Social attributions of asymptomatic women towards anorexia nervosa: A qualitative study

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Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

Social Attributions of Asymptomatic Women Towards Anorexia Nervosa: A Qualitative Study

Natalie McDonald

A report submitted in Partial Fulfillment of the Requirements for the Award of Bachelor of Arts (Psychology) Honours, Faculty of Computing, Health and Science, Edith Cowan University

Submitted October, 2007

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Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

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For Sabine, R. I. P.
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Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

Literature Review

Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

Natalie McDonald
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

Abstract

Anorexia nervosa (AN) has been identified as a complex, potentially lethal medical and psychological disorder, typically associated with a poor prognosis (Nordbo, Espeset, Gulliksen, Skarderud, & Holte, 2006; Signorini, De Filippo, Panico, De Caprio, Pasanisi, & Contaldo, 2007, 2007; Strober, Freeman, Lampert, Diamond, Teplinsky, & DeAntonio, 2006). The current review highlights the social and psychological elements attributed to AN by sufferers (Kelley, 1973; Nordbo et al., 2006; Woolrich, Cooper, & Turner, 2006), and through a social-cognitive explanation of attribution theory, identified the conceptual relevance of lay attributions towards AN and the lack of researched connection between the two concepts (Furnham & Hayward, 1997; Kelley, 1973; Stewart, Keel, & Schiavo, 2006). Limitations of the review in terms of the differences between psychologists and lay attributions towards AN, the variable nature of mortality data, and the lack of research papers with a sole focus on attributions towards AN were noted. The current review has identified the conceptual relevance between the psychological aspects of AN and attributions as not mutually exclusive, but integrative, relevant and interconnected (Kelley; Malle, 2006; Nordbo et al., 2006).

Natalie McDonald

Supervisor: Associate Professor Lynne Cohen

Date of Submission: October, 2007
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

**Introduction and Focus of the Review**

Anorexia nervosa (AN) has been acknowledged as a grave, complex medical and psychological condition, typically associated with a poor prognosis (Nordbo, Espeset, Gulliksen, Skarderud, & Holte, 2006; Strober, Freeman, Lampert, Diamond, Teplinsky, & DeAntonio, 2006). Specifically, AN is a serious eating disorder (ED) comprising restrictive and purging subtypes, characterised by refusal to maintain a minimum body weight, disturbance of body image, self-induced starvation, physical emaciation and use of purging behaviours (American Psychiatric Association, 2000; Kaplan & Woodside, 1987). May, Kim, McHale and Crouter (2006), and Signorini, De Filippo, Panico, De Caprio, Pasanisi, and Contaldo (2007) concurred, citing AN as pathological, psychiatric and nutritional in nature.

In general, AN has shown a marked gender bias towards females over males, with young women commonly diagnosed initially during the late teens to early twenties (Mangweth-Matzek, Rupp, Hausmann, Assmayr, Mariacher, & Kemmler et al., 2006; Millar, Wardell, Vyvyan, Naji, Prescott, & Eagles, 2005). Indeed, a wealth of research to date has reinforced AN as a markedly female disorder (Beumont, Hay, & Beumont, 2003; Fichter, Quadflieg, & Hedlund, 2006; Millar et al., 2005; Striegel-Moore & Bulik, 2007). Of further note was AN’s supported association with an elevated incidence of medical and psychological complications in terms of malnutrition, cardiovascular impairment, comorbidity, obsessiveness, rigid cognitions and premature mortality (Beumont et al., 2003; Dodin & Nandrino, 2003; Endacott, Kidd, Deacon-Crouch, Judd, Menzel, & Cornett, 2006; Forbush, Heatherton, & Keel, 2007; Signorini et al., 2007). For young women with AN, weight loss has been equated with personal value and competence, with positive self attributions of perceived success and self control serving as major contributors to the perpetuation and maintenance of the disorder (Woolrich, Cooper, & Turner, 2006).
Importantly, the relevance of attributions towards AN has been widely noted from the sufferer’s perspective (Nordbo et al., 2006; Woolrich et al., 2006), however understanding of attributions from the social, lay perspective has been markedly lacking (Furnham & Hayward, 1997; Stewart, Keel, & Schiavo, 2006). In its broadest sense, attribution theory according to Kelley (1973) was concerned with the cognitive and social processes by which people made sense of the actions and behaviours of others. Consequently, this literature review’s central thesis will highlight the social and psychological elements attributed to AN by sufferers (Kelley, 1973; Nordbo et al., 2006; Woolrich et al., 2006), and through explanation of attribution theory, identify the conceptual relevance of lay attributions to AN and highlight the lack of researched connection between these two concepts (Furnham & Hayward, 1997; Stewart et al., 2006).

First, the importance of understanding the social attributions made towards AN will be clarified in terms of psychosocial functioning (Couturier & Lock, 2006; de la Rie, Noordenbos, Donker, & van Furth, 2007), modelling (Alonso, Rodriguez, Alonso, Carretero, & Martin, 2005), and relevance to psychologists (Derman & Szabo, 2006; Kelley, 1973; Signorini et al., 2007). Second, the potential lethality of AN as a psychological disorder will be critically evaluated (Fichter et al., 2006; Millar et al., 2005; Signorini et al., 2007). Third, self-attributions commonly made by individuals with AN will be reviewed with specific attention to the disorder’s psychological relevance, with particular attention to cognitive and social factors (Dodin & Nandrino, 2003; Gordeev, 2007; Nordbo et al., 2006) in order to conceptually mirror the subsequent use of Kelley’s (1967; 1973) attribution theory.

From this point on, in keeping with the review’s dual application, its focus will shift from AN to attribution theory. With the aim of clarity, Locke and Pennington’s (1982) representation of attribution theory’s claims will be used as a framework for discussion of the literature. Particular emphasis will be placed on Kelley’s (1967; 1973) cube model for illustrative purposes,
which emphasised that when making social attributions of others, it was not possible to separate the person from the context of which they were a part. Indeed, the prominence of the dual-process model will become apparent through critical analysis of the literature (Kelley, 1973; van Boven, White, Kamada, & Gilovich, 2003), with the dichotomous nature of attributions further supported as twofold within itself, given the interaction between person and situation (Fishbein & Schwartz, 1984; Martinko & Thomson, 1998), and in addition through Kelley’s social-cognitive perspective.

Attribution theory’s relevance to self concept will provide additional justification for the review’s central thesis (Kelley, 1967; 1973). More specifically, the precedent for the current review was set by Furnham and Hayward (1997), who stated that people made lay attributions about the causes and cures of psychological problems, including AN. Importantly, the point will be made that while attributions towards AN have been well researched from the sufferer’s perspective (Nordbo et al., 2006; Serpell, Treasure, Teasdale, & Sullivan, 1999), extensive searching failed to locate more than a few studies from a lay stance, highlighting further need to investigate this area (Furnham & Hayward, 1997; Stewart et al., 2006). Finally, the review will present suggestions for further research acquired from inconsistencies and inadequacies within the literature, and will draw conclusions from the studies reviewed. In short, conceptual similarities between the psychological aspects of AN and attributions will be identified as not mutually exclusive, but integrative, relevant and interconnected (Kelley, 1973; Malle, 2006; Nordbo et al., 2006).

Relevance of Understanding Social Attributions to Anorexia Nervosa: Why do we Care?

Psychosocial Functioning

According to Couturier and Lock (2006), recovery from AN was hypothesised to be associated in part with psychosocial functioning and adequate social support. Similar claims
have been made by Nordbo et al., (2006), and indeed, as far back as Van Buskirk (1977). To test this hypothesis, Couturier and Lock measured psychosocial functioning with the Eating Disorder Examination Global Score (EDE), and through Global Assessment of Functioning (GAF) scores. Couturier and Lock sampled 86 adolescents aged between 11.95 to 18.37 years of age who had been diagnosed with AN. The mean age of participants was 15.1 years, with the majority of 91% female.

Participants considered recovered from AN as evidenced by EDE score post treatment \( (n = 26) \), had GAF scores significantly higher on average than the group considered unrecovered by the same criteria \( (n = 9, t = 2.57, p = 0.015) \) (Couturier & Lock, 2006). Further, participants in the recovered group were reported as having a greater degree of social contact than those in the unrecovered group (Couturier & Lock, 2006). Admittedly, the small sample size and gender imbalance were limitations, with the study further primarily concerned with AN recovery. However, the higher GAF scores in the recovered group indicated superior overall psychological functioning compared to the unrecovered group, which supported Couturier and Lock’s hypothesis that psychosocial functioning was implicated in recovery from AN.

**Social Models**

Similar statements of the importance of social support for individuals with AN were made through Nordbo et al’s (2006) qualitative, phenomenological approach to AN as a psychosocial entity. Interviews were conducted with a clinical sample of 18 Norwegian women in treatment, diagnosed with AN as per DSM-IV criteria, which were recorded, transcribed and coded. Ages ranged between 20-34 years, with a mean age of 25.5 years (Nordbo et al., 2006). The programme QSR-N*Vivo was used for phenomenological data analysis. Eight psychosocial constructs related to participant’s subjective experiences of AN were qualitatively coded under “Meaning of AN”, that included security, avoidance, mental strength, self confidence, identity,
care, communication and death (Nordbo et al., 2006). While the value of the Nordbo et al. study was limited in terms of cultural restriction, varied treatment modality and generalisability, it further noted that the role of anorexic symptoms in terms of social reinforcement from others was under-explored.

In the same way, of additional concern was the lack of research noted by both Furnham & Hayward (1997), and Stewart et al., (2006), as to the thoughts and opinions of observers towards AN, which justified the importance of improved knowledge of how AN was viewed as a psychological disorder. As well, Alonso et al., (2005) suggested that the conditioning influence of social models on the development and perpetuation of eating disorders including AN remained under-explored, which provided another rationale for further study into the social, lay attributions made towards AN by those unaffected by the condition. In addition to attributions by the lay person, greater understanding of attributions towards AN by psychologists has been implicated from the following literature.

Relevance to Psychologists

Of further interest was Kelley’s (1973) conceptualisation of the value to psychologists of understanding attributions of others behaviour. While not pertaining to AN specifically, Kelley did state more generally that psychologists as professionals needed to look beyond the individual in making their own attributions of the causes of behaviour, and take into account the context in which it occurred. In other words, according to Kelley, a more holistic approach towards psychologists interpretation of psychological problems was in order. In speaking of the importance of understanding social attributions made by psychologists (Kelley, 1973), of concern was the inadequate social understanding of AN as a psychological disorder previously noted by Furnham and Hayward (1997), and Stewart et al., (2006).
It is beyond the scope of the current review to determine the content of psychologists' attributions towards AN, in particular in terms of whether or not they differ from those made by the lay person and if so, in what ways. However, given the previously-stated lack of knowledge regarding attributions by the lay person (Furnham & Hayward, 1997; Stewart et al., 2006), the importance of social models (Alonso et al., 2005; Nordbo et al., 2006), and the often chronic course and mortality risk from AN (Beumont et al., 2003; Derman & Szabo, 2006; Signorini et al., 2007), study of attributions towards AN by both the lay person and psychologists need to be further investigated and compared. With this in mind, the potential lethality of AN will next be reviewed.

**Lethality**

Prominent in the literature as a recurring theme emerged the potential lethality of the disorder (Fichter et al., 2006; Millar et al., 2005; Signorini et al., 2007), as evidenced by mortality data from the following studies. Millar et al.'s research measured death rates in a longitudinal study that spanned 34 years. Medical and psychiatric inpatient case notes were compiled from 524 individuals at commencement, of which 487 were female and 37 male, with the large sample size a strength of the research design (Millar et al., 2005). At follow up, 507 participants were contactable to determine mortality rate, with three males and 20 females deceased, or 4.5%. The average age of deceased cases was 25 years, and 19.9 years on average for those who survived (Millar et al., 2005). Of interest was that AN-related medical complications were cited as the cause of death in only 34.8% of cases, 8.7% were due to apparent suicide, 4.3% from opiate intoxication and at least one third from unspecified causes (Millar et al., 2005).

Importantly, comparable mortality studies have produced vastly different figures to those stated by Millar et al., (2005), in particular the work of Fichter et al., (2006), and Signorini et al.,
(2007). The Fichter et al. study was conducted over a lengthy time period of 12 years, and quoted a mortality rate of 6.8% at 12 year follow up, with all participants female. The average age of initial diagnosis of AN was 18.5 years, however unlike Millar et al., age at time of death was not specified, which would have been valuable information for comparison. Congruent with the Millar et al. paper, all individuals had been inpatients at the commencement of the research, although the sample size was smaller at 103. Counter to the findings in Millar et al., all deaths were stated as directly related to AN, in particular from complications associated with purging behaviours. In future studies, the gender imbalance would ideally be addressed in order to generalise the findings with more confidence, however it was noted that the absence of male participants in Fichter et al., and the small number of males in the Millar et al. study reinforced AN as a markedly female disorder.

Even higher mortality rates were quoted in Signorini et al’s (2007) recent study that identified AN-related death rates at 9.7%. All 147 participants were females diagnosed with AN as per DSM-IV criteria, with an average age of 20.5 years at treatment entry (Signorini et al., 2007). Hospital records were used to confirm the cause of death for those participants deceased at 8 year follow up, with suicide re-emerging as a recurring factor in one third of cases. Signorini et al’s meta-analysis conducted as an adjunct to the main study determined that mortality for AN was currently placed at 4.27% at each 10 year follow up interval. Immediately obvious from each of the reviewed studies was the variable nature of mortality data. Indeed, the reporting of mortality statistics in relation to AN has presented distinct methodological difficulties in terms of accuracy, differing follow up periods, attrition of participants over time and reliance on inpatient data (Fichter et al., 2006; Herzog et al., 2000; Millar et al., 2005; Signorini et al., 2007). However all studies reviewed supported the real risk of premature death from AN-related complications.
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

Self-Attributions of the AN Sufferer: Psychological Relevance

According to Cockell et al., (2002), AN had a harmful physical impact on almost every bodily system, and in the same way, numerous adverse psychological effects in terms of negative emotional outcome. Of particular importance from the literature consulted was the extensive psychological component of AN, with the inherent difficulty of being simultaneously concise yet inclusive. Consequently, particular emphasis has been placed on cognitive and social factors (Dodin & Nandrino, 2003; Gordeev, 2007; Lena, Chidambaram, Panarella, & Sambasivan, 2001; Nordbo et al., 2006). It should be noted that while these two themes do not comprise a complete representation of AN’s psychological relevance, cognitive and social factors hold specific relevance to Kelley’s (1967; 1973) theory which will be subsequently covered in the review.

