is abnormal, which may compound internal shame (Goss & Gilbert, 2002).

In this model it is possible to hypothesise that those who manage their weight / shape and or affect in ways that is not obvious to others (e.g. purging or exercise) may experience less external shame (as they do not expect get direct negative feedback on their potentially socially unacceptable behaviour from others, and may get more positive comments about their appearance or psychosocial functioning) compared to those who restrict (whose eating behaviour or compromised psychosocial functioning may be more obvious to others). In addition it is likely that those who binge / purge may manage their negative affect, including shame affect, more effectively and thus experience lower overall levels of internal and external shame compared to those with predominantly restrictive eating disorders. To date these hypotheses have not been tested empirically.

2.7 Eating Disordered Diagnosis, Eating Disordered Beliefs and Behaviours, and Shame.

In chapter 1 the difficulties with the current diagnostic system for eating disorders were discussed. Although DSM-IV allows for an overlap between symptom presentation between different eating disorders (e.g. Anorexia Nervosa; Purging Subtype), relatively little is known about how bulimic and restricting beliefs and

behaviours present within or between current eating disorder diagnoses. Attempts have been made to discriminate between these specific symptom presentations, which suggest a differential loading on these factors for different eating disordered diagnoses, and it would appear that both types of beliefs and behaviours are highly prevalent across anorexic and bulimic diagnoses (see Williams & Power, 1995). These may be a key focus of “transdiagnostic” eating disorder treatment.

Little is known about these symptom presentations in the most prevalent group of eating disorder patients referred to specialist clinics (EDNOS) or those patients for whom clinicians find it most difficult to provide adequate treatment (restricting patients who purge and MI-BN).

Previous research investigating the role of shame, social rank, self-directed hostility and self-esteem have been based upon the diagnostic categories of AN, BN and BED. These studies have suggested that these variables may play an important role in the development and maintenance of eating disorders. However previous studies have not explored the relationship between these variables in EDNOS patients; or in relation to clinically significant patterns of bulimic and restricting beliefs and behaviours; which may provide a more useful way of classifying patients than the current DSM-IV diagnostic system.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

CHAPTER 3

3 THE CURRENT STUDY

As our theoretical models of eating disorder psychopathology have moved beyond the narrow confines of “a fear of fatness,” it has become more important to explore the function and intentional and unintentional consequences of eating disordered behaviours and beliefs which maintain them.

Several key themes have emerged in understanding the function of eating disordered beliefs and behaviours:

- To manage key themes of worthlessness, inferiority, failure and abandonment.
- To manage specific “fear of fatness” beliefs.
- To regulate general negative mood states.

Social rank theory (Gilbert, 1992) suggests that feelings of worthlessness, inferiority, and failure are aspects of being in an unwanted subordinate (inferior) position, vulnerable to social rejection and condemnation. It is this position of *vulnerable inferiority* that underpins the experience of shame and is associated with managing attractiveness to others. *Vulnerable inferiority* increases pressure to compete for a better social place/sense of status and control, and it may be this that drives the competitive dynamic of control in some eating disorders. The themes of competing for social attractiveness and social power have been central to many models attempting to explain eating disorder psychopathology. Self-directed hostility has also been implicated as a possible pathway to managing issues of social rank and feelings of shame.

Recent studies (Troop et al., 2001a, 2001b; Gee & Troop, 2003; Swan & Andrews, 2003) suggest that shame is an important variable to consider in relation to eating disorders. A number of authors have also pointed to the management of shame affect as a key variable in moderating or mediating the impact of abusive experiences in the development of eating disordered symptoms (Murray & Waller, 2002; Murray et al., 2002). Others have argued that shame and pride cycles may play a key role in maintaining eating disordered behaviour once they have developed (Goss & Gilbert, 2002). Furthermore self-directed hostility has been hypothesized to play a key role in managing social rank violations and has been associated with shame.

These findings and theoretical models suggest the potential for different patterns of shame between patients with different eating disordered diagnoses (e.g. AN / BN) or specific symptom presentation (e.g. restriction or binge / purging). It has also been argued that shame, rather than self-esteem, is more likely to be implicated in the development and maintenance of psychopathology (Cook, 1990; Goss et al., 1995). However this model has yet to be tested in an eating disordered population.

Low-self esteem is seen as a core factor in the development and maintenance of eating disorders within the model that underpins Cognitive Behavioural Therapy (Fairburn & Wilson, 1993), which is seen by the National Institute for Clinical Excellence (NICE, 2005) as the treatment of choice for eating disorders.

Although studies have independently linked social rank, shame, self-directed hostility and eating disordered psychopathology, these phenomena have not been explored within the same research population.

Studies exploring shame, social rank, self-directed hostility, and self-esteem tend to have been primarily carried out with non-clinical populations or small clinical samples. Existing clinical studies have tended not to compare the major eating disordered groups seen in treatment centres (AN, BN, EDNOS, & MI-BN) or to discriminate between specific patterns of thoughts and behaviours that are associated with symptom patterns found in eating disordered populations (i.e.

restricting and bulimic symptoms). The current study will attempt to address this deficit by exploring the relationship between these variables in a large clinical sample of patients presenting to an out-patient specialist eating disorder service.

There has been criticism of the current diagnostic classificatory system for eating disorders, particularly in its failure to distinguish between patient groups, its tendency to overlook commonalities between diagnostic groups, or miss clinically significant differences within diagnostic groups (Williams et al., 1993, Williams & Power, 1995). The recent trend in eating disordered treatment is to identify common patterns of beliefs or behaviours across eating disorder diagnoses and to develop specific interventions to address them (Fairburn et al., 2003). These patterns include those related to core eating disordered beliefs and behaviour (e.g. restrictive and bulimic) as well as to low-self esteem and self-directed hostility. Whether there are different patterns of eating disordered thoughts and behaviours that discriminate between the major eating disordered diagnoses, or that are common across diagnoses, is unclear.

This study aims to report on those patients most commonly seen in specialist eating disorder services, those diagnosed with; AN, BN, EDNOS and MI-BN. It is not within the scope of the present study to develop more sophisticated taxonomies or provide longitudinal data. Neither can it provide information regarding these patterns for BED patients.

3.1 Aims of the Current Study

The current study aims to explore four main areas:

- The relationship between shame, social rank, self-directed hostility, and self-esteem in a female eating disordered population.
- The relationship between anorexic and bulimic beliefs and behaviours and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility and self-esteem, and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility and self-esteem, and anorexic and bulimic beliefs and behaviours.

3.2 Hypotheses to Be Tested

1. Internal and external shame will be significantly positively correlated with variables which reflect various aspects of social rank (low assertiveness, perceived external control) and low self-esteem.
2. Internal and external shame will be significantly positively correlated with self-directed hostility.
3. There will be significant differences between anorexic and bulimic dietary cognitions and behaviours across eating disorder diagnosis.
4. Internal / external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem, will be significantly related to eating disordered diagnosis.
5. Internal / external shame, low assertiveness, perceived external control, self-directed hostility and low self-esteem will be significantly related to anorexic and bulimic dietary cognitions and behaviours.
6. Internal / external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem will be significantly different between patients with clinically significant restricting and binge / purging beliefs and behaviours.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

CHAPTER 4

4.1 METHODOLOGY

4.1.1. Design

This study used a cross-sectional design to quantitatively assess the relationship between shame, social rank, self-directed hostility, eating disorder diagnosis and clinically significant eating disordered beliefs and behaviours.

Participants were recruited from a female clinical population of patients attending for treatment for AN, BN, and EDNOS. Standardised self-report questionnaires were used to assess clinically significant eating disorder beliefs and behaviours (the Stirling Eating Disorder Scales, (SEDS); Williams & Cook, 1995). These questionnaires also included a multi-modal assessment of variables measuring aspects of social rank (low-assertiveness, low-self esteem, and personal efficacy and control). The SEDS also includes a measure of self directed hostility and self-esteem. Shame was measured using self-report scales designed to assess trait internal shame (The Internalised Shame Scale (ISS); Cook, 1990), and external shame (the Other As Shamer Scale (OAS); Goss et al., 1994). The ISS also provides a measure of self-esteem. All questionnaires have been shown to have acceptable reliability and validity in previous studies.

The aim of this methodology was to allow allocation of participants to specific groups based on either diagnosis or clinically significant eating disorder beliefs and behaviours. Participant profiles were composed of four diagnostic categories: AN, BN, EDNOS (excluding BED) and MI-BN. In addition participants were assigned to groups dependant on whether they experienced clinically significant restricting beliefs and behaviours and / or clinically significant purging beliefs and behaviours on the SEDS.

4.1.2 Procedure

All information reported in this study was initially collected for clinical assessment and treatment purposes and clinical audit. Participants were recruited from people referred for specialist out-patient eating disorder treatment. Only data from initial assessment is reported in the current study. All participants in this study were offered specialist eating disorder treatment.

This study used information gathered from semi-structured clinical interviews with patients referred to specialist out-patient eating disorder services and self-report questionnaires, which were used a part of the standard diagnostic assessment package for these services. The results of each assessment were fed back individually to patients during their assessment or subsequent care planning session. These measures were re-administered during treatment to monitor therapeutic progress and clinically significant scores were the target of clinical intervention. These questionnaires were also repeated for those patients who engaged in treatment to monitor individual progress and for clinical audit of treatment. All participants gave verbal consent to the use of these data for research and audit purposes. Participants also completed questionnaires relating to general psychosocial functioning and motivation to change. However these data are not analysed in the current study.

Participants undertook an extended assessment of eating disorder symptoms, medical and psychiatric status by clinicians trained and experienced in the assessment and treatment of eating disordered patients (either a Consultant Psychiatrist and Clinical Psychologist, or Clinical Psychologist and General Practitioner). Each patient completed 3 hours of diagnostic semi-structured interviewing, covering current and previous eating disorder and history, co-morbid psychiatric and medical status and motivation to change. The initial interview took approximately one hour and was used as a general screening for eating disorder and other psychopathology. The second phase of interviewing used two consecutive one hour interviews to assess eating disordered symptoms and to provide a detailed medical examination. Each participant was diagnosed using DSM IV criteria for an eating disorder (AN, BN, and EDNOS)

and criteria for MI-BN . BED patients were not included in the study as neither service was funded to provide treatment for this patient group.

Assessment interviews took place in a number of out-patient services venues dependant on where the eating disorder service was located, however all participants were aware that they had been referred to a specialist eating disorder service. Any gaps in questionnaire data were identified at initial interview and discussed with the participant as part of the assessment process. Although additional support was available to complete questionnaires, via the use of a telephone or face to face interview, no participants required this during the course of this study.

4.1.3 Participants

This study involved the evaluation of clinical data obtained at initial assessment from 187 female patients presenting for treatment at the Derby and Coventry specialist out-patient eating disorder services. Both services have catchment areas of 300,000, including a high proportion of university students (approximately 10-15%). All were referred for assessment and treatment for their eating disorder. Participants were above a Body Mass Index of 15 and were offered treatment by these services. The minimum intake age of these services was 17, with a maximum age of 65. Male patients were excluded from the analysis as only 5 were referred during the period of the study, making gender comparisons untenable.

Data have been collected over the past 5 years, (initially for one year in Derby (1998) and subsequently in Coventry (2002-2004). The break in data collection was due to the end of specialist service provision for eating disorder patients in Derby. Data collection recommenced when Coventry introduced a specialist eating disorder service. The two services offered assessment using the same inclusion / exclusion criteria, offered similar treatment programs and had the same clinical lead. (Ken Goss, Consultant Clinical Psychologist). An independent samples t-test was undertaken to compare participants from the two treatment sites; results indicated no significant differences between the groups

on all of the measures used in the study. Therefore the groups were not separated in the final data analysis.

The current study uses these data to clinically audit differences between and within patients presenting for treatment to improve treatment planning in the future. The overall results have been anonymised to protect patient confidentiality. All participants gave verbal consent to be included in the study. At the time the study began the author was advised by his academic supervisor (Dr Celia McCrea) that Ethical Committee approval was not required to analyse and report on these data. A recent additional research submission to Warwick Ethics committee, which plans to use the same data base, has confirmed that ethical committee approval is not required for the use of anonymised data obtained as part of standardised assessment for clinical audit. Their recommendation that consent is obtained in writing for the use of clinical data for audit purposes since 2005 has now been adopted as standard practice in the Coventry service.

4.2 Materials

4.2.1 The Stirling Eating Disorders Scales (SEDS)

The SEDS was designed to assess the cognitive and behavioural symptoms of eating disorders and personality characteristics associated with eating disorder psychopathology. It provides a screening of potential patients, can monitor changes in symptomatology during treatment and enables multi-scale assessment in research. It was chosen in preference to other eating disorder scales as it provides comparison between different diagnostic groups on eating disordered thoughts and behaviours and also provides an assessment of factors thought to be associated with social rank, self-directed hostility and self-esteem. These factors have been implicated in eating disordered treatment and were the target of clinical intervention by the services involved in this study.

The SEDS is an 80 item scale with eight subscales: four measuring core eating disordered behaviour and beliefs and four measuring factors associated with ED psychopathology. Each item score is individually weighted based on two criteria;

its severity (on a scale of 1-7) and its level of ambiguity. The scale provides 80 True-False questions, with a fixed alternate ordering to facilitate ease of scoring. For example, "I eat a lot of food even when I am not hungry." Here a true score would give a weighted score of 5.1 on the Bulimic Dietary Behaviours subscale. Higher scores on each subscale are indicative of increasing severity of symptoms.

The scale offers cut-off scores for a non-clinical control group compared to eating disordered patients and for patients with a diagnosis of AN or BN.

The scale was standardised on 78 Scottish clinical participants recruited and diagnosed by practising Psychiatrists and Psychologists and 76 control participants. In the original standardization study the subscales had high internal consistency (Cronbach Alpha 0.83 – 0.92; Williams and Power, 1995). The scales also differentiated between eating disorder and control groups. AN patients scored significantly higher on the Anorexic Dietary Cognitions and Behaviour subscales than BN patients. BN patients scored significantly higher than AN patients on Bulimic Dietary Behaviour and Cognitions subscales. Concurrent validity with similar scales and test-retest correlations at three weeks were also acceptable ($p < .001$).

Williams and Power (1995) note that the four eating subscales were able to discriminate eating disorder patients from other clinical groups (e.g. anxiety disorders and depression). However, perceived external control, low assertiveness, and low self-esteem did not differentiate depressed and eating disorder samples. Eating disorder patients scored higher on self-directed hostility compared to depressed patients.

4.2.2 SEDS Subscales

STADC: Anorexic Dietary Cognitions - If the patient scores above cut-off they are likely to experience feelings of guilt when eating, feelings of fear/disgust when overeating, feeling that they do not need as much food as other people, and avoid high carbohydrate foods. AN / BN cut-off score is greater than 9.

STADB: Anorexic Dietary Behaviour - If the patient scores above cut -off they are likely to eat low calorie foods and count calories, hide food rather than eat it, cut food into small pieces and eat very slowly, and cook for others but not eat with them. AN / BN cut-off score is greater than 14.

STBDC– Bulimic Dietary Cognitions - If the patient scores above cut -off they are likely to feel ashamed of the amount of food they eat, feel frightened if they cannot get rid of the food they have eaten (either by vomiting, laxatives or fasting), feel they cannot stop eating when they want to, and feel that their eating patterns are out of control. AN / BN cut-off score is greater than 17.

STBDC– Bulimic Dietary Behaviour - If the patient scores above cut -off they are likely to eat a lot of food even when they are not hungry, hide the evidence of their binges, take laxatives to get rid of food, try to diet but always lose control, and intentionally purge after eating. AN / BN cut-off score is greater than 14.

STA – Low Assertiveness – If the patient scores above cut -off they are likely to bottle up emotions; choosing to sulk rather than have an argument. They may be afraid when people are angry with them and find it difficult to confront people. AN cut-off score is greater than 9, BN cut-off score is greater than 8.

