The Process of Recovery from Eating Disorder Symptomatology

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Statement of Authorship and Sources

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution. No other persons work has been used without due acknowledgement in the main text of the thesis. All research procedures reported in this thesis received the approval of the Australian Catholic University Human Research Ethics Committee.

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Abstract

The purpose of this thesis was to investigate the process of change in relation to eating disorder symptomatology. Two models of the process of change, the Transtheoretical Model of Change (TTM; Prochaska & DiClemente, 1982) and the Adaptive Change Model (ACM; Bowles, 2000), provided the theoretical foundation for this investigation. The first study of this thesis provided a longitudinal investigation into the relationship between readiness to change and an improvement in eating disorder symptomatology over time in a non-clinical sample. A support factor comprising negative emotions, social support, and inner drive, theorised to influence the relationship between readiness to change and eating disorder symptomatology over time, was also investigated. A non-clinical sample of 140 female participants completed three baseline measures: the Eating Disorder Inventory-3 (EDI-3; Garner, 2004) assessing eating diosrder symptomatology, the Anorexia Nervosa Stages of Change Questionnaire (Rieger et al., 2000) measuring readiness to change, and the Adaptive Change Questionnaire (Bowles,) measuring readiness to change and the support factor. The EDI-3 was administered again at three month and six months following the initial point of data collection. Contrary to expectations, neither readiness to change nor the support factor aided in the prediction of improvments over time in the participants' levels of eating diosrder symptomatology. Participants' prior levels of eating disorder symptomatology and body mass index were found to predict their subsequent levels of eating disorder symptomatology. These findings indicated that the participants did not change in accordance with the princples of the TTM or the ACM, suggesting they did not know of or use the best theoretically defined means of engaging in the change process (i.e. in accordance with the TTM or the ACM). The second study of this thesis investigated this assertion via qualitative methods. A

sample of 179 participants who had experienced an eating disorder and 166 lay participants provided information regarding their views on the process of recovery from an eating disorder and the factors that could aid and hinder this recovery. Content analysis of the participants' responses regarding the process of recovery revealed three categories describing the steps involved in recovery. These categories comprised the initiation of the recovery process, seeking help and support, and dealing with thoughts, feelings, and behaviours related to the eating disorder. Two additional categories emerged describing the difficult and ongoing nature of recovery and communicating a lack of knowledge about the recovery process. Content analysis of the participants' responses regarding factors that aid recovery revealed five categories. These categories consisted of support, qualities of the environment, personal qualities of the individual experiencing an eating disorder, tasks of the individual, and professional treatment. Content analysis of the participants' responses regarding factors that hinder recovery revealed seven categories. These categories pertained to unhelpful relationships with others, daily living, treatment, difficult thoughts and emotions, compounding and maintaining factors, valued and habitual aspects of an eating disorder, and difficulties with food, weight, and shape. The participants' responses were also categorised into the factors of the TTM and the ACM to investigate whether the participants would explain the process of recovery using concepts similar to those found in these models. The largest proportion of the participants' responses corresponded with the action stage of change found in both of these models, the TTM helping relationships process factor, and the ACM social support factor. This finding indicated that the participants tended to be unaware of or undervalue the remaining factors of these models. On the basis of the findings of this thesis it was suggested that, for individuals to engage in more effective change with respect to their eating disorder symptomatology, it may be beneficial to first gain a

greater awareness of the TTM and the ACM in their totality and how these models can be used to more effectively engage in the change process. It was also suggested that individuals with an eating disorder, as well as their family and friends, may benefit from learning about the categories that naturally emerged from the participants' responses describing the process of recovery from an eating disorder and the factors that can aid or hinder recovery. It was anticipated that this information could not only be a useful point of discussion during treatment, but also during discussions about relapse prevention and discharge planning.

Publications and Presentations

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CHAPTER ONE

An Investigation into the Change Process Related to Eating Disorder Symptomatology

The eating disorders are debilitating psychological disorders, frequently associated with a chronic course (Herzog et al., 1999). It is imperative that the process of recovery from these disorders, as well as various factors related to poor and good outcomes from these disorders, are better understood. Furthermore, it is important that the mechanisms related to a poor or good outcome for individuals experiencing lower levels of eating disorder symptomatology, and who may thus be at risk of developing an eating disorder, also be elucidated. A greater understanding of the processes related to improvement in eating disorder symptomatology for individuals experiencing varying levels of eating disorder symptomatology will lead to improvements in the interventions offered to these individuals. This in turn may help reduce the prevalence and chronicity of these disorders. The purpose of this thesis was to examine two different conceptualisations of the process of change or recovery from varying levels of eating disorder symptomatology and to explore the factors that aid and hinder recovery.

This research is divided into two studies. In the first study, eating disorder symptomatology in a non-clinical sample was longitudinally examined. The purpose of this study was to investigate factors theorised to impact upon improvements in eating disorder symptomatology over time. Research into the eating disorders is increasingly incorporating the Transtheoretical Model of Change (Prochaska & DiClemente, 1982) and the construct of readiness to change. Readiness to change has been found to be a predictor of improvements in eating disorder symptomatology over time in clinical samples of individuals diagnosed with an eating disorder. However, no known research has investigated whether this relationship is also evident in a non-clinical sample of

individuals experiencing varying levels of eating disorder symptomatology. Furthermore, no known research has investigated additional variables that may impact upon the relationship between an individual's readiness to change and improvements in their eating disorder symptomatology over time. The first study of this thesis was therefore designed to investigate these relationships. A great deal of the research into readiness to change and the eating disorders has employed the Transtheoretical Model of Change (Prochaska & DiClemente, 1982). This model is not without criticism however, and other models of change have been proposed that may be more applicable to the eating disorders. Thus the aim of the first study of this thesis was to empirically examine readiness to change as conceptualised in the Transtheoretical Model of Change and in an alternative model of change, the Adaptive Change Model (Bowles, 2000), in relation to changes in eating disorder symptomatology. The results of this study should be of interest to both clinicians and researchers working in the fields of eating disorder treatment and prevention, as factors influencing the course of eating disorder symptomatology over time will be explored. The results of this study will inform the development of more effective intervention programs for individuals experiencing eating disorder symptomatology.

In the second study of this thesis the views of individuals experiencing an eating disorder and lay people who have not experienced an eating disorder, regarding recovery from the eating disorders, were explored qualitatively. Participants were asked to describe the process of recovery from an eating disorder, as well as the factors that aid and hinder recovery. The participants' responses were subjected to content analysis, to reveal those factors that naturally emerged describing the process of recovery from an eating disorder, and the factors that aid and hinder recovery. The participants' responses were also compared to the various factors found in the Transtheoretical

Model of Change (Prochaska & DiClemente, 1982) and the Adaptive Change Model (Bowles, 2000). The purpose of this step of the research was to examine whether the participants would explain the process of recovery using concepts similar to those found in these models. Similar to the information derived from the first study of this thesis, the information derived from this second study should be of interest to clinicians and researchers working in the field of eating disorders, as factors considered important in recovery from an eating disorder were explored. This information will assist in the development of more effective intervention programs that individuals experiencing an eating disorder will find appealing and helpful, as these interventions will be based on information provided by individuals who have themselves experienced an eating disorder.

Before turning to a detailed explanation of the problem under investigation, a general overview of eating disorders and their epidemiology will be conducted. This will be followed by a review of the two different models of the process of change that were employed in this thesis.

Eating Disorders

Diagnoses, Epidemiology, and Course

The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR*; American Psychiatric Association [APA], 2000) contains two major categories of eating disorders: anorexia nervosa and bulimia nervosa. An additional category of an eating disorder not otherwise specified is also included in the *DSM-IV-TR* (APA) to classify those eating disorders that do not meet the diagnostic criteria for a specific eating disorder. The following is a brief overview of the diagnostic criteria, epidemiology, and course of each of these eating disorders.

Anorexia nervosa.

According to the *DSM-IV-TR* (APA, 2000) an individual experiencing anorexia nervosa is characterised by a refusal to maintain body weight that is at or above a minimally normal body weight for the individual's age and height. Generally, an individual is considered to meet this criterion for being underweight if they weigh less than 85% of the weight considered normal for their age and height, or alternatively have a body mass index (BMI; calculated by dividing weight in kilograms by height in metres^2) of 17.5 kg/m^2 or below. An individual experiencing anorexia nervosa may have a low body weight as a result of weight loss, or due to the failure to make expected weight gains during a period of growth (i.e. during a period of time in which the individual is growing in height). Anorexia nervosa is also characterised by an intense fear of gaining weight or becoming fat, even though the individual experiencing the disorder is underweight. An individual experiencing anorexia nervosa also manifests a significant disturbance in how they experience their body weight or shape, is unduly influences by their body weight or shape in making self-evaluations, or denies the seriousness of their current low body weight. In postmenarcheal females with anorexia nervosa, amenorrhea (defined as the absence of three consecutive menstrual cycles) is also experienced.

Within the *DSM-IV-TR* (APA, 2000) two subtypes are used to specify whether or not an individual with anorexia nervosa engages in regular binge eating and purging. Binge eating is defined as consuming during a discrete period of time a quantity of food that is larger than most individuals would eat under similar circumstances. During this period of binge eating, the individual tends to experience a sense of lack of control over their eating. Purging is used to refer to inappropriate compensatory behaviours used to

prevent weight gain. These behaviours can include such things as self-induced vomiting or the misuse of laxatives, diuretics, or enemas. Individuals with the restricting type of anorexia nervosa do not regularly engage in binge eating or purging but rather tend to achieve their weigh loss through dieting, fasting, or excessive exercise. An individual with the binge-eating/purging type of anorexia nervosa regularly engages in either binge eating or purging behaviours, or both.

The majority of individuals experiencing anorexia nervosa are female, with over 90% of all cases occurring in females (APA, 2000). The incidence rates of individuals experiencing anorexia nervosa are reportedly highest for females aged between 15 and 19 years, with these individuals accounting for approximately 40% of all identified cases of anorexia nervosa and 60% of female cases of anorexia nervosa (Hoek & van Hoeken, 2003; van Hoeken, Seidell, & Hoek, 2003). The prevalence of anorexia nervosa is reportedly between 0.1% and 0.9% in females aged between 11 and 35 years, with an average prevalence of 0.3% (Hoek & van Hoeken; van Hoeken et al.). Research incorporating less stringent diagnostic criteria (i.e. including partial syndromes of anorexia nervosa that may be classified as an eating disorder not otherwise specified) tend to report higher prevalence rates for anorexia nervosa (APA; Hoek & van Hoeken; le Grange & Loeb, 2007; van Hoeken et al.). Research investigating anorexia nervosa in males indicates that the incidence of these cases is below 1.0 or even below 0.5 per 100,000 of the population per year (Hoek & van Hoeken).

Research into the course of anorexia nervosa has tended to produce variable results. Rates of full recovery from anorexia nervosa reported in the research literature range from 27% to 76% (Eddy et al., 2008; Polivy, 2007; Strober, Freeman, & Morrell, 1997). Rates of partial recovery reported in the literature range from 11% to 84% (Eddy et al., 2008; Herzog, et al., 1999; Kordy et al., 2002; Strober et al.). However, these

recovery rates for anorexia nervosa may be somewhat dependent on the definition of recovery used when the rates are calculated (Couturier & Lock, 2006a, 2006b). Research also indicates that individuals initially diagnosed with anorexia nervosa often progress over time to meet the diagnostic criteria for bulimia nervosa or a different subtype of anorexia nervosa (Eddy et al., 2008).

Bulimia nervosa.

In order to qualify for a diagnosis of bulimia nervosa as defined in the *DSM-IV-TR* (APA, 2000), an individual must binge eat and employ inappropriate compensatory behaviours an average of two times a week for a period of three months. The inappropriate compensatory behaviours associated with bulimia nervosa and used to prevent weight gain include self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise. Additionally, an individual experiencing bulimia nervosa is unduly influenced by body weight or shape in making self-evaluations. Importantly, bulimia nervosa is differentiated from anorexia nervosa binge-eating/purging type as individuals' with bulimia nervosa are able to maintain body weight that is at or above a minimally normal level

According to the *DSM-IV-TR* (APA, 2000) two subtypes are used to specify whether or not an individual with bulimia nervosa engages in the regular use of purging behaviours. An individual with the purging type of bulimia nervosa regularly engages in self-induced vomiting or the misuse of laxatives, diuretics, or enemas as a means of compensating for their binge eating. An individual with the nonpurging type of bulimia nervosa does not regularly engage in self-induced vomiting or the misuse of laxatives, diuretics, or enemas, but instead employs other inappropriate compensatory behaviours such as fasting or excessive exercise to compensate for their binge eating.

The majority of individuals experiencing bulimia nervosa are also female, with approximately 90% of cases occurring in females (APA, 2000). The incidence rates of bulimia nervosa are highest for females aged between 18 and 24 years (Dalle Grave, 2003; van Hoeken et al., 2003). The prevalence rate of bulimia nervosa for females aged between 11 and 36 years is approximately 1%, however prevalence rates vary from between 0% to 4.2% across studies (Hoek & van Hoeken, 2003). The prevalence rate of partial syndrome bulimia nervosa (more stringently defined as an eating disorder not otherwise specified with bulimia nervosa-like symptoms) may be substantially higher, perhaps as high as 5.4% (Hoek & van Hoeken; van Hoeken et al.). Research investigating bulimia nervosa in males indicates that the incidence of these cases is around 0.8 per 100,000 of the population per year (Hoek & van Hoeken).

The rates of recovery from bulimia nervosa tend to be higher than recovery rates for anorexia nervosa (Richard, Bauer, & Kordy, 2005). Rates of full recovery from bulimia nervosa reported in the research literature range from 53% to 74% (Clausen, 2008; Herzog et al., 1999). Rates of partial recovery reported in the literature range from 30% to 99% (Herzog et al., 1999; Kordy et al., 2002). However, these recovery rates for bulimia nervosa may be somewhat dependent on the definition of recovery used when the rates are calculated (Olmsted, Kaplan, & Rockert, 2005). Research also indicates that individuals initially diagnosed with bulimia nervosa may progress to meet criteria for another eating disorder, particularly if they have a past history of anorexia nervosa (Eddy et al., 2007; Keel, Mitchell, Miller, Davis, & Crow, 1999).

Eating disorder not otherwise specified.

Within the *DSM-IV-TR* (APA, 2000) the eating disorder not otherwise specified category is used to diagnose disorders related to eating that do not meet the criteria for a

specific eating disorder. For example, an eating disorder not otherwise specified may be diagnosed for a female who meets all of the criteria for anorexia nervosa but has regular menses. It may also be diagnosed for an individual who has experienced significant weight loss and who meets all of the criteria for anorexia nervosa except that their current weight is within the normal weight range for their age and height. Alternatively, an individual who meets all of the criteria for bulimia nervosa but whose binge eating and inappropriate compensatory behaviours have occurred less than twice a week or for a duration of less than three months may also be diagnosed with an eating disorder not otherwise specified. Furthermore, an eating disorder not otherwise specified may be diagnosed for an individual of normal body weight who engages in inappropriate compensatory behaviour after the consumption of small amounts of food.

The *DSM-IV-TR* (APA, 2000) describes an individual with an eating disorder not otherwise specified as potentially having a subthreshold eating disorder. A subthreshold eating disorder may be defined as a clinically significant anorexia nervosa- or bulimia nervosa-like condition in which some, but not all, of the diagnostic criteria for anorexia nervosa or bulimia nervosa are met (le Grange & Loeb, 2007). Research indicates that the label eating disorder not otherwise specified may not represent a distinct category of eating disorders, with individuals being better described as experiencing either subthreshold anorexia nervosa or subthreshold bulimia nervosa, rather than being clustered together into the eating disorder not otherwise specified category (le Grange & Loeb). As such, it may be difficult, or even redundant in many instances, to try to differentiate between an eating disorder not otherwise specified and subthreshold anorexia nervosa or subthreshold bulimia nervosa. Research further indicates that subthreshold anorexia nervosa and subthreshold bulimia nervosa may be

associated with the later development of anorexia nervosa or bulimia nervosa (le Grange & Loeb; Patton, Coffey, & Sawyer, 2003).

Recent data indicates that the majority of individuals with an eating disorder do not meet the *DSM-IV-TR* (APA, 2000) diagnostic criteria for anorexia nervosa or bulimia nervosa, but instead meet the criteria for an eating disorder not otherwise specified (Wonderlich, Joiner, Keel, Williamson, & Crosby, 2007). Thus eating disorders not otherwise specified are hypothesised to occur at higher rates than full-syndrome eating disorders, with some reports indicating that the prevalence of eating disorders not otherwise specified may be at least double the prevalence of full-syndrome eating disorders (Gowers & Bryant-Waugh, 2004; Moor, Vartanian, Touyz, & Beumont, 2004; Polivy & Herman, 2002). There is very little epidemiological data available that reports the prevalence or incidence rates of eating disorders not otherwise specified (van Hoeken et al., 2003). Hay, Mond, Buttner, and Darby (2008) report a prevalence rate of 1.9%. Wade, Bergin, Tiggermann, Bulik, and Fairburn (2006) report a prevalence rate of 5.3% for a purging type of eating disorder not otherwise specified. There is also very little research into recovery rates for individuals experiencing an eating disorder not otherwise specified. In a 2.5 year follow-up study of individuals assessed at a Danish eating disorder treatment centre, Clausen (2008) reported a full recovery rate of 69% and a remission rate of 100% in a sample of 20 individuals initially diagnosed with an eating disorder not otherwise specified. Further research investigating the incidence of eating disorders not otherwise specified and recovery rates from eating disorders not otherwise specified is clearly required.

Current difficulties regarding diagnosis and the definition of recovery

As we head towards the development of the *DSM-V* the present diagnostic criteria for the eating disorders as presented in the *DSM-IV-TR* (APA, 2000) are under review. The current diagnostic criteria for the eating disorders are generally considered problematic. For example, anorexia nervosa and bulimia nervosa currently share diagnostic criteria regarding an over-concern with body weight or shape and the experience of binge eating and purging (Palmer, 2003). Indeed, according to the *DSM-IV-TR*, individuals experiencing the binge-eating/purging type of anorexia nervosa are only distinguished from individuals experiencing bulimia nervosa by their refusal to maintain a minimally normal body weight (APA, 2000). As such, it is currently unclear whether these two disorders are indeed distinct and discrete from one another and it is not at all uncommon for individuals to cross over from one diagnostic category to another during the course of their illness (Eddy et al., 2007, 2008; Fichter & Quadflieg, 1999; Palmer, 2003). The diagnostic category of an eating disorder not otherwise specified is equally problematic. This category covers all individuals who are experiencing an eating disorder of clinical severity but who do not fulfil the criteria for anorexia nervosa or bulimia nervosa. Individuals experiencing an anorexia nervosa-like or bulimia nervosa-like eating disorder, but who fail to meet all of the diagnostic criteria for one of these disorders (e.g. an individual of normal weight who meets all of the other criteria for anorexia nervosa) are thus diagnosed as experiencing an eating disorder not otherwise specified. It is not uncommon for participant samples presented in clinical research into the eating disorders to therefore contain a substantial proportion of individuals who are experiencing an eating disorder not otherwise specified (Palmer, 2003). It is also not uncommon for individuals who have previously been diagnosed with either anorexia nervosa or bulimia nervosa to later be diagnosed with an eating

disorder not otherwise specified (Berkman, Lohr, & Bulik, 2007; Polivy, 2007). Such findings as this indicate that, for some individuals at least who have previously been diagnosed with anorexia nervosa or bulimia nervosa, the eating disorder not otherwise specified category is being used to describe individuals who have experienced a remittance or reduction over time in some of their eating disorder symptoms rather than describing a separate and discrete type of eating disorder.

In addition to the present problems regarding diagnosis of the eating disorders, current definitions of recovery from an eating disorder are also considered problematic. There is currently little consensus regarding the definition of recovery from an eating disorder, whether it be anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. Clinical research into the long-term course of the eating disorders varies in how remission and recovery is defined. For example, many studies differ in the length of time participants must be asymptomatic before they are considered to be in remission or to have recovered, differ in the weight status according to BMI that is used to define remission or recovery, and differ in the emphasis placed on psychological dimensions of an eating disorder (Couturier & Lock, 2006a, 2006b; Olmsted, Kaplan, & Rockert, 2005; Von Holle et al., 2008). Due to the lack of consistent recovery criteria found in the research literature, recovery rates for each of the eating disorders are somewhat dependent on the definition of remission or recovery used when these rates are calculated and render comparisons across studies problematic (Couturier & Lock, 2006a, 2006b; Frank, 2005; Keel, Mitchell, Davis, Fieselman, & Crow, 2000; Olmsted et al., 2005).

In summary, the diagnostic criteria for anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified have been described. An overview of the epidemiology and course of each of these eating disorders has also been presented,

along with a critical discussion of the current diagnostic criteria and definitions of recovery from the eating disorders. From this overview of the course of eating disorders presented, it is apparent that an eating disorder can take a number of different trajectories. An individual with an eating disorder may remain in a chronic state, never fully recovering from their condition. Alternatively, an individual with an eating disorder may progress to develop a different type of eating disorder in comparison to the type of eating disorder they are currently experiencing. More encouragingly, an individual with an eating disorder may experience a reduction in their eating disorder symptomatology over time and reach a state of recovery from their condition. It is this trajectory or process of change, involving a reduction in eating disorder symptomatology over, time that was the focus of this thesis. Within the two studies presented in this thesis, this process of reducing eating disorder symptomatology or recovering from an eating disorder was investigated in the context of two models of change, theorised to explain this course. In the following section of this introduction, the two models of change investigated within this thesis will be introduced.

Eating Disorders and Models of the Process of Change

Theory and research regarding the process of change has existed for some time. One well-known model of change, the Transtheoretical Model of Change (Prochaska & DiClemente, 1982), has particularly been used in the investigation of a wide range of behaviour changes. This model has also come to be incorporated into research into the eating disorders. This research has demonstrated the usefulness of the Transtheoretical Model of Change in predicting change in individuals experiencing an eating disorder, and has furthered the understanding of clinicians and researchers regarding the different levels of readiness to change possessed by individuals who are experiencing an eating

disorder (see Treasure & Bauer, 2003 for a brief introduction and review of some of this research and a discussion of practical applications to clinical practice). The purpose of this thesis was to further investigate the process of change in relation to not only full syndrome eating disorders but also varying levels of eating disorder symptomatology exhibited within a non-clinical sample. The following is a review of the two different models of change that were used throughout this thesis to investigate changes in eating disorder symptomatology.

The Transtheoretical Model of Change

One popular model attempting to explain the process of change is Prochaska and DiClemente's (1982) Transtheoretical Model of Change (TTM). The TTM is a theoretical model of intentional behaviour change that integrates concepts derived from a variety of psychotherapeutic theories, and relates to behaviour change occurring both within and outside of therapy (Prochaska & DiClemente; Prochaska, DiClemente, & Norcross, 1992; Prochaska & Norcross, 1999; Velicer, Prochaska, Fava, Norman, & Redding, 1998). The TTM comprises two core interrelated dimensions that address behaviour change: the stages of change and the processes of change (DiClemente et al., 1991). Each of these dimensions of the TTM will be discussed in turn, followed by a review of criticisms of the model.

Stages of Change.

According to the TTM, behaviour change involves progression through a series of stages over time. These stages of change emerged from empirical research into smoking cessation, whereby participants tended to report in their own words that they passed through a series of stages as they stopped smoking (Prochaska & DiClemente,

1982). Initial work regarding the TTM described five stages of change: precontemplation, contemplation, determination (now known as preparation), action, and maintenance (Prochaska & DiClemente). Subsequent research indicated that the model comprised only four stages, with the preparation stage being omitted (Prochaska, DiClemente, & Norcross, 1992; Prochaska, DiClemente, Velicer, & Rossi, 1992). Further research, however, indicated that the original number of stages was indeed appropriate, and the model was again modified to include five stages of change (Prochaska, DiClemente, & Norcross, 1992; Prochaska, DiClemente, Velicer, & Rossi, 1992). These stages represent the temporal or developmental dimension of change (i.e. they refer to when particular changes occur), and as such they encapsulate the specific attitudes, intentions, and behaviours related to an individuals status in the change sequence (Prochaska & Norcross, 1999; Prochaska, Velicer, DiClemente, & Fava, 1988). The following is a description of each of the five stages of change as found in the TTM.

An individual in the precontemplation stage of change does not intend to change their behaviour within the next six months (DiClemente et al., 1991; Prochaska, DiClemente, & Norcross, 1992; Velicer et al., 1998). Individuals in this stage may not seriously consider changing their behaviour because they are resisting confronting their problems or are unaware or under-aware of the existence of their problems, even though other people around them may recognise their problems (Hunt & Hillsdon, 1996; Prochaska & DiClemente, 1982; Prochaska, DiClemente, & Norcross). These individuals are thus unlikely to change their behaviour or present for psychotherapy. If they do present for psychotherapy, it is often because of pressure from others (Hunt & Hillsdon; Prochaska, DiClemente, & Norcross).

An individual in the contemplation stage of change is aware or acknowledges the existence of a problem, and is seriously considering change within the next six months but not within the next 30 days (DiClemente et al, 1991; Prochaska, DiClemente, & Norcross, 1992; Velicer et al., 1998). However, at this point in time no commitment has been made by the individual to take definite action towards change (Prochaska & Norcross, 1999). Individuals in the contemplation stage are thus engaged in the process of evaluating their options and are characterised by ambivalence about change (Hunt & Hillsdon, 1996; Prochaska & Norcross).

Preparation is the stage of change in which an individual intends to take action within the next 30 days and has unsuccessfully attempted to change their problematic behaviour within the last year (Prochaska, DiClemente, & Norcross, 1992). These individuals tend to have a plan of action, which they intend to implement in the very near future (Velicer et al., 1998). Individuals in the preparation stage report making small behavioural changes, but not to the degree necessary for effective action (Prochaska & Norcross, 1999). Additionally, although individuals in the preparation stage have decided to make a commitment to change, they can still be ambivalent about change and continue to engage in decision making processes (Hunt & Hillsdon, 1996).