Anorexia Nervosa’s Cognitive Effects on Thought and Attribution

In terms of cognition, Woolrich et al., (2006) explored the cognitive processes associated with the development and maintenance of AN, in particular that which resulted from excessive food restriction. This was undertaken using a mixed methodology that involved both quantitative, self-report questionnaires and qualitative semi-structured interviews with 15 symptomatic women, of which the average age of onset was 20.4 years (Woolrich et al., 2006). Quantitative measures comprised four self-report questionnaires that included the Eating Attitudes Test (EAT), Dutch Eating Behavior Questionnaire Restraint sub scale (DEBQ-R), Beck Depression Inventory-2 (BDI-II), and Rosenberg Self-Esteem Scale (RSE), which according to Woolrich et al. were each psychometrically sound. Findings that emerged from the self-report measures and semi-structured interviews were compared against those generated from two asymptomatic groups that comprised 17 dieting females, and a further group of 18 non-dieting women. Each of the three groups was matched in terms of education level and socioeconomic status, which served as a strength of the design in terms of internal validity (Woolrich et al.,
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa 11

2006), however future replication would be improved with equal participant numbers in each group.

Compared to the asymptomatic groups, the experimental group was found to have demonstrated persistent negative self beliefs, attributions of perceived inadequacy and personal failure prior to onset of AN, which continued once the process of AN became entrenched (Woolrich et al., 2006). Woolrich et al. noted that paradoxically, weight loss served as positive reinforcement and in itself promoted maintenance of the disorder, a finding also reported by Nordbo et al., (2006). Importantly, the relatively small sample size in comparison to other AN studies was not seen as a limitation in view of the study’s qualitative component, however it was in regard to the quantitative measures, both in terms of sample size and the variable nature of self report data (Atkinson, Zibin, & Chuang, 1997; Woolrich et al., 2006). This would ideally be addressed in future studies, however, logistically the process of doing so without compromising validity and reliability of findings would present a distinct challenge to researchers.

Also in regard to cognitive effects, Dodin and Nandrino (2003) investigated electrophysiological evidence for skewed cognitive functioning in individuals with AN through the study of event-related potentials (ERPs). A recognition task of simple and complex geometric and body shapes was undertaken by the experimental group of 12 female participants with AN, with a mean age of 23.2 years, against the control group that consisted of 11 healthy participants, with both groups matched for age and gender. ERPs were recorded at the P300 component, which according to Dodin and Nandrino was the area of the brain considered responsible for cognitive discrimination of selective attention between meaningful and ambiguous stimuli, a statement confirmed by Gordeev (2007), and Ruiter, Kessels, Jansma, & Brug (2006). Specifically, it was hypothesised that participants with AN would show larger
ERPs and briefer latency of cognitive processing in responding at P300 for body shapes than for ambiguous geometric shapes (Dodin & Nandrino, 2003).

Given that the data was non-parametric, Mann-Whitney U analysis was used for comparison of the two groups. As hypothesised, a cognitive processing bias towards body shapes over ambiguous geometric shapes in participants with AN was supported compared to the control group, although the differences in each condition were not statistically significant, \( p > .01 \) (Dodin & Nandrino, 2003). Further, AN participants in the experimental group displayed briefer response latency than controls, although results were again not statistically significant, \( p > .01 \). In short, the findings indicated some degree of hyperarousal and cognitive skew in relation to body shape images amongst participants with AN compared to the control group, characteristic of the obsessiveness and rigid thought patterns typical of the disorder (Dodin & Nandrino, 2003; Forbush et al., 2007; Ruiter et al., 2006; Strober et al., 2006). Immediately apparent in the results was the stringent alpha level, with replication at \( p < .05 \) a worthwhile future project, in view of the consistent results in support of Dodin and Nandrino’s hypothesis that did not reach significance at the level examined. Future replication could further be improved with a larger sample size and equal participant numbers in both the experimental and control groups.

Psychological Relevance of Social Factors

Furthermore, McVittie, Cavers, and Hepworth (2005) noted the presence, particularly in Western societies of a socialised, gendered ideal that women present in a particular way in terms of appearance and body size, a view further shared by Hepworth (1999), and Scott (1997). Nordbo et al., (2006) agreed, and stated that individuals with AN attributed value to its symptoms on a personal level, and within the social context which manifested as marked reluctance to change. In the same way, McVittie et al.’s (2005) message was that while not causal, this social element was inextricably intertwined with the psychological components of AN, a view further
shared by both Alonso et al., (2005), and Nordbo et al. Perusal of the literature indeed indicated formidable psychological complexity with AN, however this was mainly conceptualised in social terms through Nordbo et al’s qualitative study, which has been used as a basis for review of the following section.

Motivation, Functional Avoidance and Attributions of Personal Control

According to Nordbo et al., (2006), the development and maintenance of AN was concerned with issues of motivation, functional avoidance and attributions of personal control over symptoms. In terms of motivation, while Nordbo et al. acknowledged the social contribution to AN, the authors stressed that the process of living with AN provided the sufferer with self motivation to continue with weight-reducing behaviours, more than social motivation. Similar findings were produced by Serpell et al., (1999) whose qualitative study utilising grounded theory identified perceived positive and negative themes attributed to AN by sufferers. All 18 participants in Serpell et al’s study were female, with a median age of onset of 18 years, however at study commencement the median age was 24.1 years. Textual analysis of letters written by participants revealed that AN acted as a reinforcement in itself, with women employing concrete, rigid “rules” for what to eat, what not to eat, how to exercise, hiding food, purging and so on (Serpell et al., 1999). Control was noted as a core psychological feature of AN, which when self reinforced through perceived success attributed to weight loss, became a resilient and enduring motivator to continue (Serpell et al., 1999; Woolrich et al., 2006).

From this, Nordbo et al’s (2006) qualitative examination presented evasion of negative thoughts and feelings as a functionally-avoidant component of AN. This perspective was further researched by Cockell et al., (2002), who examined readiness to change amongst women with AN through the development of a decisional balance (DB) scale, using factor analysis to determine the applicability of two-factor, pro-con avoidance structures. Participants comprised
246 American and British females with AN, with the larger sample size a strength of the research design. Approximately equal numbers of restrictive and purging subtypes were included and all were considered chronic sufferers, with a mean age of 28.4 years and an average history of 11.3 years illness duration (Cockell et al., 2002).

In addition to factors concerned with thought rigidity, perfectionism, obsessionality and anhedonia, Cockell et al.’s (2002) findings projected an essence of emotional detachment, passivity and non-engagement with life tasks, themes echoed in May et al., (2006), and Holliday, Uher, Landau, Collier, and Treasure (2006). Such avoidance was stated primarily by Cockell et al. as a function of AN, which paradoxically extended to confrontation with negative outcomes later in life with longer-term illness duration. In other words, AN was used as a central focus rather than everyday life (Cockell et al., 2002; Nordbo et al., 2006).

Other findings such as Nordbo et al.’s (2006) mental strength construct stressed that counter to other psychological disorders, women with AN attributed value on symptoms and behaviours engaged in to retain control of a low body weight and sustain the illness. These attributions of value on personal control over symptoms were further qualitatively coded as a perceived benefit of AN by sufferers in Serpell et al., (1999). According to Serpell et al., personal feelings of power and control achieved through self-starvation or other weight loss behaviours reigned supreme over comments and evaluation from others. In short, while Serpell et al. acknowledged the role of both person and situation with AN, it was suggested that the sufferer’s own attributions were more powerful reinforcers for maintenance of the condition than contextual factors.

Several strengths and limitations of the three above-reviewed studies were apparent that should be taken into account in future research. First, the Nordbo et al., (2006) study was restricted to a small sample of Norwegian women, which when combined with its qualitative,
phenomenological methodology produced limitations by way of cultural restriction and poor
generalisability beyond that sample (Nordbo et al., 2006). Future replication would be improved
with participant selection from varied cultural backgrounds. Although subjective, the study did
however comprehensively explore the psychosocial lived experience of AN from the sufferer’s
perspective (Nordbo et al., 2006), which would have been impossible in quantitative terms.

Second, while the Serpell et al., (1999) study neatly identified sufferers perceived positive
and negative consequences of living with AN through a grounded theory approach that grouped
together similar concepts, its generalisability beyond that participant sample was limited for the
same reason. This was acknowledged by Serpell et al. in view of the study’s exploratory nature.
One possible limitation not mentioned by Serpell et al. was the reliance on treatment-involved
participants. While the task of locating participants with AN not in treatment could present
logistical challenges to research, similar future studies would be enhanced should this occur.

Third, the large sample size of 246 used by Cockell et al., (2002) was seen as a strength of
the design, although given these authors use of factor analysis, future replication would be
improved with even greater participant numbers. Also, given the noted acceptance of AN as a
Western phenomenon (Hepworth, 1999; McVittie et al., 2005; Scott, 1997), Cockell et al.’s use of
British and American participants added credibility to this understanding, although as with the
Nordbo et al., (2006) study, future research would be enhanced with a broader cultural base.
Cockell et al. did sample from both inpatient and outpatient populations however, which
addressed the lack of study from those with AN not in treatment that was observed in the studies
by Nordbo et al., and in Serpell et al. Next, the current paper’s focus will shift to attribution
theory in order to develop and extend the review further.
Attribution Theory

As previously explained, attribution theory was concerned with the cognitive and social processes by which people made sense of the actions and behaviour of others (Kelley, 1971; 1973). With the aim of clarity however, the current review has adopted Locke and Pennington’s (1982) interpretation of the major claims made through the wealth of attribution theory research as the basis for discussion of the literature. These claims consisted of the actor-observer difference and the fundamental attribution error (FAE), with Locke and Pennington further noting that the cognitive processes by which individuals made sense of their own and others behaviour operated outside of immediate awareness. By way of illustration, Kelley’s (1967; 1973) cube model will next be described and applied to the ensuing literature.

Kelley’s (1967; 1973) Cube as an Analogue Model

According to Kelley (1973), attribution theory referred to general principles rather than set “laws” [quotation marks added] of psychology, and cautioned against the adoption of literal, concrete interpretation. With this in mind, Kelley (1967; 1973) used analysis of variance (ANOVA) as an analogue model based on the repeated measures concept of peoples attributions to represent the generation of causal attributions made by the lay person as a naïve scientist, similar in a rudimentary way to that of the professional scientist in terms of social cognition; attributions placed within the person, time and entity framework. In the same way, the notion of the lay person as a naïve scientist was also alluded to by both Heider (1958), and Bem (1972). Martinko and Thomson (1998) agreed, and stated that Kelley’s (1973) cube model, through focus on social and cognitive factors, was concerned with how people used social information to account for the behaviour of others. The idea behind the use of ANOVA by Kelley was in view of the partitioning of covariation between consensus, distinctiveness and consistency of attributions, which is explained in the following section.
Consensus, Distinctiveness and Consistency

Of central relevance to Kelley's (1973) model comprising consensus, distinctiveness and consistency, was the role of attributions within social perception; attributions that consisted of both personal and situational factors. First, consensus according to Kelley (1973) was concerned with the person component of the above-stated framework, in particular to what extent the attributions one made regarding the phenomenon under study were similar to those of others. This was later confirmed by Försterling (1989), who through a review of Kelley’s model, identified consensus as the degree to which different individuals made similar attributions about an effect. After that, distinctiveness was related to the entity component, and essentially referred to whether lay attributions made were specific and valid to the target occurrence (Kelley, 1973). In other words, distinctiveness meant that the attribution made accurately represented the entity (Försterling, 1989). As well, consistency was concerned with time, as far as to what degree the attributor’s response was consistent over time and on different occasions (Kelley, 1973). Försterling again concurred, and stated that consistency in respect to Kelley’s model referred to the circumstances of the attributable phenomenon in terms of type and time frame.

In short, entity attributions as outlined by Kelley’s (1967; 1973) model accounted for both contextual and personal factors under the presumption that it was not possible to separate the individual’s lay attribution from the context in which it occurred. By way of explanation, Kelley (1973) went on to illustrate causal attributions, giving the example of a subject’s favourable lay attribution regarding a museum painting, in particular as to what degree its cause appeared due to person, time, entity, or a combination of all three. In the following section, the literature surrounding Locke and Pennington’s (1982) interpretation of attribution theory’s major claims will be reviewed, commencing with the actor-observer difference.
The Actor-Observer Difference

As stated in Locke and Pennington (1982), the actor-observer difference referred to the contention that actors tended to make externalised, contextual attributions for their own actions, while observers of that behaviour were inclined to attribute those same actions to personal qualities of the actor. Indeed, this claim has received widespread attention in the psychological literature (Eisen, 1979; Jones & Nisbett, 1972; Malle, 2006; Pruitt & Insko, 1980; Stevens & Jones, 1976). Important to note however, was Malle’s (2006) distinction outlined between the similarity of the actor-observer difference and the fundamental attribution error (FAE). Essentially, the difference was that the actor-observer difference typically referred to attributions made towards more changeable and subjective phenomena, whereas the FAE was more concerned with attributions of stable traits and patterns of behaviour (Malle, 2006). Given Malle’s assertion that the psychological literature had typically tended to use the term attribution to refer to these two phenomena interchangeably, the current review has made the distinction unambiguous in order to clearly delineate the structure of the paper.

By way of illustration, Eisen (1979) researched salient informational differences between actors and observers through the incorporation of Kelley’s (1967; 1973) model that comprised consensus, distinctiveness and consistency, and further sought to determine the nature of these effects on the respective attributions made. Participants consisted of 36 undergraduate students with equal numbers of 18 males and 18 females, which precluded any potential gender imbalance (Eisen, 1979). Participants were allocated as either actors or observers by random assignment which served as a strength of the research design, although this was shadowed by the small sample size (Eisen, 1979). Each was matched to another participant of the same gender to form actor-observer pairs, which removed the possibility of gender differences confounding the attributions that were made (Eisen, 1979).
Consistent with Kelley's (1967; 1973) model, and also from Jones and Nisbett (1972), it was hypothesised that in line with the actor's tendency to make external attributions for their own behaviour (Locke & Pennington, 1982), distinctiveness would be higher and consistency lower for actors than observers, and further that actors attributions to this effect would be more definite than those made by observers (Eisen, 1979). Participants completed a 12-item self-report inventory incorporating consensus, distinctiveness and consistency information that was compiled based on dimensions of personality and achievement, with gender, actor/observer role, valence and behavioural category taken into account (Eisen, 1979). Behavioural categories consisted of emotions, beliefs, actions and accomplishments, of which participants indicated attributions to each of the 12 items in relation to themselves as an actor, and in relation to their paired partner as the observer (Eisen, 1979).