STSE – Low Self Esteem - If the patient scores above cut -off they are likely to have a negative attitude about themselves, feel they are not popular, that their parents are not proud of them, and feel that they are not attractive or clever. AN / BN cut-off score is greater than 14.

STSDH – Self-Directed Hostility - If the patient scores above cut -off they are likely to feel self critical; that they should be a better person, that they deserve to be punished and have feelings of shame and anger towards self. AN / BN cut-off score is greater than 12.

STPEC – Perceived External Control - If the patient scores above cut -off they are likely to feel that other people are controlling them, for example parents / spouse / boyfriend / girlfriend. 1 item of this scale also measures the degree to

which the person feels in control of their health. AN / BN cut-off score is greater than 12.

4.2.3 *The Internalised Shame Scale (ISS)*

The ISS was developed by Cook (1990) as a self report trait scale to measure global negative beliefs about the self. It is based on Kaufman's (1989) concept of "internalised shame."

The ISS is a 30-item scale, with 24 shame items and 6 self-esteem items. Respondents are asked to rate on a 5 point Likert scale how often they experience particular thoughts and feelings such as, "I think other people look down on me", from Never (0) to Almost Always (4). The total shame score is obtained by summing scores for the 24 items; the total self-esteem score is obtained by summing 6 items. The scoring range for ISS shame subscale is a minimum of 0 and a maximum of 96, for the self-esteem subscale the range is 0-24.

The original standardization study used a large clinical sample of patients with a range of diagnoses (including eating disorders) (n=370) and a student population (n=645) (Cook, 1990). It had high internal consistency (Cronbach Alpha 0.96 and 0.95 respectively). It also had an acceptable test-retest reliability of $r=0.84$ for shame items and $r=0.69$ for the self esteem scale over a seven week interval, allowing it to be used to measure change over time. The scale's concurrent validity with other available measures of shame and self-esteem was found to be satisfactory.

Clinical cut-off scores for these scales have been suggested. A patient who scores higher than 50 on the shame subscale is experiencing "painful, possibly problematic internalised shame." Scores higher than 60 suggest the patient is, "experiencing extreme levels of shame, likely to be associated with more severe disorders such as depression/anxiety" (Cook, 1990). If the patient's self-esteem score is less than 12 they are experiencing extremely low, negative self-esteem.

4.2.4 The Other As Shamer Scale (OAS)

The OAS was adapted directly from the ISS (Cook, 1988). It was designed as a trait self-report scale to measure vulnerability to believing that others negatively evaluate the self (Goss et al., 1994). It is based on the concept of external shame (i.e. the belief that other people see the self as bad, worthless or a failure). Whereas the ISS is concerned with self-evaluation (i.e. "I feel like I am never quite good enough") the OAS asks, "I feel other people see me as not good enough."

This is an 18-item scale using a similar format to the ISS. Each item has a minimum score 0 of and a maximum score 4. A total scale score is obtained by summing all 18 items, giving a minimum score of 0 and a maximum score of 72.

The original standardisation study used a large non-clinical sample (n=152). The scale had high internal consistency (Cronbach Alpha 0.93). It also had a test-retest reliability of $r=0.86$ over a five week interval. The scales' concurrent validity with other available measures of shame was found to be satisfactory.

4.3 Data Analysis

Data were analysed using SPSS 12 using the following procedure.

1. Initial screening for unacceptable variable values, Skew and Kurtosis.
2. Presentation of descriptive statistics; including age, diagnosis and means and standard deviations for the Stirling Eating Disorders Scale, OAS, ISS and ISSE.
3. Reliability analysis to test: Internal reliability (using a Cronbach alpha test) and data distribution (using a one-sample Kolmogorov-Smirnov goodness-of-fit test and Levene Homogeneity of Variances test) for the subscales of the Stirling Eating Disorders Scale, the ISS, ISSE and OAS.

4. An assessment of the factor structure of the subscales of the Stirling Eating Disorders Scale, the ISS, ISSE, and OAS (using an exploratory principal components analysis).
5. Hypotheses one and two were tested using a visual examination of scatterplots, correlational and step-wise multiple regression analysis to explore the relationships between shame, social rank, self-esteem, and self-directed hostility.
6. Hypothesis three was tested using a visual examination of scatterplots, correlational and, multiple regression analysis to explore the relationship between anorexic dietary behaviours and beliefs. An analysis of variance (ANOVA) and post hoc ANOVA (where appropriate) was used to explore the relationships between these variables and eating disorder diagnosis.
7. Hypothesis four was tested using ANOVA to explore the relationship between shame, social rank, self-directed hostility, and self-esteem with eating disorder diagnosis.
8. Hypothesis five was tested using a visual examination of scatterplots, correlational, and step-wise multiple regression analysis to explore the relationship between shame, social rank, self-directed hostility, and self-esteem with anorexic and bulimic beliefs and behaviours.
9. Hypothesis six was tested by assigning participants to groups based on the clinical cut-off scores for eating disordered beliefs and behaviours on the Stirling Eating Disorders scale and comparing these groups using multivariate analysis of variance analysis (MANOVA) to explore the relationship between shame, social rank, self-directed hostility, and self-esteem with anorexic and bulimic beliefs and behaviours. Internal and external shame was compared separately from social rank, self-directed hostility, and self-esteem to directly test Goss and Gilbert's (2002) model and to avoid confounding the results by exploring too many variables in one MANOVA.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM AND EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

CHAPTER 5

5 RESULTS

5.1 Data Screening

Data analysis was performed using SPSS 12. Data were initially screened using SPSS 12 Frequencies. This identified missing variables, unacceptable variable values, range scores, means and standard deviations. A number of cases have not been included in the some of the subsequent analysis due to incomplete data. Data Skew and Kurtosis were also found to be acceptable for the remaining data.

Total cases and missing cases will be reported where appropriate. Cases with only 1 or 2 missing data points were retained. The additional information is useful for pairwise correlations and multivariate analysis.

5.2 Descriptive Statistics

The study included 187 female participants. Their mean age was 27.2 years, with a standard deviation of 8.9 years. They ranged between 17 and 60 years old at initial assessment. 41 participants were diagnosed with AN (21.9% of the sample); 62 were diagnosed with BN (33.2%), 71 with EDNOS (38.5%) and 12 met criteria for MI-BN (6.4%).

A key to the abbreviations used in this study is shown below. Means and standard deviations derived from participants' scores in the current study are presented in Table 2. Tables 3 and 4 report means and standard deviations for the scales used in the current study for each eating disordered diagnostic group.

Table 1: Key to abbreviations for all measures

STA	=	Stirling Eating Disorders Scale: Low Assertiveness
STSE	=	Stirling Eating Disorders Scale: Low Self-Esteem
STSDH	=	Stirling Eating Disorders Scale: Self-Directed Hostility
STPEC	=	Stirling Eating Disorders Scale: Perceived External Control
STADC	=	Stirling Eating Disorders Scale: Anorexic Dietary Cognitions
STADB	=	Stirling Eating Disorders Scale: Anorexic Dietary Behaviours
STBDC	=	Stirling Eating Disorders Scale: Bulimic Dietary Cognitions
STBDB	=	Stirling Eating Disorders Scale: Bulimic Dietary Behaviours
OAS	=	Other As Shamer Scale
ISSE	=	Internalised Shame Scale: Self Esteem Subscale
ISS	=	Internalised Shame Scale
AN	=	Anorexia Nervosa
BN	=	Bulimia Nervosa
EDNOS	=	Eating Disorder Not Otherwise Specified (excluding Binge Eating Disorder)
MI-BN	=	Multi-Impulsive Bulimia Nervosa

Table 2: Means and Standard Deviations for all measures

	N	Missing	Mean	Std. Deviation
STA	178	9	21.75	8.38
STSE	177	10	23.55	9.00
STSDH	177	10	24.72	12.43
STPEC	179	8	17.56	10.99
STADC	178	9	29.15	9.74
STADB	178	9	14.99	9.77
STBDC	178	9	30.10	11.63
STBDB	180	7	23.24	12.62
OAS	179	8	28.39	17.28
ISSE	180	7	8.65	4.94
ISS	180	7	60.80	20.89

Table 3: ISS, OAS, and ISSE Means by Eating Disorder Diagnosis

		AN	BN	EDNOS	MI-BN
ISS	Mean	60.77	60.69	59.07	71.83
	N	39	57	72	12
	Std.				
	Deviation	21.98	21.76	20.19	15.56
OAS	Mean	33.08	26.73	26.97	29.50
	N	39	56	72	12
	Std.				
	Deviation	18.50	18.14	16.46	12.25
ISSE	Mean	8.82	8.72	9.06	5.42
	N	39	57	72	12
	Std.				
	Deviation	5.10	4.96	4.79	4.76

Table 4: Means and Standard Deviations for the Stirling Eating Disorder Scale by Diagnosis

DIAGNOSIS		STA	STSE	STSDH	STPEC	STADC	STADB	STBDC	STBDB
Anorexia	Mean	22.29	22.96	25.47	18.78	33.13	20.38	29.44	20.51
	N	40	39	39	40	39	39	39	39
	Std. Deviation	8.49	8.65	13.21	10.60	7.74	9.78	11.27	12.85
Bulimia	Mean	22.29	23.46	25.07	17.06	27.74	12.47	36.71	32.06
	N	61	61	60	61	61	61	60	61
	Std. Deviation	7.99	10.02	12.07	11.57	8.76	9.67	6.97	7.85
EDNOS	Mean	20.27	23.51	22.51	16.57	27.55	14.23	24.22	16.43
	N	65	65	66	66	66	66	67	68
	Std. Deviation	8.97	8.53	11.95	10.75	11.45	9.36	12.36	11.11
Multi-Impulsive	Mean	25.33	26.26	32.82	21.56	32.29	14.44	32.04	25.88
	N	12	12	12	12	12	12	12	12
	Std. Deviation	5.45	7.73	12.02	10.95	6.04	9.96	10.38	13.63
Total	Mean	21.76	23.55	24.73	17.57	29.15	14.99	30.10	23.24
	N	178	177	177	179	178	178	178	180
	Std. Deviation	8.38	9.01	12.44	10.99	9.75	9.78	11.63	12.63

5.3 Comparison with Scale Norms Found in Previous Studies

Relatively few studies have provided clinical norms for the scales used in this study with an eating disordered population. None have specifically provided norms for patients with an EDNOS or MI-BN diagnosis. For ease of comparison, norms found in previous studies are reported in Tables 5, 6 & 7. Overall means

and standard deviations in this study were found to be comparable to other studies. The most notable discrepancy between the results of the current study and previous studies was between the OAS scores found in this study and those found by Troop et al. (2001b). Overall the AN and BN groups in this study reported lower scores on all of the SEDS subscales, compared to Williams and Power's (1995) sample.

Table 5: ISS & OAS Means for Female Eating Disorder Populations

Study	ISS Mean & Number of Participants	OAS Mean & Number of Participants
Current Study	60.80(180)	28.40(179)
Troop, 2001b		41.70(150)
Cook, 1994	68.92 (25)	
Prissel, 1993	61.8 0(34)	

Table 6: ISS, OAS, Means for Non-Clinical Populations

	ISS Mean & Number of Participants	OAS Mean & Number of Participants
Cheung et al. (2004)		21.73 (125)
Gee & Troop (2003)		22.20 (70)
Murray & Waller (2002)	33.10 (214)	
Murray et al. (1999)	34.80(139)	
Goss et al. (1994)	32.10(155)	20.00(155)

Table 7: Normative Data for the Stirling Eating Disorders Scale (Williams & Power, 1995)

DIAGNOSIS		STA	STSE	STSDH	STPEC	STADC	STADB	STBDC	STBDB
Anorexia	Mean	25.6	27.6	32.6	23.8	32.9	22.2	24.7	21.6
	N	40	40	40	40	40	40	40	40
	Std. Deviation	7.9	7.4	12.8	11.3	12.5	12.2	14.8	13.4
Bulimia	Mean	25.9	26.7	27.2	21.4	25.3	11.5	34.6	34.5
	N	38	38	38	38	38	38	38	38
	Std. Deviation	6.5	7.2	10.6	10.7	10.9	9.8	7.7	9.8
Control	Mean	9.4	8.4	5.3	5.9	2.9	1.9	5.5	3.8
	N	76	76	76	76	76	76	76	76
	Std. Deviation	7.9	8.0	6.2	7.5	5.5	3.2	8.8	3.1

5.4 Reliability Data

Table 8 reports internal reliability data derived from participants' scores in the current study. Overall internal reliability of all measures was found to be acceptable and consistent with scores found in previous scale standardisation studies. However the scores of the Anorexic Dietary Cognitions and Anorexic Dietary Behaviours were slightly below the usual cut off of 0.7. Internal reliability of the scales used in this study was considered to be acceptable

Table 8: Internal Reliability: Cronbach Alpha Coefficients

Scale Name		Alpha
	N	
STA	178	.70
STSE	177	.75
STSDH	177	.78
STPEC	179	.74
STADC	178	.65
STADB	178	.69
STBDC	178	.78
STBDB	180	.75
OAS	179	.95
ISSE	180	.94
ISS	180	.86

5.5 Data Distribution

Data distribution was explored for goodness-of-fit and homogeneity of variance prior to the final inclusion of scales for data analysis. These results are shown in Tables 9 and 10.

All independent variable items except the Stirling Self-Esteem scale meet the goodness-of-fit test at $p < .01$ and it was dropped subsequent parametric analysis. The more psychometrically robust ISS self-esteem scale was used instead. There was an expected difference in homogeneity of variance on the Stirling Anorexic Dietary Cognitions, and Bulimic Dietary Cognition and Behaviours subscales. This was not thought to pose a significant statistical difficulty as the sample population was believed to be heterogeneous on these variables and this was taken into account when choosing appropriate parametric tests to analyse the data.

All other data were found to be acceptable in terms of goodness of fit, homogeneity of variance, skew and kurtosis to allow the use of parametric statistics without further data transformation.

Table 9: Goodness-of-Fit Data

One-Sample Kolmogorov-Smirnov Test

	N	Normal Parameters(a,b)		Most Extreme Differences			Kolmogorov- Smirnov Z	Asymp. Sig. (2-tailed)
		Mean	Std. Deviation	Absolute	Positive	Negative		
STA	178	21.7584	8.38442	.113	.113	-.098	1.511	.021
STSE	177	23.5508	9.00561	.140	.137	-.140	1.858	.002
STSDH	177	24.7299	12.43633	.112	.087	-.112	1.496	.023
STPEC	179	17.5654	10.99323	.089	.089	-.081	1.186	.120
STADC	178	29.1545	9.74869	.131	.124	-.131	1.742	.005
STADB	178	14.9944	9.77511	.077	.077	-.063	1.025	.244
STBDC	178	30.1000	11.63337	.199	.166	-.199	2.658	.000
STBDB	180	23.2433	12.62910	.109	.068	-.109	1.461	.028
TOAS	179	28.3966	17.28493	.068	.068	-.050	.907	.383
TISSE	180	8.6556	4.94926	.103	.103	-.050	1.385	.043
TISS	180	60.8022	20.89633	.050	.046	-.050	.675	.753

Table 10: Test of Homogeneity of Variances

	Levene Statistic	Df1	df2	Sig.
STA	1.766	3	174	.155
STSE	1.544	3	173	.205
STSDH	.663	3	173	.576
STPEC	.148	3	175	.931
STADC	4.161	3	174	.007
STADB	.272	3	174	.845
STBDC	16.057	3	174	.000
STBDB	7.442	3	176	.000
TOAS	2.137	3	175	.097
TISSE	.401	3	176	.753
TISS	.806	3	176	.492

5.6 Factor Structure of Measures Used

An exploratory principal components analysis with varimax rotation of the measures used in the study was carried out. A cut off of 0.5 was used for the inclusion of a variable in the interpretation of a factor. This analysis produced a solution of three factors with eigenvalues greater than 1. These three factors accounted for 71.47% of the variance in the factor space. The three factors are:

1. Those related to shame, social rank, low self-esteem, which accounted for 39.9% of the variance.
2. Bulimic (binge / purging) behaviours and beliefs which accounted for 17.6% of the variance.
3. Anorexic (food restricting) behaviours and beliefs, which accounted for 14.0% of the variance.