Whilst in the action stage, an individual makes specific modifications to their behaviour and environment in order to overcome their problem (Prochaska & Norcross, 1999; Velicer et al., 1998). These modifications to the individual's behaviour or environment must be to a sufficient level such that the individual's risk of suffering health consequences from their problem behaviour is sufficiently reduced (Prochaska, DiClemente, & Norcross, 1992; Velicer et al.). Furthermore, in order to be classified as action, these modifications to the individuals' behaviour or environment need to have

occurred for a period of from one day to six months (Prochaska, DiClemente, & Norcross).

The maintenance stage begins six months after an individual enters the action stage and may extend indefinitely throughout time (Prochaska, DiClemente, & Norcross, 1992). In the maintenance stage, an individual works to prevent relapse and strengthen the changes they have achieved during the action stage (Prochaska & Norcross, 1999). The maintenance stage may be characterised by feelings of anxiety regarding potential relapses, thoughts of relapsing, and the temptation to relapse (Hunt & Hillsdon, 1996). Once an individual is no longer tempted to relapse and their new behaviours have become more habitual that their old problematic behaviours, they have reached termination or have "terminated" the change process (Hunt & Hillsdon).

Progression through the stages of change found in the TTM was originally conceptualised as a linear movement through each stage in turn (Prochaska & DiClemente, 1982). However, in order to capture the true nature of change, whereby individuals may relapse and continue to engage in the problematic behaviour they are attempting to alter, the TTM was modified to be represented as cyclical, rather than linear, in nature (Prochaska & DiClemente; Prochaska, DiClemente, & Norcross, 1992). According to this cyclical representation, individuals can both regress and progress through the stages over time, and may also stall in a particular stage or stay in a particular stage for a prolonged period of time (Prochaska & DiClemente). Research into the cyclical nature of the stages of change found in the TTM indicates that although many individuals do relapse, they do not tend to regress all the way back to their initial stage of change and their amount of success tends to increase over time (Prochaska, DiClemente, & Norcross).

Processes of Change.

Whilst the stages of change found in the TTM serve as markers for when various changes occur, the TTM also includes a number of processes of change in order to explicate how change occurs (Prochaska & DiClemente, 1982; Prochaska, DiClemente, & Norcross, 1992). Initially the TTM included only 5 processes of change; however these processes were later expanded to include 10 processes of change (Prochaska et al., 1988). The first five of these processes are generally described as experiential processes and tend to be employed during the initial contemplative stages of change. The second five processes are referred to as behavioural processes and tend to be used during the later more active stages of change (Velicer et al., 1998). The following is a description of each of the 10 processes of change as found in the TTM.

The experiential processes of change comprise consciousness raising, dramatic relief, environmental re-evaluation, social liberation, and self re-evaluation. Consciousness raising is the process in which an individual increases their awareness of their problem behaviour (Velicer et al., 1998). Consciousness raising involves gaining information about the causes, consequences, and cures of the problem (Prochaska & Norcross, 1999). Dramatic relief or catharsis is the process of emotional arousal whereby the individual experiences and expresses their feelings about their problem (Prochaska, DiClemente, & Norcross, 1992; Prochaska & Norcross; Velicer et al.). Environmental re-evaluation is the process of social reappraisal whereby the individual considers how the presence or absence of their problem behaviour affects their social environment, and can include the awareness of how the individual may serve as a positive or negative role model for others (Velicer et al.). Social liberation, also referred to as environmental opportunities, is the process of creating changes in society or the environment to increase social opportunities or alternatives for non-problem

behaviours (Prochaska, DiClemente, & Norcross; Velicer et al.). Self re-evaluation, also referred to as self reappraisal, is the process whereby the individual assesses their self-image both with and without the problem behaviour, and assesses what values they will try to act upon (Prochaska & Norcross; Velicer et al.).

The behavioural processes of change comprise stimulus control, helping relationships, counter conditioning, reinforcement management, and self liberation. Stimulus control is the process of re-engineering the environment in order to avoid or counter cues for the problem behaviour and add prompts for healthier alternatives (Prochaska, DiClemente, & Norcross, 1992; Velicer et al., 1998). Helping relationships, also referred to as supporting, is the process in which the individual is open and trusting about their problems with caring others who provide support (Hunt & Hillsdon, 1996; Prochaska, DiClemente, & Norcross; Velicer et al.). Counter conditioning occurs when the individual learns alternative or healthier behaviours that they can substitute for problem behaviours (Prochaska, DiClemente, & Norcross; Velicer et al.). Reinforcement management is the process of the individual rewarding themselves or being rewarded by others for making changes (Prochaska, DiClemente, & Norcross; Velicer et al.). Finally, self liberation is the process of committing, whereby the individual believes they can change and chooses to act on this belief (Prochaska, DiClemente, & Norcross; Velicer et al.).

Criticisms of the Transtheoretical Model of Change.

Although the TTM is a widely used model, it is not without its criticisms. The TTM has been criticised for the assumption that successful change is a rational process as it involves contemplating, preparing for, and then acting upon and maintaining change (Orford, 1992). The TTM assumes then that an individual consciously makes

coherent and stable plans which are then acted upon to implement change, but fails to take into account other processes operating outside of conscious awareness which may also contribute to the change process (West, 2005). Additionally, such a conception of change does not adequately explain sudden, abrupt, or spontaneous change (L. C. Sobell, 2007; M. B. Sobell, 2007; West, 2005).

Other criticisms of the TTM refer to the use of arbitrary divisions to distinguish between the different stages of change (West, 2005, 2006). Sutton (2001) argues that the time periods specified within the TTM to categorise individuals as belonging to one of the five stages of change are arbitrary and that using different time periods would lead to a different allocation of individuals to the various stages of change. Research by Povey, Conner, Sparks, James, and Shepherd (1999) indicates that the time periods specified within the TTM do not necessarily correspond with the way individuals change over time. Povey et al. argue that it may be more appropriate to categorise an individual's stage of change based on their qualitative attributes (e.g. whether they report that they are currently trying to change their behaviour versus reporting that they are thinking about but have not yet decided to change their behaviour) rather than using time-based measures. Surprisingly, the authors of the TTM agree that the definitional criteria of each of the stages will always be somewhat arbitrary (DiClemente, Schlundt, & Gemmell, 2004). Furthermore, criticisms have been directed towards the use of stages within the TTM, rather than some kind of continuum of change intention and preparedness or change behaviour (Brug et al., 2005; L. C. Sobell, 2007; Stockwell, 1992).

The TTM has also been criticised on the basis of the difficulty of applying the model to complex health behaviours. Prochaska, DiClemente, Velicer, and Rossi (1992) argue that the TTM is applicable to a diverse range of health related problem

behaviours including smoking, sunscreen use, weight control strategies, high fat diets, and exercise acquisition. However, the TTM is being increasingly criticised on this front (Bridle et al., 2005; L. C. Sobell, 2007). It has been argued that complex health behaviours (e.g. eating a healthy diet) cannot be viewed as a single behaviour but should instead be considered multidimensional, or a complex category of different and specific behaviours, such as food selection, food preparation, and portion sizes consumed (Brug et al., 2005; Horwath, 1999; Rollnick, Mason, & Butler, 1999). Individuals may therefore be in different stages of change for each of these different and specific behaviours that are grouped together under a single heading (e.g. that of eating a healthy diet; Brug et al.).

An Alternative Model of Change: The Adaptive Change Model

In an attempt to overcome some of the criticisms directed towards the TTM, the Adaptive Change Model (ACM) was developed by Bowles (2000, 2006) as a classificatory system defining how change occurs. The ACM is a model of the process of change and includes a secondary set of non-process factors that support or facilitate the change process (Bowles, 2006). The ACM therefore includes two sets of factors describing change: the process factors and the support factors (Bowles, 2000). The following is an overview of the ACM.

The ACM has five sequential process factors, which may be likened to stages or phases, through which individuals move in a linear manner during the change process (Bowles, 2000). Within the TTM (Prochaska & DiClemente, 1982) the process factors are described as those factors that help explain how change occurs. For the sake of clarity and in order to make the TTM and ACM factors more comparable throughout this thesis, the ACM process factors will be referred to as stages of change for the

remainder of this thesis. These stages of the ACM are ideally dependent, such that it is of little use to pass through any one of the stages of change without first having passed through each of the preceding stages (Bowles, 2000). The five stages of change found in the ACM comprise openness to opportunity, visualisation, planning, action, and closure (Bowles, 2000). During the first stage of the change process, openness to opportunity, an individual is defined as being flexible and open to change (Bowles, 2006). Following openness to opportunity is the second stage of the change process, visualisation. An individual in the visualisation stage investigates their options and alternatives and has a view of the outcome of change and how this outcome might be achieved (Bowles, 2000, 2006). Subsequently an individual moves from the visualisation stage to planning. During the planning stage an individual will decide upon, plan, and organise the path of action to be taken (Bowles, 2000, 2006). Following the planning stage, an individual enters the action stage. In the action stage the individual's plan is executed by taking effective and efficient action (Bowles, 2000). After action is taken, closure can be achieved. Closure is defined as completing the task, and finishing the change process (Bowles, 2000).

As well as the five stages of change the ACM also has three support factors which are non-sequential and operate to influence each stage of change (Bowles, 2000). The support factors consist of negative emotions, social support, and inner drive (Bowles, 2000). The first support factor, negative emotions, includes emotions such as anger, anxiety, fear, guilt, and resentment (Bowles, 2006). In order for change to occur, these negative emotions must be appropriately managed, and thus this factor may be referred to as the management of negative emotions (Bowles, 2006). The second support factor, social support, incorporates the availability of others to provide affirmation, information, and assistance (Bowles, 2000, 2006). These supportive

individuals may include a significant other, friends, family, or a therapist (Bowles, 2000). The third support factor, inner drive, comprises motivation, effort, and commitment to the change process (Bowles, 2000, 2006).

According to the ACM, change may be initiated by an interruption of some sort which raises an individual's attention and consciousness to the opportunity for change (Bowles, 2000). Subsequent to this, change is possible if the individual is open to the opportunity of changing and sufficient levels of the support factors are present (i.e. a sufficient level of negative emotions to generate inner drive, and a degree of social support; Bowles, 2000). Throughout the entire change process, there is a constant interplay between the stages of change and the support factors of change such that the presence of sufficient levels of the support factors works to continually shift the individual undergoing the change process into the next stage of change (Bowles, 2000).

The ACM presupposes that the optimal transition to change is linear (Bowles, 2000, 2006). However, the change process may not in actuality be experienced as a sequential progression through each of the stages (Bowles, 2000). Importantly, it is possible that an individual may change by using each of the stages in a different order to that stipulated by the model or by using only some of the stages, but this would not be optimal (Bowles, 2000). For example, such behaviours may result in impulsive action taking, daydreaming, or action taking based on insufficient preparation and planning that does not result in the desired change (Bowles, 2000). This change process may also be non-linear as it is possible for the process to stall either at the transition between stages or when a stage cannot be transited, indicating a revision of the change process is needed. Once a stall has occurred, the individual may fallback to a previous stage of the change process that has been successfully transited (Bowles, 2000). Through this process, the individual may clarify their plan of action or generate alternative options

and a greater resolve to change, leading the individual back onto the sequential process of change (Bowles, 2000). Alternatively, the individual may draw more heavily upon some or all of the support factors to assist them (Bowles, 2000). The stall may continue chronically and indefinitely, however, if falling back to a previous stage reveals no further options or if greater reliance on the support factors becomes unfeasible (Bowles, 2000). Different points along the change process at which an individual stalls can be identified, along with support factors which are not being optimally utilised (Bowles, 2000). Therapy, training or coaching can then be used to assist the individual in overcoming these difficulties, thus highlighting the applicability of the ACM in a range of settings (Bowles, 2000).

The ACM is operationalised by the Adaptive Change Questionnaire (ACQ; Bowles, 2000). The ACQ is used to assess an individual's level of each of the stages of change and degree of each of the support factors of the ACM. This information is used to assess their likelihood of changing in an adaptive manner (Bowles, 2006). To date the usefulness of the ACM has been assessed with a clinical sample of participants comprised of individuals seeking treatment from a psychologist for a wide range of problems (Bowles, 2000, 2006). However, unlike the TTM, the ACM has not been incorporated into research investigating eating and weight control behaviours or eating disorder symptomatology.

Summary

The research conducted within this thesis investigating readiness to change and eating disorder symptomatology has been briefly introduced. As this thesis was an investigation into changes in eating disorder symptomatology over time, the diagnostic criteria, epidemiology, and course for anorexia nervosa, bulimia nervosa, and an eating

disorder not otherwise specified have been presented. Two models of change were investigated within the two studies of this thesis. These models of change, the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), have thus been introduced.

CHAPTER TWO

Study One: An Evaluation of Change in Eating Disorder Symptomatology in a Non-Clinical Sample

Within modern society, the 'thin ideal' is becoming increasingly more pervasive and culturally acceptable, as are weight loss practices used to try to achieve this ideal (Franko & Orosan-Weine, 1998; Nasser & Katzman, 2003). These weight loss practices may lead an individual to experience varying levels of eating disorder symptomatology which may reach the level of a subthreshold eating disorder or even lead to the development of a full syndrome eating disorder (Bulik, Reba, Siega-Riz, & Reichborn-Kjennerud, 2005; Garner, 1993; Ghaderi, 2001; le Grange & Loeb, 2007; Patton et al., 2003; Striegel-Moore & Bulik, 2007). It is important to investigate factors that may ameliorate this progression from initially low levels of eating disorder symptomatology to the development of a subthreshold or full syndrome eating disorder. Recent research into the eating disorders incorporating measures of an individual's readiness to change their eating disorder symptomatology has proven useful in explicating the pathway to recovery (Treasure & Bauer, 2003). However, no known research has investigated readiness to change eating disorder symptomatology in individuals currently exhibiting some eating disorder symptomatology but not diagnosed with an eating disorder. It is possible that measures of readiness to change currently used within the eating disordered population may also be useful in exploring the pathways between initial levels of eating disorder symptomatology in a non-clinical population and later decreases or increases in this eating disorder symptomatology. The inclusion of additional factors theorised to support the change process may also provide further information in understanding these pathways. The purpose of the current study

was therefore to longitudinally examine eating disorder symptomatology in a group of individuals drawn from the community. This was achieved by investigating factors, including readiness to change, theorised to influence the participants' levels of eating disorder symptomatology over time. This research may have implications for future eating disorder prevention programs or in intervention programs for the treatment of subthreshold and full syndrome eating disorders.

The structure of this introduction to the first study of this thesis is as follows: a brief overview of the TTM in relation to the eating disorders, upon which most of the literature in this area is based, will be presented. Following this, research incorporating readiness to change in reference to individuals experiencing an eating disorder will be reviewed. A recently developed instrument, the Anorexia Nervosa Stages of Change Questionnaire (Rieger et al., 2000) will be introduced in this section and research incorporating this measure will be reviewed. A brief overview of the ACM, an alternative model of the change process, will then be presented. This will be followed by a discussion of the support factors proposed in the ACM and how they are theoretically and empirically linked to improvements in eating disorder symptomatology over time. Three hypothetical models of how readiness to change may influence an individual's level of eating disorder symptomatology over time, two direct effects models and a moderation model, will then be introduced.

The Transtheoretical Model of Change

Studies of change and how change occurs in relation to minor changes to eating habits and weight control strategies, through to recovery from an eating disorder, are relatively new to psychology. However, theorisations and research regarding change in areas other than the eating disorders have existed for some time within the field of

psychology. One widely used model attempting to explain the processes of change is the TTM (Prochaska & DiClemente, 1982). Given that this model was thoroughly introduced within the first chapter of this thesis, the following is only a brief summary of the TTM.

According to the TTM, the stages through which an individual progresses whilst making a behavioural change are precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1982; Prochaska, DiClemente, & Norcross, 1992; Prochaska, DiClemente, Velicer, & Rossi, 1992). The TTM has been applied to a wide variety of problem behaviours. For example, the TTM has been applied to smoking cessation, substance use, use of sunscreen, promotion of screening mammography, and promotion of treatment adherence among individuals with a dual diagnosis or a psychiatric disorder (Bridle et al., 2005; Prochaska, DiClemente, Velicer, & Rossi, 1992; Sutton, 2001). This model of change has also been applied to health behaviours related to eating and physical exercise such as in the promotion of various eating behaviours and dietary change, physical activity and exercise acquisition, and a range of weight control strategies (Bridle et al.; Brug et al., 2005; Horwath, 1999; Povey et al., 1999). Reviews examining the effectiveness of interventions based on the TTM in promoting such behaviours related to healthy eating and physical exercise have provided limited evidence for the validity of the TTM in relation to these particular behaviours (Bridle et al.; Brug et al.). However, the research in this area has generally focussed on the effectiveness of stage-targeted health promotion efforts rather than on the effectiveness of the TTM in predicting behavioural changes over time. Within the field of eating disorder research, the TTM has generally been used to predict changes over time, rather than being used as the basis of stage-targeted interventions. Using samples of individuals currently diagnosed with an eating disorder, the TTM has proven

useful in predicting improvements in eating disorder symptomatology, which includes changes in eating and exercise behaviours. As a result of these findings, the purpose of the current study was to establish whether the TTM would also prove useful in predicting changes in eating disorder symptomatology over time in a non-clinical population exhibiting varying levels of eating disorder symptomatology.

In summary, the TTM is a theoretical model used to explain the process of change. The TTM has been widely used in the field of psychology, with varying results, and has recently been incorporated into research into the eating disorders. The following is a review of the literature incorporating the TTM and related measures of readiness to change in the eating disorders.

Readiness to Change and the Eating Disorders

Readiness to change is defined as an individual's motivation and feelings of self-efficacy regarding change, their capability for change, and a belief that change will result in a positive outcome (Bowles, 2006; Geller, Cockell, & Drab, 2001). The TTM can be viewed not only as an explanation of the change process, but also as a description or measure of an individual's level of readiness to change (Rollnick et al., 1999). Thus, within the eating disorder research literature, an individual's stage of change according to the TTM is generally assessed and then used as a measure of the level of their readiness to change (Vansteenkiste, Soenens, & Vandereycken, 2005). An individual categorised as being in a higher stage of change (e.g. the action stage of change as opposed to the contemplation stage of change) is thus said to have a greater level of readiness to change than an individual in a lower stage of change. This incorporation of the TTM and measures of readiness to change into research regarding

the eating disorders has recently proven useful in furthering understanding of the process of recovery from an eating disorder.

Some of the earliest research incorporating measures of readiness to change was conducted with individuals experiencing bulimia nervosa. Treasure et al. (1999) included a measure of readiness to change in a randomised controlled treatment trial incorporating 125 female patients who were experiencing bulimia nervosa. These participants were allocated to receive either motivational enhancement therapy or cognitive behavioural therapy. The participants' readiness to change was assessed using the University of Rhode Island Change Assessment Scale (McConnaughy, Prochaska, & Velicer, 1983). Unfortunately this measure only categorised participants as being in either the precontemplation, contemplation, or action stage of change and not the preparation or maintenance stages. Furthermore, the University of Rhode Island Change Assessment Scale was designed to assess an individuals' stage of change with reference to any problematic behaviour, and thus asked participants about "the problem" (p. 409) rather than specifically referring to bulimia nervosa, or various aspects of bulimia nervosa. Of the sample of 125 participants who took part in the treatment trial, 91 participants completed this measure. From this group, no participants were categorised as being in the precontemplation stage of change, 90% of participants (82 individuals) were categorised as being in the contemplation stage of change, and the remaining 10% of participants (9 individuals) were in the action stage of change. It should be noted that the homogeneity of participants within the study with respect to stage of change may have led to a reduction in power for the statistical analyses conducted. The participants' readiness to change was not found to predict treatment drop-out, but it was significantly associated with symptom reduction. In comparison to the participants in the contemplation stage of change, the participants in the action stage

of change showed greater improvements in the reduction of binge eating, but not in the reduction of vomiting or laxative abuse, over four weeks of treatment. Furthermore, readiness to change was also found to be a significant predictor of the participants' ratings of the therapeutic alliance after four weeks of treatment with higher levels of the action stage predicting participants' ratings of a strong therapeutic alliance. Readiness to change was not associated with treatment modality in the prediction of symptom reduction.

Whilst Treasure et al. (1999) did not find the relationship between readiness to change and treatment outcome to depend on the treatment modality employed, research by Wolk and Devlin (2001) indicated that such a relationship may exist. In the Wolk and Devlin study, 110 participants experiencing bulimia nervosa were categorised as being in either the precontemplation, contemplation, or preparation stage of change using a staging algorithm adapted from DiClemente et al. (1991). Regrettably, this staging algorithm did not allow for the participants to be categorised as being in the action stage of change. However, the use of this measure was rendered more appropriate by the study authors who adapted it to specifically refer to changing binge eating and purging behaviours. Of their sample of 66 females who completed treatment, Wolk and Devlin found the participants' initial stage of change to predict treatment outcome. The predictive utility of stage of change was also found to vary according to the type of treatment the participants received. For those participants who received interpersonal therapy, readiness to change was found to be a significant predictor of symptom improvement. However, for participants receiving cognitive behavioural therapy readiness to change was not found to be a significant predictor of symptom improvement. Furthermore, initial stage of change was not found to be a significant predictor of either drop-out from the study prior to the participants'

randomisation to a treatment condition or of drop-out from treatment following randomisation and the commencement of treatment.

Research investigating readiness to change has also been conducted in samples of individuals experiencing anorexia nervosa. Gowers and Smyth (2004) assessed the motivational status of 42 adolescents with anorexia nervosa referred to an eating disorder service. Gowers and Smyth drew on the work of Treasure and Schmidt (2001), defining motivational status as being related to the TTM and comprising readiness, conviction, and confidence associated with change. In order to assess motivational status, participants were asked six questions rated on a 4-point Likert-type scale, regarding their readiness, conviction, and confidence. This questionnaire was devised by the treatment team from the eating disorder service from which the participants were derived. Unfortunately an additional measure of readiness to change, against which this measure devised by the study authors could be validated, was not included in the study. The assessment procedure undertaken by the participants in this study also included an assessment interview, aimed as increasing the participants' motivation towards change and treatment. Using the measure of readiness to change devised by the study authors, the participants' motivational status following this initial assessment but prior to commencement of the treatment program was found to be significantly associated with treatment retention and weight gain at 6-weeks follow-up. However, unlike past research, the participants' motivational status was not associated with improvements in eating disorder symptomatology over time. Furthermore, motivational status was also not associated with mood and clinician ratings of general functioning at follow-up. It is important to note that the small sample size used within this study, and the use of a very brief measure that has not been validated, may diminish confidence in, and the geralisability of, the results obtained.

Readiness to change was further examined by Rushford (2006) in a sample of 130 participants diagnosed with anorexia nervosa and admitted to an inpatient eating disorders unit. The participants within this study completed a global measure of readiness to recover from anorexia nervosa as well as a stage of change questionnaire. The global measure of readiness to recover completed by all participants comprised a single question ("How ready do you feel you are to recover from your eating disorder?" [p. 389]) and a visual analogue scale ranging from "Not at all" to "Completely" (p. 390). The stage of change questionnaire completed by participants was an adapted version of Prochaska, DiClemente, and Norcross' (1992) 24 item stage of change questionnaire. Unfortunately this measure only allocated participants to the precontemplation, contemplation, or action stages of change. Furthermore, this measure asked participants about "the problem" (p. 391) rather than specifically referring to anorexia nervosa or various aspects of anorexia nervosa. This measure was only completed by 41 of the participants in the study. The participants' readiness to recover, as assessed using the global measure, was found to be associated with their stage of change. Using a sub-sample of 32 participants who had provided sufficient data, the global measure of readiness to recover was found to have a greater predictive utility than the stage of change measure. Readiness to recover as assessed by the global measure, and not stage of change, was found to predict participants' drive for thinness at discharge as measured by the Eating Disorder Inventory-2 (EDI-2; Garner, 1991). These results should be taken cautiously however in light of the small sample available for some of the analyses used in the study and due to the fact that the global measure of readiness to recover was comprised of a single item.

Whilst investigating the role of readiness to change in the relationship between eating disorder symptomatology and treatment outcome in anorexia nervosa, Bewell

and Carter (2008) also found evidence for the importance of readiness to change in this relationship. The participants for this study comprised a sample of 127 females diagnosed with anorexia nervosa, receiving their first admission to an intensive inpatient treatment program. In order to assess readiness to change, the participants were asked a single item, similar to that asked by Rushford (2006). The participants were asked "How ready are you to change your eating and weight?" (p. 369), with responses rated on a 10-point Likert-type scale. Unfortunately no other measure of readiness to change or participants' stage of change was used within the study against which this single-item measure could be validated. Using the single-item measure, readiness to change was found to significantly predict treatment outcome (i.e. achieving a BMI of 20) following at least four weeks of treatment. The severity of the participants' eating disorder symptomatology, as assessed using the EDI (Garner & Olmsted, 1984), was also found to be a significant predictor of treatment outcome. However, readiness to change was found to mediate the relationship between the severity of the participants' eating disorder symptomatology and treatment outcome. In accordance with this mediation model, participants with lower levels of eating disorder symptomatology were found to have higher levels of readiness to change and a more successful treatment outcome in comparison to participants with higher levels of eating disorder symptomatology and lower levels of readiness to change. This finding indicated that the severity of the participants' eating disorder symptomatology may only be a predictor of treatment outcome as a result of its relationship with readiness to change, thus highlighting the important role of readiness to change in relation to recovery from an eating disorder. These results should also be taken cautiously, however, given the use of an unvalidated single-item measure of readiness to change.