Instead of multivariate analysis of variance (MANOVA), separate univariate ANOVA's were conducted on all combinations of the above dimensions with the Greenhouse-Geisser criterion adopted to minimise the likelihood of a Type I error (Eisen, 1979). As hypothesised, the distinctiveness of actors attributions was significantly higher than that of observers, $F(1, 16) = 5.48, p < .05$, however this main effect held true only for perceived negative behaviours (Eisen, 1979). Of note however was that Eisen's (1979) hypothesis was not supported to a statistically significant degree for consistency information, $p > .05$, with actors and observers both indicating high levels of consistency attributed to their responses.

As further hypothesised, actors attributions were more certain in terms of distinctiveness, $F(1, 16) = 6.20, p < .025$, and in addition for consistency, $F(1, 16) = 7.12, p < .025$ (Eisen, 1979). In other words, attributions of distinctiveness and consistency were more marked for behaviours perceived as negative, with the actor-observer difference evident from the study's results (Eisen, 1979). A notable limitation in Eisen (1979) was that the 12-item self-report
inventory used did not indicate validity and reliability standards, so further research on the
inventory used itself would be useful for clarification. Future replication would also be
interesting with the use of MANOVA despite the interpretative difficulty acknowledged by Eisen
to determine whether the hypothesis for consistency would be supported using the different
statistical test.

More recently, Malle (2006) similarly acknowledged the prominence of the actor-
observer difference in social psychology, and confirmed that the actor-observer difference
applied to perceived negative occurrences but worked in reverse for positive events. In other
words, in cases of positive success, actors attributed personally to their own success and
externally in cases of failure. By way of explanation, Malle conducted a meta-analysis of the
actor-observer difference in an attempt to draw together the wealth of literature on social
cognition and attributions. This commenced through database literature searches for published
studies and settled on 113 empirical studies of actor-observer attributions (Malle, 2006). Articles
were excluded if they were off topic, if they did not cover both actor and observer perspectives or
if effect sizes were unable to be determined or reconstructed due to lack of information which
was a strength of the design in terms of generalisability (Malle, 2006).

As well, within the studies examined participants collectively ranged in age from children
of five to 17 years, university students that were assigned an arbitrary age of 19 years, and adults
20 years and older, which was a strength of the design due to the broad range of ages considered
(Malle, 2006). It was further clarified by Malle that attributions were either internal (I), or
external (E) in reference to I-E difference scores used as a common measure of the magnitude of
the actor-observer effect, a concept also identified by Kinderman and Bentall (1997), and Duval
and Silvia (2002). Importantly, Malle’s (2006) analysis concentrated on the interpretation of
effect sizes, descriptive statistics, $F$ values for I and E attributions, and I-E difference scores.
Two hypotheses from the meta-analyses were proposed: first, that consistent with the actor-observer difference, observers would make more personalised internal attributions than actors for negative events as evidenced by I-E difference scores, and second that this effect would be reversed for positive events (Malle, 2006).

Due to the large amount of data reviewed from the meta-analysis, Malle’s (2006) main findings have been presented. Contrary to Malle’s first hypothesis, effect sizes contrived from the meta-analysis were not normally distributed and showed small difference scores for I-E in addition to noticeable skewness and kurtosis for I, E, and I-E respectively. In short, Malle stated that while the actor-observer difference was evident from the results of the meta-analysis, 97 of the 113 studies did not yield even small effect sizes, $d = 0.20$. Congruent however with the second hypothesis that the actor-observer effect would be reversed for positive events, support was achieved with small effect sizes, with $d = -0.158$ for positive-valenced random effects, and $d = -0.148$ for positive-valenced fixed effects (Malle, 2006).

From this, Malle (2006) indicated cautious support for the actor-observer difference, and suggested through discussion of the meta-analysis results that this phenomenon had not been upheld as pervasive and robust. It was further suggested however that the results may have been different had a larger number of studies been included, and so future research would do well to take heed of this on replication (Malle, 2006). In addition, time of attributions made both immediate and delayed, as well as positive and negatively-valenced events were analysed within the reviewed studies, however there were unequal numbers with 61 negative and 45 positive events (Malle, 2006). While the events studied were real rather than imagined which served as a strength of the design, future replication would do well to ensure equal numbers of positive and negative events in order to minimise the possibility of the inequality as a confounding variable.
A further limitation acknowledged by Malle was the use of only published studies, with the future use of unpublished data worthy of investigation.

Also, Malle (2006) affirmed that counter to most past research, measurement of personal and situational attributions had typically utilised self-ratings of actor and observer actions, however noted that no operational definition existed of what personal and situational attributions were. Indeed, previously noted by Malle, Knobe, O’Laughlin, Pearce, and Nelson (2000) was that such studies were problematic in terms of participant confusion with separating the person from the situation, and the subsequent validity of findings. Additional research to address this difficulty would certainly add further clarity to the field of social psychology but would present a distinct challenge to researchers. Of specific relevance to attributions in the AN literature was Woolrich et al.’s (2006) finding that positive self attributions of perceived success and self control following extreme weight loss served as major contributors to the perpetuation and maintenance of the disorder. Next, literature pertaining to the FAE previously noted by Malle as distinct from the actor-observer difference will be reviewed.

The Fundamental Attribution Error

According to Locke and Pennington (1982), the FAE as distinct from the actor-observer difference, referred to the occurrence whereby the observer over-attributed an actor’s behaviour to personal disposition and in comparison understated situational or contextual influences, a conceptualisation also acknowledged by Monson and Snyder (1977), and Buss (1979). Research of this phenomenon was carried out by Grace, Kelley, and McCain (1993), who identified the FAE as a cognitive variable in relation to mother-adolescent attributions, and in particular that rigid cognitions adversely impacted on communication. The primary aim of the study was to investigate the relationship between mother-adolescent attributions and self-reported conflict (Grace et al., 1993).
Random selection from a university population was used to recruit participants that consisted of 115 mothers and their teenagers, of which there were 122 (Grace et al., 1993). Participation was rewarded with inclusion in a lottery draw worth $100. Measurement items used included the Issues Checklist (IC), Conflict Behavior Questionnaire (CBQ-20), and Mother-Adolescent Attribution Questionnaire (MAAQ), that included Likert-scale measurement instruments for both mothers and adolescents (Grace et al., 1993). The IC and CBQ-20 were rated favourably by Grace et al., (1993) in terms of internal consistency and validity, while similar information for the MAAQ indicated internal consistency scores for adolescents of between .76 to .85, and between .78 to .89 for mothers. Mothers were mailed questionnaires, whereas their adolescent children completed questionnaires in the classroom setting. While this allowed for both to complete the study with privacy and confidentiality, it was possible that the different environments may have influenced results (Grace et al., 1993).

Findings that emerged from Grace et al., (1993) showed that consistent with the FAE, behaviours perceived as negative by both mothers and adolescents were attributed to personal selfishness and blame. In other words, negative attributions between mothers and adolescents were found to be positively correlated with conflict, or as negative attributions increased so too did the level of conflict (Grace et al., 1993). Consistent with much of the literature on social cognition (Fishbein & Schwartz, 1984; Kelley, 1973; Zuckerman, 1978), Grace et al’s study, while correlational and therefore not causal, supported the tendency for observers to produce personalised explanations for others perceived negative behaviour.

Importantly, Grace et al’s (1993) study was limited in that gender of the adolescents was not differentiated, which would have been valuable information for comparative purposes and would improve on future research. Also of note was that only middle-class socioeconomic status, intact families were included in Grace et al’s study and therefore future replication would be
improved through inclusion of a broader socioeconomic range of participants. In addition, Grace et al. suggested that future research into attributions could be improved through free recall by participants rather than the use of self-report methods.

Next, congruent with the FAE, McPherson and Young (2004) studied the attributions made by university students of their teacher's aggressive or assertive classroom behaviour, and hypothesised that students would make more personalised, internal attributions for aggressive teacher behaviour than for assertive behaviour. The underlying assumption was that perceived behaviours that were incongruent with the expected standard for the classroom situation, or in other words the situational context, would evidence the FAE through an over-focus on personalised ascription (McPherson & Young, 2004), a concept also accepted by Miller, Ashton, and Mishal (1990). More specifically, McPherson and Young hypothesised that the FAE would be revealed through a positive correlation between degree of teacher aggression and internal student attribution, and a negative correlation between assertive teacher aggression and students internalised attribution of that behaviour.

Participants comprised 301 undergraduate university students, aged between 17 to 50 years of age (McPherson & Young, 2004). Participants completed self-report questionnaires that included teacher demographic information, and were then required to describe a recent, salient classroom incident involving teacher anger, with responses further coded on a 7-point Likert scale designed to measure internality of attribution (McPherson & Young, 2004). As hypothesised, there was a positive correlation between the degree of teacher aggression and internality of student attribution towards that behaviour, with $r (289) = .467, p < .001$ for distributive, hostile aggression, and $r (287) = .335, p < .001$ for passive aggressive teacher behaviour (McPherson & Young, 2004).
As further hypothesised, assertive teacher displays were negatively correlated with students personalised, internal attributions of that behaviour, $r (286) = -0.36, p < .001$. In other words, students were less inclined to make personalised attributions of assertive behaviour, and in contrast tended to attribute internally to behaviour perceived as negative (McPherson & Young, 2004), which was further confirmation of much of the attribution literature (Grace et al., 1993; Kelley, 1973; 1973; Martinko & Thomson, 1998; Truchot et al., 2003; Van Boven et al., 2003). Of note was the study’s gender imbalance, with 198 females and 110 males. Future replication would be beneficial with equal numbers of males and females to more evenly account for gender within the results (McPherson & Young, 2004). In short, prominence and support for the actor-observer hypothesis and FAE within the context of attribution theory has become apparent from the literature reviewed. Next, the applicability and lack of research regarding lay attributions to AN will be explained with reference to Furnham and Hayward (1997), and Stewart et al., (2006) in order to draw towards the current review’s central argument.

**Attributional Absence**

Of core importance to the current paper was the statement by Furnham and Hayward (1997) that people as observers made lay attributions about the causes and cures of psychological problems, including AN. Also worthy of note was that Furnham and Hayward’s study did not focus exclusively on lay attributions of AN, with learning difficulties, amnesia, dyslexia, fear of flying and AN used as illustrators. In the same way, Stewart et al., (2006) more recently made a similar statement to that effect; indeed Stewart et al’s study was remarkably similar to that of Furnham and Hayward, in that attributions researched were not solely concerned with AN, with the authors researching attributions towards asthma, schizophrenia and AN.

Importantly, participants in the Furnham and Hayward (1997) study attributed personal insight for the individual with AN and receiving professional help as an important and positive
way of overcoming the disorder, and further attributed chance recovery as unlikely. In short, the theoretical and practical value of further exploration of lay attributions of psychological problems including AN was emphasised by Furnham and Hayward, who stated that such exploration had the potential to benefit both experts and the lay person in terms of practical coping strategies, support for the AN sufferer and curative action. In the same way, Stewart et al., (2006) noted the stigmatisation attributed to individuals with AN by participant observers, and in turn, the lack of research to this effect. From this, it was apparent that further research was required with a sole focus on lay attributions towards AN.

Limitations of the Review

While the limitations of individual studies have been mentioned in the body of the current review, the literature more generally has presented limitations and gaps in understanding that have been mentioned here. First, and of central value was that while the relevance of attributions towards AN has been well noted from the sufferer’s perspective (Nordbo et al., 2006; Woolrich et al., 2006), understanding of attributions from the social, lay perspective was in comparison, lacking (Furnham & Hayward, 1997; Stewart et al., 2006), and in addition given Kelley’s (1973) statement more generally that psychologists as professionals needed to look beyond the individual in making their own attributions of others behaviour and take into account both personal and situational factors. While it was beyond the scope of the current review to address this inadequacy, it has nonetheless been highlighted as an area to address in future work.

Third, in terms of mortality from AN, while each study reviewed supported the very real risk of premature death from AN-related complications (Fichter et al., 2006; Millar et al., 2005; Signorini et al., 2007), the figures reported were variable mainly as a result of methodological difficulties. Fourth, in reference to the review’s dual focus, it was not possible to comprehensively combine and apply attributions towards AN in terms of specific, concrete
examples from research papers, given the noted lack of work in this area (Furnham & Hayward,
1997; Stewart et al., 2006). Every effort has however been made to atone for this limitation
through conceptual integration of the two fields with detailed review of the AN and attributional
literature respectively.

Conclusion

In conclusion, the purpose of the current review was to highlight the social and
psychological elements attributed to AN by sufferers (Kelley, 1973; Nordbo et al., 2006;
Woolrich et al., 2006), and through explanation of attribution theory, identify the conceptual
relevance of lay attributions to AN and highlight the lack of researched connection between these
two concepts (Furnham & Hayward, 1997; Stewart et al., 2006). More specifically, the precedent
for the current review was set by Furnham and Hayward (1997), who stated that people made lay
attributions about the causes and cures of psychological problems, including AN. By way of
concise explanation, AN as a psychological disorder was defined and its relevance placed within
the context of attributions made by sufferers (Nordbo et al., 2006; Woolrich et al., 2006). The
relevance of understanding social, lay attributions towards AN was identified in terms of
psychosocial functioning (Couturier & Lock, 2006), social models (Alonso et al., 2005; Nordbo
et al., 2006), and relevance to psychologists (Kelley, 1973). As well, the potential lethality of
AN was reviewed, in addition to its psychological relevance in terms of cognitive and
psychosocial factors.

Given the review’s dual application, its focus next shifted from AN to attribution theory,
which according to Kelley (1973) was concerned with the cognitive and social processes by
which people made sense of the actions and behaviours of others. Locke and Pennington’s
(1982) representation of attribution theory’s claims in terms of the actor-observer difference and
FAE was used as a framework for review of the literature, with reference to Kelley’s (1967;
1973) model for illustrative purposes. Of core importance from the studies reviewed was support for Kelley's (1973) notion that when making social attributions of others, it was not possible to separate the person from the context of which they were a part. In short, through the precedent set by Furnham and Hayward (1997), and also by Stewart et al., (2006), appeared the notable absence of research into social, lay attributions towards AN. While little work has been done on lay attributions towards AN, the current review has identified the conceptual relevance between the psychological aspects of AN and attributions as not mutually exclusive, but integrative, relevant and interconnected (Kelley, 1973; Malle, 2006; Nordbo et al., 2006).
Reference List


links to “not eating enough” and other characteristic behaviors. *Cognitive Therapy and Research*, 30, 735-748.