Factor loadings are reported in Table 11.

Table 11: Rotated Component Matrix

	Factor		
	1	2	3
STA	.717	.117	.149
STSE	.811	.121	.002
STSDH	.753	.258	.169
STPEC	.675	.091	.171
STADC	.304	.230	.539
STADB	.071	-.051	.773
STBDC	.122	.935	.135
STBDB	.148	.804	-.023
OAS	.707	.016	.221
ISSE	-.696	-.039	-.005
ISS	.826	.199	.215

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.

5.7 Hypothesis 1:

Internal Shame will be significantly correlated with social rank variables (low assertiveness, perceived external control) and low self esteem.

The size of sample used to test this hypothesis ($n=171-179$) indicates sufficient subjects to detect a medium effect size at 0.8 (Clark-Carter, 2004). Visual examination of scatterplots indicated positive linear relationships between shame measures and low assertiveness, perceived external control, and low self esteem (high scores on the ISSE equal high self-esteem).

The relationship between internal shame (measured by the ISS), external shame (measured by the OAS), low assertiveness, perceived external control (measured by the SEDS) and low self-esteem (measured by the ISS) was investigated using Pearson product-coefficient. Preliminary analysis was performed to ensure of the assumptions of normality, linearity or homoscedasticity were not violated. There was a positive relationship between internal shame, external shame, low assertiveness and perceived external control and negative relationship between these variables and positive self esteem.

Internal and external shame accounts for between 19.1% and 36.7% of the variance in items measuring aspects of social rank and negative self-esteem. All correlations reflect an effect size greater than 0.99, indicating a large effect size ($r^2>10\%$) (Kinnear & Gray, 2004). These relationships are both statistically and clinically significant.

These findings support the hypothesis that internal and external shame are related to aspects of social rank (feeling inferior and subordinated to others) in a female eating disordered population. These correlations detailed in table 12.

Table 12: Correlations for the Relationships between, External and Internal Shame, Low Assertiveness, Perceived External Control and Self-Esteem

		ISS	STA	STPEC	ISSE
OAS	Pearson Correlation	.696(**)	.515(**)	.501(**)	-.437(**)
	Sig. (1-tailed)	.000	.000	.000	.000
	R ²		.265	.251	-.191
	N	179	170	171	179
ISS	Pearson Correlation		.606(**)	.618(**)	-.561(**)
	Sig. (1-tailed)		.000	.000	.000
	r ²		.367	.382	-.315
	N		171	172	180
STA	Pearson Correlation			.568(**)	-.530(**)
	Sig. (1-tailed)			.000	.000
	r ²			.323	-.281
	N				171
STPEC	Pearson Correlation				-.483(**)
	Sig. (1-tailed)				.000
	r ²				-.233
	N				172

** Correlation is significant at the 0.01 level (1-tailed).

5.7.1 The Relationship between Internal and External Shame and Low Assertiveness, Perceived External Control and Self-Esteem in Eating Disordered Women

A step-wise multiple regression analysis was undertaken to explore whether internal or external shame was a better predictor of low assertiveness, perceived external control and low-self esteem in a female eating disorder population. Internal (ISS) and external (OAS) scores were entered simultaneously.

Using a step-wise multiple regression method a significant model emerged for the criterion variable Low Assertiveness: *R Square* = .379, *Adjusted R Square* =

.372, F 51.05, $P < .001$. This model indicates that internal and external shame both play a significant role in predicting low assertiveness. They account for 37.2% of the variance, with an effect size above 0.99, indicating a large effect size. The low difference between *R Square* and *Adjusted R Square* suggests these results will be generalisable. The results of this analysis are shown in Table 13.

Table 13: Stepwise Multiple Regression Predicting Low Assertiveness from Internal and External Shame

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	Constant)	7.447	1.611		4.623	.001
	ISS	.192	.035	.476	5.535	.001
	OAS	.087	.042	.179	2.079	.039

Dependent Variable: STA

The step-wise multiple regressions comparisons using internal and external shame to predict perceived external control and low-self esteem indicated that internal shame was a more predictive measure than external shame of these variables.

Using a step-wise multiple regression method a significant model emerged for the criterion variable Perceived External Control: *R Square* = .384, *Adjusted R Square* = .380, F 105.19, $P < .001$. This model indicates that internal shame accounts for 38% of the variance, with an effect size above 0.99, indicating a large effect size.

Using a step-wise multiple regression method a significant model emerged for the criterion variable Low Self-Esteem: *R Square* = .313, *Adjusted R Square* = .309, F 80.58, $P < .001$. This model indicates that internal shame accounts for 30.9% of the variance, with an effect size above 0.99, indicating a large effect

size. The low difference between *R Square* and *Adjusted R Square* for both variables suggests these results will be generalisable.

These results do not necessarily mean that external shame is not playing a major role in low-assertiveness, perceived external control, or low self-esteem. External shame may operate via internal shame, or the predictive power of internal shame may leave little available variance to be accounted for by external shame.

5.8 Hypothesis 2:

Internal and external shame will be significantly positively correlated with self-directed hostility.

The size of sample used to test this hypothesis ($n=171-179$) indicated sufficient subjects to detect a medium effect size at 0.8 (Clark-Carter, 2004). Visual examination of scatterplots indicated positive linear relationship between shame measures and self-directed hostility.

The relationship between internal, shame (measured by the ISS), external shame (measured by the OAS), and self-directed hostility (measured by the SEDS) was investigated using Pearson product-coefficient. Preliminary analysis was performed to ensure no violation of the assumptions of normality, linearity or homodescedascity were violated. There was a positive relationship between internal shame, external shame, and self-directed hostility.

These results indicate a strong relationship between internal and external shame and self-directed hostility. These results support the hypothesis that internal and external shame are related to self-directed hostility in a female eating disordered population. Both internal and external shame correlations with self-directed hostility had an effect size greater than 0.99, indicating a large effect size ($r^2>10\%$) (Kinnear & Gray, 2004).

These support the hypothesis that internal and external shame are related to aspects of self-directed hostility in a female eating disordered population. These correlations detailed in table 14.

Table 14: Correlations for the Relationships between External and Internal Shame, and Self-Directed Hostility

		OAS	ISS
STSDH	Pearson Correlation	.559(**)	.739(**)
	Sig. (1-tailed)	.000	.000
	R^2	.312	.546
N		169	170

****** Correlation is significant at the 0.01 level (1-tailed).

As the correlation between internal and external shame was high ($p=0.696$) a step-wise multiple regression was undertaken to explore whether internal or external shame was a better predictor of self-directed hostility.

Using a step-wise multiple regression method a significant model emerged for the criterion variable Self-Directed Hostility: $R Square = .542$, $Adjusted R Square = .539$, $F 197.76$, $P<.001$. Internal shame accounts for 53.9% the variance, with an effect size above 0.99, indicating a large effect size. The low difference between $R Square$ and $Adjusted R Square$ suggests these results will be generalisable.

These results do not necessarily mean that external shame does not play an important role in self-directed hostility. External shame may operate via internal shame, or the predictive power of internal shame may leave little available variance to be accounted for by external shame.

5.9 Hypothesis 3:

There will be significant differences between anorexic and bulimic dietary cognitions and behaviours across eating disorder diagnoses.

Earlier studies have indicated that anorexic dietary beliefs and cognitions differ in AN and BN populations. This analysis compared these beliefs and behaviours between eating disorder patients with a diagnosis of AN, BN, EDNOS, and MI-BN. As variances were found to be heterogeneous, a between subjects ANOVA, using a Dunnetts T was used. Due to the small sample size of MI-BN patients, these were dropped from the subsequent analysis.

Power analysis for ANOVA was calculated by using the arithmetic mean of the three clinical samples (AN, $n=39$, BN, $n=61$; EDNOS, $n=66$). The arithmetic mean of 55.3 participants per group was sufficient to obtain at least a medium effect at the 0.8 level (Clark-Carter, 2004).

5.9.1 The Relationship between Anorexic and Bulimic Dietary Cognitions and Behaviour

Two multiple regressions (enter method) were undertaken to explore predictive power of anorexic dietary cognitions in relation to anorexic dietary behaviour, and bulimic dietary cognitions in relation to bulimic dietary behaviour.

A significant model emerged for the criterion variable anorexic dietary behaviour: $R\text{ Square} = .203$, $Adjusted\ R\text{ Square} = .198$, $F\ 44.765$, $P<.001$. Anorexic dietary cognitions for 19.8% the variance, with an effect size above 0.99, indicating a large effect size. The low difference between $R\text{ Square}$ and $Adjusted\ R\text{ Square}$ suggests these results will be generalisable.

A significant model also emerged for the criterion variable bulimic dietary behaviour: $R\text{ Square} = .593$, $Adjusted\ R\text{ Square} = .591$, $F\ 256.315$, $P<.001$. Bulimic dietary cognitions account for 59.1% the variance, with an effect size above 0.99, indicating a large effect size. The low difference between $R\text{ Square}$ and $Adjusted\ R\text{ Square}$ suggests these results will be generalisable.

5.9.2 Anorexic Dietary Cognition and Diagnosis

All patients groups reported high levels of Anorexic Dietary Cognition, with the mean for all groups substantially higher than the clinical cut-off score of 9 on this scale, mean range across diagnosis between 33.13 (AN) and 27.55 (BN). These cognitions appear to be a significant problem for the majority of eating disordered patients regardless of diagnosis. Across diagnoses, 93.3% of patients scored above the clinical cut-off on this scale. They are least problematic for EDNOS patients (12.1% of patients scoring below clinical cut-off). No MI-BN patients, 2.6% of AN patients, and 4.9% of BN patients scored below the clinical cut-off on this scale.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on anorexic dietary cognitions. Subjects were divided into three groups (AN, BN and EDNOS). There was a statistically significant difference in anorexic dietary cognitions between the three groups at $p < .05$ [$F(2, 163) = 4.58, p = .01$]. There was a medium effect size (0.06), calculated using eta squared (Pallant, 2005). Post hoc comparisons using the Tukey HSD test indicated that the mean score for the AN group ($M = 33.12, SD = 7.74$) was significantly higher than the mean score for the BN ($M = 27.74, SD = 8.76$) and EDNOS ($M = 27.55, SD = 11.45$) groups at $p < .05$. There was no significant difference between the BN and EDNOS group.

5.9.3 Anorexic Dietary Behaviour and Diagnosis.

AN (20.38), EDNOS (14.23) and MI-BN (14.44) patients' mean scores were all above clinical the cut-off of 14 on scale. Only the BN patient mean was lower than cut-off (12.47). Anorexic dietary behaviours were prevalent across all diagnostic groups. Across diagnoses, 48.3% of patients scored above the clinical cut-off on this scale. These behaviours were most prevalent in the AN group, where 74.4% scored higher than the clinical cut-off score. However these behaviours were also apparent in 58.3% of MI-BN patients, 43.9% of EDNOS patients and, 34.4% of BN patients.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on anorexic dietary behaviours. Subjects were

divided into three groups (AN, BN and EDNOS). There was a statistically significant difference in anorexic dietary behaviours between the three groups at $p < .05$ [$F(2, 163) = 8.86, p = .001$]. There was a medium effect size (0.09), calculated using eta squared (Pallant, 2005). Post hoc comparisons using the Tukey HSD test indicated that the mean score for the AN group ($M = 20.38, SD = 9.78$) was significantly higher than the mean score for the BN ($M = 12.48, SD = 9.07$) and EDNOS ($M = 14.25, SD = 9.36$) groups at $p < .05$. There was no significant difference between the BN and EDNOS group.

5.9.4 Bulimic Dietary Cognitions and Diagnosis.

All patients groups reported high levels of Bulimic Dietary Cognition, with the mean for all groups substantially higher than the clinical cut-off score of 17 on this scale (mean range across diagnosis between 36.71 (BN) and 22.44 (EDNOS)). Bulimic dietary cognitions were prevalent across all diagnostic groups. Across diagnoses 79.8% of patients scored above the clinical cut-off on this scale. These cognitions were most prevalent in the BN group, where 96.7% scored higher than the clinical cut-off. However these behaviours were also apparent in 83.3% of MI-BN patients, 82.1% of AN patients and, 62.7% of EDNOS patients.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on bulimic dietary cognitions. Subjects were divided into three groups (AN, BN and EDNOS). There was a statistically significant difference in bulimic dietary cognitions between the three groups at $p < .05$ [$F(2, 163) = 22.70, p = .001$]. There was a large effect size (0.22), calculated using eta squared (Pallant, 2005). Post hoc comparisons using the Tukey HSD test indicated that the mean score for the BN group ($M = 36.71, SD = 6.96$) was significantly higher than the mean score for the AN ($M = 29.34, SD = 11.27$) and EDNOS ($M = 24.22, SD = 12.35$) groups at $p < .05$. The AN group also had a significantly higher mean score than the EDNOS group at $p < .05$.

5.9.5 Bulimic Dietary Behaviours and Diagnosis.

All patients groups reported high levels of Bulimic Dietary Behaviours, with the mean for all groups substantially higher than the clinical cut-off score of 14 on this scale (mean range across diagnosis between 32.06 (BN) and 16.44 (EDNOS). Bulimic dietary behaviours were prevalent across all diagnostic groups. Across diagnoses 72.8% of patients scored above the clinical cut-off on this scale. These behaviours were most prevalent in the BN group, where 98.4% scored higher than the clinical cut-off score. However these behaviours were also apparent in 83.3% of MI-BN patients, 61.5% of AN patients and, 62.7% of EDNOS patients.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on bulimic dietary behaviours. Subjects were divided into three groups (AN, BN and EDNOS). There was a statistically significant difference in bulimic dietary behaviours between the three groups at $p < .05$ [$F(2, 165) = 37.06, p = .001$]. There was a medium effect size (0.31), calculated using eta squared (Pallant, 2005). Post hoc comparisons using the Tukey HSD test indicated that the mean score for the BN group ($M = 32.06, SD = 7.85$) was significantly higher than the mean score for the AN ($M = 20.51, SD = 12.85$) and EDNOS ($M = 16.43, SD = 11.11$) groups at $p < .05$. There was no significant difference between the AN and EDNOS groups.

5.10 Hypothesis 4:

Internal and external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem will be significantly related to eating disordered diagnosis.

Previous studies have not directly compared different eating disorder populations and internal and external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem. This analysis compared internal shame between eating disorder patients with a diagnosis of AN, BN, and EDNOS. Due to the small sample size of MI-BN patients, these were dropped from the subsequent analysis..

Power analysis for ANOVA was calculated by using the arithmetic mean of the three clinical samples (AN; $n=39$, BN, $n=61$; EDNOS, $n=66$). The arithmetic mean of 55.3 participants per group was sufficient to obtain a least a medium effect at the 0.8 level (Clark-Carter, 2004).

5.10.1 Internal Shame and Diagnosis.

All patients groups reported high levels of internal shame (measured by the ISS), with the mean for all groups higher than the clinical cut-off score of 50 on this scale (mean range across diagnoses between 71.83 (MI-BN) and 59.07 (EDNOS). These findings are consistent with other studies exploring internal shame in eating disordered populations. The mean score for each diagnostic group is approximately twice that found non-clinical female samples.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on internal shame (measured by the ISS). Subjects were divided into three groups (AN, BN, and EDNOS). There was no statistically significant difference in internal shame between the diagnostic groups at $p<.05$ [$F(3,176)=1.92$], $p=0.28$.