Further research into readiness to change has incorporated samples of participant currently experiencing either anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. In a sample of 34 adolescent females attending treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified, Gusella, Butler, Nichols, and Bird (2003) assessed participants' readiness to change using a measure referred to as the "Motivational Stages of Change for Adolescents Recovering from an Eating Disorder" (p. 59). Encouragingly, this measure was used to review with participants a variety of eating disordered behaviours including dieting, excessive exercising, binge eating, purging, laxative use, and dealing with emotions, before then asking participants to indicate their stage of change in the recovery process. However, the participants' stage of change for each of the individual eating disordered behaviours was not assessed. The reliability and validity of this measure was assessed within the study, with the results indicating that it was both reliable and valid. Using this stage of change measure, the participants were allocated to the precontemplation, contemplation, preparation, action, or maintenance stage of change, or to a recovered category. In comparison to standardised measures of eating disorder symptomatology, including the EDI-2 (Garner, 1991) and BMI, Gusella et al. found the participants' readiness to change to be the best predictor of treatment outcome following a 9-week treatment group. Furthermore, readiness to change differentiated those participants who were ready to change their ideal body image to a healthier ideal from those who were not ready to change their ideal body image, and correctly predicted that participants at the highest levels of readiness to change would report benefiting most from treatment. The participants' initial stage of change was also found to be independent of the severity of their initial weight loss, as measured by BMI, and their initial diagnosis. This finding revealed that diagnostic presentation alone is not indicative of the initial stage of change

of an individual experiencing an eating disorder. The participants' initial stage of change was, however, associated with their level of eating disorder symptomatology, correlating with subscales of the EDI-2 (Garner, 1991). Participants in the action stage were found to have significantly lower levels of drive for thinness (i.e. concern with dieting, weight, and weight gain) and body dissatisfaction (i.e. dissatisfaction with the size and shape of regions of their body and with their overall body) in comparison to participants in the precontemplation, contemplation, and preparation stages of change. Unfortunately the EDI-2 measures were only collected pre-treatment, not allowing for a longitudinal examination of stage of change in relation to eating disorder symptomatology as measured by the EDI-2.

In summary, the preceding research has demonstrated the predictive utility of measures of readiness to change in eating disorder research and treatment, with measures of readiness to change tending to predict treatment outcome better than measures of eating disorder symptomatology. On the basis of these findings, the current study also investigated the role of readiness to change in predicting changes in varying levels of eating disorder symptomatology, using a non-clinical sample. Such research as this is important in determining whether readiness to change may prove to be a useful concept to employ in eating disorder prevention programs or in interventions for individuals experiencing varying levels of eating disorder symptomatology. A number of the studies reviewed above were conducted with small sample sizes. In order to maximise statistical power, the current study incorporated a larger sample of participants. The research reviewed above also often employed general measures of readiness to change, asking participants how ready they were to change their eating disorder, rather than asking about readiness to change each of the different and specific behaviours associated with an eating disorder. As recovery from an eating disorder

involves changing multiple behaviours and symptoms, more specific measures that tap readiness to change across these multiple areas may prove more beneficial in the research and treatment of eating disorders (Dunn, Neighbors, & Larimer, 2003; Geller, 2002; Sullivan & Terris, 2001; Treasure et al., 1999; Ward, Troop, Todd, & Treasure, 1996; Wilson & Schlam, 2004). In an attempt to overcome this potential limitation regarding general or global measures of readiness to change, the current study incorporated a more specific measure assessing readiness to change across a number of behaviours linked to eating disorder symptomatology. This measure was the Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ; Rieger et al., 2000). An alternative and general measure of readiness to change, the ACQ which is based on the ACM (Bowles, 2000), was also included in this study. The following is a review of the research using two different measures that address readiness to change across a range of specific, rather than general, eating disordered behaviours: the Readiness and Motivation Interview (RMI; Geller & Drab, 1999) and the ANSOCQ.

The Readiness and Motivation Interview

The RMI was designed to be used in conjunction with the Eating Disorder Examination (Cooper & Fairburn, 1987) to collect information on the motivational status of an individual experiencing an eating disorder (Geller & Drab, 1999). The RMI gathers information regarding a respondent's readiness and motivation to change four general symptom categories associated with their eating disorder: cognitive aspects, restriction, bingeing, and compensatory strategies (Geller & Drab). For each of these symptom categories, four ratings of readiness and motivation, and one of internality, are made (Geller & Drab). Thus respondents are rated by an interviewer in each of the symptom categories on the extent to which they do not see the symptom as a problem or

do not want the symptom to change (i.e. precontemplation), the extent to which they are contemplating changing the symptom, the extent to which they are taking action to change or maintain change to the symptom, and the extent to which this action is internally versus externally motivated (Geller & Drab; Geller, Zaitsoff, & Srikameswaran, 2005). The RMI has been employed in clinical research in order to assess its usefulness, and has been demonstrated to be predictive of treatment outcome in the eating disorders.

The RMI (Geller & Drab, 1999) was used by Geller et al. (2001) to collect information from 99 women undergoing intake assessment at an eating disorders clinic. These women were diagnosed with anorexia nervosa, subthreshold anorexia nervosa, bulimia nervosa, or subthreshold bulimia nervosa. Each of the participants completed both the RMI and the University of Rhode Island Change Assessment Scale (McConnaughy et al., 1983) which categorised participants as being in either the precontemplation, contemplation, action, or maintenance stage of change. Unfortunately this measure did not allow for participants to be classified as being in the preparation stage of change. Geller et al. further stated that for the purposes of their study, this measure was slightly modified so as to be more applicable to individuals with an eating disorder. However the specifics of these modifications were not described. The participants' scores on the RMI were found to differ across symptom domains rather than being stable across domains. During their intake assessment, the participants were asked to attempt three recovery activities over the course of the following week. After controlling for the participants' stage of change, scores on the RMI were found to account for more unique variance than stage of change in the participants' ratings of the difficulty of recovery activities and the completion of recovery activities. Furthermore, the RMI but not stage of change was found to predict

the participants' decision to enrol in treatment and to drop out of treatment. The participants who enrolled in treatment had lower RMI precontemplation and higher RMI action scores than participants who did not enrol, while the participants who dropped out of treatment had significantly higher RMI precontemplation scores than the participants who remained in treatment. This study indicates that more specific measures of readiness to change, such as the RMI, which assess readiness to change across a range of eating disorder symptoms, may prove more useful than general measures of readiness to change. Unfortunately, within this study, the participants' readiness to change was not examined in relation to changes in their eating disorder symptomatology over time. Thus, although this study did demonstrate the usefulness of the readiness to change construct as assessed using the RMI, it did not directly assess the usefulness of measures of readiness to change in predicting improvements in eating disorder symptomatology over time.

A further study from Geller's group (Geller, Drab-Hudson, Whisenhunt, & Srikameswaran, 2004) did examine the utility of the RMI (Geller & Drab, 1999) in relation to changes in eating disorder symptomatology over time. Geller et al. (2004) longitudinally examined the predictive function of the RMI in a sample of 60 women receiving treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. The participants completed the RMI and EDI-2 (Garner, 1991) and provided information regarding their BMI following intake assessment to the treatment program. Following completion of the treatment program and again at 6-months follow-up, the participants were reassessed with the EDI-2. The participants also provided information regarding their BMI during this 6-month follow-up. The RMI was found to predict the participants' treatment outcome following completion of the treatment program. Precontemplation scores for the restriction domain of the RMI

predicted change in both the drive for thinness and the body dissatisfaction subscale scores on the EDI-2, and action scores for the restriction domain predicted change in the body dissatisfaction subscale. The RMI was also found to be associated with the participants' treatment outcome at 6-month follow-up. Participants whose drive for thinness scores on the EDI-2 had dropped to below the clinical range had significantly lower precontemplation scores for the restriction domain and significantly higher restriction internality scores on the RMI than participants whose drive for thinness scores were still in the clinical range. Furthermore, participants with lower restriction internality scores and higher precontemplation scores for the compensatory behaviours domain of the RMI were more likely to have lost a significant amount of weight as measured by BMI at 6-months follow-up. This study demonstrated the effectiveness of a specific measure of readiness to change in predicting changes in eating disorder symptomatology over time.

The Anorexia Nervosa Stages of Change Questionnaire

The ANSOCQ was developed as a means of measuring readiness to change and recover from anorexia nervosa across a range of behaviours or symptoms (Rieger et al., 2000). The ANSOCQ is based on Prochaska and DiClemente's (1982) TTM, and is used to classify respondents into one of five stages of change: precontemplation, contemplation, preparation, action, or maintenance (Rieger et al., 2000). The ANSOCQ is used to assess a respondent's readiness to change a range of symptomatology associated with anorexia nervosa including symptoms associated with body shape and weight, eating behaviours, weight control strategies, emotional difficulties, personality characteristics, and interpersonal difficulties (Rieger, Touyz, & Beumont, 2002). Each item on the ANSOCQ contains five statements, reflecting each of the stages of change

found in the TTM (Rieger et al., 2000). Respondents to the ANSOCQ are instructed to select the statement (or statements) that best reflects their current attitude or behaviour regarding changing the appointed symptom (Rieger et al., 2000; Rieger et al., 2002). For each item, scores range from 1 (for the precontemplation stage statement) to 5 (for the maintenance stage statement), and a respondent's average score across all items can be used to determine their current stage of change (Rieger et al., 2002). The ANSOCQ can be conceptualised as reflecting a higher-order factor of general motivation to recover, or as reflecting three interrelated domains of motivation comprising weight gain; eating, shape, and weight concerns; and ego-alien aspects (as opposed to egosyntonic) features of anorexia nervosa (Rieger & Touyz, 2006). The ANSOCQ has been used in a number of studies in order to assess its usefulness, and has demonstrated predictive utility regarding clinical outcome from the eating disorders. The following is a review of this research.

The ANSOCQ was first used by Rieger et al. (2000) to longitudinally examine eating disorder symptomatology in relation to readiness to change. The participants in the study comprised 71 inpatients being admitted to an eating disorders unit for the treatment of anorexia nervosa. The participants were administered the ANSOCQ, EDI-2 (Garner, 1991), and University of Rhode Island Change Assessment Scale, which was used as an alternative measure of readiness to change (McConnaughy, DiClemente, Prochaska, & Velicer, 1989). The University of Rhode Island Change Assessment Scale classified participants as being in either the precontemplation, contemplation, action, or maintenance stage of change, but not the preparation stage. The participants' scores on this measure were found to correlate significantly with their scores on the ANSOCQ. The ANSOCQ, but not the University of Rhode Island Change Assessment Scale, was found to predict weight gain during the first eight weeks of admission.

Furthermore, the ANSOCQ was significantly associated with the EDI-2 subscales of interoceptive awareness, asceticism, and impulse regulation at discharge, after controlling for EDI-2 scores obtained upon admission. These associations were negative, such that individuals with a greater readiness to recover tended to score lower on the EDI-2 subscales (i.e. they were currently experiencing less severe eating disorder symptomatology).

Additional evidence supporting the utility of the ANSOCQ (Rieger et al., 2000) has also been provided by George, Thornton, Touyz, Waller, and Beumont (2004). George et al. used a battery of measures including the ANSOCQ to assess the outcome of motivational enhancement therapy and schema-focused cognitive behavioural therapy for the treatment of chronic anorexia nervosa. The participants in the study comprised seven females with anorexia nervosa and one female with an eating disorder not otherwise specified, with an average length of illness of 18 years. The participants completed a range of measures upon admission and following completion of a 6-month treatment period. These measures included the ANSOCQ, the Eating Attitudes Test (Garner & Garfinkel, 1979), the General Health Questionnaire-28 (Goldberg, 1972), and the Young Schema Questionnaire (Young, 1994). Information was also collected regarding the participants' BMI, laxative abuse, and exercise levels. After the 6-month treatment period no changes were found on the Eating Attitudes Test, General Health Questionnaire, or Young Schema Questionnaire. Furthermore, no significant behavioural changes were made regarding laxative abuse or exercise levels. Although the participants' BMI did increase over the course of treatment, this change was non-significant. The only measure on which significant change was found after the 6-month treatment period was the ANSOCQ. During treatment, the participants moved on average from an early contemplation stage of change to a late contemplation stage of

change. Although this study employed a very small sample of participants, it did reveal the utility of the ANSOCQ in assessing gains that can be made during treatment as this was the only measure demonstrating the impact of treatment upon the study participants.

An alternative version of the ANSOCQ (Rieger et al., 2000), adapted for a Spanish audience, has been validated by Serrano, Castro, Ametller, Martinez, and Toro (2004). Serrano et al. administered this Spanish version of the ANSOCQ and the EDI-2 (Garner, 1991) to a sample of 70 adolescents commencing treatment for anorexia nervosa. Unfortunately this study did not provide longitudinal data regarding the participants' levels of eating disorder symptomatology as only the participants' scores on the EDI-2 from the commencement of treatment were used in the data analysis, rather than scores from over the course of their treatment. It was therefore not possible for the authors of this study to examine changes in eating disorder symptomatology over time in relation to readiness to change. However, Serrano et al. did obtain some results comparable to those of Rieger et al. (2000), finding high negative correlations between most of the EDI-2 subscales and the ANSOCQ at the commencement of treatment. Although these results do not provide evidence for the effectiveness of the ANSOCQ in predicting reductions in participants' levels of eating disorder symptomatology over time, they do indicate that individuals with a greater readiness to change tend to possess less severe eating disorder symptomatology.

This work of Serrano et al. (2004) was extended and strengthened by Ametller, Castro, Serrano, Martinez, and Toro (2005) who investigated readiness to change and longitudinal data regarding hospital admission using the Spanish version of the ANSOCQ. The participants used in this study were the same as those used by Serrano et al. and comprised 70 adolescents diagnosed with anorexia nervosa and admitted to an

eating disorders unit for either inpatient, day patient, or outpatient treatment. The participants' scores on the EDI-2 (Garner, 1991) collected at the commencement of treatment were once again used in the data analysis, rather than scores from over the course of treatment. As such, changes in eating disorder symptomatology over time were not examined in relation to readiness to change. However, participants needing hospital admission during the 6-9 month follow-up period were found to differ significantly on the ANSOCQ and EDI-2 to participants not needing hospital admission. In comparison to the participants who were not admitted to hospital during the follow-up period, the participants needing a hospital admission exhibited less readiness to change via a lower mean score on the ANSOCQ, and showed more severe eating disorder symptomatology via higher mean scores on the EDI-2 bulimia, ineffectiveness, interpersonal distrust, interoceptive awareness, and maturity fears subscales. However, only the ANSOCQ was found to be an independent predictor of hospital admission during the follow-up period. This finding indicated that, as scores on the ANSOCQ increased, the likelihood of hospital admission decreased. As hospital admissions may be considered to be indicative of the participants' levels of eating disorder symptomatology, this finding provided evidence for the effectiveness of a specific measure of readiness to change in predicting changes in eating disorder symptomatology over time.

The Spanish version of the ANSOCQ was also used by Castro-Fornieles et al. (2007) in a sample of 49 children and adolescents (aged 10 to 17 years) diagnosed with anorexia nervosa and receiving their first admission to an eating disorders unit. These participants completed the ANSOCQ and a Spanish version of the Eating Attitudes Test (Garner & Garfinkel, 1979), used to measure eating symptoms usually associated with eating disorders. These measures were administered again following discharge after

weight recovery, as well as 9-months after the participants' initial admission to hospital. Of the 40 participants who provided follow-up data at 9-months after admission, significant differences were found on the ANSOCQ and Eating Attitudes Test between those participants with poor weight maintenance and those participants with good weight maintenance. The participants' ANSOCQ score and BMI at admission were also found to be independent predictors of weight maintenance at follow-up whilst the participants' scores on the Eating Attitude Test were not found to predict their weight maintenance at follow-up. This finding indicated that, as the participants motivation to change increased, so did their ability to maintain weight gain following discharge from treatment. Unfortunately the effectiveness of readiness to change as measured by the ANSOCQ, as a predictor of changes in the participants' scores on the Eating Attitudes Test over time, was not assessed. However, as weight maintenance may be considered to be indicative of the participants' levels of eating disorder symptomatology, this finding once again provided some evidence for the effectiveness of a specific measure of readiness to change in predicting changes in eating disorder symptomatology over time.

In summary, specific measures of readiness to change, such as the RMI (Geller & Drab, 1999) or the ANSOCQ (Rieger et al., 2000), that examine a range of behaviours or symptoms related to eating disorders, have been found to be effective in predicting changes in eating disorder symptomatology over time. These measures have revealed a significant relationship between readiness to change and eating disorder symptomatology. Measures such as these, assessing readiness to change rather than only symptom severity and frequency, provide valuable information which can benefit our understanding of the course of eating disorders and improve treatment planning (Geller & Drab, 1999). However it is also important to investigate whether this

relationship between readiness to change and changes in eating disorder symptomatology over time is also evident in a non-clinical sample of individuals experiencing varying levels of eating disorder symptomatology. Such information as this may help not only in the prevention of eating disorders, but also in the treatment of varying levels of eating disorder symptomatology. Within the current study, the ANSOCQ was used in order to assess its effectiveness in predicting changes in eating disorder symptomatology within a non-clinical sample of participants exhibiting varying levels of eating disorder symptomatology. However, as the ANSOCQ was specifically designed for individuals experiencing anorexia nervosa, it was unclear just how useful this measure would be for use with a non-clinical sample, particularly if the eating disorder symptomatology exhibited by these participants more closely resembled symptoms related to bulimia nervosa rather than symptoms related to anorexia nervosa. An additional measure of readiness to change was therefore also used in the current study. The following is a review of this alternative measure of change, the ACQ, and the model it represents, the ACM (Bowles, 2000).

The Adaptive Change Model and Adaptive Change Questionnaire

The ACM was developed by Bowles (2000, 2006) as a classificatory system defining how change occurs, and provides an alternative model of change in comparison to the TTM. The ACM is a transdomain and transtheoretical model, informed by descriptions of change relevant to many settings and theoretical orientations, and thus applicable for use in both clinical and non-clinical populations (Bowles, 2006). The ACM includes five sequential stages of change through which individuals move during the change process (Bowles, 2000). These stages of change comprise openness to opportunity, visualisation, planning, action, and closure (Bowles, 2000). The model

also has three support factors which are non-sequential and operate to influence each stage of change (Bowles, 2000). The support factors consist of negative emotions, social support, and inner drive (Bowles, 2000).

The ACM is operationalised by the ACQ (Bowles, 2000). The ACQ is used to measure a respondent's level on each of the stages of change and support factors, indicating their likelihood of changing in an adaptive manner (Bowles, 2006). Using the ACQ, the ACM stages of change can be conceptualised and measured as a higher-order single construct. This construct is referred to as the ACQ stage of change and represents a respondent's level of readiness to change (Bowles, 2000). The ACM support factors can also be conceptualised and measured as a higher-order single construct. This construct is referred to as the ACQ support factor and represents a respondent's level across each of the three supports of change (Bowles, 2000). To date, the ACQ had not been employed in research investigating eating disorder symptomatology. However, on the basis of the research reviewed in this introduction that has demonstrated the applicability of models of change in relation to understanding changes in eating disorder symptomatology, it was likely that the ACM would also prove useful in furthering understanding in this area given that it is a transtheoretical model. Furthermore, the unique inclusion of the three support factors within the ACM, measured by the ACQ support factor, may help further elucidate the relationship between readiness to change and a reduction in eating disorder symptomatology over time. Cockell, Geller and Linden (2003) argue that it is likely that a variety of variables influence an individuals' readiness to change their eating disorder symptomatology. This argument speaks to the need for a model explaining the role of other variables, such as the ACM support factors, in the relationship between readiness to change and improvements in eating disorder symptomatology over time. The current study was

designed to provide such a model, incorporating readiness to change and the ACM support factors. The following is a review of research into the eating disorders that has incorporated variables related to the ACM support factors that were included in the models tested within this study.

Negative Emotions

The support factor of negative emotions defined within the ACM (Bowles, 2000) includes an individual's experience of a variety of emotions such as anger, anxiety, fear, and resentment that must be managed in an appropriate manner in order for change to occur. A number of researchers have argued that eating disorders may represent a coping strategy for dealing with or regulating negative emotions (Barth, 2003; Holliday, Wall, Treasure, & Weinman, 2005; Jeppson, Richards, Hardman, & Granley, 2003; Miller, Redlich, & Steiner, 2003; for a review and critique see Serpell & Troop, 2003; Troop, 1998). In relation to this, Serpell, Treasure, Teasdale, and Sullivan (1999) investigated the beliefs regarding the function of an eating disorder held by a sample of 18 participants receiving treatment for anorexia nervosa. Anorexia nervosa was described by the participants as fulfilling a number of valuable roles in their lives, including providing a means of avoiding, or coping with, uncomfortable emotions. Serpell and Treasure (2002) replicated this study with a sample of 30 participants receiving treatment for bulimia nervosa. Bulimia nervosa was described as fulfilling many of the same functions as anorexia nervosa as found in the Serpell et al. study, including providing a means of coping with, or managing, difficult emotions.

It has also been argued that negative emotions may contribute to, or help perpetuate, eating disorder symptoms (Polivy & Herman, 2002). As an extension of this, it may be argued that the effective management of negative emotions may be

associated with decreases in eating disorder symptoms. In accordance with such an argument, Bloks, Spinhoven, Callewaert, Willemse-Koning, and Turksma (2001) found that a group of 56 participants with anorexia nervosa and 42 participants with bulimia nervosa, who were undergoing treatment for their eating disorder, tended to employ a passive reacting coping style. Within this study, passive reacting was conceptualised as involving rumination and negative emotions such as worry, and as such may be likened to the negative emotions support factor of the ACM (Bowles, 2000). The participants in this study who completed treatment showed significant reductions at the end of treatment in a measure of passive reacting. These decreases in passive reacting were associated with less eating disorder symptomatology, as measured by the EDI (Garner, 1984) and the Eating Disorders Examination Scale (Vandereycken, 1993). Importantly, in an extension of this research, Bloks, van Furth, Callewaert, and Hoek (2004) found lower levels of passive reacting to predict reductions in eating disorder symptomatology in a sample of 146 participants receiving treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. This research indicates that the management of negative emotions may be associated with reductions in eating disorder symptomatology over time. It is therefore likely that the incorporation of a measure of negative emotions may prove useful in furthering understanding of the relationship between readiness to change and decreases in eating disorder symptomatology over time.

Past research into readiness to change and the eating disorders has incorporated measures of negative emotions; however these measures of negative emotion were not investigated in relation to changes in eating disorder symptomatology over time. In their initial study incorporating the ANSOCQ, Rieger et al. (2000) also administered the Beck Depression Inventory-2 (Beck, Steer, & Brown, 1996) and the Trait scale of the

State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) to the study's participants. The participants' scores on the ANSOCQ were found to be negatively correlated with these two measures of general distress or negative emotions, such that higher levels of readiness to change were associated with lower levels of negative emotions. Serrano et al. (2004) also administered the Beck Depression Inventory-2 to their participants, which was again found to be significantly and negatively correlated with the participants' scores on the ANSOCQ. These findings provide support for an association between an individual's level of negative emotions and their readiness to change their current level of eating disorder symptomatology. Unfortunately the authors of each of these studies did not investigate the role negative emotions may play in influencing the relationship between readiness to change and eating disorder symptomatology. However, as lower levels of negative emotion have been found to be associated with higher levels of readiness to change, and as higher levels of readiness to change have been found to be associated with reductions in eating disorder symptomatology over time, it is plausible that lower levels of negative emotions may also be associated with reductions in eating disorder symptomatology over time. Thus the current study therefore investigated the role of negative emotions in relation to readiness to change and changes in eating disorder symptomatology over time.

Social Support

Within the ACM, social support refers to the availability of others to provide affirmation, information, and support to the individual undergoing change (Bowles, 2000). Research indicates that individuals with an eating disorder tend to report having fewer support figures and being less satisfied with the quality of support available to

them than non-eating disordered individuals (Ghaderi, 2001; Rich, 2006; Rorty, Yager, Buckwalter, & Rossotto, 1999; Tiller et al., 1997; Troop, Holbrey, & Treasure, 1998). A small amount of research has also been conducted into social support as a predictor of recovery from an eating disorder. Bloks et al. (2004) found significant differences between the level of social support sought prior to treatment and following treatment in a sample of participants experiencing either anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. Participants who were in partial remission or who had recovered from an eating disorder following treatment reported seeking more social support at 2.5 years follow-up compared to their pre-treatment measures. However, participants who had not recovered from their eating disorder reported no such differences in seeking social support. Furthermore, seeking social support to a higher degree was found to contribute to the prediction of reduced eating disorder symptomatology at follow-up.

Social support has also been investigated in relation to recovery from an eating disorder by Sohlberg, Norring, and Rosmark (1992). Sohlberg et al. (1992) assessed the recovery status of 32 adults seeking treatment for either anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified at 1, 2, and 3 years after their initial presentation for treatment. At 1-year follow-up, level of social support only explained 1% of the variation in the participants' recovery status, and was not at all predictive of recovery status by 2-years follow-up. However, at 3-years follow-up, social support was a significant predictor of recovery status such that participants reporting a higher level of social support were exhibiting less eating disorder symptomatology. This finding was explained by the authors as possibly reflecting the participants' increasing acceptance of social support either as a natural result of time, or brought about as a consequence of reduced eating disorder symptomatology. This latter

explanation indicates that decreases in the participants' eating disorder symptomatology led to increases in their social support. However, it is also possible that increases in the participants' social support led to decreases in their eating disorder symptoms. In light of this literature, it is apparent that higher levels of social support may be associated with decreased levels of eating disorder symptomatology. Social support was included in the current study, to investigate the role it may play in relation to readiness to change and changes in eating disorder symptomatology over time.

Inner Drive

As contained within the ACM (Bowles, 2000), inner drive may be likened to an internal locus of control and self-efficacy, and is comprised of an individual's motivation, effort, and commitment to the change process. Little research has been conducted into the association between eating disorder symptomatology and inner drive or locus of control. Harding and Lachenmeyer (1986) found a sample of 30 females with anorexia nervosa to posses a significantly more external locus of control than a group of non-eating disordered control participants. However, Furnham and Atkins (1997) found a group of 28 women with an eating disorder to posses a significantly more internal locus of control regarding their weight control beliefs than a non-eating disordered control group. When this clinical group was divided into participants with anorexia nervosa and participants with bulimia nervosa or compulsive eating, the participants with bulimia nervosa or compulsive eating were not found to differ in their weight beliefs locus of control in comparison to the control participants. The participants with anorexia nervosa were found to have a significantly more internal locus of control regarding their weight control beliefs than the participants with bulimia nervosa or compulsive eating. This research, however, did not investigate the

participants' levels of inner drive in relation to their ability to reduce their level of eating disorder symptomatology over time. Self-efficacy, which can be likened to inner drive, has been argued to be an important element in the change process (Treasure & Schmidt, 2001; Treasure & Ward, 1997). This argument speaks to the importance of investigating inner drive and changes in eating disorder symptomatology over time.