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Social Attributions of Asymptomatic Women Towards Anorexia Nervosa: A Qualitative Study

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Abstract

The present study explored the social attributions made by healthy, asymptomatic women towards anorexia nervosa (AN) sufferers, and AN as a psychological disorder. Attributions towards AN from the sufferer's perspective were widely noted (Couturier & Lock, 2006; de la Rie et al., 2007; Nordbo et al., 2006; Woolrich et al., 2006), however similar studies from the social viewpoint were markedly lacking (Furnham & Hayward, 1997; Stewart et al., 2006). Exploratory qualitative methodology in the form of content analysis through the social constructivist paradigm underpinned the research. The age comparison conducted revealed subtle differences between younger women aged 18-22 years as compared to older women aged between 23-26 years, with younger informants in general tending to make more personalised attributions than older women. Also, the present study confirmed Kelley's (1967; 1973) stance on attribution theory that it was not possible to separate the person from the context of which they were a part. The findings from the present study substantiated this in qualitative terms in regard to AN. Essentially, the present study successfully connected the two concepts within the theoretical context of attribution theory, and supported the dual focus of AN and attributional research as integrative, relevant and interconnected (Kelley, 1973; Malle, 2006; Nordbo et al., 2006).
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa: A Qualitative Study

Historical and Current Studies

Anorexia Nervosa and Sufferer Attributions

Anorexia nervosa (AN) as pathological, psychiatric and nutritional in nature is a potentially-fatal psychological disorder that typically has a poor prognosis (Fichter, Quadflieg, & Hedlund, 2006; Millar, Wardell, Vyvyan, Naji, Prescott, & Eagles, 2005; Nordbo, Espeset, Gulliksen, Skarderud, & Holte, 2006; Serpell, Treasure, Teasdale, & Sullivan, 2007; Strober, Freeman, Lampert, Diamond, Teplinsky, & DeAntonio, 2006). Specifically, AN was defined as a serious eating disorder (ED) comprising restrictive and purging subtypes, characterised by refusal to maintain a minimum body weight, distorted body image, extreme weight loss, self-induced starvation and use of purging behaviours (American Psychiatric Association, 2000; Kaplan & Woodside, 1987). Initial diagnosis of AN commonly occurs during the late teens to early twenties, with much of the research confirming AN as a markedly female condition (Beumont, Hay, & Beumont, 2003; Endacott, Kidd, Deacon-Crouch, Judd, Menzel, & Cornett, 2006; Fichter et al., 2006; Forbush, Heatherton, & Keel, 2007; Millar et al., 2005). Of particular concern for women with AN were numerous reports that self attributions of perceived success and self control from extreme weight loss served as major contributors to the disorder’s resilience and longevity (Beumont et al., 2003; Fichter et al., 2006; Millar et al., 2005; Striegel-Moore & Bulik, 2007; Woolrich, Cooper, & Turner, 2006).

Attribution Theory’s Relevance to Anorexia Nervosa

In terms of attributions, attribution theory according to Kelley (1967; 1973) was concerned with the cognitive and social processes by which people made sense of the actions and behaviours of others. Kelley (1973) did caution against the adoption of a literal, concrete interpretation however, and stated that attribution theory referred to general principles rather than
set “laws” of psychology. Martinko and Thomson (1998) agreed, and stated that Kelley’s (1973) cube model, through its entity perspective focus, was concerned with how people as naïve scientists used social information to account for the behaviour of others. Similarly, the notion of the lay person as a naïve scientist was further alluded to by both Heider (1958) and Bem (1972). In particular, attribution theory’s relevance to self concept provides additional justification for the current study’s precedent set by Furnham and Hayward (1997), who stated that people made lay attributions about the causes and cures of psychological problems, including AN.

**Potential Lethality**

In terms of AN as a serious ED, numerous studies have confirmed the real risk of premature death from medical and psychological complications; medical complications in terms of malnutrition, substance misuse, cardiovascular impairment and renal failure (Beumont et al., 2003; Endacott et al., 2006; Fichter et al., 2006; Forbush et al., 2007; Millar et al., 2005), and psychological in terms of the high suicide rate among this population (Fichter et al., 2006; Nordbo et al., 2006; Woolrich et al., 2006; Signorini et al., 2007). For example, Millar et al.’s (2005) longitudinal study involving 524 individuals that examined AN-related mortality for both males and females over a period of 34 years identified death rates at 4.5%, 34.8% of which were due to medical complications, 8.7% to apparent suicide and 4.3% from opiate intoxication.

Those with AN who had died were aged 25 years on average, and a mean age of 19.9 years for those who survived (Millar et al., 2005).

Mortality figures have been variable between studies, with Fichter et al. (2006) quoting a mortality rate of 6.8% at 12 year follow up, however unlike the Millar et al. (2005) study, all of Fichter et al.’s participants were female. Fichter et al.’s (2006) research used a smaller sample size than in Millar et al. (2005), with 103 participants, and further did not state the ages of their participants at death, which would have been valuable information for comparative purposes,
although the stated age at initial diagnosis was 18.5 years. Unlike the Millar et al. (2005) study, all deaths were acknowledged as directly associated with AN-related medical complications, in particular from the consequences associated with purging behaviours. While including both males and females would have presented logistical challenges to Fichter et al. (2006), their inclusion of only females reinforced AN as a markedly-female disorder, and future studies would be more comprehensively informed with this amendment.

Higher rates were quoted by Signorini et al. (2007), who placed death rates from AN at 9.7%. Participant numbers were greater than in Fichter et al. (2006), at 147, again with all female participants. Signorini et al. branched out in terms of the methodology used to that of Millar et al. (2005) and Fichter et al. (2006), conducting a meta-analysis as an adjunct to the main study, which placed AN-related mortality at 4.27% at each 10 year follow up interval. Taking these three research examples into account, while the variable nature of mortality data was immediately apparent due to methodological concerns with differing follow up periods, participant attrition and reliance on patient data, all studies unanimously confirmed the real risk of premature death from AN-related complications (Fichter et al., 2006; Millar et al., 2005; Signorini et al., 2007).

**Psychological Relevance of Self-Attributions to Anorexia Nervosa**

Review of the literature indicated a profound and comprehensive psychological symptomatology in terms of the attributions made by AN sufferers, that manifested as negative emotional outcomes (Cockell, Geller, & Linden, 2002). This was of concern, given the earlier statement that self attributions of perceived success and self control from extreme weight loss served as major contributors to the disorder’s resilience and longevity (Beumont et al., 2003; Fichter et al., 2006; Millar et al., 2005; Striegel-Moore & Bulik, 2007; Woolrich et al., 2006). In particular, social-cognitive themes emerged such as rigid cognitions, negative self beliefs, attributions of perceived personal inadequacy and failure (Dodin & Nandrino, 2003; Gordeev,
These rigid, skewed thought patterns were seen as characteristic of the disorder, with the rigidity becoming more entrenched with increasing illness duration (Woolrich et al., 2006).

Further attributions of AN sufferers centred around the Western cultural value that women placed on thinness (Hepworth, 1999; McVittie, Cavers, & Hepworth, 2005; Scott, 1997), motivation and control with weight loss (Nordbo et al., 2006; Serpell, Treasure, Teasdale, & Sullivan, 1999), and functional avoidance of life responsibilities (Cockell et al., 2002; Nordbo et al., 2006). By way of explanation, themes of emotional detachment, perfectionism, rigid cognitions and non-engagement with life tasks served a function for women with AN, in terms of AN as a central focus rather than everyday life (Cockell et al., 2002; Holliday, Uher, Landau, Collier, & Treasure, 2006; May, Kim, McHale, & Crouter, 2006; Nordbo et al., 2006). Rigid cognitions were further identified through the study of event-related potentials (ERPs) as having physiological markers, in addition to psychological symptoms, with ERPs referring to low voltage fluctuations in the electrical activity of the brain in response to stimuli (Dodin & Nandrino, 2003; Gordeev, 2007; Ruiter, Kessels, Jansma, & Brug, 2006). With this in mind, also alarming was that the AN sufferer’s own attributions were potentially powerful reinforcers for the perpetuation of the disorder (Serpell et al., 1999).

Of further concern in terms of AN’s psychological relevance, was that the well-noted skewed thought patterns and rigid cognitions characteristic of the disorder contributed to the perpetuation of severe weight loss, which served as positive reinforcement for the continuation of the illness (Nordbo et al., 2006; Woolrich et al., 2006). The pervasiveness of this worrying phenomenon was particularly evident in Woolrich et al.’s (2006) study, given these authors use of measures such as the Eating Attitudes Test (EAT), Dutch Eating Behaviour Questionnaire Restraint sub scale (DEBQ-R), Beck Depression Inventory-2 (BDI-II), and Rosenberg Self-
Esteem Scale (RSE). Data from these measures confirmed the persistently-negative thought patterns and self beliefs of experimental participants with AN, that became more entrenched with longer illness duration (Woolrich et al., 2006).

A Theoretical Match to the Social-Cognitive Attributional Pattern

Attribution theory’s claims of the actor-observer difference and fundamental attribution error (FAE) were researched in detail by Locke and Pennington (1982). These authors further noted that the cognitive processes by which individuals made sense of their own and others behaviour operated outside immediate awareness. Indeed, this claim has received comprehensive coverage in the psychological literature (Eisen, 1979; Jones & Nisbett, 1972; Malle, 2006; Pruitt & Insko, 1980; Stevens & Jones, 1976). Given that much research has tended to use the two terms interchangeably (Malle, 2006), the distinction between them was made specific in the present study in order to avoid ambiguity. Essentially, the actor-observer difference typically referred to attributions made towards more subjective, fluid phenomena, whereas the FAE was concerned more with attributions of stable traits and behaviour patterns (Malle, 2006).

An illustration of these two phenomena can be found in the work of Kelley (1967; 1971; 1973), whose social-cognitive perspective was conceptually identified as a theoretical match to the social-cognitive aspects of the AN literature (Cockell et al., 2002; Dodin & Nandrino, 2003; Lena et al., 2001; Hepworth, 1999; Nordbo et al., 2006; Serpell et al., 1999). Kelley’s (1973) primary message was that it was not possible to separate the individual’s behaviour from the context in which it occurred; further, that one’s lay attributions could be represented through an entity perspective in terms of person, time and place. By way of illustration, Kelley (1967; 1973) used analysis of variance (ANOVA) as an analogue model based on the repeated measures concept of the partitioning of variance between consensus, distinctiveness and consistency of causal attributions by the naive scientist.
Consensus, Distinctiveness and Consistency

Consensus, distinctiveness and consistency as core elements of Kelley’s (1967; 1973) cube model were representative of attributions made within the context of entity theory; a perspective that combined person, time and place (Eisen, 1979; Kelley, 1967; 1973; Locke & Pennington, 1982). First, consensus according to Försterling (1989) was concerned with the degree to which different individuals made like attributions about an effect or phenomenon, and in Kelley’s (1973) view concerned with the person component of the entity perspective. Second, distinctiveness was confirmed by Försterling (1989) to mean that the attribution made represented the phenomenon accurately, and according to Kelley (1973) applied to the entity component. As well, consistency was concerned with the time component, in terms of stability of an individual’s attributions, and on different occasions (Kelley, 1973), also confirmed by Försterling (1989).

Area of Study

The Lack of Social Knowledge

Most importantly with respect to the present research, while the relevance of attributions towards AN has been well noted from the sufferer’s perspective (Nordbo et al., 2006; Woolrich et al., 2006), similar understanding from the social, lay perspective has not been examined (Furnham & Hayward, 1997; Stewart, Keel, & Schiavo, 2006). Many studies almost without exception have acknowledged the impact of social influences from the AN sufferer’s viewpoint (Alonso, Rodriguez, Alonso, Carretero, & Martin, 2005; Couturier & Lock, 2006; Nordbo et al., 2006; Woolrich et al., 2006), however study of social, lay attributions have not followed suit (Furnham & Hayward, 1997; Stewart et al., 2006). This discrepancy was seen as ironic, given that psychosocial functioning (Couturier & Lock, 2006; de la Rie et al., 2007) and modelling
(Alonso et al., 2005), by definition as social concepts in relation to AN required the perspective of more than one individual.

In other words, a lack of social knowledge regarding AN was apparent. While both quantitative and qualitative research has been conducted on AN and its sufferers (Couturier & Lock, 2006; de la Rie et al., 2007; Nordbo et al., 2006; Woolrich et al., 2006), the marked imbalance in perspective provided the rationale for the current study. Therefore, the value and rationale of the present research is twofold. First, this study will address the dearth of available information as to the social attributions of AN, and in the process build on the work of Furnham and Hayward (1997). Second, the ways in which healthy women perceive AN will be explored in order to understand the social processes that envelop AN as a complex psychological disorder and women who suffer from it.

Research Questions

The present study aimed to qualitatively explore the social attributions made by healthy, asymptomatic women towards AN and its sufferers. The specific research questions were as follows:

1. What are the beliefs and opinions of healthy, asymptomatic women aged between 18-22 years, as compared to women aged 23-26 years towards AN as a psychological disorder?
2. What are the beliefs and opinions of healthy, asymptomatic women aged between 18-22 years, as compared to women aged 23-26 years towards AN sufferers?

Methodology

Research Design

Exploratory qualitative methodology was adopted for the present study, in view of both its attributional perspective and the scarcity of available research previously noted regarding the social views of AN (Furnham & Hayward, 1997; Stewart et al., 2006). The present research
focused on attributions towards AN through a psychosocial lens, its emphasis was on psychological, social and cultural issues as representative of the role of the broader social context. In reference to the study’s dual focus on AN and lay attributions, the conceptual and theoretical analysis has laid the groundwork for the integration of the two fields, as the current study intended to provide a qualitative exploration of the area.

**Paradigm and Assumptions**

Consistent with the study’s vicarious, psychosocial stance, the lay attributions of healthy women towards AN were explored through the social constructivist paradigm (Denzin & Lincoln, 2003; Payne, 2000). The rationale for adopting this framework was the lack in the social attributions made towards AN by women who did not have a history with the disorder, such a paucity of knowledge necessitated a construction process in order to establish a foundation upon which future understanding could be built. With this in mind, the social constructivist paradigm’s core philosophical assumption is that individuals create their own reality of a phenomenon, based on their perception and experience of that phenomenon within the social context (Denzin & Lincoln, 2003).

Of importance to emphasise in respect to the current study however, was its focus on the broader psychosocial and cultural issues surrounding one’s attributions towards AN, and not personal subjective experiences per se. Social construction was previously applied to the ways in which the social world has influenced AN, and in particular its history and entrenchment within the typically-Western social context (Hepworth, 1999). Given that AN is regarded as a social phenomenon, parallels appeared between this assertion and the earlier remarks of Kelley (1967; 1973) that it was not possible to separate the person’s behaviour or way of being from the context in which it occurred. The use of social construction as a research paradigm has been supported both in general theoretical terms (Kelley, 1967; 1973), and specifically in relation to AN.
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

(Hepworth, 1999). Therefore, the present study has adopted this paradigm in order to facilitate a more extensive understanding of lay attributions made towards AN, as a psychological disorder embedded within its social context.