5.10.2 External Shame and Diagnosis.

All patients groups reported high levels of external shame (measured by the OAS), with the mean for all groups higher than the mean 20 to 22.2 OAS score

found in non-clinical samples. Across diagnosis the mean was 28.4, ranging from 26.73 (BN) to 33.08 (AN). The mean across diagnosis for external shame was somewhat lower than that found in the only other study looking at this variable in an eating disordered population of (mean score 41.7) (Troop et al., 2001b).

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on external shame. Subjects were divided into three groups (AN, BN and EDNOS). There was no statistically significant difference in external shame between the diagnostic groups at $p < .05$ [$F(3,175)=1.31$], $p=0.27$.

5.10.3 Low Assertiveness and Diagnosis.

All patients groups experienced significant difficulties with low assertiveness measured by the STA. This scale has not been used to compare the range of eating disordered diagnoses used in this study. The range of scores on this scale was 20.27 (EDNOS) to 25.33 (MI-BN). These findings are consistent with means found in the standardisation of the Stirling Scale, where the mean for AN was 25.6 and BN 25.9, compared to a mean for controls of 10.8 (Williams & Power, 1995). All diagnostic group means were higher than the clinical cut-off score of 8 (BN) or 9 (AN).

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on low assertiveness. Subjects were divided into three groups (AN, BN, and EDNOS). There was no statistically significant difference in low assertiveness between the diagnostic groups at $p < .05$ [$F(3,174)=1.56$], $p=0.20$.

5.10.4 Perceived External Control and Diagnosis.

MI-BN patients scored highest on this scale (STPEC) (mean 21.56) and EDNOS patients scored the lowest (mean 16.57). The scores on this scale were generally lower for all patient groups than those found in the standardisation study (Williams and Power, 1995). However all patient groups scored above the clinical cut-off (>8 for BN, >9 for AN).

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on perceived external control. Subjects were divided into three groups (AN, BN and EDNOS). There was no statistically significant difference in perceived external control between the diagnostic groups at $p < .05$ [$F(3,175)=0.912$], $p=0.436$.

5.10.5 Self-Directed Hostility and Diagnosis.

All patients groups experienced significant difficulties with self-directed hostility. The range of scores on this scale was 22.51 (EDNOS) to 32.82 (MI-BN). These findings are somewhat lower than the means found in the standardisation of the Stirling Scale, where the mean for AN was 32.6 and BN 27.2 (Williams & Power, 1995). All diagnostic group means were higher than the clinical cut-off score of 12 on this scale.

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on perceived external control. Subjects were divided into three groups (AN, BN and EDNOS). There was no statistically significant difference in perceived external control between the diagnostic groups at $p < .05$ [$F(3,173)=2.51$]. This result did approach statistical significance ($p=0.06$).

5.10.6 Low Self-Esteem and Diagnosis.

The ISS self-esteem subscale (ISSE) was used as the primary measure of self-esteem in this study. All groups scored below the clinical cut off (<12 for the ISSE). Mean scores ranged between 9.06 (EDNOS) and 5.42 (Multi-Impulsive BN).

A one-way between groups ANOVA was conducted to explore the impact of eating disordered diagnosis on self-esteem. Subjects were divided into three groups (AN, BN and EDNOS). There was no statistically significant difference in self-esteem between three groups at $p < .05$ [$F(3,176)=1.96$], $p=0.13$.

5.11 Hypothesis 5:

Internal and external shame, low assertiveness, perceived external control, self-directed hostility and low self-esteem will be significantly related to anorexic and bulimic dietary cognitions and behaviours.

Visual examination of scatterplots and a Pearson correlational analysis were initially undertaken to explore the relationship between these variables.

Scatterplot results generally indicated positive linear relationships between internal and external shame low assertiveness, perceived external control, self-directed hostility, and low self-esteem and anorexic and bulimic dietary beliefs and behaviours. However this relationship was not apparent for the relationship between anorexic dietary behaviour and low self-esteem. These results were borne out in the subsequent correlational analysis (table 15). The effects size of these correlations are reported in tables 16-18.

Table 15: Correlations for the Relationships between External and Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem and Anorexic Dietary Cognitions / Behaviours and Bulimic Dietary Cognitions / Behaviours.

		STADC	STADB	STBDC	STBDB
ISS	Pearson Correlation	.428(**)	.202(**)	.339(**)	.288(**)
	Sig. (1-tailed)	.000	.004	.000	.000
	r ²	.183	.041	.115	.083
	N	171	171	171	173
OAS	Pearson Correlation	.325(**)	.209(**)	.140(*)	.131(*)
	Sig. (1-tailed)	.000	.003	.034	.043
	r ²	.110	.044	0.02	.020
	N	170	170	170	172
STA	Pearson Correlation	.311(**)	.172(*)	.227(**)	.240(**)
	Sig. (1-tailed)	.000	.011	.001	.001
	r ²	.097	.030	.052	.058
	N	177	177	176	177
STSDH	Pearson Correlation	.375(**)	.166(*)	.374(**)	.319(**)
	Sig. (1-tailed)	.000	.014	.000	.000
	r ²	.141	.028	0.140	.102
	N	176	176	177	177
STPEC	Pearson Correlation	.291(**)	.196(**)	.219(**)	.152(*)
	Sig. (1-tailed)	.000	.004	.002	.021
	r ²	.085	.038	.048	.023
	N	178	178	177	178
ISSE	Pearson Correlation	-.181(**)	-.087	-.135(*)	-.130(*)
	Sig. (1-tailed)	.009	.129	.039	.044
	r ²	.038	.008	.018	.002
	N	171	171	171	173

****** Correlation is significant at the 0.01 level (1-tailed), ***** Correlation is significant at the 0.05 level (1-tailed).

Table 16: Effect size Results: Correlation with an effect size of greater than 0.99, indicating a large effect size (r²>10%).

Variable	Correlated with
ISS	STADC, STBDC
OAS	STADC
STA	STADC
STSDH	STADC, STBDC

Table 17: Effect Size Results: Correlation with an effect size of 0.86 to 0.99, indicating a medium effect size ($r^2 > 1-10\%$).

Variable	Correlated with
ISS	STADB, STBDB
OAS	STADB
STA	STBDC, STBDB
PEC	STADC, STBDC

Table 18: Effect Size Results: Correlation with an effect size of 0.38-0.85, indicating a small effect size ($r^2 < 1\%$).

Variable	Correlated with
OAS	STBDC, STBDB
STA	STADB
STSDH	STADB
PEC	STADB, STBDB
ISSE	STADC, STBDC, STBDC

5.11.1 The Relationships Between External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem and Anorexic Dietary Cognitions / Behaviours and Bulimic Dietary Cognitions / Behaviours.

A series of step-wise multiple regression analyses using the enter method was undertaken to explore whether internal and external shame, low assertiveness, self-directed hostility, perceived external control and self-esteem were better predictors of anorexic beliefs / behaviours and bulimic beliefs / behaviours. The results of these analyses are reported below.

5.11.2 Multiple Regression Analysis Predicting Anorexic Dietary Cognitions from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem

Using the enter method a significant model emerged for the criterion variable STADC: $R^2 = .214$, Adjusted $R^2 = .185$, $F = 7.317$, $p < .001$.

This analysis indicates that internal shame, external shame, low assertiveness, self-directed hostility, perceived external control, and low self-esteem play a significant role in predicting anorexic dietary cognitions. They account for 18.5% of the variance, with an effect size above 0.09, indicating a large effect size. The low difference between R^2 and Adjusted R^2 suggests these results will be generalisable.

The results of this analysis indicate self-directed hostility and low self-esteem are more predictive of anorexic dietary cognitions ($p < .05$). However internal shame also appears to be important as its effects fall just short of statistical significance. These results are shown in Table 19.

Table 19: Enter Method Multiple Regression Analysis Predicting Anorexic Dietary Cognitions from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, and Low Self-Esteem.

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.523	3.718		3.099	.002
	ISS	.106	.058	.235	1.815	.071
	OAS	.015	.055	.027	.265	.792
	STA	.171	.108	.153	1.583	.115
	STSDH	.167	.084	.217	1.990	.048
	STPEC	.008	.083	.009	.099	.921
	ISSE	.348	.175	.181	1.986	.049

a Dependent Variable: STADC

These results do not necessarily mean that external shame, low assertiveness, or perceived external control do not play a major role in anorexic dietary cognitions. These variables may operate via self-directed hostility and low self-

esteem, or the predictive power of the latter variables may leave little available variance to be accounted for by the former variables.

5.11.3 Multiple Regression Analysis Predicting Anorexic Dietary Behaviours from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem.

Using the enter method a significant model emerged for the criterion variable STADB: $R^2 = .062$, $Adjusted\ R^2 = .027$, $F = 7.317$, $p < .001$.

This model suggests that internal, external shame, low assertiveness, self directed hostility, perceived external control and self-esteem all play a significant role in predicting anorexic dietary behaviour and appear to operate as a single factor, as ANOVA results showed no significant difference between the variables. They account for 2.7% of the variance, indicating a medium effect size.

5.11.4 Multiple Regression Analysis Predicting Bulimic Dietary Cognitions from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem.

Using the enter method a significant model emerged for the criterion variable STBDC: $R^2 = .169$, $Adjusted\ R^2 = .138$, $F = 5.472$, $p < .001$.

This analysis indicates that internal shame, external shame, low assertiveness, self-directed hostility, perceived external control, and low self-esteem play a significant role in predicting bulimic dietary cognitions. They account for 13.9% of the variance, with an effect size above 0.99, indicating a large effect. The low difference between R^2 and $Adjusted\ R^2$ suggests these results will be generalisable.

Using the enter method of comparisons to predict Bulimic Dietary Cognitions, results suggest that self-directed hostility ($p < .01$), high internal shame and low

external shame ($p < .05$) are more powerful predictors of bulimic dietary cognitions. These results are reported in Table 20.

Table 20: Enter Method Factor Analysis Predicting Bulimic Dietary Cognitions from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.446	4.692		2.652	.009
	ISS	.153	.074	.277	2.079	.039
	OAS	-.144	.069	-.215	2.079	.039
	STA	.059	.137	.043	.434	.665
	STSDH	.310	.106	.327	2.926	.004
	STPEC	.012	.105	.011	.115	.909
	ISSE	.353	.221	.150	1.593	.113

a Dependent Variable: STBDC

These results do not necessarily mean that low assertiveness, perceived external control, or low self-esteem do play a major role in bulimic dietary cognitions. These variables may operate via self-directed hostility, and shame, or the predictive power of the latter may leave little available variance to be accounted for by the former variables.

5.11.5 Multiple Regression Analysis Predicting Bulimic Dietary Behaviours from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem.

Using the enter method a significant model emerged for the criterion variable STBDB: $R^2 = .129$, $Adjusted R^2 = .096$, $F = 3.971$, $p < .001$.

This analysis indicates that internal shame, external shame, low assertiveness, self-directed hostility, perceived external control, and low self-esteem play a significant role in predicting bulimic dietary behaviours. They account for 9.6% of the variance, with an effect size above 0.09, indicating a large effect. The low

difference between *R Square* and *Adjusted R²* suggests these results will be generalisable.

Using the enter method of comparisons to predict Bulimic Dietary Behaviours, results suggest that self-directed hostility ($p < .05$), was the most powerful predictor. Low external shame also appears to be a relatively powerful predictor, however this result fell short of statistical significance. These results are shown in Table 21.

Table 21: Enter Method Factor Analysis Predicting Bulimic Dietary Behaviours from External & Internal Shame, Low Assertiveness, Self-Directed Hostility, Perceived External Control, Low Self-Esteem

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.796	5.214		1.111	.268
	ISS	.135	.082	.225	1.649	.101
	OAS	-.130	.077	-.178	1.684	.094
	STA	.199	.152	.134	1.310	.192
	STSDH	.268	.118	.260	2.270	.025
	STPEC	-.061	.117	-.053	-.524	.601
	ISSE	.299	.246	.117	1.217	.225

a Dependent Variable: STBDC

These results do not necessarily mean that the other variables are not playing a major role in bulimic behaviours. These variables may operate via self-directed hostility, or the predictive power of the latter may leave little available variance to be accounted for by the former variables.

5.12 Hypothesis 6:

Internal / external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem will be significantly different between patients with clinically significant restricting and binge / purging cognitions and behaviours.

The earlier results reported in this study indicated high associations between these variables and eating diagnoses. There were no significant differences found between eating disorder diagnostic groups on the variables of internal shame, external shame, low assertiveness, and low self-esteem. Limitations of the current diagnostic approach to eating disorder (see Fairburn & Bohn, 2005) suggest it may be more useful to explore differences between patients based on symptom presentation (e.g. dietary restriction, bingeing and purging, and/or bingeing) or patterns of cognition. Results from the current study indicate that these patterns of behaviour and cognition may vary to some degree between eating disordered patient groups, but are prevalent at clinically significant levels across all eating disordered diagnostic categories reported in this study. This suggests that diagnosis can only play a limited role in assisting our understanding of the role of internal and external shame, low assertiveness, perceived external control, self-directed hostility in clinically significant patterns of eating disordered behaviour or cognition.

An attempt was made to resolve the difficulty in overlapping clinical presentations between eating disordered diagnostic groups by assigning participants to groups based on clinically significant eating disorder symptoms and / or clinically significant eating disordered beliefs. A series of MANOVA's were undertaken to compare groups who scored above or below the relevant clinical cut off score for shame (measured by the ISS & OAS) to test Goss and Gilbert's (2002) model and the combined factors of social rank (measured by the STA and STPEC) and, self-directed hostility (STSDH) and self-esteem (ISSE) which, in conjunction with shame, were found to constitute a single factor in the analysis reported on page 78. Internal and external shame were also found to account for a significant amount of the variance in social rank, self-directed hostility and low-self esteem. Exploring social rank, self-directed

hostility and self-esteem separately from internal and external shame reduced the potential for confounding the results of the MANOVAs and allowed for a separate analysis of factors which have also been hypothesised be related to eating disorder beliefs and behaviours (e.g. self-esteem (Fairburn & Cooper, 1989), self-directed hostility (Williams et al, 1994) or aspects of social rank). Effect sizes for statistically significant results were calculated using partial eta squared.

Six groups were identified for the purposes of this analysis.

1. *Restricting Beliefs*: Patients with clinically significant restricting beliefs (scoring above the clinical cut-off of 9 on the Stirling Eating Disorders Anorexic Cognitions Scale).
2. *Restricting Behaviours*: Patients with clinically significant restricting behaviours (scoring above the clinical cut-off of 14 on the Stirling Eating Disorders Anorexic Behaviours Scale).
3. *Bulimic Beliefs*: Patients with clinically significant binge / purging beliefs (scoring above the clinical cut-off of 17 on the Stirling Eating Disorders Bulimic Cognitions Scale).
4. *Bulimic Behaviours*: Patients with clinically significant binge / purging beliefs (scoring above the clinical cut-off of 14 on the Stirling Eating Disorders Bulimic Behaviours Scale).
5. *Restricting & Bulimic Beliefs*: Patients with clinically significant restricting and binge / purging beliefs (scoring above the clinical cut-off's of 9 and 14 on the Stirling Eating Disorders Anorexic Cognitions and Behaviours Scales).
6. *Restricting & Bulimic Behaviours*: Patients with clinically significant restricting and binge / purging behaviours (scoring above the clinical cut-off's of 17 and 14 on the Stirling Eating Disorders Bulimic Cognitions and Behaviours Scales).

Using this categorisation system participants can be in more than one group dependant on their score on each subscale.

Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance

matrices, and multicollinearity, with no serious violations noted. The alpha level for statistical significance for these tests is assumed at $p < .05$ unless the results significantly violated the assumption of equal variances (Pallant, 2005). When testing for between-subjects effects a Bonferroni adjustment was made to the alpha level by dividing the alpha level (0.05) by the number of dependant variables.