A small amount of research investigating factors similar to inner drive in relation to changes in eating disorder symptomatology over time has been conducted. Bardone, Perez, Abramson, and Joiner (2003) investigated self-competence (i.e. self-efficacy) in association with changes in bulimia nervosa symptoms using a sample of over 500 female undergraduate university students. Bardone et al. found bulimia nervosa symptoms to be associated with self-competence such that lower levels of self-competence were associated with higher levels of bulimia nervosa symptoms. The results of the study also revealed a non-significant trend for self-competence to be associated with changes in bulimia nervosa symptoms over time such that higher levels of self-competence appeared to be associated with reductions in bulimia nervosa symptoms.

Whilst investigating the ANSOCQ in relation to decisional balance and self-efficacy, Rieger et al. (2002) devised the Self-Efficacy Scale based on items from the ANSOCQ. The Self-Efficacy Scale was designed to assess the self-efficacy of individuals with anorexia nervosa regarding their ability to change their anorexia nervosa symptomatology. The Self-Efficacy Scale was found to be significantly associated with the participants' stage of change, as measured by the ANSOCQ. This finding indicated that participants with a higher level of readiness to change also possessed higher levels of self-efficacy regarding their ability to change their eating disorder symptomatology. As research has indicated that higher scores on the

ANSOCQ are associated with improvements in eating disorder symptomatology over time (e.g. Rieger et al., 2000), it is also likely that higher self-efficacy may also be associated with improvements in eating disorder symptomatology over time.

Similar to Rieger et al. (2002), Pinto, Guarda, Heinberg, and DiClemente (2006) also developed an instrument, the Eating Disorder Self-Efficacy Questionnaire, to measure self-efficacy related to recovery in individuals experiencing an eating disorder. Pinto, Heinberg, Coughlin, Fava, and Guarda (2008) administered this measure to a sample of 104 females admitted to an inpatient eating disorders treatment program for the treatment of anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified (classified as subthreshold anorexia nervosa by the authors). In this sample of participants, recovery self-efficacy at admission was associated with a shorter duration of hospitalisation and less self-reported eating disorder symptomatology at two weeks following step-down to partial hospitalisation, as assessed using the drive for thinness and body dissatisfaction subscales of the EDI-2 (Garner, 1991). Recovery self-efficacy was also a significant predictor of the participants' length of hospitalisation and body dissatisfaction over and above other variables such as age, eating disorder diagnosis, and BMI at admission. Thus self-efficacy was found to be associated with reductions over time in eating disorder symptomatology. It is apparent from this review of the literature that inner drive is likely associated with reductions in eating disorder symptomatology over time. Thus the current study incorporated inner drive, to investigate the role it may play in relation to readiness to change and changes in eating disorder symptomatology over time.

In summary, research has demonstrated the usefulness of readiness to change as a predictor of eating disorder symptomatology over time in individuals currently experiencing an eating disorder. However, it has not yet been established whether this

relationship between readiness to change and eating disorder symptomatology is also apparent in a non-clinical population. It is also possible that other variables, such as the ACM support factors (Bowles, 2000), may play a role in this relationship between readiness to change and improvements in eating disorder symptomatology over time. The purpose of the current study was investigate these possible relationships by longitudinally investigating readiness to change, the ACM support factors, and eating disorder symptomatology over time in a non-clinical sample. It was anticipated that this research could help clarify possible differences between individuals who are experiencing an eating disorder and non-eating disordered individuals exhibiting varying levels of eating disorder symptomatology. It was also anticipated that the current study would held elucidate areas of focus for eating disorder prevention or for the treatment of varying levels of eating disorder symptomatology.

Aims and Hypotheses

The aims of the current study were to extend research into readiness to change and the eating disorders, to investigate this relationship in a non-clinical sample and to investigate the role of additional factors that may support the change process. In order to achieve these aims, three different models were proposed to explain two hypothesised relationships between each of the variables of interest within this study. On the basis of the research reviewed within this introduction demonstrating the role of readiness to change in predicting improvements in eating disorder symptomatology or treatment outcomes in clinical samples over time, it was hypothesised that this same relationship would be evident in a non-clinical sample of participants displaying various levels of eating disorder symptomatology. The first hypothesis therefore stated that readiness to change would predict changes in eating disorder symptomatology over time such that

higher levels of readiness to change would predict greater reductions in eating disorder symptomatology than lower levels of readiness to change. The second hypothesis stated that that the ACQ support factor (Bowles, 2000) would aid in the prediction of changes in eating disorder symptomatology over time, such that higher levels of the ACQ support factor would predict greater reductions in eating disorder symptomatology than lower levels of the ACQ support factor.

In order to investigate the two hypotheses of this study, the current study was longitudinal in nature. The participants' levels of eating disorder symptomatology were assessed at three different points in time, to assess the utility of readiness to change in predicting time 2 (T2) eating disorder symptomatology and then time 3 (T3) eating disorder symptomatology. In order to adequately assess the participants' levels of readiness to change, two different measures of readiness to change were employed. The ANSOCQ (Rieger et al., 2000) was used as a specific measure of readiness to change various eating disorder symptomatology. The ACQ (Bowles, 2000) was used as a more general measure of readiness to change as it did not ask participants about specific eating disorder symptomatology. These two measures were used as the majority of previous research into readiness to change and eating disorder symptomatology has tended to use either a general measure or a specific measure of readiness to change, but not both. However, as eating disorder symptomatology comprises multiple behaviours it is possible that measures that assess readiness to change across these various behaviours may prove more beneficial in predicting changes over time in than more general measures of readiness to change (Dunn et al., 2003; Geller, 2002; Sullivan & Terris, 2001; Treasure et al., 1999; Ward et al., 1996; Wilson & Schlam, 2004). Thus both the ANSOCQ and the ACQ were each used separately within the current study to predict T2 and T3 eating disorder symptomatology.

Two direct effects models and a moderation model were proposed in order to explain the two hypothesised relationships between the variables employed in this study. The first direct effects model was proposed to explain the first hypothesis. A direct effects model indicates that an independent variable, in this case readiness to change, has a direct influence on a dependent variable, in this case eating disorder symptomatology. In relation to the first direct effects model proposed within this study, it was hypothesised that the participants' level of readiness to change would predict the change in their level of eating disorder symptomatology over time. It was hypothesised that a higher degree of readiness to change would lead to greater reductions in eating disorder symptomatology over time in comparison to a smaller degree of readiness to change. This model is depicted in Figure 1.

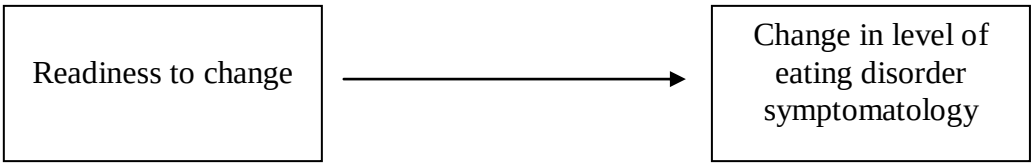

Figure 1. Direct effects model of readiness to change and change in level of eating disorder symptomatology.

Secondly, it was hypothesised that the inclusion of the ACQ support factor (Bowles, 2000) would aid in the prediction of change in the participants' level of eating disorder symptomatology over time. However, based on the current research literature, it was unclear whether the ACQ support factor would exert a direct influence on eating disorder symptomatology over time or if it would moderate the relationship between readiness to change and changes in the participants' level of eating disorder

symptomatology over time. Therefore, a direct effects model and a moderator effects model were proposed.

The direct effects model incorporating the ACQ support factor proposed that the participants' readiness to change and the ACQ support factor would each exert an independent influence on changes to their level of eating disorder symptomatology over time. Thus it was hypothesised that either a high level of the ACQ support factor, or a greater degree of readiness to change, would lead to greater reductions in eating disorder symptomatology over time than either a low level of the ACQ support factor or a smaller degree of readiness to change. This model is shown in Figure 2.

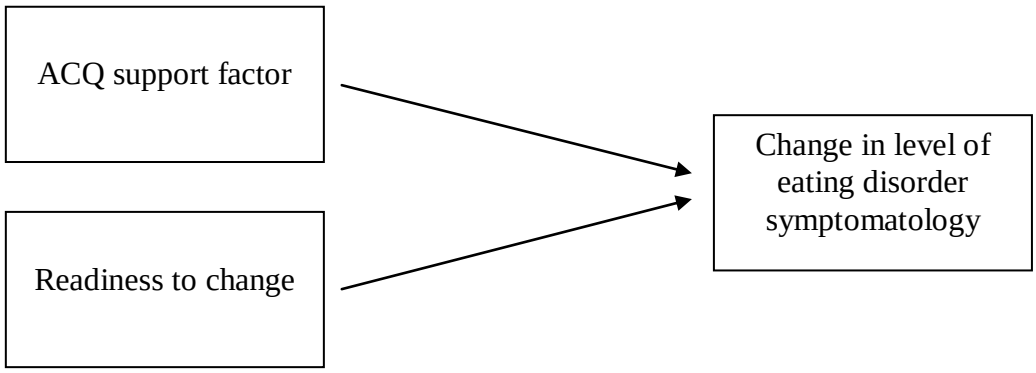

Figure 2. Direct effects model of the ACQ support factor, readiness to change, and change in level of eating disorder symptomatology.

An alternative explanation was provided by a moderator model. A moderator effects model includes a moderator variable (in this instance the ACQ support factor; Bowles, 2000) which affects the strength and/or direction of the relationship between a predictor (readiness to change) and an outcome (eating disorder symptomatology; Baron & Kenny, 1986; Frazier, Tix & Barron, 2004). When moderation occurs, the effect of the predictor variable upon an outcome variable changes in accordance with the level or

strength of the moderator (Baron & Kenny, 1986). Thus, a moderating variable is an effect modifier, influencing 'when' or 'for whom' a variable most strongly predicts an outcome (Frazier et al.; Kraemer, Stice, Kazdin, Offord, & Kupfer, 2001; Kraemer, Wilson, Fairburn, & Agras, 2002). Within this study, the moderation model proposed that the ACQ support factor would modify the relationship between readiness to change and changes in the participants' level of eating disorder symptomatology over time. It was hypothesised that greater levels of the ACQ support factor would enhance the relationship between readiness to change and changes in the participants' level of eating disorder symptomatology, leading to greater reductions in eating disorder symptomatology over time. In other words, it was expected that participants with both a high level of the ACQ support factor and a high degree of readiness to change would exhibit the most favourable changes over time in their level eating disorder symptomatology. In comparison, less favourable changes over time in a participant's level of eating disorder symptomatology were expected for those participants with either a high level of the ACQ support factor but a low degree of readiness to change, a low level of the ACQ support factor but a high degree of readiness to change, or both a low level of the ACQ support factor and a low degree of readiness to change. This model is shown in Figure 3.

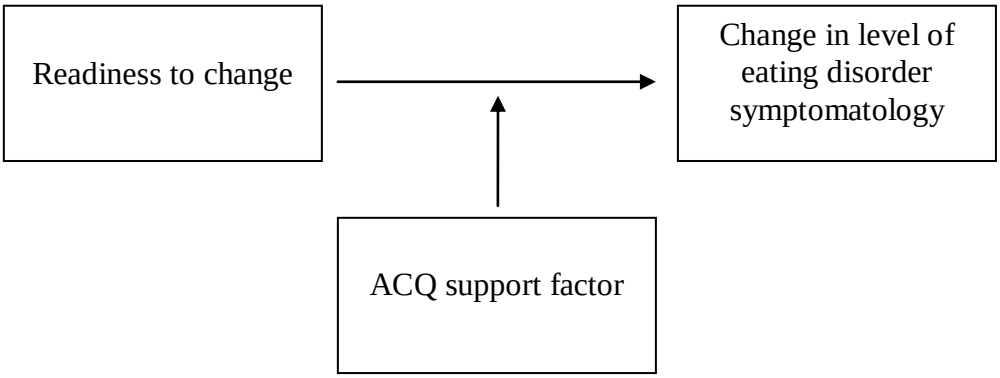

Figure 3. Moderator effects model of the ACQ support factor, readiness to change, and change in level of eating disorder symptomatology.

Summary

Research has tended to demonstrate the effectiveness of measures of readiness to change in predicting improvements in eating disorder symptomatology or treatment outcome over time. However, it has not yet been established whether this relationship between readiness to change and eating disorder symptomatology is also applicable to a non-clinical population. It has also not yet been established whether there are additional variables not yet researched, such as the ACQ support factor (Bowles, 2000), that also play a role in this relationship. The purpose of the current study was to examine whether readiness to change as measured by the ANSOCQ (Rieger et al., 2000) and the ACQ stage of change (Bowles) would predict changes over time in the varying levels of eating disorder symptomatology present in a non-clinical sample. The ACQ support factor was also included in the current study, to investigate the role this factor may play in the relationship between readiness to change and eating disorder symptomatology in a non-clinical sample. Two direct effects model and a moderation model were proposed

to account for the hypothesised relationships between these variables. In the next section of this thesis, the methodology employed to test the hypotheses of this study will be introduced.

CHAPTER THREE

Study One Method

Participants

In accordance with the majority of research investigating readiness to change and eating disorder symptomatology, the participants in the study were all female. Participants were required to be over the age of 18. However, no upper age limit was set for participation, as epidemiological studies clearly demonstrate the presence of eating disorder symptomatology in older women (e.g. Hay et al., 2008). The participants were recruited via a snowball technique. Initially, participants were recruited during undergraduate classes at a university in metropolitan Australia. These participants were also invited to pass the questionnaire on to other women interested in participating in the study. Using this method, data was collected from 140 participants.

Materials

All participants were provided with an information letter about the study and consent forms to sign prior to participation (see Appendices A and B). The participants then completed a background questionnaire and three psychological measures (see Appendix C). The background questionnaire gathered information regarding the participants' age, date of birth, and their current mailing address and phone number so they could be contacted for follow-up data collection. This questionnaire was also used to gather information regarding the participants' height and weight, used to calculate their BMI. The psychological measures administered to the participants included the ANSOCQ (Rieger et al., 2000), ACQ (Bowles, 2000), and EDI-3 (Garner, 2004), as described below.

ANSOCQ.

The ANSOCQ (Rieger et al., 2000) is a 20-item self-report measure assessing participants' readiness to change a broad range of eating disorder symptomatology. Areas addressed include participants' readiness to change their focus on body shape and weight, eating behaviours, weight control strategies, emotional difficulties, problematic personality characteristics, and interpersonal difficulties. Each item of the measure refers to a specific aspect of eating disorder symptomatology and contains five statements representing Prochaska and DiClemente's (1982) stages of change: precontemplation, contemplation, preparation, action, and maintenance. For each item, the participants were required to select the statement(s) which best reflected their current attitude or behaviour with regard to making a change to each aspect of eating disorder symptomatology. Scores for each item of the ANSOCQ range from 1 (representing a precontemplation stage response) to 5 (a maintenance stage response). Total ANSOCQ scores range from 1 to 100, but were averaged across items to approximate the participants' stage of change or readiness to change. The Cronbach alpha coefficient for the ANSOCQ within the current study was .69.

ACQ.

The ACQ (Bowles, 2000) is a 35-item self-report measure, also assessing participants' readiness to change. The original ACQ was modified for the purposes of this study to particularly refer to changes in eating behaviour and body shape, rather than to any change in general. The ACQ was used to measure two general factors of change, stage of change and the ACQ support factor. The participants' stage of change was measured using 18 items rated on a 6-point Likert scale ranging from 1 (very

strongly disagree) to 6 (very strongly agree). Raw scores on this factor can range from 18 to 108, with the average of the sum across items reflecting the participants' readiness to change via the ACQ stage of change factor. The Cronbach alpha coefficient for the ACQ stage of change factor within the current study was .89. The ACQ support factor was assessed using 17 items measured on the same scale as the ACQ stage of change. Raw scores on this factor can range from 17 to 102, with the average of the sum across items reflecting the participants' average level of the supports of change via the ACQ support factor. The Cronbach alpha coefficient for the ACQ support factor within the current study was .84.

EDI-3.

The EDI-3 (Garner, 2004) is a 91-item self-report measure assessing the presence and intensity of psychological traits or symptom clusters relevant to the development and maintenance of eating disorders. For the purposes of the current study, the participants' level of eating disorder symptomatology was assessed using the 25 item Eating Disorder Risk Composite (EDRC), a composite of the Drive for Thinness, Bulimia, and Body Dissatisfaction scales found within the EDI-3. The participants were required to report whether each item of the EDI-3 was true about them always (A), usually (U), often (O), sometimes (S), rarely (R), or never (N). Responses were then given a score ranging from 0 to 4, with the most extreme response in the pathological or symptomatic direction scored 4 and the two least pathological responses scored 0. Raw scores for the EDRC were calculated by summing all of the relevant item scores, and could thus range from 0 to 100 with higher scores indicating a higher level of eating disorder symptomatology. The participants' T scores on the EDRC were used to indicate their level of clinical range with respect to their eating disorder

symptomatology. T scores for the EDRC were found by computing the participants' scores on the relevant scales and then converting these scores to T scores for each scale according to the international adult clinical sample conversion tables found in the EDI-3 Professional Manual. These T scores were then added together and converted into an overall T score for the EDRC using the relevant conversion table provided in the EDI-3 Professional Manual. The participants' T scores on the EDRC could range from 20 to 68. For the purposes of this study, references to the participants' scores on the EDI-3 EDRC relate to their raw scores, rather than T scores, unless otherwise specified. At the time of initial data collection (time 1 or T1), the Cronbach alpha coefficient for the EDRC was .94. At T2 the Cronbach alpha coefficient for the EDRC was .94. At T3 the Cronbach alpha coefficient for the EDRC was also .94.

Procedure

All participants were invited to read an information letter about the study and were required to give signed consent before participating. At the initial point of data collection (T1), the participants were provided with a booklet containing the background questionnaire, ANSOCQ, ACQ, and EDI-3. At three months (T2) and again at six months (T3) following their initial participation, participants were sent a brief questionnaire package asking their height and weight and also containing the EDI-3. The participants returned this brief questionnaire package to the researcher via a reply-paid envelope. Participants who had not returned their questionnaire after two weeks were contacted by phone when possible, as a reminder to return the questionnaire. No reward was offered to the participants for their participation.

The participants' BMI at T1, T2, and T3 was calculated using their reported height at T1. Height reported at T1 was used as a number of participants reported

different heights at each point of data collection that appeared to be due to inconsistent reporting, rather than actual changes in height (for example, one participant reported her height to be 1.73 meters at T1, 1.72 meters at T2, and 1.75 meters at T3). For those participants who had not reported their height at T1, height at T2 or T3 was used to calculate their BMI where appropriate. BMI data was deleted for one participant who did not report her height at T1, but reported a height of 1.93 meters at T2 and 1.64 meters at T3. The participants were categorised as underweight, normal weight, overweight, or obese using the World Health Organization's (2000) BMI cut-off points. Using these cut-off points, participants with a BMI < 18.50 were classified as underweight, participants with a BMI between 18.50 and 24.99 were classified as a normal weight, participants with a BMI between 25.00 and 29.99 were classified as overweight, and participants with a BMI ≥ 30.00 were classified as obese.

At the T1 data collection period, the mean age of the participants was 27.02 years (*SD* = 10.33, range 18 to 59), with a mean BMI of 23.99 (*SD* = 5.94, range 17.63 to 57.03). According to the participants' BMI data, at T1 4.0% of the sample were classified as underweight, 66.7 % as a normal weight, 20.6% as overweight, and 8.7% as obese. Using the EDRC T scores and the T score cut-offs as recommended by Garner (2004), 85.5% of the participants were within the low clinical range of the EDRC (i.e. exhibited no significant concerns with eating and weight). A further 13.0% of participants fell within the typical clinical range of the EDRC (i.e. exhibited significant eating and weight concerns, characteristic of an individual experiencing an eating disorder), and 1.4% of participants were within the elevated clinical range of the EDRC (i.e. exhibited extreme eating and weight concerns).

At the T2 data collection period, questionnaires were returned by 99 participants (70.71% response rate). The participants who returned the T2 questionnaire had a mean

age of 28.16 years (*SD* = 11.10) and a mean BMI of 24.35 (*SD* = 5.13). According to this BMI data, at T2 2.0% of the sample were classified as underweight, 64.3 % as a normal weight, 23.5% as overweight, and 10.2% as obese. According to the EDRC T scores, 88.7% of the participants were within the low clinical range, 10.0% within the typical clinical range, and 1.0% within the elevated clinical range of the EDRC. The Kruskall-Wallis Test was used in order to assess whether the participants who did not return the T2 questionnaire differed significantly on any of the T1 variables from the participants who did return the T2 questionnaire. This non-parametric test was used as the factor scores on each of the variables of interest had not yet been transformed to be normally distributed. The Kruskal-Wallis Test indicated that participants who did not return the questionnaire did not differ from participants who did return the questionnaire on T1 measures of the ANSOCQ, ACQ support factor, EDRC, BMI, or age ($p > .05$). However, the participants who did not return the T2 questionnaire differed from participants who did return the questionnaire on the ACQ stage of change. The participants who did not return the T2 questionnaire reported significantly lower levels of the ACQ stage of change ($M = 3.90$, $SD = 0.38$) than participants who did return the questionnaire ($M = 4.21$, $SD = 0.67$), $\chi^2 = 8.26$, $p < .01$.

At the T3 data collection period, questionnaires were returned by 88 participants (62.86% response rate). The participants who returned the T3 questionnaire had a mean age of 27.90 years (*SD* = 11.30) and a mean BMI of 23.92 (*SD* = 5.10). According to this BMI data, at T3 1.2% of the sample were classified as underweight, 69.4 % as a normal weight, 23.5% as overweight, and 5.9% as obese. According to the EDRC T scores, 89.5% of the participants were within the low clinical range, 6.9% within the typical clinical range, and 3.5% within the elevated clinical range of the EDRC. The Kruskal-Wallis Test indicated that participants who did not return the T3 questionnaire

did not differ from participants who did return the questionnaire on T1 measures of the ANSOCQ, ACQ stage of change, ACQ support factor, EDRC, BMI, or age ($p > .05$).

CHAPTER FOUR

Study One Results

Prior to analyses, the data were screened in accordance with Tabachnick and Fidell (2001) using SPSS (Version 15) for Windows. The data were examined for accuracy of data entry, missing values, and normality. Missing data was found to be random, as indicated by Little's MCAR test: $\chi^2(2129) = 2128.81$, $p > .05$. Participants with a significant amount of data missing (≥3 items) on the ANSOCQ (10 participants) or the ACQ stage of change (11 participants) or ACQ support factor (14 participants) were excluded from all analyses incorporating those measures. For participants with 1-2 items of missing data on the ANSOCQ or ACQ, missing values were replaced by the mean for that series. As the amount of missing data on the EDI-3 for all cases was less than one item per scale and thus within acceptable limits (Garner, 2004), mean substitution for missing values was not employed. The descriptive statistics for each of the measures of interest are presented in Table 1.

Table 1

Mean Scores and Standard Deviations for Readiness to Change, the ACQ Support Factor, EDRC, and BMI

	Time 1		Time 2		Time 3	
ANSOCQ	2.12	(0.45)				
ACQ Stage of Change	4.12	(0.62)				
ACQ Support Factor	4.29	(0.57)				
EDRC	32.71	(19.41)	30.15	(18.92)	29.23	(18.90)
BMI	23.99	(5.94)	24.35	(5.13)	23.92	(5.10)
	N = 140		N = 99		N = 88	

Analyses indicated that the measures of the participants' BMI were not normally distributed. To reduce skewness and kurtosis, BMI at T1, T2, and T3 was logarithmically transformed and 11 outlying cases with a BMI > 30 were excluded from subsequent analyses using this factor. Following logarithmic transformations, the participants' BMI at T1 began to approximate a normal distribution (Shapiro-Wilk = .98 (113), $p < .05$). To address skewness and kurtosis, the participants' BMI at T2 and T3 were also subjected to logarithmic transformations. Following transformations, tests of normality indicated a normal distribution for BMI at T2 (Shapiro-Wilk = .99 (88), $p > .05$) and T3 (Shapiro-Wilk = .97 (78), $p > .05$ at T3). Further analyses indicated that the participants' scores on the ANSOCQ, ACQ stage of change, ACQ support factor, and the EDI-3 EDRC at T1, T2, and T3 were not normally distributed. To reduce skewness and kurtosis the ANSOCQ scores were logarithmically transformed. Following transformation, tests of normality indicated a normal distribution for the ANSOCQ

(Shapiro-Wilk = .99 (130), $p > .05$). To reduce skewness and kurtosis on the ACQ stage of change, scores were logarithmically transformed and 5 outlying cases dropped from subsequent analyses using this factor. Following these steps, tests of normality indicated a normal distribution for the ACQ stage of change (Shapiro-Wilk = .98 (124), $p > .05$). The ACQ support factor scores were also logarithmically transformed to reduce skewness and kurtosis, resulting in a normal distribution of scores (Shapiro-Wilk = .99 (126), $p > .05$). To reduce skewness and kurtosis on the EDI-3 EDRC at each time point, scores were subjected to a square root transformation. Following transformations, tests of normality indicated a normal distribution for the EDRC at each time point (Shapiro-Wilk = .99 (140), $p > .05$ at T1; Shapiro-Wilk = .978 (99), $p > .05$ at T2; Shapiro-Wilk = .99 (88), $p > .05$ at T3). Each of these transformed variables was used in all subsequent analyses.

Following transformations of the variables of interest for this study, subsequent examination of bivariate scatterplots indicated that the assumptions of linearity and homoscedasticity were not violated for each of these variables. Using the Mahalanobis distance technique and a probability estimate of $p < .001$, the data was screened for multivariate outliers. Two cases were found to be multivariate outliers and were subsequently excluded from all further analyses. The intercorrelations for each of the transformed variables of interest are presented in Table 2.