**Participants**

Study informants consisted of 12 healthy, asymptomatic women aged between 18-26 years, recruited from the student population of Edith Cowan University. This age range was selected based on research that indicated the marked prevalence of AN in women during the late teen years and early to mid twenties (Couturier & Lock, 2006; Nordbo et al., 2006; Signorini et al., 2007). In addition, this number of informants was estimated and subsequently found to be sufficient to achieve data saturation, as outlined in Strauss and Corbin (1998), and more recently in Liamputtong and Ezzy’s (2005) discussion of saturation theory. Prospective participants were initially identified from the School of Psychology’s research participant register and through the use of noticeboard flyers. The information flyer has been included as Appendix A. Those students from the participant register were initially contacted by email, with responses followed up by the researcher. The researcher further screened each informant prior to interview to ensure that age, gender and asymptomatic criteria were met.

Rather than including both genders as informants, only females were selected for the study due to the biased prevalence of AN in women (Crisp, 2006; McVittie et al., 2005; Nordbo et al., 2006; Signorini et al., 2007). Informants further comprised two groups, each with six women: a younger group aged between 18-22 years and an older group aged between 23-26 years. The rationale for selecting two age groups was in order to facilitate a qualitative examination of whether any similarities or differences existed between the younger and older women, in the process maximising the depth of information gained from their perspectives.
Data Collection Procedures

Participation involved a single interview of between 30-45 minutes duration. The researcher personally negotiated a mutually convenient date and time for the interviews with each informant, all of which took place in a private interview room in the School of Psychology on the Joondalup campus of Edith Cowan University. Demographic information including age and educational history was collected from participants at interview commencement in order to confirm participant suitability and establish rapport. All information was treated as strictly confidential, with interviews tape recorded and transcribed verbatim by the researcher. A boundary microphone, used in conjunction with the standard-cassette tape recorder minimised the sound interference from background noise.

Consistent with the methodology employed by Nordbo et al., (2006), individual semi-structured, in-depth interviews were conducted by the researcher, using open-ended questions to allow for informant elaboration and the emergence of rich and comprehensive data. The interview schedule has been included as Appendix B, and included questions such as “What are your thoughts concerning the psychological side of AN?”, and “What do you think contributes to some young women of approximately your age developing a more serious eating disorder such as AN?”. Data collection was further facilitated through verbal and non-verbal prompts and communication skills to encourage the development of rapport, as well as to guide and maintain the “on topic” content of each interview.

Ethics

Permission to undertake the present study was granted from the Faculty of Computing, Health and Science Research Ethics Committee prior to the commencement of the research. The aim and nature of the study was explained to each participant, and signed informed consent obtained prior to interview commencement. The letter of introduction and notice of informed
consent have been included as Appendices C and D respectively. All information was treated as strictly confidential, with names and potentially-identifying information removed from typed transcripts to ensure privacy, and a pseudonym used. Participants names were not used during the tape recording of the interviews in order to further protect their identity.

Data Analysis

Thematic content analysis was used to explore the thoughts, beliefs and opinions of healthy, asymptomatic women towards AN. Although content analysis has been utilised quantitatively (Liamputtong & Ezzy, 2005; Tartz, Baker, & Krippner, 2006), its core task is the qualitative identification of units of analysis or categories in language (Schilling, 2006). Words and phrases when categorised into particular units of analysis are assumed to share similar meanings, allowing for a comprehensive understanding of qualitative information (Cavanagh, 1997; Schilling, 2006). Consequently, this was seen as an appropriate methodology through which to undertake interpretation of the interview data, given also Cavanagh's statement that content analysis went beyond mere description of text and language, consisting of a systematic and detailed measure by which to explore meaning within the context of data.

All information was treated as strictly confidential, with interviews tape recorded and transcribed verbatim by the researcher. All names and identifying information were removed from the typed transcripts and replaced with a pseudonym. Pseudonyms and age only have been presented in this paper. Interview transcripts were reviewed against the taped recording to ensure accuracy and to achieve immersion within the data. Content analysis was employed with recurring themes highlighted and notations made on each transcript showing appropriate, applicable interpretation of information. Recurring themes from informants attributions were collated together by the researcher to form qualitatively-distinct categories.
Categories broadly fell into physical, psychological and socio-cultural threads, each of which was subsumed by further, less abstract sub-categories. Checking of themes and sub-themes was carried out by the research supervisor, which ensured rigour and credibility through evidence of attention to detail applied to the research, and in the process provided an audit trail (Glesne & Peshkin, 1992). In addition, data analysis was further facilitated through the use of methods triangulation (Liamputtong & Ezzy, 2005; Murphy, 1989), whereby the researcher undertook an extensive review and analysis of the literature, conducted semi-structured, in-depth interviews, and unobtrusive observation of informants during the interview process itself in order to maintain rapport and ensure the “on topic” content of the data. It is acknowledged that the triangulation process may have been further improved through the addition of focus groups, however time and logistical concerns precluded such an action. Future studies though may benefit from the inclusion of focus group methods to complement the data produced.

Findings and Interpretations

The present study aimed to qualitatively explore the social attributions made by healthy, asymptomatic women towards AN and its sufferers. Further, a qualitative comparison was made within each major theme category of younger women aged between 18-22 years as compared to older women aged between 23-26 years. Participants were assigned to one of two groups depending on their age in order to determine whether there was a difference in the ways in which younger and older womens attributions towards AN differed, with comparison intended to maximise the depth of interpretation from the data. Strong, recurrent themes emerged from the thoughts and opinions of informants regarding AN and its sufferers that more broadly fell into physical, psychological and socio-cultural effects; each of which was subsumed by associated sub-themes and concepts, and presented in Table 1. For the purpose of clarity, the findings and
interpretations will be presented within these three categories, and interpreted with reference to previous research.

Table 1

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Physical Effects

Findings emerged from younger women’s (18-22 years) thoughts and opinions in terms of the physical effects of AN; a general category of responses that was subsumed by the three sub-themes of appearance, personal harm and fatigue. Younger women emphasised the more obvious, visible physical manifestations of AN, and tended to voice responses that were direct, to the point, and at times blunt and seemingly judgemental. Also, responses from women of this age group within the broad theme of physical effects tended to focus more on the AN sufferer than the actual disorder, with attributions within this category markedly personal in nature, more than situational or contextual (Kelley, 1973; Locke & Pennington, 1982). However, this was not surprising given the previously-mentioned effects of AN on the body and potentially-serious personal impact of the condition (APA, 2000; Fichter et al., 2006; Millar et al., 2005; Striegel-Moore & Bulik, 2007).

Appearance

By way of illustration, the following quote from Shelley (18 years) was illustrative of an internal, personalised attribution towards the physical appearance of AN sufferers:

“...everybody notices because of what they’re doing to themselves.”

Attributions similar in style were offered by Rachel (20 years):

“...although they’d look slightly ridiculous being so skinny, but they can’t see themselves.”

In terms of physical appearance of women with AN, another opinion from Sara (20 years) was put forward:

“So, nit-picking every little thing on their body.” .... “So, you know, if their cheekbones aren’t high enough then they’d want to lose more weight so that their cheekbones stuck...[pause]...” .... “Yeah, stuck out more...became more pronounced, something like that.” .... “Whereas, ummm, pretty much I’ve never thought about my cheekbones, I don’t think so anyway” (laughs).
In comparison to younger women, while older women aged between 23-26 years also mentioned the physical effects of AN sufferers in terms of appearance, the attributions made were less judgemental in tone and seemed to be underpinned with a degree of knowledge and understanding beneath mention of the actual physical concern. Further, women in the older age group tended to be less focused on the physical effects as such than the younger women, and offered more of an explanation of their opinions, in addition to the attribution made itself.

Illustrative of this was the following statement from Tina (25 years):

"Yeah, gaunt... I suppose they'd look very gaunt and quite pale... uumm... I also suppose it depends on how far into the disorder that you are."

Another similar attribution from Leanne (24 years) that was less judgemental:

"Depending on the age of the person, kind of, uumm... not progressing in puberty... just not going any further because they stop growing, yeah." "... as time goes on, I think people would notice, like the gaunt facial features, uumm... sunken eyes, and... bones sticking out..."

**Personal Harm**

As previously discussed, informant’s attributions of the physical effects of AN tended to be more personalised in terms of the sufferer than the disorder itself, and aside from the ‘appearance’ sub-theme, also evoked messages concerned with personal harm. Specifically, ‘personal harm’ as a sub-theme was underpinned with attributions concerning physiological damage and death. Findings that emerged suggested that the attributions made between younger and older women did not appear to have the same qualitative degree of tonal differences, with both groups of informants voicing their opinions and concerns of personal harm in terms of both the AN sufferer and AN as a disorder. Responses in general were more holistic in the acknowledgement of AN as a serious condition in itself, as well as towards women who suffered from it. There was less of a tendency evident to attribute personally (Jones & Nisbett, 1972; Kinderman & Bentall, 1997; Locke & Pennington, 1982), in relation to ‘personal harm’ than to
“appearance”. This was so with most responses elicited, with one notable exception from Kate (20 years):

“...like, they'd look shocking and waste away, and end up in hospital...I suppose through the trashing of their body.”

Other responses that were more typical of this sub-theme as stated above included the following from Erin (20 years):

“Well, I guess your organs shutting down, I mean, when they go into kidney and renal failure and all that sort of thing” .... “...you're in really dire straits, so they can't...yeah, that's going to be the worst thing, when all your kidneys and all that start failing and shutting down, you basically know that that's it...it's the end of the line.”

In addition, Andrea (18 years) mentioned the personal harm from AN in terms of physical damage and death:

“...so, umm...in terms of damage really, like your hair falling out...and generally, just like [pause]...I see it if, you know, your hair's falling out and stuff, your body's sort of dying [pause]...so it's kind of like that...from the starvation.”

Further, as explained, women in the older age group between 23-26 years of age attributed likewise, as demonstrated by Michelle (24 years):

“Physically I know that...it can kill a person.”

Similar concerns were voiced by Marg (24 years):

“...being anorexic would be really dangerous, you know...” .... “...these women...they can have like heart attacks, stuff like that...especially if they're like, you know...taking drugs or throwing up or whatever, because I read somewhere that doing that messes up the chemicals in your blood...or otherwise just because they're so frail...their body just gives out.”

Fatigue

To complete the presentation of the findings in terms of attributions made regarding physical effects, another set of sub-themes existed by way of the fatigue associated with and experienced by women with AN, and demonstrated by Kate (20 years):
"I don't know a lot about it...just the loss of weight...uumm...and I take it they'd get really tired." ... ... "Yeah, and kind of very weak...yeah, and just awful really."

Similar opinions were expressed by Jane (24 years):

"Uumm... well, tiredness...just tired and weak."

and from Marg (24 years):

"I don't know...I think that if I had lost that much weight...or even not that much weight (laughs)...as someone with anorexia, I'd just be exhausted, you know? I'd be so wrecked...so for women who are like that...it must be awful." ... ... "Yeah...they'd just be...well...permanently fatigued."

While responses for this sub-theme were focused mainly on the AN sufferer, the tone of responses was more empathic for both younger and older women, and in this way was more akin to the 'personal harm' attributions. Within the thoughts and opinions of informants and the fatigue experienced by women with AN, there was no evidence of the personalised ascription typical of the FAE (Locke & Pennington, 1982; Malle, 2006). Further, from a review of the three sub-themes within the categories of appearance, personal harm and fatigue, it was apparent that while some of the women particularly in the younger age group made quite strong, blunt and personalised attributions towards the topic, this was most evident in the sub-theme of 'appearance'.

Indeed, given that the typically emaciated physical appearance characteristic of women with AN has without exception been noted as highly visible and of grave concern (APA, 2000; Couturier & Lock, 2006; Derman & Szabo, 2006; Forbush et al., 2007; Strober et al., 2006), this was not surprising. However, of note was that the tendency for younger women (18-22 years) to make markedly personal attributions of AN sufferers in terms of 'appearance' was limited to this sub-theme, with the sub-themes of 'personal harm' and 'fatigue' more balanced in content of speech between the younger and older women. These evoked a more unbiased and empathic consideration by informants by way of reference to both personal and situational factors through
their more respectful acknowledgement of AN sufferers (personal, internalised attributions), and AN as a disorder (situational, externalised attributions). Participant attributions regarding AN were not limited to physical effects however, with interview responses heavily underpinned by psychological themes, which are presented next.

**Psychological Effects**

Without exception, all 12 participants interviewed were cognisant of AN as more than just a physical or medical concern. Psychological effects as a major theme in the current study was subsumed by the sub-themes of 'cognition', 'affect', 'behaviour' and 'psychological disorder'. AN as a psychological disorder will be interpreted following the preceding sub-themes, as the emergence of these categories was of particular interest, given that the grouping of sub-themes comprised the tripartite model of attitude structure (Breckler, 1984). Further, cognition, affect and behaviour in particular were talked about by informants in an integrative, inclusive manner; a finding that supported Kelley's (1973) view that it was not possible to separate the person from the context of which they were a part. Also, while attributions made towards AN in terms of psychological effects tended to be more focused on the sufferer, there was little qualitative evidence suggestive of actor-observer asymmetry in the quality of attributions made (Locke & Pennington 1982). Again, the recurring theme of empathy and understanding by informants was apparent.

**Cognition**

Cognition emerged in considerable detail as a sub-theme within informants attributions towards AN, which was congruent with the literature as to the known cognitive effects of AN (Forbush et al., 2007; Strober et al., 2006; Woolrich et al., 2006). Further, there did not appear to be distinct qualitative differences between the two groups of younger and older women, with attributions referring to the association of cognition as a psychological factor with AN empathic
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

in tone. This was especially evident through use of the second-person grammatical tense, with responses suggestive that the women interviewed were mentally placing their thoughts within the perspective of the AN sufferer, as evidenced by Sara (20 years):

"I guess it would be like if you had the obsession, you might think that everyone else was looking at you in that way and thinking about it as if they were just... looking at you to see how thin you were, instead of... looking at you, so you'd probably become... I guess a bit paranoid about it." ... "... if it was consuming every one of your thoughts, then you'd assume that everyone else was looking at you in that way as well."

Another example of younger women's attributions towards cognition as a psychological variable with AN came from Erin (20 years):

"It's harder to change their thoughts about what they think is happening and that sort of thing, rather than... putting back on the weight..."

As stated, women in the older age group made attributions that were similar in quality:

"... and so, to kind of go back and change their whole way of thinking, is pretty hard... and that goes for anyone." .... "... with any way of thinking, you know..." (Michelle, 24 years)

"Their head-space would have to be pretty... set... on being thin, I think... and they'd be continually thinking, 'now, what can I do to get out of eating today'?... things like that... they'd be so driven in how they thought about losing the weight and being skinny... [pause]... it would totally consume every part of their day-to-day life." .... "I think it does consume their life and their thoughts about their life, which is kind of ironic, seeing as they're starving themselves." (Marg, 24 years).