5.12.1 Restricting Vs Non-Restricting Beliefs and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 22.

Results of this analysis indicate that the majority of eating disordered patients (> 91%) experience clinically significant levels of restricting beliefs.

Table 22: Means and Standard Deviations for Restricting and Non-Restricting Beliefs

	Restricting Belief	N	Mean	Std. Deviation
ISS	No	16	43.4	25.0
	Yes	154	62.1	20.2
OAS	No	16	18.1	17.0
	Yes	154	29.0	17.1
STA	No	14	16.5	9.1
	Yes	154	22.1	8.3
STPEC	No	14	12.2	7.8
	Yes	154	18.1	10.5
STSDH	No	14	18.8	15.4
	Yes	154	26.6	11.6
ISSE	No	14	11.1	5.4
	Yes	154	8.3	4.9

With restricting beliefs as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of restricting beliefs. There was a statistically significant difference between groups with restricting and non-restricting beliefs on the combined dependant variables: $F(2, 167)=3.75, p=.025$; Pillai's trace=.043; partial eta squared=.043. When the results for the dependant variables were considered separately those with restricting beliefs scored significantly higher on internal shame ($F(1, 168)=6.08, p=.0.015$; partial eta

squared=.035) and external shame ($F(1, 168)=6.63, p=.0.011$; partial eta squared=.038), using a Bonferroni adjusted alpha level of .025.

With restricting beliefs as the grouping variable a MANOVA on the social rank, self-directed hostility, and self-esteem variables revealed no significant multivariate effect of restricting beliefs. There was no statistically significant difference between groups with restricting and non-restricting beliefs on the combined dependant variables: $F(4, 163)=1.81, p=.0.129$; Pillai's trace=.043; partial eta squared=.43, using a Bonferroni adjusted alpha level of .0125.

5.12.2 Restricting Vs Non-Restricting Behaviours and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 23.

Results of this analysis indicated that more than 48% of eating disordered patients experience clinically significant restricting behaviours.

Table 23: Means and Standard Deviations for Restricting and Non-Restricting Behaviour.

	Restricting Behaviour	N	Mean	Std. Deviation
ISS	No	89	56.4	22.0
	Yes	79	66.5	20.2
OAS	No	89	24.6	15.9
	Yes	81	32.1	17.8
STA	No	86	19.4	9.0
	Yes	80	23.8	7.1
STPEC	No	86	15.9	10.5
	Yes	80	19.5	10.1
STSDH	No	86	22.9	12.0
	Yes	80	27.4	12.0
ISSE	No	86	9.2	5.1
	Yes	80	7.9	5.0

With restricting beliefs as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of restricting behaviours.

There was a statistically significant difference between groups with restricting

and non-restricting behaviours on the combined dependant variables: $F(2, 165)=5.45$, $p=.005$; Pillai's trace=.062; partial eta squared=.062. When the results for the dependant variables were considered separately those with restricting behaviours scored significantly higher on internal shame ($F(1, 166)=8.29$, $p=.0.005$; partial eta squared=.047) and external shame ($F(1, 166)=9.97$, $p=.0.002$; partial eta squared=.057), using a Bonferroni adjusted alpha level of .025.

With restricting behaviours as the grouping variable a MANOVA on the social rank, self-directed hostility, and self-esteem variables revealed a significant multivariate effect of restricting behaviours. There was a statistically significant difference between groups with restricting and non-restricting behaviours on the combined dependant variables $F(4, 161)=3.32$, $p=.012$; Pillai's trace=.076; partial eta squared=.076*. When the results for the dependant variables were considered separately those with restricting behaviours scored significantly higher on the social rank variable low assertiveness ($F(1, 166)=8.29$, $p=.0.005$; partial eta squared=.047), but not perceived external control ($F(1, 164)=4.90$, $p=.0.028$; partial eta squared=.029), self-directed hostility $F(1, 164)=5.72$, $p=.0.018$; partial eta squared=.034) or self-esteem $F(1, 164)=2.70$, $p=.0.103$ partial eta squared=.016), using a Bonferroni adjusted alpha level of .0125.

*Note: scores for the low assertiveness variable violated the assumption of equal variances, however this result remained statistically significant when a lower alpha level (0.025), as recommended by Tabachnick and Fidell (2001) was used.

5.12.2 Bulimic Vs Non-Bulimic Beliefs and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 24. Results of this analysis indicate that a majority of eating disordered patients (>76%) experience clinically significant bulimic beliefs.

Table 24: Means and Standard Deviations for Bulimic and Non-Bulimic Beliefs

	Bulimic Belief	N	Mean	Std. Deviation
ISS	No	39	48.1	22.6
	Yes	128	64.8	29.8
OAS	No	39	20.4	14.0
	Yes	128	29.8	17.2
STA	No	37	17.7	9.9
	Yes	128	22.6	7.6
STPEC	No	37	13.3	9.2
	Yes	128	18.9	10.5
STSDH	No	37	19.0	12.6
	Yes	128	26.9	11.3
ISSE	No	37	9.8	5.6
	Yes	128	8.1	4.7

With bulimic beliefs as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of bulimic beliefs. There was a statistically significant difference between groups with bulimic and non-bulimic beliefs on the combined dependant variables: $F(2, 165)=5.45, p=.005$; Pillai's trace=.062; partial eta squared=.062. When the results for the dependant variables were considered separately those with bulimic beliefs scored significantly higher on internal shame ($F(1, 166)=8.29, p=.0.005$; partial eta squared=.047) and external shame ($F(1, 166)=9.97, p=.0.002$; partial eta squared=.057), using a Bonferroni adjusted alpha level of .025.

With bulimic beliefs as the grouping variable a MANOVA on the social rank, self-directed hostility and self-esteem variables revealed a significant multivariate effect of bulimic beliefs. There was a statistically significant difference between groups with bulimic and non-bulimic beliefs on the combined dependant variables $F(4, 161)=3.32, p=.012$; Pillai's trace=.076; partial eta squared=.076*. When the results for the dependant variables were considered separately those with bulimic beliefs scored significantly higher on one of the social rank variables; low assertiveness ($F(1, 166)=8.29, p=.0.005$; partial eta squared=.047); but not on perceived external control ($F(1, 164)=4.90, p=.0.028$; partial eta squared=.029) self-directed hostility $F(1, 164)=5.72, p=.0.018$; partial

eta squared=.034) or self-esteem $F(1, 164)=2.70, p=.0.103$ partial eta squared=.016), using a Bonferroni adjusted alpha level of .0125.

*Note: scores for the low assertiveness variable violated the assumption of equal variances, however this result remained statistically significant when a lower alpha level (0.025), as recommended by Tabachnick and Fidell (2001) was used.

5.12.3 Bulimic Vs Non-Bulimic Behaviours and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 25. Results of this analysis indicate that a majority of eating disordered patients (>70%) experience clinically significant bingeing and purging behaviours.

Table 25: Means and Standard Deviations for Bulimic and Non-Bulimic Behaviours

	Bulimic Behaviour	N	Mean	Std. Deviation
ISS	No	50	54.6	23.3
	Yes	118	63.6	19.4
OAS	No	50	25.7	17.4
	Yes	118	29.1	17.2
STA	No	48	18.5	9.5
	Yes	116	22.9	8.4
STPEC	No	48	16.0	9.9
	Yes	116	18.4	10.4
STSDH	No	48	21.4	12.3
	Yes	116	26.6	12.0
ISSE	No	48	8.48	5.0
	Yes	116	8.61	5.0

With bulimic behaviours as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of bulimic behaviours. There was a statistically significant difference between groups with bulimic and non-bulimic behaviours on the combined dependant variables: $F(2, 165)=3.68, p=.027$; Pillai's trace=.043; partial eta squared=.043. When the results for the

dependant variables were considered separately those with bulimic behaviours scored significantly higher on internal shame ($F(1, 166)=6.66, p=.0.011$; partial eta squared=.039) but not on external shame ($F(1, 166)=1.35, p=.0.246$ partial eta squared=.008), using a Bonferroni adjusted alpha level of .025.

With bulimic behaviours as the grouping variable a MANOVA on the social rank, self-directed hostility and self-esteem variables revealed a significant multivariate effect of bulimic behaviours. There was a statistically significant difference between groups with bulimic and non-bulimic behaviours on the combined dependant variables $F(4, 159)=4.12, p=.003$; Pillai's trace=.096; partial eta squared=.096. When the results for the dependant variables were considered separately those with bulimic behaviours scored significantly higher on the one of the social rank variables; low assertiveness ($F(1, 162)=9.49, p=.0.002$; partial eta squared=.055), but not on perceived external control ($F(1, 162)=1.890, p=.0.171$; partial eta squared=.012). They also scored significantly higher on self-directed hostility $F(1, 162)=6.63, p=.0.011$; partial eta squared=.039) but not on self-esteem $F(1, 162)=0.045, p=.0.833$ partial eta squared=.000), using a Bonferroni adjusted alpha level of .0125.

Note: scores for the low assertiveness variable violated the assumption of equal variances, however this result remained statistically significant when a lower alpha level (0.025), as recommended by Tabachnick and Fidell (2001) was used.

5.12.4 Restricting and Bulimic Beliefs Vs Non-Restricting and Bulimic Beliefs and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 26. Results of this analysis indicate that a majority of eating disordered patients (>77%) experience clinically significant restricting and bulimic beliefs.

Table 26: Means and Standard Deviations for Restricting and Bulimic Beliefs and Non-Restricting and Bulimic Beliefs

	Restricting & Bulimic Beliefs	N	Mean	Std. Deviation
ISS	No	39	49.9	23.0
	Yes	126	64.4	19.5
OAS	No	39	21.2	15.4
	Yes	126	30.0	17.3
STA	No	37	17.8	10.1
	Yes	127	22.7	7.5
STPEC	No	37	14.1	9.3
	Yes	127	18.7	10.6
STSDH	No	37	20.4	12.5
	Yes	127	26.6	11.6
ISSE	No	37	9.6	5.4
	Yes	127	8.3	4.8

With restricting and bulimic beliefs as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of restricting and bulimic beliefs. There was a statistically significant difference between groups with restricting and bulimic beliefs and non-restricting and bulimic beliefs on the combined dependant variables: $F(2, 162)=7.519, p=.001$; Pillai's trace=.085; partial eta squared=.085. When the results for the dependant variables were considered separately those with restricting and bulimic beliefs scored significantly higher on internal shame ($F(1, 162)=15.047, p=.0.000$; partial eta squared=.085) and on external shame ($F(1, 162)=8.145, p=.0.005$; partial eta squared=.005), using a Bonferroni adjusted alpha level of .025.

With restricting and bulimic beliefs as the grouping variable a MANOVA on the social rank, self-directed hostility and self-esteem variables revealed a significant multivariate effect of restricting and bulimic beliefs. There was a statistically significant difference between groups with restricting and bulimic beliefs and non-restricting and bulimic beliefs on the combined dependant variables $F(4, 159)=3.309, p=.012$; Pillai's trace=.077; partial eta squared=.077*. When the results for the dependant variables were considered separately those with restricting and bulimic beliefs scored significantly higher on one of the social rank

variables; low assertiveness ($F(1, 162)=10.240, p=.0.002$; partial eta squared=.059), but not on perceived external control ($F(1, 162)=5.694, p=.0.018$; partial eta squared=.034). They also scored significantly higher on self-directed hostility $F(1, 162)=5.694, p=.0.006$; partial eta squared=.046) but not on self-esteem $F(1, 162)=2.086, p=.0.151$ partial eta squared=.013, using a Bonferroni adjusted alpha level of .0125.

*Note: scores for the low assertiveness variable violated the assumption of equal variances, however this result remained statistically significant when a lower alpha level (0.025), as recommended by Tabachnick and Fidell (2001) was used.

5.12.3 Restricting and Bulimic Behaviours Vs Non-Restricting and Bulimic Behaviours and Internal Shame, External Shame, Low Assertiveness, Perceived External Control, Self-Directed Hostility and Low Self-Esteem

Means and standard deviations for these variables are reported in table 27. Results of this analysis indicate that a large minority of eating disordered patients (>32%) experience clinically significant restricting and bulimic behaviours.

Table 27: Means and Standard Deviations for Restricting and Bulimic Behaviours and Non-Restricting and Bulimic Behaviours

	Restricting & Bulimic Behaviours	N	Mean	Std. Deviation
ISS	No	111	57.5	21.2
	Yes	53	68.4	19.4
OAS	No	111	25.7	16.8
	Yes	53	33.1	17.6
STA	No	108	20.0	8.9
	Yes	54	24.7	6.5
STPEC	No	108	16.3	10.4
	Yes	54	20.8	10.1
STSDH	No	108	23.0	12.1
	Yes	54	29.4	10.8
ISSE	No	108	8.8	5.1
	Yes	54	8.0	4.8

With restricting and bulimic behaviours as the grouping variable a MANOVA on the two shame variables revealed a significant multivariate effect of restricting and bulimic behaviours. There was a statistically significant difference between groups with restricting and bulimic behaviours and non-restricting and bulimic behaviours on the combined dependant variables: $F(4, 157)=4.737, p=.001$; Pillai's trace=.006; partial eta squared=.060. When the results for the dependant variables were considered separately those with restricting and bulimic behaviours scored significantly higher on internal shame ($F(1, 161)=9.994, p=.0.002$; partial eta squared=.058) and on external shame ($F(1, 161)=6.708, p=.0.010$; partial eta squared=.048), using a Bonferroni adjusted alpha level of .025.

With restricting and bulimic behaviours as the grouping variable a MANOVA on the social rank, self-directed hostility and self-esteem variables revealed a significant multivariate effect of restricting and bulimic behaviours. There was a statistically significant difference between groups with restricting and bulimic behaviours and non-restricting and bulimic behaviours on the combined dependant variables $F(4, 157)=4.737, p=.001$; Pillai's trace=.108; partial eta squared=.108*. When the results for the dependant variables were considered separately those with restricting and bulimic behaviours scored significantly higher on the both of the social rank variables; low assertiveness ($F(1, 160)=12.061, p=.0.001$; partial eta squared=.070), and perceived external control ($F(1, 160)=6.910, p=.0.009$; partial eta squared=.041). They also scored significantly higher on and self-directed hostility $F(1, 160)=10.672, p=.0.001$; partial eta squared=.063) but not on self-esteem $F(1, 160)=1.097, p=.0.296$; partial eta squared=.007), using a Bonferroni adjusted alpha level of .0125.

*Note: scores for the low assertiveness variable violated the assumption of equal variances, however this result remained statistically significant when a lower alpha level (0.025), as recommended by Tabachnick and Fidell (2001) was used.

THE RELATIONSHIP BETWEEN SHAME, SOCIAL RANK, SELF-DIRECTED HOSTILITY, SELF-ESTEEM, EATING DISORDERS BELIEFS, BEHAVIOURS, AND DIAGNOSIS

CHAPTER 6

6 DISCUSSION

The current study aimed to investigate four main topics:

- The relationship between shame, social rank, self-esteem, and self-directed hostility in an adult female eating disordered population.
- The relationship between anorexic and bulimic beliefs and behaviours and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem, and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem, and anorexic and bulimic beliefs and behaviours.

In this study a distinction was made between internal shame (measured by the ISS) and external shame (measured by the OAS). Two measures relating to social rank were included; low assertiveness (measured by the STA) and the degree to which a person feels they, or other people, control their life and health (measured by the STPEC). Self-directed hostility has been regarded as important in the development and maintenance of an eating disorder (Williams & Power, 1995), as a method of regulating loss of social rank (Gilbert, 2000a) and increasingly the focus of treatment for eating disordered patients (Goss & Gilbert, 2002). The STSDH scale was used to measure this variable. The ISSE was used to measure low-self-esteem, as has also been considered to be an important variable in this population. Managing low self-esteem underpins cognitive behavioural models of eating disorders and is seen as a key focus for intervention in more recent developments in eating disorder treatment (Fairburn & Cooper, 1989; Fairburn et al, 2003; Garner & Garfinkel, 1982).