Table 2

Intercorrelations Between BMI, Readiness to Change, the ACQ Support Factor, and EDRC

	1	2	3	4	5	6	7	8	9
1. BMI (T1)	__	.99**	.94**	-.07	.03	.00	.33**	.37**	.36**
2. BMI (T2)		__	.97**	-.13	-.01	-.12	.36**	.37**	.34**
3. BMI (T3)			__	-.06	-.03	-.19	.39**	.37**	.36**
4. ANSOCQ				__	-.01	-.08	.05	.04	.02
5. ACQ Stage of Change					__	.56**	-.18*	-.19	-.14
6. ACQ Support Factor						__	-.42**	-.36**	-.34**
7. EDRC (T1)							__	.88**	.84**
8. EDRC (T2)								__	.93**
9. EDRC (T3)									__

* $p < .05$

** $p < .01$

Although a number of the variables were found to correlate significantly, examination of tolerance statistics for each of these variables indicated that the assumptions of multicollinearity and singularity were not violated. Francis (2000, 2004) asserts that tolerance levels less than 0.3, derived from multiple regression analyses, are indicative of multicollinearity. Menard (2002) argues that tolerance levels less than 0.2 are a cause for concern, with levels less than 0.1 almost certainly indicating serious multicollinearity. Within the current study, all tolerance levels were greater than 0.3, indicating that there was no problematic multicollinearity between the variables.

Prior to assessing each of the hypotheses of this study, a one-way repeated measures ANOVA was used to compare the participants' BMI and scores on the EDRC

at each time point of data collection. There was no significant effect of time on the participants' BMI, Wilks' Lamba = .93, F (2, 60) = 2.42, $p > .05$, $\eta^2 = .075$ (see Figure 4). There was a significant effect of time on the EDRC scores, Wilks' Lamba = .92, F (2, 77) = 3.299, $p < .05$, $\eta^2 = .079$. Inspection of the means for the EDRC across the three time points indicated that the participants' scores on the EDRC tended to decrease over time (see Figure 4).

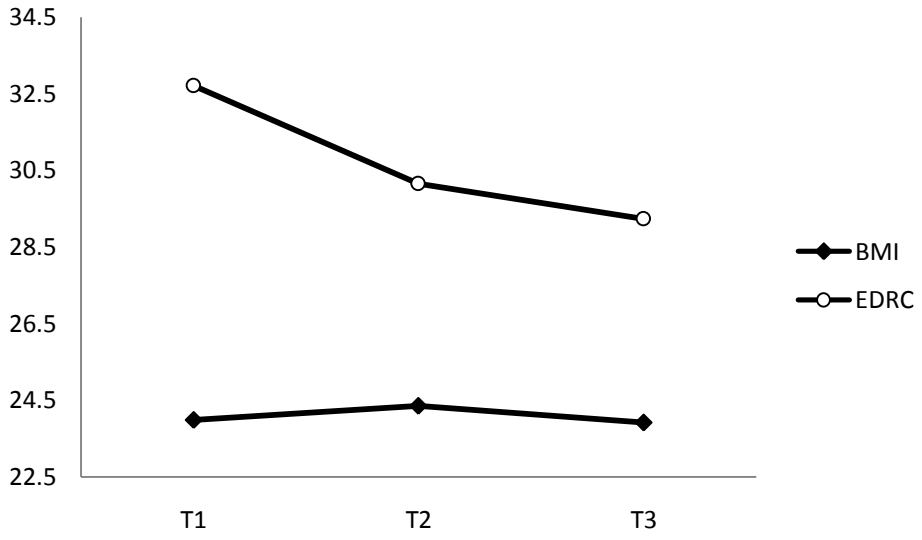

Figure 4. Mean scores for BMI and the EDRC across the three time points of data collection.

In order to assess the hypotheses of this study, three models were assessed. Each model was assessed using hierarchical (also known as sequential) multiple regression. Hierarchical multiple regression was used as this data analytic technique allows for the independent or predictor variables to be entered into the regression equation in blocks, in an order specified by the researcher (Pallant, 2001). By entering the predictor variables in blocks or steps, each successive block entered into the equation is evaluated for its predictive power over and above that provided by previous

blocks (Pallant). Thus hierarchical multiple regression allows for the initial variables or blocks entered into the regression equation to be controlled for, revealing the predictive utility of a subsequent block of variables. This technique of data analysis was employed in the current study in order to assess the power of readiness to change and the ACQ support factor in predicting eating disorder symptomatology, over and above the predictive power provided by initial levels of eating disorder symptomatology and BMI. In accordance with the hypotheses of this study, it was anticipated that, after controlling for prior levels of eating disorder symptomatology and BMI, readiness to change and the ACQ support factor would be significant predictors of changes in an individual's level of eating disorder symptomatology over time. Hierarchical multiple regression was also used within the current study to test the moderation model, as recommended by Irwin and McClelland (2001), McClelland and Judd (1993), and Tabachnick and Fidell (2001).

Within the current study there were two measures of readiness to change, the ANSOCQ (Rieger et al., 2000) and the ACQ stage of change (Bowles, 2000). Each model was therefore assessed using the ANSOCQ measure of readiness to change as a predictor of changes in eating disorder symptomatology over time (i.e. the EDRC) and then assessed again using the ACQ stage of change measure of readiness to change. Each of the three models was also assessed using the T2 EDRC as the dependent variable and then assessed again using the T3 EDRC as the dependent variable. Each model was therefore assessed four times.

Hypothesis One

The ANSOCQ as a Predictor

The first hypothesis stated that participants' readiness to change would predict changes in eating disorder symptomatology over time. This model was initially assessed using the ANSOCQ measure of readiness to change, to determine whether the addition of the ANSOCQ would improve the prediction of the EDRC at T2 beyond the predictive utility provided by the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation to statistically control for the effects of these variables. The ANSOCQ was then entered in the second block, as the independent variable. Table 3 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 74) = 91.02, $p < .001$). The addition of the ANSOCQ in the second predictor block did not account for any more variance in the prediction of the EDRC at T2, as indicated by the R Square Change value. The only variable found to make a statistically significant unique contribution to the prediction of the EDRC at T2 was the EDRC at T1 (beta = .87).

Table 3

Model 1 Hierarchical Multiple Regression Analysis Using the ANSOCQ to Predict the T2 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	12.78	7.05	.34
BMI at T2	-9.90	6.97	-.27
EDRC at T1	0.92	0.06	.87***
Block 2			
BMI at T1	13.06	7.21	.35
BMI at T2	-10.23	7.18	-.28
EDRC at T1	0.92	0.06	.87***
ANSOCQ	-0.25	1.18	-.01

Note: Block 1 R^2 = .79, Block 2 ΔR^2 = .000 (p > .05)

***p < .001

The first hypothesis was assessed again to determine whether the ANSOCQ would improve the prediction of the EDRC at T3 beyond the predictive utility provided by the EDRC from T1 and T2, and BMI from all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation to statistically control for the effects of these variables. The ANSOCQ was then entered in the second block, as the independent variable. Table 4 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T3 (F (5, 62) = 92.55, p < .001). The addition of the

ANSOCQ in the second predictor block added 0.3% of variance to the prediction of the EDRC at T3, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T3 were the EDRC at T2 (beta = .85) and BMI at T2 (beta = -.58).

Table 4

Model 1 Hierarchical Multiple Regression Analysis Using the ANSOCQ to Predict the T3 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	7.76	5.91	.21
BMI at T2	-17.66	7.58	-.49*
BMI at T3	10.76	6.57	.29
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.84	0.10	.85***
Block 2			
BMI at T1	8.82	5.93	.24
BMI at T2	-20.86	7.92	-.58*
BMI at T3	12.74	6.71	.34
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.84	0.10	.85***
ANSOCQ	-1.27	0.96	-.06

Note: Block 1 $R^2 = .88$, Block 2 $\Delta R^2 = .003$ ($p > .05$)

*$p < .05$

***$p < .001$

The ACQ Stage of Change as a Predictor

The first hypothesis was then assessed using the ACQ stage of change as a predictor variable, to determine whether the ACQ stage of change would improve the prediction of the EDRC at T2 beyond the predictive utility provided by the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation to statistically control for the effects of these variables. The ACQ stage of change was then entered in the second block, as the independent variable. Table 5 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 73) = 89.79, $p < .001$). The addition of the ACQ stage of change in the second predictor block added 0.2% of variance to the prediction of the EDRC at T2, as indicated by the R Square Change value ($p > .05$). The only variable found to make a statistically significant unique contribution to the prediction of the EDRC at T2 was the EDRC at T1 (beta = .86).

Table 5

Model 1 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change to Predict the T2 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	12.78	7.10	.34
BMI at T2	-9.90	7.02	-.27
EDRC at T1	0.92	0.06	.87***
Block 2			
BMI at T1	13.51	7.17	.36
BMI at T2	-10.48	7.07	-.29
EDRC at T1	0.91	0.06	.86***
ACQ stage of change	-1.54	1.93	-.04

Note: Block 1 R^2 = .79, Block 2 ΔR^2 = .002 (p > .05)

***p < .001

The first hypothesis was assessed a final time to determine whether the ACQ stage of change would improve the prediction of the EDRC at T3 beyond the predictive utility provided by the EDRC from T1 and T2, and BMI from all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation to statistically control for the effects of these variables. The ACQ stage of change was then entered in the second block, as the independent variable. Table 6 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T3 (F (5, 62) = 92.55, p <

.001). The addition of the ACQ stage of change in the second predictor block added 0.1% of variance to the prediction of the EDRC at T3, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T3 were the EDRC at T2 (beta = .86) and BMI at T2 (beta = -.49).

Table 6

Model 1 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change to Predict the T3 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	7.76	5.91	.21
BMI at T2	-17.66	7.58	-.49*
BMI at T3	10.76	6.57	.29
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.84	0.10	.85***
Block 2			
BMI at T1	7.03	6.01	.19
BMI at T2	-17.58	7.61	-.49*
BMI at T3	11.31	6.64	.30
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.85	0.10	.86***
ACQ stage of change	1.15	1.16	.03

Note: Block 1 $R^2 = .88$, Block 2 $\Delta R^2 = .001$ ($p > .05$)

*$p < .05$

***$p < .001$

Hypothesis Two

Direct Effects Model Using the ANSOCQ and ACQ Support Factor as Predictors

The second hypothesis incorporated the ACQ support factor into the previously tested direct effects model, stating that a high level of the ACQ support factor would lead to greater reductions in eating disorder symptomatology over time than a low level of the ACQ support factor. The same process used in testing the first hypothesis, whereby the model was assessed four times, was again used to assess the second hypothesis.

The second model was initially assessed to determine whether the ANSOCQ and the ACQ support factor would improve the prediction of the EDRC at T2 beyond the predictive utility provided by the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation to statistically control for the effects of these variables. The ANSOCQ and ACQ support factor were entered in the second block, as independent variables. Table 7 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 74) = 91.02, $p < .001$). The addition of the ANSOCQ and ACQ support factor in the second predictor block added 0.5% of variance to the prediction of the EDRC at T2, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T2 were the EDRC at T1 (beta = .83) and BMI at T1 (beta = .45).

Table 7

Model 2 Hierarchical Multiple Regression Analysis Using the ANSOCQ and ACQ Support Factor to Predict the T2 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	12.78	7.05	.34
BMI at T2	-9.90	6.97	-.27
EDRC at T1	0.92	0.06	.87***
Block 2			
BMI at T1	16.99	7.86	.45*
BMI at T2	-13.87	7.74	-.38
EDRC at T1	0.88	0.07	.83***
ANSOCQ	-0.45	1.19	-.02
ACQ support factor	-2.66	2.16	-.08

Note: Block 1 $R^2 = .79$, Block 2 $\Delta R^2 = .005$ ($p > .05$)

*$p < .05$

***$p < .001$

The second hypothesis was assessed again to determine whether the ANSOCQ and ACQ support factor would improve the prediction of the EDRC at T3 beyond the predictive utility provided by the EDRC from T1 and T2, and BMI from all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation. The ANSOCQ and ACQ support factor were entered in the second block, as independent variables. Table 8 displays the results of this hierarchical

regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T3 (F (5, 62) = 92.55, $p < .001$). The addition of the ANSOCQ and ACQ support factor in the second predictor block added 0.4% of variance to the prediction of the EDRC at T3, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T3 were the EDRC at T2 (beta = .87) and BMI at T2 (beta = -.57) and T3 (beta = .40).

Table 8

Model 2 Hierarchical Multiple Regression Analysis Using the ANSOCQ and ACQ Support Factor to Predict the T3 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	7.76	5.91	.21
BMI at T2	-17.66	7.58	-.49*
BMI at T3	10.76	6.57	.29
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.84	0.10	.85***
Block 2			
BMI at T1	6.23	6.85	.17
BMI at T2	-20.50	7.97	-.57*
BMI at T3	14.89	7.29	.40*
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.86	0.10	.87***
ANSOCQ	-1.22	0.97	-.06
ACQ support factor	1.45	1.90	.04

Note: Block 1 R^2 = .88, Block 2 ΔR^2 = .004 (p > .05)

*p < .05

***p < .001

Direct Effects Model Using the ACQ Stags of Change and ACQ Support Factor as Predictors

The second hypothesis was then assessed using the ACQ stage of change and ACQ support factor as predictor variables, to determine whether these variables would improve the prediction of the EDRC at T2 beyond the predictive utility provided by the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation. The ACQ stage of change and ACQ support factor were entered in the second block, as independent variables. Table 9 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 73) = 89.79, $p <$ .001). The addition of the ACQ stage of change and ACQ support factor in the second predictor block added 0.4% of variance to the prediction of the EDRC at T2, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T2 were the EDRC at T1 (beta = .83) and BMI at T1 (beta = .43).

Table 9

Model 2 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change and ACQ Support Factor to Predict the T2 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	12.78	7.09	.34
BMI at T2	-9.90	7.02	-.27
EDRC at T1	0.92	0.06	.87***
Block 2			
BMI at T1	16.20	7.81	.43*
BMI at T2	-12.99	7.63	-.36
EDRC at T1	0.89	0.07	.83***
ACQ stage of change	-0.33	2.37	-.01
ACQ support factor	-2.36	2.65	-.07

Note: Block 1 $R^2 = .79$, Block 2 $\Delta R^2 = .004$ ($p > .05$)

*p < .05

***$p < .001$

The second hypothesis was assessed a final time to determine whether the ACQ stage of change and ACQ support factor would improve the prediction of the EDRC at T3 beyond the predictive utility provided by the EDRC from T1 and T2, and BMI from all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation. The ACQ stage of change and ACQ support factor were entered in the second block, as independent variables. Table 10 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T3 (F (5, 62) = 92.55, $p < .001$). The addition of the ACQ stage of change and ACQ support factor in the second predictor block added 0.2% of variance to the prediction of the EDRC at T3, as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T3 were the EDRC at T2 (beta = .87) and BMI at T2 (beta = -.48).

Table 10

Model 2 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change and ACQ Support Factor to Predict the T3 EDRC

Variable	*B*	*SE B*	ß
Block 1			
BMI at T1	7.76	5.91	.21
BMI at T2	-17.66	7.58	-.49*
BMI at T3	10.76	6.57	.29
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.84	0.10	.85***
Block 2			
BMI at T1	5.34	6.96	.14
BMI at T2	-17.41	7.67	-.48*
BMI at T3	12.82	7.35	.34
EDRC at T1	0.10	0.10	.09
EDRC at T2	0.86	0.10	.87***
ACQ stage of change	0.60	1.93	.02
ACQ support factor	1.16	2.36	.04

Note: Block 1 R^2 = .88, Block 2 ΔR^2 = .002 (p > .05)

*p < .05

***p < .001

Moderator Effects Model Using the ANSOCQ and ACQ Support Factor as Predictors

The second hypothesis was also assessed using the ACQ support factor as a moderator variable between readiness to change and improvements in eating disorder

symptomatology over time. It was hypothesised that greater levels of the ACQ support factor would enhance the relationship between readiness to change and eating disorder symptomatology, leading to greater reductions in eating disorder symptomatology over time. Prior to analysis, each of the variables incorporated into the regression equation were centered. Each variable was centered so as to negate problems of multicollinearity that may arise due to the production of the interaction term used to assess moderation (Kenny, 2004; Kraemer & Blasey, 2004; Tabachnick & Fidell, 2001). Centering was achieved by standardising each variable. The first interaction term used to assess the moderation model incorporating the ANSOCQ was computed by multiplying the participants' ANSOCQ scores and ACQ support factor scores. The second interaction term used to assess the moderation model incorporating the ACQ stage of change was computed by multiplying the participants' ACQ stage of change scores and ACQ support factor scores. As with each of the preceding models, this model was assessed four times to allow for the prediction of the EDRC at T2, and then at T3, with the inclusion of both the ANSOCQ and ACQ stage of change. As a result of centering each of the variables, only standardised coefficients were available following hierarchical regression.

The third model was initially assessed to determine whether the ACQ support factor would moderate the relationship between the ANSOCQ and the EDRC at T2, whilst statistically controlling for the influence of the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation. The ANSOCQ and ACQ support factor were then entered in the second block, to statistically control for the main effects of these variables. Finally, the moderation term incorporating the interaction of the ANSOCQ and ACQ support factor

was entered as the third predictor block into the regression equation. Table 11 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 71) = 87.33, $p < .001$). The second predictor block was found to explain 79.1% of the variance in the EDRC at T2 (F (2, 69) = 52.32, $p < .001$). The addition of the interaction term in the third predictor block, signifying the moderating role of the ACQ support factor, added 0.5% of variance to the prediction of the EDRC at T2 as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T2 were the EDRC at T1 (beta = .82) and BMI at T1 (beta = .56) and T2 (beta = -.49).

Table 11

Model 3 Hierarchical Multiple Regression Analysis Using the ANSOCQ and ACQ Support Factor as a Moderator to Predict the T2 EDRC

Variable	ß	*SE* ß
Block 1		
BMI at T1	.34	.19
BMI at T2	-.27	.19
EDRC at T1	.87***	.06
Block 2		
BMI at T1	.45*	.21
BMI at T2	-.38	.22
EDRC at T1	.83***	.07
ANSOCQ	-.02	.06
ACQ support factor	-.08	.07
Block 3		
BMI at T1	.56*	.23
BMI at T2	-.49*	.23
EDRC at T1	.82***	.07
ANSOCQ	-.03	.06
ACQ support factor	-.09	.07
Moderator (ACQ support factor)	.08	.07

Note: Block 1 R^2 = .79, Block 2 R^2 = .79 ΔR^2 = .005 (p > .05), Block 3 R^2 = .80 ΔR^2 = .005 (p > .05)

*p < .05

***p < .001

The third hypothesis was assessed again to determine whether the ACQ support factor would moderate the relationship between the ANSOCQ and the EDRC at T3, whilst statistically controlling for the influence of the EDRC from T1 and T2, and BMI at all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation. The ANSOCQ and ACQ support factor were then entered in the second block, to statistically control for the main effects of these variables. Finally, the moderation term incorporating the interaction of the ANSOCQ and ACQ support factor was entered as the third predictor block into the regression equation. Table 12 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T2 (F (5, 60) = 89.57, $p < .001$). The second predictor block was found to explain 88.6% of the variance in the EDRC at T2 (F (2, 58) = 64.53, $p < .001$). The addition of the interaction term in the third predictor block, signifying the moderating role of the ACQ support factor, added 0.4% of variance to the prediction of the EDRC at T3 as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T2 were the EDRC at T2 (beta = .82) and BMI at T2 (beta = -.58).

Table 12

Model 3 Hierarchical Multiple Regression Analysis Using the ANSOCQ and ACQ Support Factor as a Moderator to Predict the T3 EDRC

Variable	ß	*SE* ß
Block 1		
BMI at T1	.21	.16
BMI at T2	-.49*	.21
BMI at T3	.29	.18
EDRC at T1	.09	.10
EDRC at T2	.85***	.10
Block 2		
BMI at T1	.17	.19
BMI at T2	-.57*	.22
BMI at T3	.40*	.20
EDRC at T1	.09	.10
EDRC at T2	.87***	.10
ANSOCQ	-.06	.05
ACQ support factor	.04	.06
Block 3		
BMI at T1	.35	.23
BMI at T2	-.58*	.22
BMI at T3	.23	.23
EDRC at T1	.12	.10
EDRC at T2	.82***	.11
ANSOCQ	-.06	.05
ACQ support factor	.01	.06
Moderator (ACQ support factor)	.09	.06

Note: Block 1 R^2 = .88, Block 2 R^2 = .89 ΔR^2 = .004 (p > .05), Block 3 R^2 = .89 ΔR^2 = .004 (p > .05)

*p < .05

***p < .001

Moderator Effects Model Using the ACQ Stage of Change and ACQ Support Factor as Predictors

The third hypothesis was then assessed to determine whether the ACQ support factor would moderate the relationship between the ACQ stage of change and the EDRC at T2, whilst statistically controlling for the influence of the EDRC from T1, and BMI at T1 and T2. Using the EDRC at T2 as the dependent variable, the participants' BMI from T1 and T2, and the EDRC from T1, were entered as the first predictor block into the regression equation. The ACQ stage of change and ACQ support factor were then entered in the second block, to statistically control for the main effects of these variables. Finally, the moderation term incorporating the interaction of the ACQ stage of change and ACQ support factor was entered as the third predictor block into the regression equation. Table 13 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 78.7% of the variance in the EDRC at T2 (F (3, 72) = 88.56, $p < .001$). The second predictor block was found to explain 79.1% of the variance in the EDRC at T2 (F (2, 70) = 52.96, $p < .001$). The addition of the interaction term in the third predictor block, signifying the moderating role of the ACQ support factor, added 1.8% of variance to the prediction of the EDRC at T2 as indicated by the R Square Change value ($p < .05$). Thus the interaction term incorporating the ACQ stage of change and ACQ support factor was found to contribute significantly to the prediction of the EDRC at T2 (F (1, 69) = 48.58, $p < .001$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T2 were the EDRC at T1 (beta = .82), BMI at T1 (beta = .47), and the interaction of the ACQ stage of change and ACQ support factor (beta = -.12).

Table 13

Model 3 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change and ACQ Support Factor as a Moderator to Predict the T2 EDRC

Variable	ß	*SE* ß
Block 1		
BMI at T1	.34	.19
BMI at T2	-.27	.19
EDRC at T1	.87***	.06
Block 2		
BMI at T1	.43*	.21
BMI at T2	-.35	.21
EDRC at T1	.83***	.07
ACQ stage of change	-.01	.07
ACQ support factor	-.07	.08
Block 3		
BMI at T1	.47*	.20
BMI at T2	-.38	.20
EDRC at T1	.82***	.06
ACQ stage of change	.02	.07
ACQ support factor	-.10	.08
Moderator (ACQ support factor)	-.12*	.05

Note: Block 1 R^2 = .79, Block 2 R^2 = .79 ΔR^2 = .004 (p > .05), Block 3 R^2 = .81 ΔR^2 = .018 (p < .05)

*p < .05

***p < .001

The third hypothesis was assessed a final time to determine whether the ACQ support factor would moderate the relationship between the ACQ stage of change and the EDRC at T3, whilst statistically controlling for the influence of the EDRC from T1 and T2, and BMI at all time points. Using the EDRC at T3 as the dependent variable, the participants' BMI from T1, T2, and T3, and the EDRC from T1 and T2, were entered as the first predictor block into the regression equation. The ACQ stage of change and ACQ support factor were then entered in the second block. Finally, the moderation term incorporating the interaction of the ACQ stage of change and ACQ support factor was entered as the third predictor block into the regression equation. Table 14 displays the results of this hierarchical regression analysis. The first predictor block was found to explain 88.2% of the variance in the EDRC at T2 (F (5, 62) = 92.55, $p < .001$). The second predictor block was found to explain 88.3% of the variance in the EDRC at T2 (F (2, 60) = 64.92, $p < .001$). The addition of the interaction term in the third predictor block, signifying the moderating role of the ACQ support factor, added 0.2% of variance to the prediction of the EDRC at T3 as indicated by the R Square Change value ($p > .05$). The only variables found to make a statistically significant unique contribution to the prediction of the EDRC at T3 were the EDRC at T2 (beta = .91) and BMI at T2 (beta = -.50).

Table 14

Model 3 Hierarchical Multiple Regression Analysis Using the ACQ Stage of Change and ACQ Support Factor as a Moderator to Predict the T3 EDRC

Variable	ß	*SE* ß
Block 1		
BMI at T1	.21	.16
BMI at T2	-.49*	.20
BMI at T3	.29	.18
EDRC at T1	.09	.10
EDRC at T2	.85***	.10
Block 2		
BMI at T1	.14	.19
BMI at T2	-.48*	.21
BMI at T3	.34	.20
EDRC at T1	.09	.10
EDRC at T2	.87***	.10
ACQ stage of change	.02	.06
ACQ support factor	.04	.07
Block 3		
BMI at T1	.09	.19
BMI at T2	-.50*	.21
BMI at T3	.40	.20
EDRC at T1	.06	.10
EDRC at T2	.91***	.11
ACQ stage of change	.00	.05
ACQ support factor	.06	.07
Moderator (ACQ support factor)	.05	.04

Note: Block 1 R^2 = .88, Block 2 R^2 = .88 ΔR^2 = .002 (p > .05), Block 3 R^2 = .89 ΔR^2 = .002 (p > .05)

*p < .05

***p < .001

CHAPTER FIVE

Study One Discussion

The purpose of the current study was to longitudinally investigate reductions in the level of eating disorder symptomatology experienced by a non-clinical sample of participants in relation to their levels of readiness to change and the ACQ support factor (Bowles, 2000). The structure of this discussion is as follows. Firstly, the results relating to each of the constructs examined within this study will be summarised. These results will then be discussed in light of the previous research in this area. This will be followed by a presentation of the possible explanations for the results of this study. The implications of this study will then be discussed and suggestions for future research presented.