It was apparent from the above quotes that the present study reinforced from a social perspective the rigid thought patterns typical of sufferers of AN (Dodin & Nandrino, 2003; Woolrich et al., 2006). Of particular concern was Woolrich et al.'s. (2006) study that identified the functional avoidance of AN for sufferers as a result of skewed thoughts and rigid cognitions in the perpetuation of the disorder. Similar findings as to the existence of rigid, inflexible cognitive functioning with AN were produced by Dodin and Nandrino (2003) in quantitative, and Nordbo et al., (2006) in qualitative terms. Taken together, the current research has identified the understanding of this phenomenon from the attributions of healthy women.
Affect

In relation to AN and its sufferers, affect comprised a large portion of the healthy women’s attributions; a sub-theme underpinned by more specific concepts including body image, self perception, depression, insecurity and self esteem. Similar findings have been widespread in the AN literature from the sufferer’s perspective (Couturier & Lock, 2006; Hepworth, 1999; Nordbo et al., 2006; Woolrich et al., 2006), with findings from the current study’s social, lay perspective already mentioned. In general, while both younger and older women revealed a considerable degree of knowledge and opinion, there were few qualitative differences in the nature of attributions made, with both personal and contextual factors taken into account in most cases. Responses typical of attributions made towards AN as an affective, emotional phenomenon were illustrated by Rachel (20 years):

“Uumm, just err... a distorted sense of reality I suppose.”

and by Kate (20 years):

“...but perhaps it's just not seeing who you are... with the distorted body image.”

“Yep, it would be pretty intense. I just know they’d be really hard on themselves... and they’d do whatever they had to do to themselves to achieve that, although it couldn’t be pleasant.”

Another perspective was put forward by Sara (20 years):

“... if people have insecurities, they channel it in other ways [pause]... ”

“... channelling it into food and not eating and... obsession ....about their weight is what’s actually... actually pertinent... they’re doing it because they’re insecure about something else, but they’re [pause]... channelling it in a different way.”

Of particular relevance to affective concerns were the references made to depression by Rachel (20 years):

“Uumm... depression because you’d feel obviously that you were a failure, because you’d gained weight... or that you couldn’t control your weight [pause]... uumm... and not just like feeling sad, but like real depression where, you know, you get the tiredness and stuff...”
Indeed, depression as an affective concern with AN was also referred to by those informants in the older age group, with the following attribution made by Michelle (24 years):

"I guess they could be depressed... I guess, it's kind of... what comes first... like they could, have depression and that could lead to kind of behaviours... yeah, relating to anorexia, or... just that whole low self esteem." ... "... what they think their bodies look like could lead to... you know, being depressed... uumm... yeah, and I think it's just how they feel, and [pause]... yeah, I think it all starts in your head."

Self-esteem as an affective issue with AN was also mentioned by Jane (24 years):

"Uumm... again maybe there's just not that psychological stuff that's going on, there's maybe the insecurities or low confidence, self esteem, that they want to go on a diet, you know... improve their body image, feel better about themselves, be more desirable to guys or something like that."

An alternative explanation of self esteem was put forward by Leanne (24 years):

"... but I think that it's related to, uumm... self esteem issues, and basically not believing that... that you're good at things in life, and that you can be good at losing weight." ... "Yeah... I don't know that you'd necessarily consciously think to yourself, 'oh, I'm not good at anything but I'm good at losing weight', but you would know that you were having control by stopping eating." ... "... that you were able to have an effect on your body."

The above references to self esteem put forward by participants, in particular to the low self esteem often present with AN, were previously noted from the sufferer’s perspective by Cockell et al., (2002). Of further note in Cockell et al.’s. (2002) research was the parallel drawn between low self esteem as a functionally-avoidant component of AN, with the similar role of cognitive factors in the studies previously mentioned by Nordbo et al., (2006), and Woolrich et al., (2006). Indeed, the issues of both low self esteem and cognition as functionally-avoidant components of AN were viewed by Cockell et al. (2002) as intriguing phenomena that required further study. As such, the present research has identified this and provided another perspective on the existence of self esteem concerns with sufferers of AN.
Behaviour

Informants' attributions towards AN repeatedly referred to behaviour as a sub-theme; one that encompassed AN in relation to control, motivation, weight and food issues, and weight loss behaviours. More specifically, these behaviours were seen by the participants as functionally-avoidant components of AN that sufferers used to escape from regular life responsibilities. Further, their recognition of these factors were inextricably intertwined with their own thoughts, feelings and viewpoints. The fact that informants recognised the behaviours particularly associated with AN as functionally avoidant emerged as an interesting parallel. This finding was reinforced in social terms, given Nordbo et al.'s (2006) previous assertion that women with AN attributed value on symptoms and behaviours engaged in to retain control of a low body weight and sustain the illness. Motivation and control in the present study were frequently mentioned together as being linked as behavioural issues. By way of illustration, the following response given by Rachel (20 years) was typical of the behavioural sub-theme:

"...yeah, or if I eat now, I'm just ruining all my hard work if I put weight on, and all that sort of stuff, so... I think they would just... you know... they may think like that, which is so dumb, but they'd just keep at it because [...pause]... they want to look like that more than anything." ..... "Yeah, the end justifies the means."

The above excerpt was interpreted as slightly judgemental in tone, consistent with the attributions towards 'appearance' outlined previously by informants in the younger age group. A further perspective more explanatory and understanding in nature illustrative of the behavioural measures to reinforce motivation and achieve control by women with AN was also provided by Rachel (20 years):

"Control is about... being able to have an impact on your environment, and your body... and in terms of anorexia, I would think that control would be about being able to impact the shape of your body, and the look of your body, and that's how it starts... and also if that... if you feel that you are losing grip on other areas of your life like school, or your relationships or something, having that sort of... umm... impact and ahh, and say..."
over what your body looks like might be how... how it’s triggered... or how it gets a lot .... of girls... uumm[pause]... sort of in too deep."

An alternative perspective was put forth by Erin (20 years), who presented the other side of the control issue, which was reflected in the literature suggesting the fine line between women with AN being in control of their behaviours, or conversely being controlled by the disorder (Beumont et al., 2003; Nordbo et al., 2006; Serpell et al., 2006).

"But I mean like, yeah what I’d mostly know about the psychological side and that sort of thing is just that, you know... they can’t control it, it’s not a big choice for them" .......
"...you know... it’s something in their wiring, so to speak, something in their brain that tells them... uumm... and the way that they perceive themselves tells them that they have to, you know... go on this route and starve themselves."

Control as a core feature of AN was interconnected with the motivation by women with AN to continue behaviours associated with the disorder, was without exception spoken of by informants in both age groups. Attributions relevant to the motivation and control issue that were made by women in the older age group were similar in tone and content to that of younger women. For example:

“Well, I’ve always thought that anorexia’s to do with a loss of control... " ....
“...uumm... you know, maybe it does start with a bit of a diet or something, but I’ve always thought that underneath that, there’s this thing of... there’s something in their life and they don’t have control of it... but by... you know... controlling their eating habits, you know, their regime... going and doing physical exercise... that’s the way that they have control in their life... " Jane (24 years):

“...but, yeah... my understanding is that... when you start to lose weight, you don’t necessarily believe that you’re losing enough?" (questioning tone). ..... “...that you need to keep losing it, so you keep going, but I think it’s tied in with the obsession, and the sense of control... feeling that you’ve got some control in your life, and if that means losing weight... if you keep losing the weight, you’ll have control over something." Leanne (24 years).

In terms of behaviours employed by women with AN, both younger and older women seemed to focus on these areas. Both groups were candid regarding their attributions of this
particular aspect of AN, and while some responses again with the younger women were interpreted as judgemental in tone and focused on the sufferer rather than the disorder itself. This was not surprising given the focus in the literature on the AN sufferer as an individual (de la Rie et al., 2007; Nordbo et al., 2006; Woolrich et al., 2006). This is demonstrated by the following examples:

"...or they’re throwing up and that sort of thing." ... "I don’t know how anyone could do that." ...... "...the vomiting would have to have a physical effect...yeah, I just think the throwing up is gross...it’s freaky...and umm, also, I don’t know, probably they couldn’t concentrate as well either because they’re not having the nutrition." ...... "... umm, so unless they’re taking like tablets or anything, but chances are they won’t be...[pause]...I guess if they’ve let themselves get to that stage." Shelley (18 years).

“You know, like with calorie counters...reading the back of the packets...and I just think that’s stupid and a waste of time.” ...... “...because if you’re happy in yourself, you wouldn’t need to do that or to... to change.” Kate (20 years).

In comparison however, women in the older age group also voiced a degree of negativity over behaviours employed by women with AN in the pursuit of weight loss. The majority of older women’s attributions were less-directly personal, appeared to think through and explain their responses in more detail, and consistent with Kelley (1967; 1973), were more cognisant of both personal and situational elements of the disorder. For example, the following explanation by Marg (24 years) was illustrative of an attribution made with in-depth consideration:

“I think they’d probably try and hide what they were actually up to, you know...[pause]...what they were actually doing to lose so much weight.” ...... “... these are all pretty extreme behaviours these women use to rid themselves of food...but in all fairness I do understand that that’s part of their condition, and I guess I’m just saying that because I’m trying to be honest, and I could never imagine myself doing anything like that...but then again, I’ve never been anorexic, so...”

The response from Leanne (24 years) provides a further example:

“...but I remember having read about someone with anorexia who did used to just...they’d just get on the treadmill and...just keep...[pause]...” ...... “...and not stop, and do it for, you know...a few hours” (laughs) ...... “Yeah...well because...they must be...they must get hungry...and when I get hungry, there’s no way I’d be study on a
treadmill for [pause]... "... "Yeah, even ten minutes if I’m hungry, so for them to not eat... and to work out like that..."

Psychological Disorder

While psychological effects including ‘cognition’, ‘affect’ and ‘behaviour’, as presented above were attributed by informants as complex in nature, which was consistent with research by Signorini et al. (2007) and Strober et al. (2006), these were further identified within the context of AN as a ‘psychological disorder’. Although some of the attributions as stated in the examples provided were markedly personal in nature, they were made within the context of discussion of AN as a serious condition, and in this way can also be interpreted as inherently contextually-based. Indeed, this level of interpretation proposed by the researcher in the present study has been supported on a conceptual level both within the AN literature (Nordbo et al., 2006; Serpell et al., 1999; Strober et al., 2006), and attribution literature (Kelley, 1967; 1973; Locke & Pennington, 1982; Martinko & Thomson, 1998). With this in mind, the attributions made by both younger and older women recognised AN as a complex psychological disorder, as shown by Erin (20 years):

“You know, like if you think what you’re doing is normal and that, you’re not going to change your behaviour because you still perceive it as normal, but if you finally... like if you admit, ‘ok, I’m anorexic and I have a disease’ ... ... “... you would have to admit it before you can start changing it.”

Also the following statement from Andrea (18 years):

“Like, you can’t just say to them, ‘oh, you should eat some more’... like, it’s... gone beyond that...” ....... “... so... I guess you just have to make sure that people don’t... [pause]... just presume it’s food... like, ... you’d have to go about it with the whole problem, rather than just the eating... which is why it’s not just physical, it’s psychological as well.”

The following comments from women in the older age group were similar in nature, with the following response provided by Marg (24 years):
"Yeah, well it is a psychological condition... it's an illness... which... I mean, there are physical consequences of that... but I don't think it's something that women with anorexia choose to do." "... and I just think that anorexia is probably something that... an illness that would have to be... well, they'd fight it, - I mean, attempts to help them... so it would be something that wasn't that easy to recover from, or to get out of... once they were in that pattern."

Tina (25 years) spoke of AN as a psychological disorder in the following way:

"...you know, if someone can stand in the mirror and all their bones can be showing, and you know, they might be tired and exhausted, and not be able to concentrate... and yet because they're so focused on... what's going on in their head... it would be a bit like an addiction I would say, but you wouldn't realise that it was out of control until... " "...you suddenly realise or have been forced... to realise..."

Michelle's (24 years) concern was as follows:

"...I guess that it's one of those things also that can go unnoticed for quite a while," "...and they might end up sick before anyone actually does notice, so it's already been going on and they've been in those patterns for a long time already..." "...and yeah, it becomes a way of life."

Of particular interest was the attribution made by Marg (24 years), in terms of the definition of AN as a psychological disorder and its implications for what people thought about it who did not have the condition. The following message served as reinforcement of Furnham and Hayward's (1997) and Stewart et al.’s (2006) statement as to the lack of understanding into the social attributions of AN:

"...perhaps also tied in with peoples perceptions of what anorexia actually is... I mean, we're told that it is 'starving yourself'... which implies one's free choice to do that behaviour... but I think it's much more complex than that." "... it's not just an 'eating issue'... even the term 'eating disorder' comes across to those who might not know a lot about it as... [pause]... well, pretty restrictive... so people see that and think, 'ok, it's just about food'."

**Contextual Effects**

Consistent with Hepworth’s (1999) and Scott’s (1997) conceptualisation of AN as a condition that occurred within a social context, lay attributions made by both younger and older women made repeated reference to social-contextual and cultural influences. Contextual effects
as a major theme in the present research were subsumed by the sub-themes of social comparison, social influence, and family and friends. Participants also attributed externally (Kelley, 1973; Locke & Pennington, 1982) in their thoughts and opinions of the context surrounding AN as a serious disorder, recognising that consistent with Hepworth (1999), AN did not occur in a social vacuum.

**Social Comparison**

Importantly, the sub-theme of 'social comparison' in relation to women with AN and also the disorder itself received unanimous mention from each informant, and emerged as a prominent attribution from the current study's social perspective. Kelley’s (1967; 1973) concept of consensus of attributions between individuals received considerable qualitative support in the present research. Also of note was that counter to negative, heavily-personalised attributions (Locke & Pennington, 1982) made by women in the younger age group regarding physical appearance and behaviour in particular, and to a lesser extent personal harm, any hint of this in either age group was absent in respect to social comparison, as evidenced by the following example from Andrea (18 years).

"I don’t know, maybe peer pressure and stuff...like...[pause]..." "If...[pause]...I don’t know anyone who’s done this...but you know, if you had a friend who was anorexic and losing weight, and like I’ve heard people who’ve had diets together and stuff, and if there’s two of them, you know, you’re being supportive for each other, but it could be detrimental to your body." "Yep...it’s like, you know, you used to play sports against your friends, but now you diet against your friends."