This study replicated findings of smaller scale studies (Cook, 1994; Prissel, 1993) which show that mean internal shame score for this population (60.8) are approximately double the levels found in non-clinical female samples. In this study mean levels of internal shame were at a level consistent with Cooks (1990) definition of, "Extreme Shame," (i.e. above 60), which would be regarded as a key focus for treatment and places individuals at risk of developing a range of psychopathology (Cook, 1994).

External shame (mean 28.4) was also found to be high in this population compared to that found in non-clinical female samples (mean range 20-22.2). The mean external shame score was lower in this study than that found by Troop et al. (2001b) (mean score 41.7).

This difference may be an artefact of the different sampling methods used in these studies. In this study symptom severity was accounted for the treatment service exclusion criteria (only accepting patients with a BMI and eating disordered symptomatology which could be treated at out-patients). Troop et al.'s (2001b) participants were recruited from patients presenting to a national, rather than local, specialist eating disorder service and from volunteers in contact with the Eating Disorder Association. Patients referred to specialist national units tend to have higher overall levels of psychopathology and Troop et al.'s (2001b) study also included in-patients. It could also reflect a difference in which the OAS scores were calculated, using either a 0-4 scoring method (used in this study) or a 1-5 method which has been reported in other studies.

Low-self esteem was also common in this population. The sample as a whole, as well as separate diagnostic groups, scored within the clinical range on both measures of self-esteem used in this study.

Mean scores reported in this study for all of the subscales of the Stirling Eating Disorders scale were similar to those found in previous studies. This study was also able to provide norms for EDNOS patients (excluding those with BED), and tentative norms for MI-BN patients. Mean scores for participants in this study on each subscale of the Stirling were two to three times higher than that found in

Williams and Power's (1995) non-clinical group. In this study eating disordered patients scores for low assertiveness, perceived external control, and low self-esteem were similar to those found by Williams and Power (1995) and were all above the clinical cut-off scores for the relevant scale.

6.1 The Relationship between Shame, Social Rank, Self-Directed Hostility, and Self-Esteem in a Female Eating Disordered Population

Correlations between internal shame, external shame, low assertiveness, perceived external control, low self-esteem, and self-directed hostility were high and an exploration of the factor structure of the measures used in this study suggest that they form a single factor which accounts 39.92% of the of the available variance.

The results of this study support hypotheses one and two; that internal and external shame are both strongly related to items measuring various aspects of social rank (low assertiveness and perceived external control) and self-directed hostility. These findings support evolutionary models, which hold that shame acts to regulate judgements of social rank. It is possible to hypothesize that shame regulates challenges to those perceived to be more powerful and controlling (perceived external control) via reducing assertive behaviour. These findings support a social rank theory of shame (Gilbert & McGuire, 1998; Keltner & Harkner, 1988).

Internal shame was found to be a powerful predictor of perceived external control, low self-esteem, and self directed hostility in a female eating disordered population. This finding adds further support to evolutionary and social rank theories of shame that suggest that shame is related to feeling relatively powerless or controlled by others, making global judgments about the unattractiveness of the self in across a range of domains (low self-esteem), and attempting to correct these perceived deficits by making highly critical judgements or demands of oneself (self-directed hostility). This fits with theories that view self-directed hostility as an attempt to manage perceived social rank violations and shame affect (Gilbert et al, 2004).

These results do not necessarily mean that external shame does not play an important role in perceived external control, low self-esteem, and self-directed hostility. External shame may operate via internal shame, or the predictive power of internal shame may leave little available variance to be accounted for by external shame. Further research may help to identify whether these factors operate independently or there is a “flow” between internal and external shame, which related to feeling relatively powerless, globally unattractive and being hostile to the self. In Goss and Gilbert’s (2002) model it is hypothesized that these variables may form a complex feedback loop that involves eating disordered beliefs and behaviours to manage these shame affects and evaluations. These findings support models which see shame (Goss & Gilbert, 2002) and self-esteem (Fairburn & Cooper, 1993) as central to eating disorders.

6.2 The Relationship between Anorexic and Bulimic Beliefs and Behaviours and Eating Disordered Diagnosis.

Several theorists have argued that current diagnostic models may be inadequate in delineating differences and similarities between the eating disorders (Fairburn et al., 2003; Franko et al., 2004; Waller, 1993). This study compared beliefs and behaviours regarded as “core” to eating disorders by clinicians to explore whether there are response patterns on these variables that can be used to differentiate diagnostic groups (AN, BN, EDNOS and MI-BN). These measures were strongly associated with diagnosis. However they suggest that diagnosis may not be helpful in delineating groups with clinically significant problems in these areas (e.g. individuals who score above the clinical cut-off) and support models which argue for a transdiagnostic approach (Fairburn et al., 2003; Garner & Garfinkel, 1982; Waller, 1993) or a functional analysis approach to assessment and treatment for eating disorders (Goss & Gilbert, 2002). These approaches target specific beliefs and behaviours, rather than use diagnosis, as a focus of intervention.

The results of this study offered limited support to hypothesis three; that there will be significant differences between anorexic and bulimic dietary cognitions and behaviours across eating disorder diagnosis.

In this study anorexic dietary cognitions were prevalent in all diagnostic groups, with 93.3% of patients scoring above the clinical cut-off. Although the severity of these thoughts may vary somewhat between diagnoses; they appear to be problematic for the vast majority of patients, regardless of diagnosis.

Anorexic dietary behaviours were also prevalent across diagnostic groups, with 48.3% of patients scoring above the clinical cut-off. AN patients scored significantly higher on this scale (mean 33.3) than BN (27.7) and EDNOS (27.6) patients ($p<.001$). There were no other significant differences between diagnostic groups on this scale. Although statistically significant, these results may not be clinically significant if these behaviours are a target of treatment. These behaviours were most prevalent in the AN group where 74.4% scored above the clinical cut-off. However 58.3% of MI-BN and 43.9% of EDNOS patients scored above the cut-off. These behaviours were problematic for a large minority of BN patients, as 34.4% scored above cut-off. Using diagnosis alone to identify food restriction as a target of intervention is likely to lead to a significant proportion of patients not receiving targeted treatment for this type of behaviour.

It is important to note that anorexic dietary behaviours were not present at a clinically significant level for all patients diagnosed with AN, only 74.4% of these patients were above clinical cut off. This may reflect the sensitivity of the scale in discriminating between diagnoses, difficulties in diagnosing patients due to researcher error or patients under-reporting symptoms on a questionnaire compared to diagnostic clinical interview. Alternatively it may suggest that the current diagnostic system may be inadequate in identify those patients with significant restricting behaviours, or identify those with low weight, fear of weight gain and body image disturbance, who use alternative methods of weight loss (such as exercise, purging, or drugs) to lose weight, or have restricted food intake in the past, but are using alternate weight regulation strategies currently.

A similar pattern was found in relation to bulimic dietary cognitions. These were prevalent at a clinically significant level across all diagnostic groups, with 79.8% of patients scoring above clinical cut-off. The mean score for BN patients (36.1) was significantly higher than that for AN (29.4) and EDNOS (22.4) patients ($p < .001$). There were no significant differences on this variable between other diagnostic groups. These cognitions were most prevalent in the BN group, where 96.7% scored above clinical cut-off. However a large majority of MI-BN (83.3%), AN (82.1%) and EDNOS patients (62.7%) also scored above clinical cut-off.

Bulimic dietary behaviours were also prevalent across all diagnostic groups. 72.8% of patients scored higher than the clinical cut off. Again BN patients mean scores (32.1) were significantly higher than AN (20.5) and EDNOS patients (16.4). There were no other significant differences between these groups. This scale appears to be more closely related to diagnosis than the anorexic dietary behaviour subscale. More BN patients scored above the clinical cut-off on this scale (98.4), however 83.3% of MI-BN, 61.5% of AN, and, 54.4% of EDNOS patients scored above the clinical cut-off on this scale.

These results suggest that anorexic and bulimic cognitions and behaviours are common across eating disordered diagnoses. The clinical implications of these findings will be discussed in more detail later.

A further important finding in this analysis was that although anorexic dietary beliefs do play a significant role in predicting anorexic dietary behaviour, they only account for 20.3% of the variance; clearly other mediating or moderating variables are important and require further investigation. It is possible that if individuals are restricting this may turn-off or tone down anorexic dietary cognitions (as the gap between actual and desired body weight/shape is closed), with these cognitions becoming more prevalent or intense as rules about size and shape are violated. This pattern has been predicted in several maintenance models of eating disorders (Fairburn & Cooper, 1993; Goss & Gilbert, 2002).

Bulimic dietary cognitions are more powerful predictors of bulimic dietary behaviour (accounting for 59.3% of the variance). This may reflect a general impulsiveness in this group and / or support models which suggest that bulimic beliefs and behaviours are linked to affect control mechanisms which may offer short-term relief from powerful negative emotional states (Cooper, Todd, & Wells, 1998; Fairburn & Cooper, 1993; Fairburn et al., 2003; Goss and Gilbert 2002; Saftner & Crowther, 1996) thus making it highly likely that these beliefs will be acted upon.

6.2 The Relationship between Shame, Social Rank, Self-Directed Hostility, Self-Esteem, and Eating Disordered Diagnosis

Previous studies have produced norms and suggested clinical cut offs for internal shame (Cook, 1994; Prissel, 1993), low assertiveness, perceived external control, self-directed hostility (Williams & Power, 1995) and low self-esteem (Cook, 1994). Norms for external shame have also been developed (Troop, 2001b). However these studies have been limited in either sample size or the range of eating disordered diagnoses they have studied. The current study aimed to replicate these findings using a larger sample size and to develop norms for two additional eating disordered diagnoses, EDNOS and MI-BN. The findings of this study support hypothesis four; that internal and external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem, will be significantly related to eating disordered diagnosis.

All patient groups reported high mean levels of internal shame, at levels almost twice that found in non-clinical samples. No significant differences were found between diagnostic groups for internal shame.

All diagnostic groups reported means for external shame 58% higher than those found in previous studies with non-clinical female samples. There were no significant differences on external shame between diagnostic groups. Internal and external shame was strongly associated with all eating disorder diagnoses at levels indicative of a large effect size.

These results add further support to theories which view shame as an aetiological and/or maintenance factor in the development of eating disorder (Andrews, 1997; Goss and Gilbert, 2002; Mayer et al. 2001; Murry et al. 2002; Murray and Waller, 2002; Saftner & Crowther, 1988; Waller et al., 2001).

Two measures of social rank were used in this study, low assertiveness and perceived external control. All diagnostic groups scored above the clinical cut-off on these scales. There were no significant differences between groups on either of these variables.

All patient groups also scored in the clinical range for low-self esteem. Although low self-esteem was also associated with diagnosis, this association was less strong than that found in the shame and social rank variables. There was no significant difference between diagnoses on low self-esteem. These suggest that although low self-esteem may be implicated in eating disorder aetiology and maintenance, its role may be less important than that hypothesised Fairburn and Cooper (1989), with shame being a more important variable.

The only significant difference between diagnoses was in levels of self-directed hostility. Results indicated a significant difference between MI-BN (who scored significantly higher) and EDNOS patients at the $p < 0.05$ level. There were no significant differences between the other patient groups on this variable. Although statistically significant, this finding may be of little clinical relevance, as all diagnostic groups scored above the clinical cut-off for self-directed hostility. It should also be treated with some caution given the relatively small sample of MI-BN sample. This finding supports previous findings (Williams & Power, 2005) and suggests that these symptoms may also contribute to the development and maintenance of eating disorder behaviour as a defensive strategy for managing shame (Goss & Gilbert, 2002) and/or the use of self-directed hostility to manage social rank difficulties and shame affect (Gilbert et al., 2004) and motivate eating disordered behaviour (Goss & Gilbert 2002).

Given the difficulties with the current diagnostic system used to classify eating disorders, these findings at best support theories which argue shame or low self-

esteem are central to understanding eating disorders generally. Using these diagnostic categories may not help us understand the relationships between clinically significant eating disorder beliefs and behaviours and shame, social rank, self-directed hostility and self-esteem.

6.3 The Relationship between Shame, Social Rank, Self-Directed Hostility, Self-Esteem and Anorexic and Bulimic Beliefs and Behaviours.

The results of this study support hypothesis five; that internal shame, external shame, low assertiveness, perceived external control, self-directed hostility and low self-esteem will be significantly related to anorexic and bulimic dietary cognitions and behaviours.

Internal shame, external shame, low assertiveness, perceived external control, and self-directed hostility were all significantly correlated with anorexic and bulimic cognitions and behaviour. Low-self esteem was significantly associated with anorexic and bulimic dietary cognitions, and bulimic dietary behaviours but not anorexic dietary behaviours. The relative predictive power of internal, external shame, low assertiveness, perceived external control, low self-esteem, and self-directed hostility was explored using multiple regression analysis.

Multiple regression analysis indicated that self-directed hostility and low self-esteem were more powerful predictors of anorexic dietary cognitions, compared to internal and external shame and low assertiveness ($p < .05$). These variables accounted for 21.4% of the available variance (a large effect size). However for anorexic dietary behaviour all of these factors appear to operate as a single factor, accounting for 6.2% of the variance (a medium effect size). These results support models that view shame and social rank and/or low self-esteem as central to eating disorder beliefs and behaviours. However they suggest that the severity of these beliefs and behaviours may rely on different mechanisms. For example, managing beliefs about the need to restrict may be used to manage global low self-esteem and self-directed hostility. Alternatively specific negative evaluations and shape \ weight may be linked to global low self-esteem and

provoke self-attacking thoughts and behaviour. When it comes to acting on anorexic dietary beliefs by actively restricting eating, then it would appear that shame, social rank, low-self-esteem and self-directed hostility act as a global factor.

Self-directed hostility ($p < .01$) and internal and external shame ($p < .05$) were more powerful predictors of bulimic dietary beliefs compared to low assertiveness, perceived external control and low self-esteem. These variables accounted for 16.9% of the variance (a large effect size). However self-directed hostility ($p < .05$) was the most powerful predictor of bulimic dietary behaviour. External shame also appeared to be a powerful predictor, falling just short of statistical significance. In combination these variables accounted for 12.9% of the variance in bulimic dietary behaviour (a large effect size). Thus shame may play an important predisposing role to bulimic beliefs, but self-directed hostility (perhaps to manage shame affect) may drive bulimic behaviour, and/or be a response to bulimic behaviour.

This analysis may help illuminate pathways from eating disordered beliefs to eating disordered behaviour. However further analysis (particularly using qualitative or time-sampling longitudinal methods), is required to explore how these factors precipitate or maintain eating disordered beliefs and behaviours.

To further explore the theoretical and treatment implications of the relationship between social rank, self-directed hostility and self-esteem participants were assigned to groups, based on whether they experienced anorexic or bulimic dietary beliefs and behaviours at clinically significant levels. Six clinically significant groups were identified: *Restricting Beliefs*, *Restricting Behaviours*, *Bulimic Beliefs*, *Bulimic Behaviours*, *Restricting and Bulimic Beliefs*, and *Restricting Bulimic and Behaviours*. Using this categorisation system, participants can be in more than one group dependant on their score on each subscale. These groups were then compared with their non-clinical counterpart on internal and external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem. This approach was taken to

overcome some of the difficulties in using diagnosis to identify patterns of symptom presentation.

Results from this analysis partially support hypothesis six; that internal shame, external shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem will be significantly different between patients with clinically significant restricting and binge / purging beliefs and behaviours. All groups were found to experience clinically significant levels of low assertiveness, perceived external control, self-directed hostility, and low self-esteem; with the only differences in these variables was found in the restricting behaviour and bulimic behaviour groups. Findings in relation to shame supported Goss and Gilbert's model (2002), which suggests that different patterns of internal and external shame are associated with either restricting or bulimic eating disorder presentations.