Findings of the Current Study

There were two hypotheses, presented in the form of three models, within the current study. The first hypothesis stated that readiness to change would predict reductions in eating disorder symptomatology over time, and was depicted in the form of a direct effects model. This hypothesis was not supported. Readiness to change, as measured by both the ANSOCQ (Rieger et al., 2000) and the ACQ stage of change (Bowles, 2000), was not a significant predictor of a reduction in either T2 or T3 eating disorder symptomatology as measured by the EDI-3 (Garner, 2004). The only variable found to predict a reduction in T2 eating disorder symptomatology was T1 eating disorder symptomatology, whilst a reduction in T3 eating disorder symptomatology was predicted by T2 eating disorder symptomatology and T2 BMI.

The second hypothesis of this study stated that the ACQ support factor (Bowles, 2000) would aid in the prediction of a reduction in eating disorder symptomatology over time. It was unclear, on the basis of past research in the area, whether the ACQ support factor would exert a direct influence on eating disorder symptomatology over time or if it would moderate the relationship between readiness to change and eating disorder symptomatology over time. Both a direct effects model and a moderator effects model were therefore proposed. This hypothesis was not supported using either the direct effects model or the moderation model to depict the relationships between each of the variables of interest. In accordance with the direct effects model it was hypothesised that the ACQ support factor and readiness to change would each exert an independent influence on the level of a participant's eating disorder symptomatology over time. This model was not supported. Neither the ACQ support factor, nor readiness to change as measured by either the ANSOCQ (Rieger et al., 2000) or ACQ stage of change (Bowles), were significant predictors of reductions in either T2 or T3 eating disorder symptomatology. In accordance with the moderation model it was hypothesised that the ACQ support factor would moderate the relationship between readiness to change and eating disorder symptomatology over time. This model was also not supported. The ACQ support factor was not found to moderate the relationship between readiness to change as measured by the ANSOCQ and reductions in T2 or T3 eating disorder symptomatology. The ACQ support factor was also not found to moderate the relationship between readiness to change as measured by the ACQ stage of change and a reduction in T3 eating disorder symptomatology. The ACQ support factor was found to moderate the relationship between readiness to change as measured by the ACQ stage of change and a reduction in T2 eating disorder symptomatology. However, the inclusion of the moderating role of the ACQ support factor within this model only

added a negligible amount of variance to the prediction of a reduction in T2 eating disorder symptomatology. Once again, when assessing these models, the only variables found to predict a reduction in T2 eating disorder symptomatology were T1 eating disorder symptomatology and T1 and T2 BMI. The only variables found to predict a reduction in T3 eating disorder symptomatology were T2 eating disorder symptomatology and T2 and T3 BMI.

In summary, within the current study it was hypothesised that readiness to change would predict a reduction in eating disorder symptomatology over time. This hypothesis was not supported. It was also hypothesised that the ACQ support factor (Bowles, 2000) would aid in the prediction of reductions in eating disorder symptomatology over time. This hypothesis was also not supported. Within the current study the only variables found to predict a reduction in T2 eating disorder symptomatology were T1 eating disorder symptomatology and T1 and T2 BMI. The only variables found to predict a reduction in T3 eating disorder symptomatology were T2 eating disorder symptomatology and T2 and T3 BMI.

Support for Previous Research

Readiness to Change and the Eating Disorders

The findings of the current study do not support the previous research in this area which has indicated that readiness to change tends to predict improvements in eating disorder symptomatology or treatment outcome over time. This previous research has tended to utilise either general measures of readiness to change (e.g. Rushford et al., 2006; Treasure et al., 1999; Wolk & Devlin, 2001) or more specific measures of readiness to change (e.g. Ametller et al., 2005; Geller et al., 2001; Geller et al., 2004; Rieger et al., 2000). Within the current study, both a general measure (the

ACQ; Bowles, 2000) and a specific measure (the ANSOCQ; Rieger et al.) of readiness to change were utilised. With regard to general measures of readiness to change, Treasure et al. (1999) and Wolk and Devlin (2001) indicated that readiness to change was a good predictor of symptom reduction following treatment for bulimia nervosa. However, Wolk and Devlin only found this relationship to exist for participants receiving interpersonal therapy and not for participants receiving cognitive behavioural therapy. Using a sample of participants with anorexia nervosa who had participated in a motivational interview, Gowers and Smyth (2005) did not find readiness to change to be associated with improvement in eating disorder symptomatology. Readiness to change, however, was found to be a good predictor of weight gain and treatment retention. Within a sample of participants receiving treatment for anorexia nervosa, Rushford (2006) found a global measure of readiness to change, but not a stage of change questionnaire, to predict improvements in eating disorder symptomatology over time. Following treatment for anorexia nervosa, Bewell and Carter (2008) also found readiness to change and the severity of participants' eating disorder symptomatology to predict weight gain. In a sample of participants attending treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified, Gusella et al. (2003) found participants' readiness to change to be a better predictor of treatment outcome than standardised measures of eating disorder symptomatology.

Each of these studies incorporating general measures of readiness to change utilised samples of participants who were receiving some kind of intervention (i.e. they were either participating in a motivational interview or receiving treatment for their eating disorder). It is likely that the improvements in eating disorder symptomatology or treatment outcome evident in this past research are in part attributable to the interventions received by the studies' participants. The participants in the present study

were not receiving any intervention, which explains a major difference between the previous research in this area and the findings of this study. Furthermore, as the participants in these past studies were receiving treatment for an eating disorder, they would also have been experiencing eating disorder symptomatology of a greater severity than most of the participants in the current study. This greater severity of eating disorder symptomatology would likely provide a greater motivational stimulus to change in comparison to the less severe eating disorder symptomatology experienced by the participants in this study. Within the present study, the majority of the participants at the T1 data collection period were experiencing eating disorder symptomatology within the low clinical range. This may help explain the low motivation towards change exhibited by these participants and the finding that readiness to change was not a statistically significant predictor of reductions in eating disorder symptomatology over time. These explanations will be discussed in greater detail in a following section.

Previous research incorporating specific measures of readiness to change has used either the RMI (Geller & Drab, 1999) or the ANSOCQ (Rieger et al., 2000). Geller et al. (2001) used the RMI to assess the levels readiness to change in a sample of participants diagnosed with anorexia nervosa, bulimia nervosa, or a subthreshold eating disorder. These participants were undergoing an intake assessment at an eating disorder treatment facility and as part of this assessment were asked to attempt three recovery activities during the week following their assessment. The participants' readiness to change was found to be associated with their ratings of the difficulty, and their completion of, these recovery activities. Readiness to change was also a predictor of the participants' decision to enrol in, or drop out of, treatment. Using a sample of participants receiving treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified, Geller et al. (2004) found readiness to change as

measured using the RMI to also predict improvements in eating disorder symptomatology and BMI over time. Using the ANSOCQ with a sample of participants receiving treatment for anorexia nervosa, Rieger et al. found the participants' level of readiness to change to be associated with their level of eating disorder symptomatology at discharge and to also predict weight gain during admission. Using a sample of adolescents receiving treatment for anorexia nervosa, Ametller et al. (2005) found readiness to change to predict hospital admission 6-9 months following the participants' initial admission to treatment. Castro-Fornieles et al. (2007) also found BMI and readiness to change, as measured by the ANSOCQ, to predict weight maintenance following hospital admission. Similar to the findings of the previous research using general measures of readiness to change, each of these studies used samples of participants who were receiving some kind of intervention or treatment for their eating disorder. The improvements evident in these participants' levels of eating disorder symptomatology or treatment outcome over time are therefore not only attributable to their level of readiness to change but also to the effects of the interventions these participants were receiving. These participants were also experiencing levels of eating disorder symptomatology severe enough to warrant attention from treatment providers. This level of eating disorder symptomatology, and the accompanying treatment, would likely be a greater stimulus to change than the levels of eating disorder symptomatology experienced by the participants in the current study, which may help account for the findings of the present study. These explanations will be elaborated on in a later section of this discussion.

In summary, previous research has indicated that readiness to change is a useful predictor of reductions in eating disorder symptomatology over time. Within the current study, prior levels of eating disorder symptomatology and BMI, but not

readiness to change, were found to predict reductions in eating disorder symptomatology over time. This different finding, in comparison to the findings of previous research, may be explained by the severe levels of eating disorder symptomatology and subsequent interventions received by the participants in past research. Additional possible explanations for the results of this study will be presented within a subsequent section of this discussion.

The ACQ Support Factor and the Eating Disorders

Within the current study the ACQ support factor (Bowles, 2000), comprised of negative emotions, social support, and inner drive, was not found to aid in the prediction of a reduction in eating disorder symptomatology over time. This finding does not support the small amount of previous research in this area which has indicated that each of the support factors contained within the ACM (Bowles) may aid in the prediction of changes in eating disorder symptomatology over time.

With regard to the negative emotions support factor found within the ACM (Bowles, 2000), Bloks et al. (2001) investigated levels of passive reacting in a sample of participants receiving treatment for anorexia nervosa or bulimia nervosa. Passive reacting was conceptualised as involving rumination and negative emotions such as worry, and as such may be likened to the negative emotions factor of the ACM. The participants in the study by Bloks et al. (2001) who completed treatment showed significant reductions in their level of passive reacting over the course of treatment, which was also associated with less eating disorder symptomatology. Bloks et al. (2004) extended this research using a sample of participants receiving treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. In this study, lower levels of passive reacting were found to predict improvements in eating

disorder symptomatology over time. Using samples of participants receiving treatment for anorexia nervosa, both Rieger et al. (2000) and Serrano et al. (2000) found higher levels of readiness to change to be associated with lower levels of negative emotions, indicating that these lower levels of negative emotion may also be associated with a reduction in eating disorder symptomatology over time.

In relation to the social support factor found within the ACM (Bowles, 2000), Bloks et al. (2004) found that participants who had recovered from an eating disorder following treatment tended to report seeking more social support than participants who were in partial remission or who had not recovered from their eating disorder following treatment. Seeking social support was also found to contribute to the prediction of improvements in the participants' levels of eating disorder symptomatology over time. In a sample of participants seeking treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified, Sohlberg et al. (1992) found participants' level of social support to predict their recovery status at three years, but not one or two years, after their initial presentation for treatment. Three years after their initial presentation for treatment, participants reporting a higher level of social support were found to be exhibiting less eating disorder symptomatology.

With regard to the inner drive support factor of the ACM (Bowles, 2000), Bardone et al. (2003) found self-competence (i.e. self-efficacy, which may be likened to inner drive) to be associated with levels of bulimia nervosa symptomatology in a non-clinical sample. In this study, lower levels of self-competence were associated with higher levels of bulimia nervosa symptoms, and a trend was revealed for self-competence to be associated with reductions in bulimia nervosa symptoms over time. In a sample of participants receiving treatment for anorexia nervosa, Rieger et al. (2002) found that participants with a higher level of readiness to change also possessed higher

levels of self-efficacy regarding their ability to change their eating disorder symptomatology, indicating that higher levels of inner drive may also be associated with a reduction in eating disorder symptomatology over time. In support of this, Pinto et al. (2008) investigated self-efficacy, treatment outcome, and eating disorder symptomatology in a sample of participants receiving treatment for anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified. Pinto et al. found recovery self-efficacy at admission to be associated with shorter hospital admissions and lower levels of eating disorder symptomatology over time. Recovery self-efficacy was also found to be a significant predictor of the length of the participants' hospital admission and their level of eating disorder symptomatology.

In summary, a small amount of previous research has indicated that each of the ACM support factors (Bowles, 2000) may predict changes in eating disorder symptomatology over time. It was therefore argued within this study that the ACQ support factor, a higher-order construct representing a respondent's level across each of the three ACM support factors, should aid in the prediction of improvements in eating disorder symptomatology over time. This hypothesis was not supported within the current study. Each of these previous studies, apart from that of Bardone et al. (2003), utilised samples of participants who were diagnosed with an eating disorder and receiving treatment for that eating disorder. It is likely that, in each of these studies, the treatment received by the participants helped reduce their level of eating disorder symptomatology not only through the effects of treatment, but by improving their levels of negative emotions, social support, and inner drive, which then led to a reduction in their levels of eating disorder symptomatology over time. Within the present study, however, the participants were receiving no such treatment which may have influenced their levels of each of the ACM support factors and thus their level of eating disorder

symptomatology. This explanation may therefore help explain the discrepant results of the current study in comparison to past research in this area. It is also plausible that in each of the previous studies using eating disordered participants, the participants were experiencing negative emotions of a greater severity, and a higher level of inner drive due to the negative impact of their eating disorder, than the participants in the current study, and that these participants sought social support in the form of professional treatment. This may have led to the ACM support factors having a greater impact on these participants' levels of eating disorder symptomatology over time in comparison to the participants in the current study. Future research comparing levels of negative emotion, social support, inner drive, and readiness to change, across a sample of eating disordered and non-eating disordered participants, could help elucidate this finding. Additionally, the ACQ support factor, which was an aggregate of each of the support factors found in the ACM, was used in the current study. This aggregate factor was used as Bowles argues that it is valid to conceptualise and measure both the ACM stages of change and support factors as the aggregated ACQ stage of change and the ACQ support factor. The nature of this study required the participants' readiness to change to be measured using the aggregated ACQ stage of change, rather than as separate scores on each of the individual stages of change found within the ACM. It was therefore appropriate and consistent to also assess the participants' scores on the ACM support factors using the aggregated ACQ support factor. Thus an alternative explanation for the findings of the current study relates to the use of this aggregate ACQ support factor. It may be more useful, in future research, to measure each of the ACM support factors individually. Such research would then be able to indicate whether any of the ACM support factors can individually, rather than collectively, aid in the prediction of improvements in eating disorder symptomatology over time in a clinical or

a non-clinical sample. Further explanations for the results of the current study are presented in the next section of this discussion.

Explanations of the Findings

Within the current study the participants' most recent prior measure of their level of eating disorder symptomatology and BMI were the most useful predictors of a reduction in their subsequent level of eating disorder symptomatology. For example, the best predictors of a reduction in T2 eating disorder symptomatology were T1 eating disorder symptomatology and T1 and T2 BMI. The best predictors of a reduction in T3 eating disorder symptomatology were T2 eating disorder symptomatology and T2 and T3 BMI, but not T1 eating disorder symptomatology or T1 BMI. Neither the ANSOCQ (Rieger et al., 2000) nor the ACQ (Bowles, 2000), representing the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles) respectively, aided in the prediction of a reduction in the participants' eating disorder symptomatology over time. The findings of this study therefore indicate that neither the TTM nor the ACM were able to account for the change that occurred for the participants within the current study. There are a number of explanations that may help account for these results.

The findings of the current study may be explained by the process of change employed by the participants. Rather than changing in accordance with the TTM (Prochaska & DiClemente, 1982) or the ACM (Bowles, 2000), the participants in this study tended to make changes to behaviours related to their level of eating disorder symptomatology that were not based on prior thoughts, intentions, or planning. These changes were not made using the factors of the TTM or the ACM, including the ACM support factors, whereas the eating disordered participants in the past research previously reviewed did appear to make changes using the factors of these models. The

changes made by the participants in the present study were more likely abrupt, impulsive, and non-strategic rather than planned and systematic in accordance with the TTM and the ACM. Past criticisms of the TTM have highlighted the fact that this model may not be able to adequately explain sudden, abrupt, or spontaneous change (L. C. Sobell, 2007; M. B. Sobell, 2007; West, 2005). It is possible that the ACM may also be criticised in the same manner. It is likely that the participants in the current study changed in an unplanned or unsystematic manner due to a low level of urgency and need, resulting in a reduced level of readiness to change. With this low level of readiness to change, these participants were likely not perceiving or contemplating the range of opportunities for change available to them and were also not visualising or planning these potential changes.

As an extension of this argument regarding the process of change employed by the participants in this study, it is important to consider the magnitude of the changes made by these participants. The participants' BMI scores tended to remain stable over time. Although a slight increase in the mean BMI scores was noted from T1 to T2, and a slight decrease noted from T2 to T3, these changes were not statistically significant. The participants' levels of eating disorder symptomatology did reduce significantly over time. These reductions were very small however, with participants' scores on the EDRC decreasing by an average of 2.56 points from T1 to T2 and 0.92 points from T2 to T3. Overall, this resulted in a reduction on the EDRC of 3.48 points on average over the three time points of data collection. These reductions were so small that, although statistically significant, they may not be clinically important or clinically significant reductions brought about by systematic and planned change (Jacobson, Roberts, Berns, & McGlinchey, 1999; Jacobson & Traux, 1991). These small changes may be better likened to naturally occurring fluctuations that take place over time and as such may not

be comparable to changes made in accordance with the TTM (Prochaska & DiClemente, 1982) or the ACM (Bowles, 2000). This explanation may help clarify the results of the present study which revealed that the participants' most recent measures of BMI and eating disorder symptomatology were the best predictors of their later levels of eating disorder symptomatology. As the participants did not tend to change much, it is understandable that their most recent previous measure of eating disorder symptomatology would be very similar to, and therefore a predictor of, their subsequent level of eating disorder symptomatology. Furthermore, if these changes were so small as to be more comparable to naturally occurring fluctuations rather than to planned and systematic changes, it is also understandable that the participants' levels of readiness to change would not be predictive of changes in their levels of eating disorder symptomatology over time.

An additional explanation for the findings of the present study, already briefly discussed, relates to the nature of the participant sample used in the present study in relation to their motivation to change. The participants in past research in this area were clinical samples of individuals who were either referred for treatment for an eating disorder, or were currently receiving treatment for an eating disorder. These participants would therefore have been experiencing levels of eating disorder symptomatology that were significant and severe enough to lead them to seek treatment, either through their own initiative or because of the urgings of others. This initiation of treatment, whether or not it was desired by the individual experiencing an eating disorder, may be considered a critical incident that could be the impetus to lead an individual onto the early stages of the change process. This critical incident may have served as an awakening point for the individual who was then confronted with the severity of their condition and may have therefore gone on to develop a greater

motivation or readiness to recover. Without this critical incident the individual would likely be less motivated to make changes to their level of eating disorder symptomatology. The majority of participants in the current study, however, tended to be experiencing low levels of eating disorder symptomatology. At these low levels, it is less likely that these participants would recognise any urgent need to make behavioural changes related to their level of eating disorder symptomatology or be confronted with any kind of critical incident that may spur them on to change, which would explain the low levels of readiness to change exhibited by the participants in the current study. A different result to that obtained within this study may have occurred, however, had these participants been made aware of unhealthy behaviours related to their current level of eating disorder symptomatology that they could change in order to further reduce their current level of eating disorder symptomatology (i.e. had the participants been confronted with a critical incident or awakening point). Future research, in which participants' are confronted with such an awakening point, would help clarify this explanation.

It is important to consider the preceding argument in conjunction with the fact that the participants from the past research in this area were receiving some kind of treatment or intervention for an eating disorder. These participants would therefore have been exposed to a variety of intervention strategies aimed at bringing about a reduction in their level of eating disorder symptomatology, and would have received education and assistance regarding the change process. For example, it is likely that the treatment received by these participants would have included a focus on readiness to change (Treasure & Bauer, 2003), psychoeducational training and assistance regarding making changes to behaviours and irrational thoughts associated with eating disorders (Fursland, Byrne, & Nathan, 2007; Lock and le Grange, 2005; Waller & Kennerley,

2003), information and support regarding identifying and altering problematic interpersonal relationships (Wilfley, Stein, & Welch, 2003), and skills training in such areas as relaxation, mindfulness, distress tolerance, and emotional regulation (Fursland et al., 2007; Palmer & Birchall, 2003). Indeed, the very purpose of treatment for an eating disorder is to help the individual change. Thus, although previous research has tended to find readiness to change to predict improvements in eating disorder symptomatology or treatment outcome over time, this previous research has generally failed to take into account the role of treatment in this relationship. In other words, it may be that this relationship between readiness to change and improvements in eating disorder symptomatology or treatment outcome is strengthened and magnified through the use of treatment and would not be present in the absence of such an intervention. It is possible that the inclusion in the current study of some kind of intervention, incorporating psychoeducation and support, may have resulted in the findings of the current study being more similar to those of previous research in the area. Future research incorporating some kind of intervention could investigate this argument.

The findings of this study must also be considered in light of a number of limitations. At the T1 data collection period, only 14.4% of the participant sample exhibited significant eating disorder symptomatology. The majority of the participants in the study did not exhibit significant concerns with eating and weight, and thus may have experienced difficulty responding to questions about their willingness to change behaviours related to eating disorder symptomatology. Indeed, this explanation may account for the low level of readiness to change found on the ANSOCQ (Rieger et al., 2000). The findings of the current study indicate that, although previous research has demonstrated the predictive utility of the ANSOCQ in clinical samples, this measure may not be highly applicable to low-level eating disordered behaviours displayed in a

non-clinical sample. It may be that the majority of the participants in this study experienced difficulty relating the questions found on the ANSOCQ and ACQ (Bowles, 2000) to their own experiences, which could explain the lack of statistically significant findings in the results section of this thesis and the difficulty experienced in trying to apply the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) to the change process undertaken by the participants in this study. Additionally, it is likely that, for the majority of the participants in the very least, the eating disorder symptomatology experienced by the participants in this sample did not lead to a corresponding negative impact on their social or occupational functioning. As such, it is unlikely then that the participants in this study would have possessed a strong desire to change, which may also help explain why the TTM or the ACM were not found in this study to help explain the changes undertaken by the participants. It is also important to acknowledge that the BMI data used within the present study was derived from the participants' self-reported height and weight. In an attempt to overcome some of the inconsistencies in the participants' self-reported height over time, only one self-reported measure of height was used to calculate each participant's BMI at each time point. However, research indicates that non-clinical women have a tendency to slightly underestimate their weights and slightly overestimate their heights (Doll & Fairburn, 1998; Engstrom, Paterson, Doherty, Trabulsi, & Speer, 2003; Larsen, Ouwens, Engels, Eisinga, & van Strien, 2008; Meyer, McPartlan, Sines, & Waller, 2009; Shapiro & Anderson, 2003). As such, the BMI data presented within the current study must be viewed tentatively.

In summary, there are a range of possible explanations that may account for the results of the current study. The changes made by the participants in this study were very small and most likely unplanned and not executed in a systematic manner. As

such, these changes were not made using, or consonant with, the factors of the TTM (Prochaska & DiClemente, 1982) or the ACM (Bowles, 2000) and were therefore not able to be predicted by the measures based on these models. It is also plausible that, because of the low levels of eating disorder symptomatology evident within this sample, these participants had not faced any critical incident that spurred them on to change, increasing their levels of readiness to change and leading them to invoke the strategic change process described within the TTM and the ACM. Additionally, these participants had not received any intervention or psychoeducational assistance that may have strengthened any possible relationship between their levels of readiness to change and improvements in eating disorder symptomatology over time.

Implications of the Findings of the Current Study

The results of the current study have important implications for both prevention and intervention programs related to the eating disorders. The implications of this study relate not only to individuals experiencing high levels of eating disorder symptomatology but also to individuals with lower levels of eating disorder symptomatology who decide they would like to make changes to behaviours related to their level of eating disorder symptomatology in order to improve their overall health and well-being. The findings of the current study indicate that, in order to bring about clinically significant and meaningful reductions in eating disorder symptomatology and health improvements, some kind of critical incident or recognition of the behaviours to be changed and the goal to be achieved by the individual is first needed. This critical incident or recognition is needed so that the individual's motivation or readiness to change may increase. Individuals likened to those in the current study may benefit from psychoeducation regarding the benefits of reducing behaviours associated with their

current level of eating disorder symptomatology. Most importantly, the findings of this study highlight the need for individuals to receive psychoeducation regarding the best process by which they can achieve any desired changes. Individuals could be taught about the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) and how these models can be applied in their own lives in order to engage in planned and systematic change. For individuals experiencing high levels of eating disorder symptomatology and at risk of developing an eating disorder, it may be most useful to teach how these models can be used to help reduce the individual's current level of eating disorder symptomatology. Individuals with lower levels of eating disorder symptomatology who would like to improve their overall health and well-being could be taught how these models can be applied to a range of different health behaviours. It is likely that, by learning about the TTM and the ACM and how to engage in the change process in an effective manner, individuals will come to see how it is possible to change behaviours that are associated with higher levels of eating disorder symptomatology or with their overall health. This understanding should then bolster an individual's motivation regarding their ability to engage in health behaviour change and increase their level of readiness to change. This increased readiness to change can then, in turn, lead to greater behavioural changes over time. Such interventions as these, involving psychoeducation regarding the process of change, may be useful for targeted prevention programs aimed at individuals who are exhibiting high levels of eating disorder symptomatology, indicating they are at risk of developing an eating disorder. These interventions can also be incorporated into eating disorder treatment programs so as to benefit individuals already experiencing an eating disorder who are unaware or under-aware of the best means of engaging in the change process, and may be incorporated

into programs to facilitate effective management of health and lifestyle issues that may be preconditions to eating disorders.

Suggestions for Future Research

The results of this study highlight a number of areas for future research. The results of this study indicated that interventions incorporating psychoeducation regarding the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) may help individuals engage in strategic and planned change that leads to clinically significant improvements over time in their level of eating disorder symptomatology. Further research is needed, however, in order to provide evidence for this assertion. Future research incorporating a psychoeducational component, whereby participants are trained in applying the TTM and the ACM when making changes to behaviours associated with their eating disorder symptomatology, could provide such evidence. It is possible, however, that the participants in the current study were aware of the best means of engaging in change (i.e. in accordance with the TTM or the ACM) but did not use these processes of change because of their low levels of eating disorder symptomatology and low levels of readiness to change. In order to investigate this argument, future research should inquire into the beliefs held by non-clinical individuals regarding the process of reducing an individual's level of eating disorder symptomatology. Such research would help ascertain whether these non-clinical individuals have a knowledge of, and see the value in, such models of change as the TTM and the ACM. It would also be important to investigate the beliefs held by eating disordered individuals regarding the process of reducing an individual's level eating disorder symptomatology. The previous research reviewed within this study indicates that individuals experiencing an eating disorder do tend to change in accordance with

the principles of the TTM, but it is unclear whether these individuals are consciously aware of these principles. Future research investigating the beliefs regarding the process of change, held by both eating disordered and non-eating disordered participants, would provide information regarding how well models of change such as the TTM and the ACM are understood by these participants. Information could also be ascertained from such research regarding the aspects of the TTM and the ACM that are clearly understood and valued by the participants, as well as aspects of the TTM and ACM that are less commonly applied during the change process. This information may then be of use in the development of effective and useful intervention and psychoeducation programs aimed as helping individuals reduce their level of eating disorder symptomatology.