Rachel’s (20 years) attribution towards the social pressures impacting on women with AN highlighted the ways in which the social comparison process unfolded:

"How they look in a particular set of clothes, how things look on them compared to other girls, and other girls and their weight, and how popular they seem to be, and how much fun they seem to be having..." "...and they can see how other people are up close, but they can’t see the real them."
In addition, Sara (20 years) spoke in social comparison terms of the perceived reasons that underpinned the lay person's difficulty with understanding why some women developed AN:

"Yep... and also because, if you could never... if you could never imagine... *yourself* ever doing that, to yourself, then it's hard to imagine why someone else would do it to themselves..."  "...if you feel that you can't relate in any way then it's pretty hard to understand."

In the same way, attributions made by women in the older age group in terms of social comparison between and by women with AN were made by Michelle (24 years):

"Groups of girls, yep, definitely."  "Uumm [pause]...I don't really know how... how the whole thing would start, but I guess, kind of comments about, 'oh, you're so skinny', or 'she's so skinny', and wanting to be like that, and... uumm...yeah, general discussions, you know... probably over and over again about, you know, their own weight."  "...and the other ones sympathising, 'well, you know, I don't like mine either... even making a pact..."

Also, Ingrid (26 years) expanded on the above concept from Michelle, attributing the association between young women with AN and social pressures:

"Young women are just trying to fit in, to be what they are brought up to believe is normal... also, peer group pressure would be a big factor... young women would want to be like their peers because they don't want to be considered the fat one that is left out."  "I don't think they would see the true image of themselves, and even when they do get to an ideal weight they wouldn't recognise it, and would keep on dieting or starving, or purging... they'd always believe that they are still overweight."

Of further relevance to the issue of social comparison was its influential effect not only on women with AN, but on society as a whole. Tina (25 years) voiced the following opinion to this effect, which conceptually bridged the gap between social comparison in relation to AN, and social influence as a concurrent, relevant phenomenon.

"Uumm... I think it's a good thing that now it's being brought to a lot more peoples attention."  "...that, you know, uumm... it is a big issue, especially uumm... for women that are in a position to be role models... and showing that this is unhealthy... uumm, I think that's a positive thing."
Social Influence

'Social influence' as distinct from 'social comparison' emerged as a related sub-theme that while similar in substance, was different in focus. In other words, while 'social comparison' in the current study referred to the attributions informants made regarding the AN sufferer's comparison of self to others, and vice versa, social influence as a sub-theme was further subsumed by mention of celebrities, media and retail influences. The media as a source of social influence on women with AN was viewed without exception by every informant in both age groups as a major player, and received much criticism to that effect. Further, while there did not appear to be qualitative differences in the personalisation of informants' attributions with respect to 'social influence', external attributions made in respect to the social context were extremely candid. In short, given the broader, contextual perspective of the social influence sub-theme, it was not surprising that all attributions made targeted not the AN sufferer, but the social context of which they were a part (Kelley, 1967; 1973). This was outlined by Andrea (18 years).

"Probably like... the celebrity thing? (questioning tone)... where, you know, you see celebrities every day [pause] ... and they're just like... stick figures." ...... "... and like, it's so unrealistic." ...... "... but if you're in that mind-set then you're not going to see that as unrealistic..."

The following message from Erin (20 years) was further illustrative of social influence:

"You see them in, umm... newspapers and movies, and that sort of thing." ...... "... so it's always reinforcing the idea that to be perfect, or to be, umm... famous and well-known and liked, you know, you have to be skinny... so I think that's [pause]..." ...... "It's portrayed as being... normal... and being popular and that, but it's still... but it's not? (questioning tone) It's just the way the media is portraying it... and if someone's perhaps in the early stages of anorexia or if they're... quite advanced in it... that could possibly contribute, yeah... I mean, especially when you see it every day."

Another example was mentioned by Sara (20 years):

"Well, I guess [pause]... there's always the media..." ...... "... and the... models... and the pretty people on the front of the magazines that are all stick-thin, and... [pause]..." ...... "... the ideal woman, so, I don't know... a lot of girls grow up wanting to be models and..."
that sort of thing, so I guess that would contribute to... wanting to lose weight and be thin, and all the rest.”

In line with younger informants, women in the older age group attributed similar messages in terms of the effects of social pressures on women to appear a particular way.

Consistent with Hepworth’s (1999) conceptualisation of this typically-Western phenomenon, Tina (25 years) outlined the following example:

“...I mean, it’s a huge thing at the moment...you look...you turn on the ..television or you open a magazine, and there’s all this stuff on like Nicole Ritchie and all these girls...”

... “...bones and all...and I mean, what sort of image is that putting out for young girls...” ..... “...typical as that sounds to say that the media has such an effect, I think it really does, because girls are so impressionable at that age.”

Also, attributions made towards social influence were not restricted to television and film media sources, with magazines also named as influential on women who were vulnerable with AN by Leanne (24 years):

“... they also have articles ...about... uumm ...dieting, and...[pause].” ..... “...and they make out like it’s about being healthy... but you know, I’ve read the diets, and don’t think that they’re...pushing that idea.” ..... “I think that someone with anorexia would see the picture, think about starting the diet, and perhaps they would think that they’re not losing the weight fast enough?”

Of further interest was that magazines as an information source were mentioned in relation to AN by Leanne (24 years):

“Yeah, yeah... because, as well...no matter, you know, like I said, I’ve seen interviews, I’ve seen some documentaries, I’ve read some... umm...I’ve read stuff for uni...I’ve read stuff in magazines, but...I think that...I don’t think it really gets down into the...nitty gritty of what is actually going on for those girls.”

Also in relation to the sub-theme of ‘social influence’, was the finding that only the younger informants mentioned social influence with AN in relation to retail outlets. Informants in the older age group did not make similar externalised attributions regarding AN, the reasons for which were unclear. Further, while the differences between the age groups in the present study were minimal, the fact that subtle differences have appeared with this finding has warranted
further consideration in future studies, in particular from a developmental perspective to investigate this further.

These findings are supported by Alonso et al., (2005) who suggested that the ways in which social influences have contributed to AN remained underexplored, although acknowledged that the promotion and maintenance of a thin body shape as aesthetically desirable had been associated in part with media and other social factors influencing peer and family influences. This has been a commonly recurring theme in the AN literature that has received much support (Couturier & Lock, 2006; Hepworth, 1999; May et al., 2006; McVittie et al., 2005; Scott, 1997).

As an illustration of the attributions elicited from the younger women in the present study however, the following finding has been presented from Andrea (18 years):

"... like, also, you go in and like because you know yourself, what size you are..." 
"... so you grab that one off and if it doesn't fit, you're like, 'well, what's wrong?' ...like you know, you're already doubting yourself...you're going to go...you know...consider that it's something wrong with you rather than something wrong with the clothes being big sizes." 

"They'd probably think that they'd put weight on...and [pause]...they'd like,yeah...like that I guess, and if their size is different, then they must have [pause]...put on some weight, and then they'll be like, you know, 'I have to lose weight'.”

Another perspective illustrative of attributions made by younger informants towards the effect of retail outlets on women with AN was made by Sara (20 years):

"Uumm...so there's definitely pressure, especially when you want to go shopping and everything's suited to a size 2 and you're not a size 2." 
"...and that would affect peoples...yeah..." 
"Yeah, and you kind of feel like, weird...if you have to go further back into the row to find your size." 
"So, I think that would contribute to people wanting to lose weight." 
"... if you were so consumed with your weight you'd just be...looking at them and wanting to be them and wishing you looked like them, so I guess you'd try and do anything in your power to look like that.”

With the above attributions in mind, an alternative perspective was put forth by Kate (20 years), an employee at a retail outlet who also attributed externally in terms of the relationship between retail stores as a form of social influence:
Social Attributions of Asymptomatic Women Towards Anorexia Nervosa

"Umm... well I personally... just because [pause]... like, I work at a clothes store?" .......
"... so I'm always, you know, surrounded by pictures of models who are like picture perfect... like, actually there's a lady that comes into my work all the time..." .......
"... I think she is anorexic, but she doesn't see it." .......
"... I mean... I'm not sure that she is anorexic, I'm not sure how you'd classify it, but yeah... as I was saying, she's very thin."

Family and Friends

Finally, attributions made by informants also referred to 'family and friends' within the broader category of contextual effects. Family studies of the social dynamics of living with AN and its associated weight concerns have been well-documented (Grace, Kelley, & McCain, 1993; May et al., 2006). Immediately apparent was the additional parallel of this finding with Kelley's (1973) inclusive conceptualisation that attributions of others were situated within a contextual framework. Attributions in terms of family and friends as a component of contextual effects did not appear to show any major differences in tone, with both groups projecting an essence of concern and the realisation of AN as a serious disorder that impacted not only on the individual but that created stress for the family unit as a whole. Examples of attributions made by informants in relation to AN and the family context included the following thoughts from Erin (20 years):

"But, you know... also I mean, families don't [pause]" .......
"... if... you... you and your family spend time watching tv and that together, and your family doesn't say anything about these skinny models you're going to think, 'wow, it is normal'...
"... yeah... and I guess it's the society that's seen as normal, that's right, that you know... you should warn your kids about drugs and that, but with things like eating disorders and that... well... 'it's a choice... it's not a big problem, so... we don't need to talk about that'."

In addition, the following attributions were made by younger women:

"Yeah, but umm... I'm sure that... it has a huge toll on family of someone with anorexia, because it must be horrible to see someone you love... just [pause]...
"... Yeah, wasting away and they can't do anything about it." Kate (20 years).

"... I don't know, I'm not sure who the main people like, who would tell women that they're anorexic... probably family members and that sort of thing." .......
"... so yeah, getting them to admit that they've got a problem is like a huge thing anyway, so it would
just keep going on, and spiralling out until... [pause]...” ... “...it gets drastic.” Shelley (18 years).

In comparison to younger informants, women in the older age group made attributions similar in style, although older informants were more descriptive and explanatory in expression of their thoughts and opinions, with a broader perspective taken by Ingrid (26 years):

“...and that old thing about 'what will our friends or neighbours think'?” ... “...and in a way, a capitalist society has a lot to answer for, where children are given money instead of love, so they go out and buy a dress for a quick fix, instead of the parent spending time with them... I guess in a psychological realm, anorexia is a cry for help, for love, as well as an issue of personal control.”

Another explanation by Tina (25 years), while personal in focus towards the sufferer, also referred to the family of women with AN in terms of contextual effects:

“Ummm...I think that they would maybe be a little bit defensive, in the way that, 'this is my decision, this is my life and why are my friends and family trying to force food into me or trying to make me realise what's going on?'...I think that they would probably take it more negatively than positively.” ... “I don't think that they...would understand that other people were trying to help them, ummm...and that may link back to their other issues...if they've grown up in...you know...dysfunctional families or something like that.” ... “...it sounds extremely complex...and that's why I don't...I've never done any reading on it, I mean, it's very interesting.”

In a related manner, the family context of women with AN has been the subject of much research from the perspective of both the family and the sufferer (Alonso et al., 2005; May et al., 2006; Woolrich et al., 2006). A common theme found in such studies was seen in Woolrich et al.’s. (2006) research that overprotective and authoritarian parenting was hypothesised as implicated in the development of AN, however it was emphasised by Woolrich et al. (2006) that this particular theory remained unsubstantiated. It was suggested however that feelings in diagnosed anorexics of a high sense of personal responsibility, but low sense of personal control during early years leant some support to the developmental theory of AN (Woolrich et al., 2006). Consistent with the overriding theme of the current research however, while the role of the family context and its interaction with sufferers of AN has been studied from the sufferer and family perspectives, the social
viewpoint of these issues has not been explored, with the exception of the above attributions made by participants.

Summary

As can be seen from presentation of the current study’s findings and interpretations, AN as a complex psychological disorder (Alonso et al., 2005; Nordbo et al., 2006; Serpell et al., 1999) was further reinforced in social terms, given the multifaceted content of lay, healthy women’s attributions. As well, it was also found that consistent with attribution theory (Kelley, 1967; 1973; Locke & Pennington, 1982; Martinko & Thomson, 1998), observers made both personal and situational attributions of others’ behaviour and actions; further, that personalised attributions tended to occur more so for events and situations perceived as negative (Eisen, 1979; Malle, 2006), as evidenced through younger women’s attributions of ‘appearance’ and ‘behaviour’ in particular. While the current study was qualitative in nature and therefore did not aim to quantify this phenomenon, it has nonetheless provided in-depth information in this area.

Suggestions of Participants

Unexpectedly, findings from the present research extended in a related manner beyond that of healthy women’s attributions towards AN and its sufferers, with several informants suggesting areas for future study. From this, it was evident that the semi-structured, in-depth interviews had stimulated thoughts in participants beyond the attributions requested through discussion of their opinions. Participants in both age groups made the following suggestions:

“...I just think that it would be interesting to have a look at... perhaps... the effects of having an anorexic parent.” ... “Yeah, just to kind of know whether the effects of anorexia on their body and their behaviours can be passed on to their children... whether they think the same, whether they realise it in their kids as well... whether the anorexic parent thinks it’s healthy having no hips, to have bones sticking out... yeah, it’s a frightening image.” (Kate, 20 years)

In the same way, the following suggestion was made by Tina (25 years):
“Yep, yep... mmm... I don’t know how much of a role genes have in it either... the genetic side of things... whether it sort of can run through families...” .... “I’ve never read anything about that, but that would sort of be interesting to know...” .... “...why one of us might go down that track and why one of us might not...” .... “...it is interesting, it’s a very interesting topic.” (Tina, 25 years).

Discussion

Overview of the Findings

The current research aimed to qualitatively explore through thematic content analysis the social attributions made by healthy, asymptomatic women towards AN and its sufferers. Social construction was utilised as the appropriate paradigm of choice through which to develop a foundation of understanding, in order to nurture the lack of social knowledge already mentioned (Furnham & Hayward, 1997; Nordbo et al., 2006; Stewart et al., 2006). Further, in order to maximise the depth of interpretation gained from the interview data, the 12 informants were divided into two equal groups by age to facilitate a qualitative comparison. A general finding was that women in the older age group from 23-26 years tended to talk through their responses in more detail than younger women aged 18-22 years, and gave more in-depth, comprehensive answers that had a greater essence of maturity in their content. In this way there appeared to be a subtle, qualitative difference between the two groups.

Similarly, in terms of attribution theory (Jones & Nisbett, 1972; Kelley, 1967; 1973; Locke & Pennington, 1982; Martinko & Thomson, 1998), slight differences were evident in the attributions made towards AN between younger and older women. However these appeared selectively between sub-themes of the main physical, psychological, and contextual categories, as will be discussed next within the context of the research questions. An unexpected finding that emerged was that some participants put forward their own suggestions for further study, which have been discussed as the final main pronouncement following those in relation to the research
questions. Limitations by way of methodology and scope will be acknowledged, along with indications for further research. Taken together, conceptual and theoretical support has been demonstrated for the relevance of AN to attribution theory from the present study that focused exclusively on these concepts from the social, vicarious perspective.