Eating disordered patients with clinically significant restricting beliefs and behaviours score significantly higher on internal and external shame than non-restrictors (whose mean scores are consistent with non-clinical samples). Means for those with clinically significant restricting behaviour was in the clinical range for internal shame (e.g. above 60 on the ISS), although those with non-restricting behaviour are also likely to score in a range where shame is likely to be problematic (e.g. 50-60, Cook, 1994). Social rank, self-directed hostility and self-esteem was in the clinical range for those with restricting beliefs. There was no difference between groups on these variables although the mean for perceived external control in the non-clinical level was only 0.2 above the clinical cut-off of 12. Those with restricting behaviour have significantly lower assertiveness scores. These results implicate shame and low assertiveness as important mechanisms underlying anorexic dietary behaviour; whilst perceived external control, self-directed hostility, and low self-esteem remain problematic regardless of restricting beliefs and/or behaviour.

The pattern for those experiencing clinically significant bulimic beliefs was similar to the found in those with clinically significant restricting beliefs. They experience significantly higher internal and external shame than those with non-

clinically significant bulimic beliefs. Again those with bulimic beliefs score in the clinical range for internal shame, and experience external shame at a level 57% higher than those without bulimic beliefs. Interestingly the mean level of perceived external control (13.3) experienced by this group again only just rises above a normal level.

Those with clinically significant bulimic behaviour experienced higher levels of internal shame, but not external shame. They were also lower in assertiveness and higher in self-directed hostility than those without clinically significant bulimic behaviour. Those without clinically significant restricting and bulimic beliefs experience internal and external shame at levels similar to non-clinical samples.

It is possible to interpret this finding within an evolutionary frame work. It appears that the majority of eating disorder patients are focused on controlling eating. However those who chose a restrictive behavioural pathway tend to be more focused on monitoring and evaluating negative judgements about the self by others (external shame). These individuals may need to monitor whether their restricting behaviour is having the desired impact of signalling submission to more dominant others, and whether this submission is sufficient to guarantee social acceptance. An additional (or alternative explanation) is that successful restrictors may experience others commenting on, or intervening, to reduce restricting behaviours, again this may lead to higher levels of external shame.

For eating disordered patients following a more bulimic behavioural pathway internal shame and self-directed hostility appear to be the most important factors. Bulimic behaviours are often less obvious to others, and do not tend to lead to the same degree of weight loss that severe restriction does. This may mean that it is less necessary to monitor how others see the self. Many patients also believe bulimic behaviours increase their sense of control over their weight and their feelings. However bulimic behaviours may be maintained by an increase in internal shame following a binge episode, with self-directed hostility fuelling attempts to compensate for eating.

Patients with clinically significant restricting and bulimic beliefs also experienced higher internal and external shame (in the clinically significant range), and were also lower in assertiveness and higher in self-directed hostility than those without these beliefs; whose shame scores were in the non-clinical range. For patients with clinically significant restricting beliefs and behaviour, internal and external shame, low assertiveness, perceived external control and self-directed hostility were significantly higher than those in the non-clinically significant group. There was no difference between groups in self-esteem. This may be because this group are more likely to be observed and experience the concern / intervention of others due to the anxiety they provoke in carers and professionals. This result does not appear to reflect a higher level of severity in shame, social rank, self-directed hostility or self-esteem between restricting, bulimic and restricting and bulimic groups, rather there appear to be different patterns in these variables associated with each set of symptom presentations.

These hypotheses require further testing, but seem to fit with the anecdotal evidence given by many eating disordered patients of the difficulties they face when confronted by giving up restriction or managing the consequences of bulimic episodes.

6.4 Relevance to Evolutionary Models of Shame, Social Rank and Eating Disorder

This study supports a multidimensional model of shame, in which internal and external shame are key aspects of the shame experience (Goss et al., 1994; Lewis, 1971).

The findings of this study support previous studies which regard shame to be a central experience of eating disordered women (Cook, 1994; Gee & Troop, 2003; Prissel, 1993; Troop et al., 2001a, 2001b; Waller et al., 2000, Webb 2000). It extends the work of studies which have found shame to be important in specific eating disorder populations (Hayaki 2002; Jambekar et al., 2003 Troop et al., 2001b).

The results of this study support an evolutionary model of shame (Gilbert, 2000a, Gilbert 2003; Gilbert & Allan, 1994; Gilbert & McGuire, 1998). Internal shame, external shame, low-assertiveness, perceived external control, self-directed hostility and low self-esteem were highly associated and formed a large single factor.

One interpretation of these findings is that these factors may constitute a complex implicational reasoning and behaviour system that allows for multi-dimensional judgements regarding ones potential for social rejection or abandonment.

In this system one can judge ones social status in relation to others (internal shame and negative self-esteem) the power one has to influence others and the world (perceived external control) and how others judge the self (external shame) and to behave in a way least likely to lead to rejection (low assertiveness /submission).

This supports the hypothesis that shame responses actively signal submissive behaviour (Gilbert & McGuire, 1998, Keltner & Harker, 1998). Here, monitoring and judging how others see the self would be very important in helping an individual recognise when their submissive behaviour would be sufficient to reduce the possibility of rejection.

Internal shame appears to be more related to perceived external control (judgements about how much one's behaviour is controlled by others). In this case it may be that once one has identified oneself as relatively powerless, one accepts this position by making negative judgements about the self, acts in a more submissive way and is more hostile to the self to reduce the possibility of rejection. Once this position is accepted the focus on for external shame may diminish, as one is clearer about relative social rank and social attractiveness. These findings support the hypothesis that self-directed hostility performs the function of helping an individual remain in a high state of alert for potential

rejection signals or transgressions in behaviour which may lead to rejection, or signalling to others that they are willing to punish themselves to avoid rejection.

Finally, the results of this study support Goss & Gilbert's (2002) model which suggest that the management of shame may be a central aetiological and maintenance factor in eating disorders, and that ways of managing shame are associated with different patterns of eating disorder behaviour.

6.5 Clinical Implications of the Current Study

This study supports recent approaches to eating disordered classification, which argue that eating disorder patients (at least in western cultures) may have more in common than traditional diagnostic classificatory systems suggest (Fairburn & Bohn, 2005; Garner & Garfinkel, 1992; Waller, 1993)

The extremely high prevalence of restricting beliefs across all diagnostic categories suggest that these beliefs may need to be a core focus for intervention for all eating disorder patients; particularly as changing eating disordered beliefs is seen as key to reducing relapse in most intervention programs.

The presence of high levels of co-morbid restricting and bulimic behaviours suggests that the provision of treatments designed to target both of these problems is necessary for patients presenting for community based cares.

The differentiation of patient groups based on symptoms presentation, rather than diagnostic categories may provide a more efficient and client centred approach to treatment compared to providing BN or AN specific approaches. This is in line with current "transdiagnostic" treatment approaches, which target themes considered to be relevant to all most eating disorder patients, and provide "modular" treatment for more specific difficulties on either a group (Kaplan et al., 2002) or individual basis (Fairburn, 2003 et al).

Fairburn et al.'s (2003) current transdiagnostic approach, as well as working on perfectionism, mood intolerance, and interpersonal difficulties, also focuses on treating low-self esteem. Fairburn et al. (2003) argue that this factor is a central maintaining mechanism in eating disorders. However this may be a more transient variable compared to shame. Self-esteem appears to improve on recovery from an eating disorder. Recovered patients move out of the clinical range for low self-esteem and are no different from clinical controls (Blaise & Elklit, 2001). However, recovery from an eating disorder may have a limited impact on internal and external shame (Troop, 2001b), as this remains at elevated levels even after recovery.

Given the range of psychological disorders associated with shame (including eating disorders) it may be important to specifically target shame (and related difficulties social rank and self-directed hostility) when designing eating disorder treatment services and programs. Several suggestions for this are outlined below:

- Providing accessible, non-stigmatising services
- Staff should be trained and supervised in the recognition and treatment of shame, social rank issues, and self-directed hostility. This may involve working with the wider social network, which can deliberately or inadvertently contribute to these feelings.
- Shame, social rank issues, and self-directed hostility should be assessed prior to and during treatment eating disorder treatment. If shame is unresolved during treatment it may require additional intervention, as it does not appear to necessarily remit once eating disorder symptoms are successfully treated.
- Services should provide psycho-education for patients and carers on the functional nature of eating disorder symptoms in managing social rank and shame difficulties (as well as affect intolerance and interpersonal relationship difficulties). This should be a precursor to engaging in treatments which may leave patients feeling less in control (e.g. giving up restricting behaviours) and more vulnerable to increased self-directed hostility and feelings of internal and external shame. As this may lead to

non-disclosure of clinically relevant information (Swan & Andrews, 2003)
or treatment non-compliance (Goss & Gilbert, 2002).

Clearly these modifications to treatment should not take place in lieu existing evidence based treatments. However further research should be undertaken to see if tackling issues of shame, social rank, and self-directed hostility alongside these treatments increases their efficacy and / or reduces longer term risk of relapses.

It is possible that some of the reported similarity in treatment outcome between Interpersonal Therapy (IPT) and Cognitive Behaviour Therapy (CBT), may be accounted for by common factors which may indirectly treat shame or manage social rank difficulties. For example the promotion of self-efficacy by promoting problem solving, de-shaming of symptoms (via normalization and psycho-education during treatment) and the provision of a containing and supportive therapeutic environment in which shameful behaviours and feelings can be explored.

Many patients in our own (CBT) group based treatment programs reported that one of the most important factors in their recovery was no longer feeling alone, isolated and weird, and that the social support and acceptance they find within the group is a key motivating factor in helping them engage in the difficult process of recovery. It may be that the group experience helps to provide a more “up-rank” social role, of being able to support and help others. In turn this may promote self-efficacy and make it easier for the person to engage in more reciprocal care giving and self-nurturing. Issues of rejection based on appearance/weight or eating disordered behaviours are often a core theme in the groups, and patients appear to be able to move forward in overcoming eating disordered behaviours once they become more integrated into the group.

An interesting finding of the current study was the extent to which self-directed hostility appears to be central to eating disorders, particularly in bulimic behaviours. It may be that it is the quality and intensity of this hostility which distinguishing eating disorder patients from many others in the population who

are dissatisfied with their size or shape, or begin but then give up dietary behaviour. The submissive responses seen in shame can be evoked through interactions with others. However it is also possible that when this is internalised self-directed hostility and self-criticism can evoke similar responses and be recruited to reinforce rules regarding eating behaviour. It may be the quantity or content of eating disorder beliefs that are not as important as the level of self-directed hostility they are imbued with that leads to eating disordered behaviour and a lack of ability to soothe the self (Esplen et al., 2000).

Recent developments in CBT aimed at developing self-compassion, managing self-directed hostility and developing self-soothing (Gilbert, 2000c, Gilbert & Irons, 2004) may be particularly helpful for eating disordered patients. Indeed the treatment program provided to the patients included in this study has included this model for several years, and patients report they have found it more useful than traditional CBT methods of challenging eating disordered thoughts; or as a useful precursor to helping them generate coping thoughts and behaviours.

Perhaps more controversial is the development of therapies which tackle shame, social rank and self-directed hostility directly without also addressing eating disorder beliefs and behaviours. To an extent this would mirror the model offered in IPT. These treatment models have yet to be developed, however such an approach may provide an additional framework for treating eating disordered patients, particularly for patients who struggle to give up restricting or bulimic behaviour early in treatment. These patients often have a higher drop-out rate and a poorer response in CBT programs (Fairburn et al., 2004).

6.6 Strengths of the Current Study

This study used the largest clinical sample to date to explore the research questions posed in this study (187 participants). They are likely, in terms of symptom presentation and numbers in each group, to be representative of patients seen for out-patient treatment in the UK. They were recruited from all

patients presenting to specialist out-patient eating disorder treatment services with a 300,000 population catchment area over three years. The large sample size allowed sufficient numbers for comparisons within and between patients groups from which statistically and clinically meaningful conclusions could be drawn.

The current study has added to the developing research base relating to shame, social rank, self-directed hostility, self-esteem and eating disordered beliefs and behaviours. Specifically it outlines the high degree of prevalence and complex relationship between internal shame, external shame, low assertiveness, perceived external control, self-directed hostility, and low-self esteem in eating disorder patients, regardless of diagnosis. The study supports models which place these variables at the centre of eating disorder psychopathology and which regard treating these factors as important goals during and after the treatment of eating disorder psychopathology.

The study provides further norms to those initially reported by Williams & Power (1995) for the Stirling Eating Disorders Scale. In addition to norms for AN and BN, this study provides norms for perhaps the most frequent diagnosis encountered in clinical practice (ENDOS) and provides tentative norms for patients who are believed to be the most difficult eating disordered patients to treat (MI-BN).

The study supports models which argue for a “transdiagnostic approach” to assessing and treating eating disorders. It has identified large overlaps in symptom presentation across diagnostic groups.

The study has highlighted potentially different clinically relevant focus areas (such as self-directed hostility in patients with bulimic behaviours, and perceived external control in restricting patients) which may help inform theoretical understandings of aetiological and maintenance pathways for specific eating disordered symptom presentations.

Finally, the study discusses potential adjunctive or alternative treatment strategies based on understanding the importance of shame, social rank, and self-directed hostility in eating disorders. It suggest that these factors are more important target for intervention than low-self-esteem.

6.7 Limitations of the Current Study

6.7.1 Sample of Participants

The current study used a large sample size of female out patients. Although several men presented to these treatments services during the time of the study, they were too small in number to allow meaningful comparisons. They were therefore excluded from the current study. This is typical of most studies in this field. Gender specific patterns require further research. No attempt has been made in this analysis to explore potential ethnic and cultural differences between participants. This could be an important variable in different eating disorder presentations, particularly in identifying less “fat phobic” eating disorder cognitions or in specific behavioural patterns which may vary across gender, ethnic groups, sub-cultures of culturally (Anderson-Fye & Becker, 2004). Furthermore, this study did not include younger participants, again shame, social rank and self-directed hostility may differ in this group (Lask & Bryant-Waugh, 1993).

As the services involved in this study did not include participants with symptoms severe enough to require intensive (day or in-patient) care, it difficult to draw clinically meaningful conclusions about shame, social rank, self-directed hostility and self-esteem in this population. It is possible that different profile patterns may be found in more severely ill patients.

Finally, this study only included participants presenting to for treatment to specialist eating disorder services. They represent only a small proportion of individuals with an eating disorder in the general population (Hoek, 1995). It is possible that those seeking treatment many experience different levels of shame, low assertiveness, perceived external control, self-directed hostility, and

low self-esteem compared to those not actively seeking help, or being treated in intensive voluntary or involuntary treatment. Differences between these groups require further research.

6.7.2 Measures

This study used a combination of clinical interview (to determine diagnosis) and questionnaire measures. No attempt was made to include alternative methodologies to assess shame social rank, self-directed hostility, and self-esteem. Observational measures (e.g. of physiological shame responses) or narrative analysis may both provide further insights into the relationship between these factors and eating disordered beliefs and behaviours (see Andrews, 1988 for a review).

The ISS has been criticised as primarily offering a measures of global (negative) self-esteem and self-criticism, rather than specific affective or behavioural components of shame. The ISS is also highly correlated with measures of depression in student samples (Allan et al., 1994). It may be that it measures “general negative affectivity.” The high correlations between internalised shame, low-self-esteem, low assertiveness and self-directed hostility could be an artefact this construct. It is also possible that these factors may not be exclusive to the shame experience. However a number of items on the ISS tap into what are generally regarded as “core” shame experiences (i.e. defectiveness, fear and avoidance of exposure of perceived inadequacy, and inferiority). Factor analysis of the ISS suggests it is a single factor scale (Cook, 1996), thus the scale can be regarded as a relatively good measure of the self-evaluative aspects of shame.