In conclusion, within this study neither readiness to change nor the ACQ support factor (Bowles, 2000) were found to predict a reduction in eating disorder symptomatology over time in a non-clinical sample. The participants' prior levels of eating disorder symptomatology and BMI were the only statistically significant predictors of the participants' subsequent levels of eating disorder symptomatology. These findings did not provide support for the previous research in this area. Previous research in this area, however, included samples of participants with severe levels of eating disorder symptomatology who were receiving some kind of intervention for their condition. This difference between past research in this area and the current study may help account for the discrepancy between the results of the current study and past research. Other possible explanations for the findings of the current study related to the very small changes made by the participants in this research, along with their low levels of readiness to change. Suggestions for future research, including an investigation into the beliefs held by eating disordered and non-eating disordered individuals regarding

the process of changing eating disorder symptomatology, were also presented within this discussion.

CHAPTER SIX

Further Investigation into the Process of Changing Eating Disorder Symptomatology

The first study of this thesis provided an investigation into readiness to change and the ACQ support factor (Bowles, 2000) in relation to improvements in eating disorder symptomatology over time in a non-clinical sample. The measures of readiness to change used within this study were derived from two different theories of the process of change, the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles). Previous research employing clinical samples of participants with an eating disorder has found readiness to change to predict improvements in eating disorder symptomatology or treatment outcome over time (e.g. Ametller et al., 2005; Geller et al., 2004; Rieger et al., 2000; Treasure et al., 1999). This previous research indicates that the clinical participants within these studies tended to change in accordance with the principles of the TTM. It is currently unclear whether these participants were, however, aware of these principles of the TTM, and also the ACM, as they engaged in the change process. The non-clinical participants within the first study of this thesis were not found to change in accordance with the principles of the TTM or the ACM. It is also unclear whether these non-clinical participants were aware of the best means of engaging in the change process when attempting to reduce one's level of eating disorder symptomatology (i.e. by changing in accordance with the TTM and the ACM). The purpose of the second study of this thesis was to investigate the knowledge held by both eating disordered and non-eating disordered individuals regarding the process of change associated with reductions in eating disorder symptomatology. The beliefs of both of these groups regarding the process of recovery from eating disorder symptomatology were explored to ascertain whether these individuals believed change occurs in

accordance with the principles of the TTM and the ACM. Such information as this has relevance and importance for the development and provision of more effective intervention and psychoeducation programs. These programs can teach individuals about the factors of the TTM and the ACM that were most frequently mentioned as assisting the process of recovery from an eating disorder. This information will allow individuals attempting to change their own eating disordered behaviours to learn from, and capitalise upon, the experiences of others. In the next section of this thesis, this second study will be introduced.

CHAPTER SEVEN

Study Two: Multiple Perspectives on Recovery from the Eating Disorders

Greater knowledge regarding the process of recovery from the eating disorders, whether it be recovery from anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified, is clearly important as a means of assisting individuals through recovery. It is important that this knowledge provides information regarding the different stages of the recovery process. Ideally, this knowledge should also contain information about the different factors that can help an individual during this recovery process, and the factors that can hinder the process or make it more difficult. The intention of the current study was to investigate recovery from the eating disorders, from the perspectives of individuals who have experienced an eating disorder, and from the perspectives of individuals who have not experienced an eating disorder (referred to as lay people). The purpose of this study was to explore via qualitative methods the beliefs of these individuals not only regarding the stages of the process of recovery, but also factors that aid and hinder the recovery process.

The first aim of the current study was to ascertain the factors of recovery that would naturally emerge from the participants' responses. In order to achieve this aim of the research, the participants' responses regarding their perceptions of the recovery process, as well as factors that aid or hinder this process of recovery from an eating disorder, were subjected to content analysis. This aspect of the current study was exploratory in nature, and replicates and extends previous research in the area. Past research which has investigated the perceptions of individuals who have experienced an eating disorder has tended to use small samples of participants and has tended to focus on anorexia nervosa and bulimia nervosa to the exclusion of eating disorders not

otherwise specified. This past research has also tended to include either participants who were currently experiencing an eating disorder or participants who had recovered from an eating disorder, but not participants who had recovered along with those who had not recovered. There is also very little past research investigating the perceptions of lay people regarding recovery from the eating disorders. Thus the purpose of the current study was replicate past research in this area which has examined the perspectives of individuals who have experienced an eating disorder, and to overcome some of the limitations found in this research. This was achieved by using a much larger sample size than that found in other studies, incorporating a sample of lay participants, and including both recovered and non-recovered eating disorder participants who had experienced anorexia nervosa, bulimia nervosa, or an eating disorder not otherwise specified.

The second aim of this study was to investigate the TTM (Prochaska & DiClemente, 1982), as well as an alternative model of change, the ACM (Bowles, 2000), in relation to recovery from the eating disorders. The purpose of this aspect of the current study was to investigate whether individuals would explain the process of recovery using concepts similar to those found in the TTM or the ACM, indicating that change is experienced in accordance with the process theorised in these models. In order to achieve this aim of the research, the participants' responses regarding their perceptions of the process of recovery from an eating disorder and the factors that aid this change process, were compared to the factors found within the TTM and the ACM. Previous research has demonstrated that the TTM, a model of the process of behaviour change, may help explain the process of recovery from the eating disorders and further understanding of how change in eating disorder symptoms can progress over time (e.g. Ametller et al., 2005; Geller et al., 2004; Gusella et al., 2003; Rieger et al., 2000;

Treasure et al., 1999; Wolk & Devlin, 2001). This research also indicates that the ACM may be useful in furthering understanding of the process of recovery from the eating disorders. The first study of this thesis did not support the usefulness of the ACM in explaining the process of change related to eating disorder symptomatology. This second study, however, was a further attempt to investigate the role the ACM may play in describing the process of change in relation to eating disorder symptoms and full syndrome eating disorders. It is currently unclear how the TTM and the ACM fit with perceptions of the process of recovery from the eating disorders held by individuals who have experienced an eating disorder and by lay people. Thus the purpose of this aspect of the current study was to investigate how well the perceptions of the recovery process, held by individuals who have experienced an eating disorder and lay people, fit with the process of change described in the TTM and the ACM.

In order to properly introduce the relevant research literature and expected outcomes of this study, a review will be presented of past research which has investigated the process of recovery from an eating disorder, from the perspectives of individuals who have experienced an eating disorder and lay people. Within this review, the components or aspects identified within this past research describing the process of recovery will be compared to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). Following this, past research investigating beliefs about the factors that aid or hinder recovery, held by individuals who have experienced an eating disorder and lay people, will also be presented. The factors identified within this literature as aiding recovery will be compared to factors of the TTM and the ACM, as each of these models also specify factors that are theorised to assist in the change process. The factors identified in the past literature as hindering recovery will not be compared to the TTM or the ACM, as neither of these models

contains factors theorised to hinder the change process. This will be followed by a discussion of the anticipated findings of the current study.

The Process of Recovery

Perspectives of Individuals who have Experienced an Eating Disorder

Within the research literature investigating eating disorders there are a small number of studies exploring eating disordered individuals' personal experiences of the process of recovery. Such research as this, providing greater understanding of the personal experiences of change, is important as it provides eating disordered individuals with a voice and provides another perspective of recovery from that theorised by clinicians and researchers. Lamoureux and Bottorff (2005) interviewed nine women who considered themselves recovered from anorexia nervosa. These participants were asked about their experiences of recovery from anorexia nervosa. The women tended to describe recovery as an extremely slow and difficult process that focussed on discovering their sense of self without anorexia nervosa. The components of the process of discovering this sense of self consisted of: seeing the dangers, inching away from anorexia nervosa, tolerating exposure without anorexia nervosa, gaining perspective by changing the anorexia nervosa mindset, and discovering and reclaiming self as "good enough". These components tended to overlap, and the participants were prone to moving backwards and forwards between the components during their recovery rather than progressing through each component in a linear manner. The first component, seeing the dangers, occurred when the women in the study gained insight into the dangers of anorexia nervosa that were often previously obscured by fears of weight gain. These insights gave these participants the hope of a different future to that offered by anorexia nervosa, and the women began contemplating change. During this

component of recovery the women appear to have become aware or acknowledged the existence of the problems presented by anorexia nervosa, and thus became open to the possibility of making changes in their lives. As such, this component of recovery may be likened to the contemplation stage of the TTM (Prochaska & DiClemente, 1982) and the ACM openness to opportunity stage of change (Bowles, 2000). Inching away from anorexia nervosa, the second element of the recovery process, occurred when the women began to take steps towards forming an identity separate from anorexia nervosa. This was a vulnerable time for the women because of the sense of control and power offered by anorexia nervosa, the link between their current sense of identity and the disorder, and their perception of themselves as not being good enough. This component of recovery found by Lamoureux and Bottorff may correspond to the action stages of the TTM and the ACM. The third element of recovery mentioned by the participants was tolerating exposure without anorexia nervosa. The women had to learn to tolerate and manage their sense of vulnerability by developing their sense of power, setting boundaries, and facing their fears. This aspect of recovery appears to correspond with the negative emotions support factor found in the ACM. The fourth component of recovery, gaining perspective by changing the anorexia nervosa mindset, occurred when the women used various strategies to alter their thinking and gain a more realistic perspective on themselves. This aspect of recovery may also be likened to the action stages of the TTM and the ACM. The fifth and final component of recovery comprised discovering and reclaiming self as "good enough". To achieve recovery, the women had to change their self-perception of not being good enough to viewing themselves as having value, and had to reclaim parts of their identity that they had previously abandoned.

The process of recovery from an eating disorder was also investigated by Weaver, Wuest, and Ciliska (2005), using a sample of seven women who self-identified as recovered from anorexia nervosa. From the participants' accounts of their recovery, Weaver et al. constructed a theory of self-development moving from perilous self-soothing to informed self-care. Anorexia nervosa was seen as a form of perilous self-soothing, which was made up of not knowing oneself and losing oneself to the obsession of anorexia nervosa. However, each of the women reached a turning point where they began to recognise that anorexia nervosa was no longer a solution, but was rather a problem. This turning point may be likened to the contemplation and preparation stages of the TTM (Prochaska & DiClemente, 1982), and the openness to opportunity stage of change found in the ACM (Bowles, 2000). The participants explained that it was at this turning point that they began to distance themselves from anorexia nervosa. They gained understanding of the severity of anorexia nervosa, developed previously unknown aspects of their identity, developed social and emotional skills, and gained a sense of responsibility for their own recovery. The women then began to enter the recovery stage of informed self-care by nurturing, rather than abusing, themselves. This stage may correspond with aspects of the action stages of the TTM and the ACM. During this stage the participants began to take care of themselves, connect with other people, and develop positive perceptions of themselves. They also began to celebrate themselves, becoming happy with themselves and knowledgeable about how to best meet their own needs.

Using a sample of individuals who had experienced anorexia nervosa, as well as the family members of these individuals, Sharkey-Orgnero (1999) further investigated the process of recovery from anorexia nervosa. Sharkey-Orgnero interviewed ten mothers, eight fathers, and nine females who had recovered from anorexia nervosa.

These participants provided information regarding their experiences as a family of the recovery process. Responses from all of the participants indicated that recovering from anorexia nervosa comprised three phases and one core variable, known as awakening, evident throughout all of the phases. Awakening, which was described as a basic psychosocial process, referred to an awakening to different truths, not just the initial realisation of the existence of the eating disorder. Awakening unfolded over time, driving movement between each of the phases, and involved processes of rationalising and excusing, then avoiding and ending trust, followed by a final realisation that the problem faced by the daughter is life threatening. This core variable may be likened to the consciousness raising process factor found in the TTM (Prochaska & DiClemente, 1982). The three phases of recovery comprised reacting, acting, and maintaining. The first of these phases, reacting, was initiated by recognition in the family that the health of the daughter was declining. This recognition spurred the family into activities that increased their knowledge about anorexia nervosa, as well as seeking help from various professionals. During this phase, the daughters reacted with anger and denial to the families' attempts to change their behaviour. As a result of this the families tended to feel helpless, before recognising that the problem was a family problem, and therefore must be faced by the family as a whole. This led to the second phase of recovery, the acting phase. Within the acting phase, families first planned together how they were going to address the difficulties they faced, and then provided the daughters with support and encouragement. At this stage each of the daughters reached a turning point and developed a readiness to change. This stage may be likened to the TTM preparation stage and to the openness to opportunity stage of change found in the ACM (Bowles, 2000). Following the acting phase was the third phase of recovery, the maintaining phase. During the maintaining phase parents helped their daughters to find professional

help that was appropriate for their needs. Parents continued to observe, encourage, and support their daughter, and changes occurred not only in the daughters but in the families as a whole. This phase appears to correspond with the action stages found within both the TTM and the ACM.

Whereas the previous studies reviewed have examined the perspectives of individuals who have experienced anorexia nervosa, Peters and Fallon (1994) interviewed 30 women who identified themselves as recovered or in the process of recovering from bulimia nervosa. These participants described the general psychological and social changes in their lives that occurred as they recovered from bulimia nervosa. From the responses of the participants, three continua of recovery from bulimia nervosa were identified: denial to reality, alienation to connection, and passivity to personal power. The first of these continuum, denial to reality, represents the transition from distortion and concealment to a reconstruction of reality. This transition occurred as the women changed their view of bulimia nervosa from seeing it as a solution to seeing it as a problem, became more aware and accepting of their affective states, gained awareness of dysfunctional beliefs and styles of thinking, learnt to eat normally, and learnt to be more realistic about and accepting of their bodies. The initial aspect of this continuum, denial, appears to correspond with the precontemplation stage of the TTM (Prochaska & DiClemente, 1982). Aspects of the continuum also appear to correspond with the action stages of both the TTM and the ACM (Bowles, 2000). The second continua, alienation to connection, described the change from the isolation associated with bulimia nervosa to experiencing feelings of connection with other people. Shame and secrecy surrounding bulimia nervosa initially led the women to withdraw from social contact. Disclosure of the disorder was often the first step to reconnecting with others, accompanied by the subsequent development of more

assertive, direct, and articulate social skills. The women also made adjustments in their sexual relationships and sexual identity, and differentiated from their family of origin. This continuum appears to contain a number of behaviours or actions undertaken by the participants, similar to the action stages of the TTM and the ACM. The third continua, passivity to personal power, represented the shift from feeling powerless over the direction of ones life to taking control. The women were initially passive and powerless, and resistant to change. However, the development of personal power was accompanied by the development of readiness to change. The women also changed their attitudes about the cultural standards for female weight and shape, moving from a position of complying with these standards to questioning and being outraged. As the women gained more personal power and took responsibility for themselves, they moved beyond the victim stance to feeling like competent and powerful adults. This continuum, in which the participants developed a readiness to change, may be likened to the preparation stage of the TTM or to the openness to opportunity stage of change found in the ACM. As the women began to take greater responsibility for themselves, this continuum may also be likened to the action stage of change found in the TTM and the ACM.

A small number of studies have also investigated recovery from an eating disorder from the perspective of individuals who have experienced either anorexia nervosa or bulimia nervosa. D'Abundo and Chally (2004) collected information regarding the social processes of recovery from interviews with 17 individuals at different stages of recovery from an eating disorder, observation at an eating disorder support group, and a focus group. All of the participants in the study were female. From the data collected, D'Abundo and Chally developed the eating disorder curve. This curve was used to illustrate how an eating disorder develops and increases in

severity over time, before the process of recovery is initiated and continued. Recovery was initiated by turning points involving events or people, preceded by the eating disorder reaching a pinnacle of severity on the eating disorder curve. According to the eating disorder curve, an individual experiencing an eating disorder needs to accept the disease, the involvement of others, and spirituality in order to recover. Furthermore, it is the interaction of these three areas of acceptance that contribute to the individual's feelings of self-worth. For the participants in the study, acceptance of the disease tended to be triggered by a turning point or critical event that led them to recognise the severity of their eating disorder, such as being hospitalised or suffering from medical conditions related to the eating disorder. This acceptance of the disease involved both the recognition of the negative consequences of the eating disorder, and becoming tired of these consequences. Acceptance of the involvement of others referred to the acceptance of relationships with other people. These other people included counsellors, a significant other, or a family member. The participants' relationships with these other people provided them with unconditional love and support, trust, inspiration, and hope. The third area of acceptance, acceptance of spirituality, consisted of having hope, valuing life, and trusting in God. This acceptance of spirituality helped the participants in the study to accept themselves and their bodies, as well as to begin establishing feelings of self-worth. The acceptance by the participants of the disease, the involvement of others, and spirituality worked together to develop their self-worth and decrease the severity of their eating disorder symptomatology. During this decrease in symptom severity, the participants started to think rationally, gain control over their lives, and rejoin society by building relationships with others and socialising. Both the initial turning point mentioned by D'Abundo and Chally and the acceptance of the disease appear to correspond with the contemplation stage of the TTM (Prochaska &

DiClemente, 1982), and the openness to opportunity stage of the ACM (Bowles, 2000). Acceptance of the involvement of others may also be likened to the TTM process factor of helping relationships, or the ACM support factor of social support. However, the acceptance of spirituality as found by D'Abundo and Chally does not appear to correspond to factors found in either the TTM or the ACM.

Using an Internet discussion group, Keski-Rahkonen and Tozzi (2005) also investigated perceptions of the process of recovery within a sample of individuals who had experienced a range of eating disorders. Keski-Rahkonen and Tozzi downloaded all of the messages posted on an Internet eating disorders discussion group over a three month period. Online postings were submitted by 158 participants, comprising 155 women and 3 men. These participants self-reported that they were experiencing anorexia nervosa, bulimia nervosa, both anorexia nervosa and bulimia nervosa, binge eating disorder, and orthorexia (an obsession with healthy food and lifestyle). The participants' messages were analysed for discussions regarding recovery, and approximately half of the messages were sorted into the stages of change found in the TTM (Prockaska & DiClemente, 1982). These messages were able to be sorted into the contemplation, preparation, action, and maintenance stages of change but not the precontemplation stage. It is likely that these responses would also correspond with the openness to opportunity, visualisation, planning, action, and closure stages of change found in the ACM (Bowles, 2000). However, a large portion of the participants' messages were not able to be sorted into the TTM stages of change, but instead related to the emotional context of recovery and factors that are helpful and not helpful in the recovery process.

In summary, the preceding review of the literature reveals a variety of factors that individuals who have experienced an eating disorder consider to be involved in the

process of recovery. The majority of these studies, however, were conducted with very small sample sizes. These studies tended to also focus on anorexia nervosa or bulimia nervosa, as only the study by Keski-Rahkonen and Tozzi (2005) possibly included individuals experiencing an eating disorder not otherwise specified. In order to gather as wide a range of responses as possible and maximise the generalisability of the results of the current study, this study incorporated a much larger sample of participants than that found in the majority of this previous research. Furthermore, the current study included individuals experiencing not only anorexia nervosa or bulimia nervosa, but also eating disorders not otherwise specified.

Although the preceding review of the literature provides descriptions of the process of recovery from the perspective of individuals who have experienced an eating disorder, these descriptions appear to correspond with many of the factors of recovery contained within the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). These models therefore appear to comprehensively describe the process of recovery from an eating disorder even though they do not include all of the possible factors described by individuals who have experienced an eating disorder. Thus, the TTM and the ACM may provide suitable explanations of the process of recovery from an eating disorder that are readily accepted by individuals who are experiencing an eating disorder. Only one previous study by Keski-Rahkonen and Tozzi (2005), however, has specifically attempted to compare the descriptions of recovery provided by individuals who have experienced an eating disorder with the process of recovery found within the TTM. Within the present study, the participants' responses were analysed to reveal factors related to the process of recovery that naturally emerge, and were also compared to factors of the TTM and the ACM to assess how well these models account for the participants' explanations of the recovery process. Within this

review of the literature it was apparent that, although the participants were describing the process of recovery, these descriptions tended to correspond with both the stages of the change process and factors theorised to support the change process (i.e. the TTM process factors and the ACM support factors). It was therefore anticipated that, within the current study, the participants' descriptions of the change process would correspond with the stages of change found within the TTM and the ACM. It was likely, however, that some descriptions would also correspond with factors theorised within the TTM and the ACM to facilitate the change process.

Perspectives of Lay People

To the knowledge of this author, there is no known research investigating lay peoples' perceptions of the process of recovery from an eating disorder. Such research as this would be important, however, as it would allow for a comparison of the similarities and differences between lay peoples' perceptions of the recovery process and the perceptions held individuals who have experienced an eating disorder. This research would provide information into whether eating disordered individuals' beliefs regarding the process of recovery are comparable to those held by lay people, or if eating disordered individuals hold their own unique set of beliefs regarding the process of recovery. The current study was an attempt to investigate this area. As there is currently no known research in this area, no hypotheses or research expectations were formulated regarding the similarities or differences that may be apparent between the beliefs regarding recovery held by lay people and held by individuals who have experienced an eating disorder.

In the following section, a review is presented of past research which has investigated the beliefs held by individuals who have experienced an eating disorder

regarding the factors that aid and hinder recovery. In this section, the factors identified in this past research as aiding recovery will be compared to the factors of the TTM (Prochaska & DiClemente, 1982) and ACM (Bowles, 2000). As neither the TTM nor the ACM describe factors that may hinder change or recovery, the factors identified in this past research as hindering recovery will not be compared to either of these models.

Factors Aiding and Hindering Recovery

Perspectives of Individuals who have Experienced an Eating Disorder

Within the eating disorder literature there is a growing body of research investigating eating disordered individuals' perceptions of factors they consider to either aid or hinder their recovery. Within this area, the majority of the research has focused upon factors that aid and hinder recovery from anorexia nervosa, with few studies examining these factors in relation to bulimia nervosa or eating disorders not otherwise specified. For example, approximately 20 years after the onset of their illness, Hsu, Crisp and Callender (1992) interviewed a number of women who had recovered from anorexia nervosa. These women were asked to describe their experiences with anorexia nervosa and the factors that assisted their recovery. Hsu et al. presented case studies of six of these women. Each of these women identified a number of factors they considered important for recovery, described by Hsu et al. as comprising personality strength, self-confidence, being ready, and being understood. More specifically, the personality strength described by Hsu et al. referred to the women's will power and determination to recover. This factor may be likened to the self liberation process factor found in the TTM (Prochaska & DiClemente, 1982), or to the inner drive support factor found in the ACM (Bowles, 2000). The second factor derived from the participants' responses, self-confidence, was used to refer to the support provided by significant

others in these women's lives, which helped the women gain the confidence to attempt recovery. This factor may be comparable to the TTM process factor of helping relationships, and the ACM support factor of social support. The third factor found by Hsu et al., being ready to recover, was described as having had enough of the disorder or being fed up with the disorder, and thus deciding that something needed to change. This factor may be likened to the preparation stage found in the TTM, and the ACM openness to opportunity stage of change. Finally, the fourth factor derived from the participants' responses, being understood, tended to refer to the utilisation of psychological treatments whereby the women felt understood, supported, and unconditionally accepted. This factor appears to be similar to the helping relationships process factor of the TTM and the social support factor of the ACM.

Factors that may aid or hinder recovery from anorexia nervosa were also investigated by Garrett (1997). Garrett interviewed 32 females who were experiencing anorexia nervosa and were at various stages of recovery. These participants reported that they found listening to and performing music, creating art work, and engaging in meditation aided their recovery. The participants also found it helpful to engage in physical activities for the pleasure of fitness, rather than as a means of weight reduction or as a moral striving. Garrett also reported that many of the participants indicated that they did not find treatment helpful in their recovery process, but those participants who did find treatment to be helpful declared that it was due to the development of a strong relationship with the therapist. The participants also tended to consider other relationships to be just as important or more important in aiding recovery, for example relationships with a dietitian, nurse, fellow eating disorder sufferer, friend, or significant other. This emphasis on the helpful nature of some relationships appears to correspond

with the TTM process factor of helping relationships (Prochaska & DiClemente, 1982) and the ACM support factor of social support (Bowles, 2000).

The subjective appraisal of individuals who have experienced an eating disorder, regarding the factors that aided or hindered their recovery, was further explored by Tozzi, Sullivan, Fear, McKenzie, and Bulik (2003). Tozzi et al. interviewed sixty-nine women with a history of anorexia nervosa, the majority of whom were considered recovered. From these interviews Tozzi et al. identified fifteen factors that aid recovery from anorexia nervosa. These factors are presented in Table 15, in order from the most commonly reported factor to the least reported factor. Also presented in Table 15 are the factors of Prochaska and DiClemente's (1982) TTM and Bowles' (2000) ACM that appear to correspond with the factors found by Tozzi et al. From this table it is evident that approximately half of Tozzi et al.'s factors may be subsumed under the more general process factors found in the TTM, or support factors found in the ACM.

Table 15

Tozzi et al.'s (2003) Factors Related to Recovery Compared to the TTM and the ACM

Tozzi et al.'s (2003) Recovery Factors	Corresponding TTM Factors	Corresponding ACM Factors
Supportive relationship (partner)	Helping relationship	Social support
Maturation		
Therapy/counselling	Helping relationship	Social support
Children/pregnancy		
Waking up/realisation	Consciousness raising	
Leaving home	Social liberation	
Supportive friendship	Helping relationship	Social support
Increased self-esteem		
Will power	Self liberation	Inner drive
Family support	Helping relationship	Social support
Job		
Medications		Negative emotions
Religion		
"Good loss"		
Support from other patients	Helping relationship	Social support

Using a sample of 68 females who had previously received treatment for anorexia nervosa, Nilsson and Hägglöf (2006) also investigated the factors that aid recovery from an eating disorder. Nilsson and Hägglöf asked the participants what they considered to be important factors in their recovery. These participants reported that

supportive friends were the most useful factor in their recovery, followed by viewing themselves as an active agent in their own recovery. This view of oneself as an active agent incorporated the participants' thoughts, feelings of will power, insights, maturation, decision-making, and changing their focus to consider their own well-being. Also helpful in the recovery process were activities, treatment, and family. When compared to the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), these supportive friends, family, and treatment may be likened to the helping relationships process factor of the TTM and the ACM social support factor. Additionally, viewing oneself as an active agent in one's own recovery may be likened to the TTM process factor of self liberation and the ACM support factor of inner drive.