**Attributions of Asymptomatic Women Towards Anorexia Nervosa as a Psychological Disorder**

In relation to the first research question as to healthy women’s attributions towards AN as a psychological disorder, while there were a few exceptions mainly with younger informants, attributions towards AN as a grave, complex illness were more empathic, less judgemental than those seen in respect to the sufferer, and were inclined to be situational in nature rather than personal. Of particular relevance given Malle’s (2006) acknowledgement of actor-observer differences in which observers typically attributed personally to negative occurrences, was the fact that the present study did not make this finding to any extent in relation to AN as a potentially-fatal psychological disorder. Given also Couturier and Lock’s (2006) finding that recovery from AN was associated with adequate social support and improved psychosocial functioning, this was indeed encouraging. In terms of attribution theory (Jones & Nisbett, 1972; Locke & Pennington, 1982; Malle, 2006; Martinko & Thomson, 1998; Pruitt & Insko, 1980), there was little indication of any actor-observer asymmetry or fundamental attribution error (FAE) in reference to AN as a psychological disorder.

With this in mind, attributions made towards AN as a psychological disorder were contained largely within the contextual effects theme, and to a lesser extent psychological effects. Participants mainly attributed (Kelley, 1973; Locke & Pennington, 1982) their opinions externally, or away from the sufferer, recognising that consistent with Hepworth (1999), AN did not occur in a social vacuum. Similar to the research by Bem (1972) and Heider, (1958), informants in the present study as naive scientists did use information within their social context
to account for AN as a psychological disorder, and consistent with Kelley (1967; 1973) placed attributions within the entity framework of person, time and entity. Accordingly, lay attributions towards AN as a serious condition in itself were able to be appropriately applied from the social psychological perspective, which lent further support to the relevance and interconnectedness of the two concepts (Kelley, 1973; Malle, 2006; Nordbo et al., 2006). Next, attributions by informants in terms of the person component of Kelley’s (1967; 1971; 1973) entity perspective will be discussed in reference to the second research question regarding the AN sufferer.

**Attributions of Asymptomatic Women Towards Sufferers of Anorexia Nervosa**

In relation to the second research question as to healthy women’s opinions towards sufferers of AN, the attributions made tended to be markedly personal in nature, and at times quite direct, particularly with women in the younger age group of between 18-22 years. Further, attributions made towards the AN sufferer were contained largely within the physical effects theme, and to a lesser extent psychological effects. This was most evident in the ‘appearance’ and ‘personal harm’ sub-themes for physical effects, and also in the ‘behaviour’ sub-theme for psychological effects. Younger women seemed to focus heavily on the obvious physical signs of women with AN in terms of severe weight loss, starvation and other behaviours, which was not surprising given the highly visible nature of the condition, and grave impact of AN on the sufferer (APA, 2000; Fichter et al., 2006). While women aged between 23-26 years also mentioned physical effects in relation to the AN sufferer, the attributions made were explained in greater detail and were less judgemental in tone than those in the younger age group.

What was not apparent from informant’s responses however, was why women in the older age group from between 23-26 years differed in the tone and personalisation of their attributions from that of the younger women. These reasons are unknown and were not the focus of the study, however further research from a developmental perspective may help to understand these
differences. The one exception to the apparent imbalance between younger and older age groups in relation to attributions towards the AN sufferer, was that with the ‘personal harm’ sub-theme, responses in general were more holistic with both age groups of informants in the acknowledgement of women who suffered from AN. There was less of a tendency to attribute personally towards the AN sufferer in a judgemental manner with references to ‘personal harm’, than was apparent with the ‘appearance’ sub-theme.

Of interest in terms of the current study’s previous finding that in relation to attributions towards AN as a psychological disorder there was no apparent evidence of actor-observer differences, such as that stated by Locke and Pennington (1982), and Malle (2006). Conversely however, along with the highly-personalised tone of participant’s responses, particularly with those women in the younger age group and to a lesser extent older women aged 23-26 years, the findings regarding AN sufferers were consistent with Malle’s (2006) conceptualisation of actor-observer differences in relation to negative phenomena. In the case of the present research, AN sufferers tended to be viewed in a negative light particularly by younger informants in regard to the obvious, highly-visible physical consequences of AN, resistance and resilience to treatment, and the behaviours engaged in to achieve and maintain severe weight loss. These findings were consistent with previous research that confirmed the alarming physical and psychological impact of AN on the affected individual (Alonso et al., 2005; Fichter et al., 2006; Nordbo et al., 2006; Serpell et al., 1999; Strober et al., 2006; Woolrich et al., 2006). The present study has therefore qualitatively reinforced these findings in social terms.

**Attributions Towards Anorexia Nervosa and its Contextual Relevance**

Given this study’s dual perspective on AN and attributions, it was appropriate to contextually expand further from the social attributions made by observers towards AN and its sufferers. Consequently, comment has been made on its relevance and relationship to the wider
social context beyond the confines of the present research. AN was conceptually and theoretically placed within the context of attribution theory (Fishbein & Schwartz, 1984; Jones & Nisbett, 1972; Kelley, 1967; 1973; Locke & Pennington, 1982; Martinko & Thomson, 1998), through the exploration of healthy women’s thoughts and opinions by way of the social constructionist perspective such as that seen in Denzin and Lincoln (2003). It was apparent from the responses given that in general, AN was viewed from social terms as a serious, life-threatening condition. It was further evident that while there were subtle differences in the nuances of responses between women in each age group, both younger and older women consistently made both personal and situational attributions.

Consistent with Kelley’s (1973) general stance on attribution theory to the effect that it was not possible to separate the person from the context of which they were a part, the findings from this study have provided qualitative support for this assertion in relation to AN. What should also be noted in relation to the current study’s findings when applied to the wider social context was that attribution theory in itself was intended to represent social psychology in general terms, and not to be taken in a literal, concrete manner (Kelley, 1973). Participants through their exploration of attributions towards AN in the process revealed their own beliefs, biases, opinions and social stance. As a result, it has successfully connected the two concepts, and commenced much-needed study in a field of psychology that has evidenced an “AN of social knowledge”.

Limitations of the Present Study

While the present research succeeded in exploring the lack of research evident as to social, lay attributions towards AN (Furnham & Hayward, 1997; Stewart et al., 2006), three main limitations existed in terms of the methodology used and scope of the findings. First, it was beyond the scope of this study to definitively determine why women in the older age group from between 23-26 years did not focus as heavily on the physical effects of women with AN as the
younger informants aged 18-22 years, however the nuances of their responses provided valuable information that may be of use in further research. Second, the present study was designed as an exploratory exercise, and through the social constructivist paradigm (Denzin & Lincoln, 2003), succeeded in providing some insight into the current “AN of social knowledge”. Of course, no causal claims can be made, however it is hoped that future research along similar lines will provide the basis for further understanding.

Third, the data analysis stage was facilitated through the use of methods triangulation (Liampittong & Ezzy, 2005; Murphy, 1989), including extensive analytic review of the literature, semi-structured in-depth interviews, and unobtrusive observation of informants in order to maintain the rapport and “on topic” content of the data. However, it has nonetheless been acknowledged that the triangulation process may have been further improved through the additional use of focus groups as well as the interviews. Unfortunately, time and logistical constraints precluded such an action, however it is a methodology to consider in the future.

Conclusion

In conclusion, the present study aimed to qualitatively explore the social attributions made by healthy, asymptomatic women towards AN as a psychological disorder and its sufferers. Of concern for women with AN were research findings that self attributions of perceived success and self control from extreme weight loss served as positive reinforcement for the perpetuation of the disorder (Nordbo et al., 2006; Serpell et al., 1999; Woolrich et al., 2006). Of central relevance to the current study, while attributions towards AN were well researched from the sufferer’s perspective (Nordbo et al., 2006; Woolrich et al., 2006), similar understanding from the social viewpoint was lacking in comparison. In other words, an “AN of social knowledge” was apparent. Taken together, in addition to the precedent previously set by Furnham and Hayward
Given the lack of social understanding that was apparent in relation to AN, exploratory qualitative methodology utilising content analysis through the social constructivist paradigm was adopted in order to establish a foundation upon which future understanding could be built (Denzin & Lincoln, 2003). Also, a qualitative comparison by age was conducted between younger women aged 18-22 years and older women aged 23-26 years to maximise the depth of interpretation from the interview data. Content analysis of the interview transcripts revealed three main themes which were physical, psychological and contextual effects, each of which were subsumed by less abstract sub-themes.

In regard to healthy women’s attributions towards AN as a psychological disorder, aside from a few exceptions from younger informants, attributions were more empathic, and less judgemental than those seen in respect to the sufferer, and were inclined to be situational in nature rather than personal. In other words, there was little evidence of any actor-observer asymmetry (Locke & Pennington, 1982; Martinko & Thomson, 1998). Importantly, attributions made towards AN as a psychological disorder were contained mainly within the contextual effects theme, and to a lesser extent psychological effects.

Similarly, in respect to the attributions made towards sufferers of AN, the accounts given were of a markedly blunt, personal nature, particularly with younger women aged between 18-22 years. This was most evident in the ‘appearance’ and ‘personal harm’ sub-themes for physical effects, and also in the ‘behavioural’ sub-theme for psychological effects. Of note was that while older women aged between 23-26 years also commented on the physical effects of AN on the sufferer, these were presented with a greater sense of maturity and explanation than with younger women. The one exception to the imbalance in attributions made between the two age groups
was in relation to the ‘personal harm’ sub-theme in respect to the AN sufferer, with all participants responses exuding concern rather than contempt.

Limitations of the present study in terms of methodology and scope have been explained, in particular in relation to the question of why differences in the nature of attributions made between the two age groups appeared. This was not the focus of the current study and requires further investigation; however its appearance provoked interesting findings in terms of possible age differences, above and beyond the purely exploratory purpose of the research. An additional incidental finding was the suggestion by participants of avenues for further study into genetic factors associated with AN, which while not related to the research questions, served as evidence of the depth of thought engaged in by some informants.

Finally, AN was conceptually and theoretically placed within the context of attribution theory (Kelley, 1967; 1973; Locke & Pennington, 1982; Martinko & Thomson, 1998). It was apparent from the responses given that in general, AN was viewed as a serious, life-threatening condition. Consistent with Kelley’s (1973) general stance on attribution theory to the effect that the individual’s attributions could not be separated from the context of which they were a part, the present research has provided qualitative support for this assertion in relation to AN as a psychological disorder, and to sufferers of AN. In the process, it has addressed the “AN of social knowledge” already identified, connected the two concepts of AN and attributions, and confirmed that the psychological aspects of AN and attributions were not mutually exclusive, but integrative, relevant and interconnected (Kelley, 1973; Malle, 2006; Nordbo et al., 2006).
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Appendix A

UNDERSTANDING ATTITUDES TO ANOREXIA NERVOSA: A QUALITATIVE STUDY

My name is Natalie McDonald, and I am an Honours in Psychology student at Edith Cowan University. As part of my degree, I am required to undertake a research project. The Faculty of Computing, Health and Science Human Research Ethics Committee has approved this research. I am interested in talking to young, healthy women between the ages of 18-26 and exploring their beliefs, opinions and thoughts towards anorexia nervosa and how it affects young women.

Participation would involve a single interview of approximately 30-45 minutes duration. All information will be treated as strictly confidential, with interviews tape recorded and transcribed verbatim. No names or identifying information will be used to ensure privacy. A pseudonym will be used if required.

Your participation is entirely voluntary. You are free to withdraw from the study at any stage without any adverse consequences. At the end of this study, a report of the results will be available upon request. This report may also be published, but in no way will you, or any other participant, be identifiable.

If you are interested in participating in this research or if you have any questions, please feel free to contact me, Natalie McDonald on 0448 757 241 or by email on nrmcdona@student.ecu.edu.au, or my supervisor at the School of Psychology, Associate Professor Lynne Cohen on 6304 5575. If you are interested in speaking to someone independent of this research, please contact the Research Officer, Dr Dianne McKillop on 6304 5736.
Appendix B

*Interview Schedule*

1. What is your age?
2. What is your education level?
3. What are your thoughts concerning the physical effects of AN?
4. What are your thoughts concerning the psychological side of AN?
5. What do you think contributes to some young women of approximately your age developing a more serious eating disorder such as AN?
6. We are interested in your thoughts and beliefs about AN. Please can you share with me any other thoughts and beliefs you may have towards AN?
Letter of Introduction

Natalie McDonald
C/- Edith Cowan University
School of Psychology
100 Joondalup Drive
Joondalup WA 6027

Dear Participant

My name is Natalie McDonald, and I am an Honours in Psychology student at Edith Cowan University. As part of my degree, I am required to undertake a research project. The Faculty of Computing, Health and Science Human Research Ethics Committee has approved this research. I am interested in talking to young women and exploring their beliefs, opinions and thoughts towards anorexia nervosa and how young women are affected by it.

Participation would involve a single interview of approximately 30-45 minutes duration. All information will be treated as strictly confidential, with interviews tape recorded and transcribed verbatim. No names or identifying information will be used to ensure privacy.

Your participation is entirely voluntary. You are free to withdraw from the study at any stage without any adverse consequences. At the end of this study, a report of the results will be available upon request. This report may also be published, but in no way will you, or any other participant, be identifiable.

If you are interested in participating in this research or if you have any questions, please feel free to contact me, Natalie McDonald on 0448-757-241 or by email on nrmcdona@student.ecu.edu.au, or my supervisor at the School of Psychology, Associate Professor Lynne Cohen on 6304 5575. If you are interested in speaking to someone independent of this research, please contact the Research Officer, Dr Dianne McKillop on 6304 5736.

Yours sincerely

Natalie McDonald
Appendix D

Notice of Informed Consent

I, ____________________ (name), on ___________ (date), state that I have read and understood the letter of introduction for the research thesis entitled: “Social attributions of anorexia nervosa: A qualitative study”. In addition, these details have been verbally explained to me by the researcher ____________________ (name), along with the requirements of participation. Any questions that I have had have been answered fully.

I further understand that I am under no obligation to participate in the study. As a participant, I have the right to refrain from answering any questions, and am free to withdraw from the study at any stage without adverse consequences. All of my information will be treated as confidential, with interview tapes and transcripts kept in locked storage, and computerised documents adequately secured. I agree to the interview being audio taped and transcribed.

I hereby consent to participate in this research project.

____________________ (participant signature)

____________________ (researcher signature)