The inclusion of the OAS allowed for a multi-factorial approach to the measurement of shame. This scale measures perceptions of how others behave/see the self. In a non-clinical sample (Goss et al., 1994) this scale measures inferiority and emptiness, however this picture is less clear in clinical samples and these factors were not separately analysed in this study, although this approach may prove promising in further research (Troop, 2001b).

The Stirling Scale was developed based on a consensus of what 40 experienced eating disorder clinicians believed to be clinically significant eating disordered cognitions and behaviours, rather than on clinical cut offs for diagnostic inclusion/exclusion. These judgements were then assigned a weighted score based upon the contribution these clinicians believed they made to eating disordered psychopathology (Williams et al., 1994) This weighting approach gives rise to some methodological difficulties when interpreting the relationship between shame measures and measure of self-directed hostility (as there are two highly weighted items which appear to be common to the ISS & STSDH scales ("I believe I am a bad person" and "I feel ashamed of myself"). The STSDH also appears to include an item measuring guilt, rather than self-attack / self-criticalness ("I believe I have little to feel guilty about"). However this item has a relatively low contribution to the overall score. Further data analysis with these items removed may help to clarify the relationship between internal shame and self-directed hostility.

Finally this study does not include a measure of Body Mass Index or overall weight change since the onset of restriction / bulimic behaviours. This may have been helpful in determining whether patients who are more successful at restricting experience a different pattern of shame, low assertiveness, perceived external control, self-directed hostility, and low self-esteem to those who restrict but are less successful in losing weight, or whose weight loss is less obvious to others.

6.7.3 Statistical Analyses

The distribution of the data allowed for parametric testing without transformation. The sample size was of sufficient power to allow relatively statistically and clinically robust conclusions to be drawn. However as some of the analyses in this study were exploratory in nature the direction of the results could not be predicted with complete confidence. In these instances two-tailed significance values were produced. This means that some differences in the data may have been missed (type II error). Further studies may be able to use directional hypotheses to reduce the likelihood of type II errors. The small sample sizes of the MI-BN group and those who do not have clinically significant restricting

beliefs mean these results should be treated with some caution and would need to be replicated in a larger population.

6.7.4 Methodological Issues

In addition to the biases in recruitment and the use of a primarily questionnaire based methodology, this study did not have the scope to include matched control groups to re-standardise the measures used. Instead comparative analysis relied on using established norms. In particular this has been a difficulty in developing clinical cut off's for the OAS. It would have been helpful to have investigated a matched control group to allow for comparison and the development of clinical cut-offs.

If the ISS and low self-esteem do measure "general negative affectivity.", further measures of negative affect (such as measures of depression) would allow this factor to be statistically controlled. This may help interpret the general findings of this study without confounding the data with a mood effect. Interestingly however, studies that have controlled for depression still suggest shame and eating disordered psychopathology are highly related (Gee & Troop, 2003).

This study has added to a growing body of evidence which suggests that shame and eating disordered psychopathology are highly related. It also supports evolutionary models which suggest that social rank and self-directed hostility are also important. However the measures used in this study do not all allow one to predict whether shame, low social rank and self-directed hostility predates an eating disorders (is a vulnerability factor), is a necessary and sufficient condition for the onset of the disorder (a causative factor); is a factor which leads to the maintenance of an eating disorder or is a consequence of being identified as an eating disordered patient who is seeking help and/or ambivalently engages in treatment. It was also unclear what eating disordered patients ashamed of. It is possible that restricting patients feel ashamed of their inability to keep their restriction going, whilst bulimic patients feel ashamed of their inability to lose weight fast enough.

Recent research by Troop et al.(2001a) suggests that pride may also play an important role in eating disorders. The interactions between shame and pride, and shame and pride foci in eating disorders were not explored in this study. These complex relationships will require further exploration, however Goss and Gilbert's (2002) model suggests ways in which these complex interactions may occur to trigger and maintain different eating disorder presentations.

6.8 Suggestions for Future Research

Several key areas for further research emerge from this study:

- Further analysis of the relationship between shame, social and self-directed hostility and eating disordered behaviours and beliefs is warranted. This should include measures of shame which offer a more multi-dimensional approach including narrative and observational methods (such as observation of gaze avoidance, Cortisol monitoring and neuro-imaging), or questionnaires which focus on affective and behavioural aspects of shame. Andrews et al. (2002) have provided a model for looking at differences aspects of shame (behavioural, characterological and bodily shame), which suggests that there may be important variations in shame themes across diagnoses. It would also be helpful to include a wider range of measures of social rank and self-directed hostility.
- Further analysis of eating differing patterns of disordered cognition and behaviours in specific eating disordered populations is required; this should include a larger sample size of patients with MI-BN and patients with more severe eating disorders.
- Further analysis of the relationship between specific eating disordered behaviours (e.g. duration and frequency of restriction / bulimic behaviours) and shame, social rank and self-directed hostility (controlling for mood effects).

- Longitudinal studies of shame, social rank, and self-directed hostility to assess the potential role of these variables as a vulnerability, causative or maintaining, or relapse risk factor in eating disordered psychopathology.
- The development of additional measures of shame and pride, particularly in relationship to eating disordered specific eating disordered behaviour. These studies may benefit from a time sampling approach that would allow for explorations of temporal changes preceding, during, and after specific eating disordered behaviours of cognitions.

These studies should include gender balanced clinical and non-clinical samples, which take greater account off ethnicity and culture, age and BMI. They should also distinguish between those who are in intensive treatment voluntarily, compared to those in have compulsory treatment.

- Therapies to treat shame, social rank, and self-directed hostility problems during and after eating disordered treatment need to be developed. They should be researched for their clinical efficacy in improving attrition, recovery, and relapse rates. These methods should be explored as both adjunctive and alternative approaches to eating disorder treatment.

6.9 Summary of Conclusions

This study investigated:

- The relationship between shame, social rank, self-directed hostility, and self-esteem in a female eating disordered population.
- The relationship between anorexic and bulimic beliefs and behaviours and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem and eating disordered diagnosis.
- The relationship between shame, social rank, self-directed hostility, self-esteem, and anorexic and bulimic beliefs and behaviours.

Shame, social rank, self-directed hostility and low self-esteem are highly related in a female out-patient eating disordered population. These variables are also highly associated with eating disordered diagnoses and specific patterns of eating disorder behaviour and cognition, but may present at differing levels of severity when clinically significant levels of eating disorder cognitions and behaviours are identified. Eating disordered patients scored above the clinical cut-off scores for internal shame, low assertiveness, perceived external control, and low self-esteem.

This study compared anorexic and bulimic dietary behaviours and cognitions (measured by the Stirling Eating Disorder Scale) between four eating disorder diagnostic groups (AN, BN, EDNOS and MI-BN). All of these measures were strongly associated with diagnosis.

The results suggest that anorexic and bulimic cognitions and behaviours are common across eating disordered diagnoses. However the norms for MI-BN patients need to be regarded with caution due to the small sample size.

Improvements to participant sampling, statistical analysis and methodology were discussed. Finally the research and clinical implications of these findings, and directions for future research were explored.

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8 APPENDICES

The Stirling Eating Disorders Scale

The Internalised Shame Scale

The Other As Shamer Scale



STIRLING EATING DISORDER SCALES

PAGE
1

NAME

SCORING INSTRUCTIONS

1. For each item where the respondent's mark is in the circle, make a circle around the adjacent score in the score matrix. If the respondent's mark is in the blank space, cross out the adjacent score in the score matrix.
2. Work down the column, adding up each circled score.
3. Put the column total of circled scores in the Subtotals boxes at the base of the matrix.

	TRUE	FALSE	A	SE	SDH	PEC	ADC	ADB	BDC	BDB
I tend to bottle up my emotions rather than make a scene	<input type="radio"/>		4.1							
At times I think I am no good at all	<input type="radio"/>			5.5						
I often want to injure myself	<input type="radio"/>				7.0					
I can pretty much decide what happens in my life		<input type="radio"/>				1.0				
I find myself preoccupied with food	<input type="radio"/>						5.4			
I eat the same food day after day	<input type="radio"/>							3.6		
I feel satisfied with my eating patterns		<input type="radio"/>							1.0	
I eat a lot of food even when I'm not hungry	<input type="radio"/>									5.1
I find it difficult to ask personal questions	<input type="radio"/>		4.6							
I have a positive attitude towards myself		<input type="radio"/>		1.9						
I believe I am a bad person	<input type="radio"/>				5.9					
My life is determined by my own actions		<input type="radio"/>				1.6				
When I eat anything I feel guilty	<input type="radio"/>						7.9			
I eat low calorie foods all the time	<input type="radio"/>							2.4		
When I binge I have a sense of unreality	<input type="radio"/>								5.5	
I never eat uncontrollably		<input type="radio"/>								1.2
I feel I can ask my parents/friends not to nag me		<input type="radio"/>	2.9							
I feel I am not as popular as other people of my age	<input type="radio"/>			3.6						
I often feel angry with myself	<input type="radio"/>				4.2					
Little in this world controls me - I usually do what I decide to do		<input type="radio"/>				2.0				
High carbohydrate foods make me feel nervous	<input type="radio"/>						5.1			
I often hide food rather than eat it	<input type="radio"/>							6.0		
When I binge I feel disgusted with myself	<input type="radio"/>								6.1	
I hide the evidence of my binges (eg food wrappers)	<input type="radio"/>									5.7
I feel confident going into a social gathering		<input type="radio"/>	1.9							
I believe my parents are proud of me		<input type="radio"/>		2.5						
I feel ashamed of myself	<input type="radio"/>				4.8					
I feel I live according to other people's rules	<input type="radio"/>					4.9				
I believe I am allergic to many foods	<input type="radio"/>						3.6			
I cut my food into very small pieces in order to eat more slowly	<input type="radio"/>							4.3		
I am not worried about my bingeing		<input type="radio"/>							2.0	
I take laxatives in order to get rid of the food I have eaten	<input type="radio"/>									6.3
I am afraid of people being angry with me	<input type="radio"/>		5.5							
I have a strong sense of self-worth		<input type="radio"/>		1.7						
I do not behave the way I should	<input type="radio"/>				3.4					
I feel I am in control of my body		<input type="radio"/>				1.8				
I can eat sweets without feeling anxious		<input type="radio"/>					1.3			
I weigh myself after meals	<input type="radio"/>							3.5		
I feel ashamed of the amount of food I can eat	<input type="radio"/>								4.1	
I try to diet but always lose control	<input type="radio"/>									3.7
PAGE 1 SUBTOTALS										

I.S.S. SCALE

DIRECTIONS: Below is a list of statements describing feelings or experiences that you may have from time to time or that are familiar to you because you have had them for a long time. Most of these statements describe feelings and experiences that are generally painful or negative in some way. Some people will seldom or never have many of these feelings. Everyone has had some of these feelings at some time, but if you find that these statements describe the way that you feel a good deal of the time, it can be painful just reading them. Try to be as honest as you can in responding.

Read each statement carefully and circle the number to the left of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below.

DO NOT OMIT ANY ITEM.

SCALE

0 = NEVER 1 = SELDOM 2 = SOMETIMES 3 = FREQUENTLY 4 = ALMOST ALWAYS

SCALE

- | | |
|-----------|--|
| 0 1 2 3 4 | 1. I feel like I am never quite good enough |
| 0 1 2 3 4 | 2. I feel somehow left out |
| 0 1 2 3 4 | 3. I think other people look down on me |
| 0 1 2 3 4 | 4. All in all, I am inclined to feel that I am a success |
| 0 1 2 3 4 | 5. I scold myself and put myself down |
| 0 1 2 3 4 | 6. I feel insecure about others opinions of me |
| 0 1 2 3 4 | 7. Compared to other people, I feel like I somehow never measure up |
| 0 1 2 3 4 | 8. I see myself as being very small and insignificant |
| 0 1 2 3 4 | 9. I feel I have much to be proud of |
| 0 1 2 3 4 | 10. I feel intensely inadequate and full of self-doubt |
| 0 1 2 3 4 | 11. I feel as if I am somehow defective as a person, like there is something basically wrong with me |
| 0 1 2 3 4 | 12. When I compare myself to others I am just not as important |
| 0 1 2 3 4 | 13. I have an overpowering dread that my faults will be revealed in front of others |

0 = NEVER 1 = SELDOM 2 = SOMETIMES 3 = FREQUENTLY 4 = ALMOST ALWAYS

Scale

- | | |
|-----------|---|
| 0 1 2 3 4 | 14. I have a number of good qualities |
| 0 1 2 3 4 | 15. I see myself striving for perfection only to continually fall short |
| 0 1 2 3 4 | 16. I think others are able to see my defects |
| 0 1 2 3 4 | 17. I could beat myself over the head with a club when I make a mistake |
| 0 1 2 3 4 | 18. On the whole, I am satisfied with myself |
| 0 1 2 3 4 | 19. I would like to shrink away when I make a mistake |
| 0 1 2 3 4 | 20. I replay painful events over and over in my mind until I am overwhelmed |
| 0 1 2 3 4 | 21. I feel I am a person of worth at least on an equal plane with others |
| 0 1 2 3 4 | 22. At times I feel like I will break into a thousand pieces |
| 0 1 2 3 4 | 23. I feel as if I have lost control over my body functions and feelings |
| 0 1 2 3 4 | 24. Sometimes I feel no bigger than a pea |
| 0 1 2 3 4 | 25. At times I feel so exposed that I wish the earth would open up and swallow me |
| 0 1 2 3 4 | 26. I have this painful gap within me that I have not been able to fill |
| 0 1 2 3 4 | 27. I feel empty and unfulfilled |
| 0 1 2 3 4 | 28. I take a positive attitude toward myself |
| 0 1 2 3 4 | 29. My loneliness is more like emptiness |
| 0 1 2 3 4 | 30. I always feel there is something missing |

OAS SCALE

DIRECTIONS: Below is a list of statements describing feelings or experiences that you may have from time to time or that are familiar to you because you have had them for a long time. Most of these statements describe feelings and experiences that are generally painful or negative in some way. Some people will seldom or never have many of these feelings. Everyone has had some of these feelings at some time, but if you find that these statements describe the way that you feel a good deal of the time, it can be painful just reading them. Try to be as honest as you can in responding.

Read each statement carefully and circle the number to the left of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below.
DO NOT OMIT ANY ITEM.

SCALE

1 = NEVER 2 = SELDOM 3 = SOMETIMES 4 = FREQUENTLY 5 = ALMOST ALWAYS

SCALE

- | | |
|-----------|---|
| 1 2 3 4 5 | 1. I feel other people see me as not good enough |
| 1 2 3 4 5 | 2. I think that other people look down on me |
| 1 2 3 4 5 | 3. Other people put me down a lot |
| 1 2 3 4 5 | 4. I feel insecure about others opinions of me |
| 1 2 3 4 5 | 5. Other people see me as not measuring up to them |
| 1 2 3 4 5 | 6. Other people see me as small and insignificant |
| 1 2 3 4 5 | 7. Other people see me as somehow defective as a person |
| 1 2 3 4 5 | 8. People see me as unimportant compared to others |
| 1 2 3 4 5 | 9. Other people look for my faults |
| 1 2 3 4 5 | 10. People see me as striving for perfection but being unable to reach my own standards |
| 1 2 3 4 5 | 11. I think others are able to see my defects |
| 1 2 3 4 5 | 12. Others are critical or punishing when I make a mistake |
| 1 2 3 4 5 | 13. People distance themselves from me when I make mistakes |

1 = NEVER 2 = SELDOM 3 = SOMETIMES 4 = FREQUENTLY 5 = ALMOST ALWAYS

- | | |
|-----------|---|
| 1 2 3 4 5 | 14. Other people always remember my mistakes |
| 1 2 3 4 5 | 15. Others see me as fragile |
| 1 2 3 4 5 | 16. Others see me as empty and unfulfilled |
| 1 2 3 4 5 | 17. Others think there is something missing in me |
| 1 2 3 4 5 | 18. Other people think I have lost control over my body
and feelings |