Further research into the factors that either aid or hinder recovery from an eating disorder has also been provided by Granek (2007). Granek interviewed five women who had previously received treatment for anorexia nervosa, and who self-identified as recovered. The most pervasive theme evident in these interviews was the social aspects of anorexia nervosa. Each of the participants described how their social circle impacted on their desire and ability to maintain their eating disorder. The participants explained that others in their social circle engaged in dieting, obsessive exercising, and a preoccupation with their bodies, rendering these behaviours normal. This finding demonstrated the ways in which social relationships can hinder recovery from an eating disorder, exacerbating the severity and length of the disorder. However, the participants in the study also explained how their peers can help aid recovery by encouraging them to seek treatment for their eating disorder. The participants also talked about how the males in their lives, such as fathers, brothers, and boyfriends, could both aid and hinder their recovery from anorexia nervosa. Males were able to aid the recovery of the participants in the study by accepting them unconditionally and helping them realise

their worth regardless of their body size. However, males hindered recovery when they made derogatory comments about the participants' weight or shape, encouraged the participants to lose weight, or helped the participants learn to associate their self-worth with their weight. These findings by Granek regarding the role that social relationships can play in aiding recovery from anorexia nervosa relates to the helping relationships process factor found in the TTM (Prochaska & DiClemente, 1982), and the support factor of social support found in the ACM (Bowles, 2000), both of which highlight how the presence of positive relationships with others may aid recovery.

In order to research the subjective appraisal of factors that aid or hinder recovery from an eating disorder, Federici and Kaplan (2008) interviewed individuals who had recovered and individuals who had not recovered from anorexia nervosa. A sample of 15 participants took part in the study, 7 of whom were categorised as recovered according to the authors and 8 of whom were considered to have relapsed, as they had lost weight following intensive treatment. The recovered participants were asked to discuss the factors that aided their recovery, while the participants who had relapsed were asked to discuss the factors that hindered their recovery. Four factors on which the recovered and relapsed participants differed, that could either aid or hinder recovery from anorexia nervosa, emerged from the participants' responses. Firstly, the participants differed on their internal motivation for change. The recovered participants talked about having a strong desire to recover, and stated that their decision to recover was self-initiated and self-directed. The participants in the relapsed group stated that they were ambivalent about recovery and their ability to maintain the necessary changes, and indicated that they engaged in treatment in order to satisfy others, not because of their own desires. This factor may be likened to the presence or absence of the self liberation process factor found in the TTM (Prochaska & DiClemente, 1982), or

to the inner drive support factor found in the ACM (Bowles, 2000). Secondly, the participants differed on their perceptions of the value of their treatment experience. The participants who had recovered reported that they were satisfied with their treatment. They felt safe, supported, and validated, and saw the value of the different specific interventions that made up their treatment. These participants also believed that follow-up care after their intensive treatment had been crucial to their ability to maintain recovery. The relapsed participants stated that they were dissatisfied with their treatment. They believed their treatment and follow-up care had focussed too much on behavioural goals, such as weight restoration, to the neglect of psychological and emotional issues. These participants believed that this had then left them unprepared to deal with emotional and interpersonal stressors. This factor may correspond with the presence or absence of the helping relationships process factor of the TTM and the social support factor found in the ACM. The third factor on which the participants in the study by Federici and Kaplan differed regarded the development of supportive relationships. The recovered participants explained that their ability to maintain recovery was linked to the availability of supportive and non-judgemental family and friends following treatment, and their own ability to ask for help and develop trust. The participants who had relapsed reported that they did not have adequate support, and they often felt judged, misunderstood, and isolated following treatment. These participants reported that their family and friends continued to emphasise dieting and body weight in their interactions. Furthermore, the relapsed participants indicated that they tended to have difficulty asking for and accepting help from others. This factor may also be likened to the presence or absence of the helping relationships process factor of the TTM, and the ACM social support factor. Finally, the participants also differed on their awareness and tolerance of negative emotions. The participants who had recovered

believed that learning to identify and tolerate negative emotions was an important aspect of their recovery, whereas the participants who had relapsed stated that following treatment they experienced considerable difficulty tolerating negative emotions. This factor may be comparable to the presence or absence of the negative emotions support factor found in the ACM.

Researchers have also examined factors specifically related to treatment that aid or hinder recovery from anorexia nervosa. Colton and Pistrang (2004) interviewed 19 female adolescents experiencing anorexia nervosa who were receiving treatment in an inpatient eating disorder unit. These participants were interviewed to find out what they found helpful and unhelpful about their treatment. The participants indicated that being with other individuals experiencing anorexia nervosa who were also patients in the unit had the potential to both aid and hinder their recovery. The participants explained that they received understanding, support, and friendship from other patients. They also felt that they were not alone, and were relieved to be able to talk freely to others about their anorexia nervosa. However, being with other patients in the unit could also hinder recovery when they compared themselves to one another and competed to be the thinnest. The participants were also hindered in their recovery when they learnt new, bad habits from other patients in the unit, and when they became fearful and upset upon seeing other patients in a distressed state. The participants also reported that they found it helpful to be viewed by the staff of the inpatient unit as individuals with unique needs, and to have the staff take the time to listen to each of the patients. The participants explained that their recovery was hindered, however, when the staff treated them as just another patient to be treated, focussed on weight restoration to the neglect of their psychological well-being, and ignored patients unless they were in obvious distress. The influence of other patients and the unit staff in either aiding or hindering recovery

may be likened to the presence or absence of the helping relationships process factor as found in the TTM (Prochaska & DiClemente, 1982), or the social support factor found in the ACM (Bowles, 2000).

Factors specifically related to treatment that aid or hinder recovery have also been investigated by Offord, Turner, and Cooper (2006). Offord et al. interviewed seven young adult females who had previously received inpatient treatment for anorexia nervosa, in an adolescent inpatient care setting. These participants explained that their recovery was aided by creating a normal atmosphere in the hospital around mealtimes. This was achieved by having the staff and patients eat together. During hospital admission, the participants also reported that they found it helpful to follow a rigid diet plan with specified portion sizes, but found it unhelpful to eat this way after discharge. These findings regarding meals and eating may be likened to the social liberation process factor found in the TTM (Prochaska & DiClemente, 1982). The participants also explained how being able to collaborate with their treatment team and having a sense of control over their own treatment aided their recovery process. However, participants believed their recovery was hindered when hospital staff were un-collaborative, rigid, and controlling. Furthermore, the participants reported that being around other patients suffering from other kinds of mental health problems in the general adolescent inpatient unit tended to aid their recovery, as they found the other patients to be helpful, accepting, and supportive. The participants reported that they tended to learn positive coping strategies from these other patients, although at times they did also learn negative coping strategies such as self-harm. Furthermore, the participants reported that being around other patients who were also experiencing anorexia nervosa could aid their recovery, as they received support and had someone with whom to identify, but that it could also hinder their recovery if it brought about

comparison and competition. These findings regarding the ways in which other patients can aid or hinder recovery from anorexia nervosa may be likened to the presence or absence of helping relationships as found in the TTM (Prochaska & DiClemente), or social support as found in the ACM (Bowles, 2000).

Further research into aspects of treatment that may aid or hinder recovery from anorexia nervosa has been provided by Tierney (2008). Tierney interviewed ten adolescents who had previously received treatment for anorexia nervosa, and were at various stages of recovery. Of these participants, 9 were female and 1 male. The participants were asked about their experiences of how it feels to be treated for anorexia nervosa. The analysis of the participants' responses produced four themes relating to factors that aid and hinder recovery. The first of these themes was concerned with accessing appropriate care. The participants commonly reported a lack of early detection of their eating disorder by their general practitioner, and a lack of appropriate services once a diagnosis had been made. This tended to led to a deterioration in their health, resulting in unpleasant hospital admissions. It was only when the participants' health had deteriorated to a serious stage that they then tended to be referred to specialist eating disorder services. These difficulties in receiving early access to suitable treatment tended initially to hinder the participants' recovery. The second theme to emerge from participants' responses was balancing the physical and psychological in their treatment. The participants tended to criticise their treatment for focussing too much on their physical recovery to the neglect of their psychological health, which they believed led them to be more likely to relapse and thus hindered their recovery. The third theme found by Tierney related to the qualities required in professionals. The participants reported that staff who were easily deceived, did not understand eating disorders, treated the participants as cases rather than as individuals,

and who made negative comments about food, made the participants' recovery more difficult. The fourth theme derived from participants' responses was concerned with help from nonprofessional routes. Parents, siblings, and other individuals experiencing an eating disorder who were also attending self-help groups were reported by the participants to both aid and hinder recovery at times, depending on the level of support and understanding they provided. This theme derived from the participants' responses may be likened to the presence or absence of the TTM helping relationships process factor (Prochaska & DiClemente, 1982) or the social support factor of the ACM (Bowles, 2000).

There has only been a limited amount of investigation into the beliefs held by individuals experiencing bulimia nervosa regarding the factors that aid or hinder recovery. Rorty, Yager, and Rossotto (1993) interviewed forty women who defined themselves as recovered from bulimia nervosa. These participants were asked about the treatment they received and the non-treatment factors that impacted on their recovery. The participants in the study ranged from not having received any professional treatment, to receiving extensive professional treatment. A large proportion of the participants indicated that the most helpful aspect of treatment they experienced was the empathy and understanding they received. This helpful aspect of treatment appears to correspond to the helping relationships process factor found in the TTM (Prochaska & DiClemente, 1982) and the social support factor found in the ACM (Bowles, 2000). According to the participants, another aspect of treatment that they found helpful was being in contact with other individuals experiencing bulimia nervosa, which also may correspond with the helping relationships factor of the TTM and the social support factor of the ACM. The participants also reported that working on the issues underlying their eating disorder aided their recovery. Furthermore, a smaller proportion of the

participants in the study reported that they found it helpful to receive education about eating disorders and work on the behavioural features of bulimia nervosa during treatment. These aspects of treatment appear to correspond to the TTM process factors of consciousness raising and contingency management. The participants also talked about features of treatment that they found unhelpful, or that may have hindered their recovery. These features included complaints about specific therapists, and complaints about various treatment strategies employed in their own treatment. Unfortunately, Rorty et al. do not elaborate on these therapist-specific or treatment strategy-specific complaints. The participants in the study also indicated that supportive friends, family, or a significant other were very helpful to their recovery process. This finding may again correspond with the TTM process factor of helping relationships, and the ACM social support factor. The participants also reported that a lack of understanding or insensitivity from friends, family, or a significant other was unhelpful or actively harmful in their recovery. Finally, Rorty et al. noted that a minority of the participants appeared to lack insight into the various aspects of their recovery. This observation indicates that although many individuals who have experienced an eating disorder may be aware of the factors that aided or hindered their recovery, there may also be many individuals who have experienced an eating disorder who cannot explain the various features of their recovery even though they themselves have recovered from an eating disorder.

Further research into the factors that may aid recovery from an eating disorder, incorporating the views of individuals who have experienced anorexia nervosa or bulimia nervosa, has been conducted by Pettersen and Rosenvinge (2002). The participants in this study included 10 individuals with a history of anorexia nervosa, 10 with a history of bulimia nervosa, 8 individuals who had experienced binge eating

disorder, and 20 individuals who had experienced a mixture of anorexia nervosa and bulimia nervosa. Three factors contributing to recovery were derived from the participants' responses, and were subsumed under the more general factor of desiring a better life. This general factor of desiring a better life related to the participants admitting that they were experiencing an eating disorder and gaining motivation to recover. This factor appears to be comparable to the contemplation stage and the self liberation process factor found in the TTM (Prochaska & DiClemente, 1982), and the openness to opportunity stage of change and inner drive support factor of the ACM (Bowles, 2000). The first of Pettersen and Rosenvinge's three recovery factors referred to professional treatment, which was viewed as effective by the participants once they were ready and motivated to change. Professional treatment was reported to be valuable when it included a positive therapeutic relationship emphasising support, empathy, respect, understanding, and a recognition of the individual behind the eating disorder. Assistance in dealing with issues underlying the eating disorder, the use of medication as a buffer against strong emotions and a regulator of food and hunger, support in following a diet plan, and follow-up treatment were also viewed as helpful aspects of professional treatment. These aspects of treatment may be likened to the helping relationships process factor of the TTM and the social support and negative emotions support factors of the ACM. The second factor found by Pettersen and Rosenvinge to contribute to recovery was the use of non-professional care. This non-professional care included meeting other individuals who were experiencing an eating disorder, as well as participating in self-help groups, Internet chat groups, meetings and courses, and reading self-help books. By engaging in each of these activities, the participants were understood, enlightened about their disorder, and given hope. These activities may therefore be likened to the TTM process factors of consciousness raising and helping

relationships, and the ACM social support factor. The third factor derived from the participants' responses comprised the effects of positive life events and important persons. Positive life events included such things as education, employment, and having a partner or children. Important persons referred to the emotional and practical support provided by family and friends in the participants' lives. The role of these important persons in aiding the participants' recovery may be comparable to the helping relationships process factor of the TTM, and the ACM social support factor.

In the research conducted by Keski-Rahkonen and Tozzi (2005) mentioned previously, participants' online messages were downloaded from an Internet eating disorders discussion group over a three month period. A number of these participants' responses were sorted into a category that was comprised of factors that are helpful and not helpful to recovery. The participants' online postings indicated that the Internet discussion group, close relationships, and professional help can aid recovery, as they provide support, but can also hinder recovery at times if they fail to provide support or meet the needs of an individual experiencing an eating disorder. This finding highlights the importance of social support in the recovery process, which corresponds with the helping relationships process factor found in the TTM (Prochaska & DiClemente, 1982) and the support factor of social support found in the ACM (Bowles, 2000). Focussing on food was also reported as both helpful to recovery as all people need to eat, and unhelpful to recovery if this focus on food detracts from work on the underlying issues being experienced by the sufferer. Finally, ceasing to identify with an eating disorder and willpower, which may be likened to the self liberation process factor of the TTM and the inner drive support factor of the ACM, were both reported to be helpful to recovery.

Using a sample of individuals who reported that they had recovered from an eating disorder without treatment, Woods (2004) also investigated factors that aided not only recovery, but the maintenance of recovery. The participants in the study comprised 18 young adults, 2 of whom were male. Half of the participants reported that they had previously experienced bulimia nervosa and half reported that they had previously experienced anorexia nervosa. The majority of the participants reported that significant persons in their lives were the impetus to their recovery. These individuals included mothers, fathers, boyfriends, and close friends. These individuals provided support, empathy, and love, which aided the participants in their recovery journey. The majority of the participants in this study also reported that ongoing support and encouragement from a parent, boyfriend, or friend helped sustain their recovery. These findings emphasise the use of social support to aid and then maintain recovery from an eating disorder. These findings correspond with the helping relationships process factor of the TTM (Prochaska & DiClemente, 1982) and the social support factor found in the ACM (Bowles, 2000). A small number of the participants also reported that they found medications to be helpful in managing their feelings of anxiety and maintaining their recovery, a finding which may correspond with the negative emotions support factor found in the ACM.

The work of Woods (2004) was extended by Cockell, Zaitsoff, and Geller (2004), who investigated the factors that aid and hinder the maintenance of gains made during treatment for an eating disorder. Cockell et al. interviewed 32 women who had completed a residential eating disorder treatment program, six months following their discharge. Prior to treatment, 21 of the women were diagnosed with anorexia nervosa, and 11 with an eating disorder not otherwise specified. Following treatment, all of the women reported a decrease in their eating disorder symptoms but met the criteria for an

eating disorder not otherwise specified. Each of the participants in the study was asked to describe the factors that assisted or impeded their recovery during the last six months following their discharge from the treatment program. Three factors that aid recovery were derived from the participants' responses. The first of these factors consisted of maintaining connections with social supports. These social supports included treatment professionals, family members, and friends. These individuals provided trusting relationships, support, empathy, validation, someone to talk to, and the experience of feeling understood. This factor likely corresponds with the TTM helping relationships process factor (Prochaska & DiClemente, 1982) as well as with the ACM social support factor (Bowles, 2000). The second factor to aid recovery as found by Cockell et al. related to the application of cognitive and affective skills learned in the treatment program. The participants reported that they found the application of the psychological skills and nutritional knowledge gained during their residential treatment to assist in their recovery as it helped them trust their meal plan and their bodies, develop habits that supported recovery, express their emotions, and communicate their needs. The third factor to aid recovery that was derived from the participants' responses involved focusing beyond the eating disorder. The participants reported that they found it helpful to focus on aspects of their life that they found to be meaningful, that were not associated with their eating disorder, and to focus on their higher values and personal development. These participants reported that they also found it helpful to spend time with people who did not have an eating disorder, and to make external changes in their lives that symbolised a new beginning, such as moving out of home, getting a job, or getting a pet. This finding may be likened to the social liberation process factor of the TTM. Cockell et al. also derived from the participants' responses three general categories of factors that hinder recovery from an eating disorder. The first of these

factors consisted of losses, which often triggered relapses (both small and large). These losses included the loss of structure and specialised professional support following discharge from a highly structured treatment program, and feeling disconnected, alone, unsupported, and misunderstood following discharge. The second factor found to hinder recovery related to self-defeating beliefs. The participants reported that holding self-defeating beliefs, such as unrealistic expectations and the need to be in control, caused them to feel a wide range of negative emotions and interfered with their recovery process. The third factor derived from participants' responses involved dealing with real life. For the participants this meant having to deal with the daily hassles of life, which included such things as exposure to the diet culture present in the media and others' comments about dieting and their bodies. Daily life also included environmental challenges such as stressful work situations, health problems, and interpersonal difficulties.

In summary, the preceding review of the literature illustrates the variety of factors that individuals who have experienced an eating disorder believe may aid and hinder the process of recovery. A large proportion of these studies investigated the beliefs of individuals who have experienced anorexia nervosa, with less research focusing on the beliefs of individuals who have experienced bulimia nervosa or an eating disorder not otherwise specified. For example, the studies reviewed above by Hsu et al. (1992), Garrett (1997), Tozzi et al. (2003), Nilsson and Hägglöf (2006), Granek (2007), Federici and Kaplan (2008), Colton and Pistrang (2004), Offord et al. (2006), and Tierney (2008) all focussed exclusively on anorexia nervosa. The study by Rorty et al. (1993) was the only research reviewed above to focus exclusively on bulimia nervosa. A further two studies reviewed above, conducted by Pettersen and Rosenvinge (2002) and Woods (2004), incorporated samples of individuals who had

experienced anorexia nervosa and bulimia nervosa. The study conducted by Cockell et al. (2004) was the only study reviewed above to specifically mention incorporating participants who have experienced an eating disorder not otherwise specified, although the study by Keski-Rahkonen and Tozzi (2005) may have also included such individuals. In order to allow the results of the present study to be generalisable to each of the different eating disorders, the participants in the current study included individuals who have experienced not only anorexia nervosa or bulimia nervosa, but also individuals who have experienced an eating disorder not otherwise specified or a mixture of each of the different eating disorders over the course of their illness.

The factors described in the preceding literature as aiding recovery reflect not only the beliefs of individuals who have experienced an eating disorder, but many of them also appear to correspond with a number of the factors found within the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) that are theorised to support the change process. The TTM and ACM may therefore prove useful in assisting individuals who are experiencing an eating disorder to identify factors that they may utilise to aid their recovery. No known previous research has specifically attempted to compare the descriptions of factors that aid recovery provided by individuals who have experienced an eating disorder to factors found within TTM and the ACM. Within the present study the participants' responses were not only analysed to reveal the categories that naturally emerged describing the factors that aid recovery but were also compared to the factors of the TTM and the ACM. Within this review of the literature, it was apparent that the factors described as aiding recovery tended to correspond with the process factors of the TTM and the support factors of the ACM. It was therefore anticipated that, within the present study, the participants' descriptions of the factors that aid recovery would correspond with the process factors of the TTM and

the support factors of the ACM. It was likely, however, that some of the descriptions would also correspond with the stages of change found in each of these models.

The preceding review of the literature also revealed a variety of factors that individuals who have experienced an eating disorder believe may hinder the process of recovery. As neither the TTM (Prochaska & DiClemente, 1982) nor the ACM (Bowles, 2000) describe factors that are theorised to hinder the recovery process, the factors identified in this past research were not compared to either of these models. The responses of the participants in the current study regarding the factors that hinder recovery were also not compared to the factors of both of these models. The participants' responses regarding the factors that hinder recovery were therefore only be analysed to reveal those factors that naturally emerged from the data. The following is a review of past research which has investigated the beliefs held by lay people regarding the factors that may aid or hinder recovery.

Perspectives of Lay People

There is currently very little known research investigating lay peoples' beliefs regarding the factors that may aid or hinder recovery from an eating disorder. Research in this area is important as it can allow for a comparison of the similarities and differences between lay peoples' beliefs of these factors, and the beliefs held by individuals who have experienced an eating disorder. Such a comparison would provide information about how eating disordered individuals' beliefs regarding the factors that aid and hinder recovery are comparable to those held by lay people or if these two different groups of individuals tend to develop their own unique set of beliefs regarding factors that aid and hinder recovery from an eating disorder.

Using a sample of 168 participants, Furnham and Hume-Wright (1992) investigated lay beliefs about anorexia nervosa. Of the participants, 15 stated that they had at some point in time experienced an eating disorder. More importantly, the remaining participants did not report that they had ever experienced an eating disorder and were thus considered to be lay people. The participants in this study completed a 105-item questionnaire, rated on a 7-point Likert scale, regarding their beliefs about the nature of anorexia nervosa and the causes and cures of this condition. Although this research did not specifically investigate lay peoples' beliefs regarding the factors that may aid or hinder recovery from an eating disorder, these participants' beliefs in relation to the cures of anorexia nervosa are indicative of their beliefs regarding factors that may aid recovery. Using this questionnaire, the participants indicated that psychotherapeutic treatments, particularly when they were designed to develop insight and confidence, were most likely to contribute to improvement or recovery from anorexia nervosa. This aspect of recovery may be likened to the consciousness raising and helping relationships process factors found within the TTM (Prochaska & DiClemente, 1982) and the inner drive and social support factors of the ACM (Bowles, 2000). Factor analysis of the participants' responses to the questionnaire revealed five factors underlying their beliefs about recovery from anorexia nervosa. The first factor associated with recovery, labelled Authoritarian, comprised participants' beliefs that the recovery process should be controlled by doctors rather than by the individual who is experiencing anorexia nervosa. The second factor, labelled Self-worth, was considered to be the most important aspect of the recovery process by the participants. This factor comprised the participants' beliefs that during the recovery process, an individual experiencing anorexia nervosa should develop a greater understanding of their personal worth. This factor may be likened to aspects of the self re-evaluation process factor

found in the TTM. The third factor to emerge from the participants' responses on the questionnaire was labelled Coping, and dealt with coping strategies taught during treatment for anorexia nervosa. These coping strategies included training in sensible eating and dietary needs and developing confidence in managing daily problems. These coping strategies may be likened to the consciousness raising and self liberation process factors of the TTM. The fourth factor, labelled Physiological, comprised the participants' beliefs that physiological treatments such as hormone treatment and bed rest may aid the recovery process. The final factor to emerge from the participants' responses was labelled Conflict Reconciliation. This factor related to the need of individuals experiencing anorexia nervosa to deal with sources of conflict in their lives. This factor may be likened to the negative emotions support factor of the ACM. Correlations between each of these factors of recovery and the participants' status as an individual who had experienced an eating disorder or a lay person revealed only one significant relationship. This one significant relationship indicated that the lay participants held a stronger belief in the important of conflict reconciliation than that held by the participants who had experienced an eating disorder. With respect to the four other factors, it appeared that having experienced an eating disorder had no significant impact on the beliefs held about recovery as these eating disorder participants held comparable beliefs to the participants who had not experienced an eating disorder. These comparisons between the participants who had experienced an eating disorder and the lay participants should be taken cautiously, however, given the very small number of participants who had experienced an eating disorder. This limitation was addressed in the current study.

Further research into factors that may aid recovery from an eating disorder has been provided by Furnham, Pereira, and Rawles (2001). Furnham et al. investigated lay

peoples' beliefs regarding the effectiveness of various therapies for four different psychological disorders, including anorexia nervosa. The participants in the sample comprised 217 lay people. Each of the participants completed a questionnaire investigating their beliefs regarding the efficacy of a variety of different therapies for the treatment of depression, schizophrenia, delusional disorder, and anorexia nervosa. The participants were required to rate the efficacy of 24 therapies on a 5-point Likert scale for each of these four psychological disorders. The results of the study indicated that the participants believed cognitive-behavioural therapy and psychotherapy (presumably meaning psychoanalysis) would be the most effective therapies for the treatment of anorexia nervosa. These two therapies correspond with a number of the process factors found within the TTM (Prochaska & DiClemente, 1982), such as consciousness raising, dramatic relief, and helping relationships. These therapies also appear to correspond with the negative emotions and social support factors of the ACM (Bowles, 2000).

In summary, there is very little known research investigating the beliefs of lay people regarding the factors that may aid or hinder recovery from an eating disorder. In the two studies reviewed, participants were required to complete a questionnaire in order to indicate their beliefs regarding recovery. Unfortunately these participants were not asked to describe in their own words their beliefs regarding the process of recovery from an eating disorder. These participants were also not asked about factors that they believe may hinder recovery from an eating disorder. Within the current study, the participants were provided with the opportunity to describe in their own words the factors they believe aid and hinder recovery from an eating disorder. The study by Furnham and Hume-Wright (1992) found both lay people and individuals who have experienced an eating disorder to hold similar beliefs regarding factors that may aid

recovery from anorexia nervosa. However, as this study only included 15 participants who reported previously experiencing an eating disorder, and as participants beliefs were assessed using a questionnaire rather than an open-ended question, it was unclear whether the present study would have similar findings. Within this study there were therefore no formal hypotheses or expectations formulated regarding the similarities or differences that may be apparent between the beliefs of the participants who had experienced an eating disorder and the lay participants.

Aims and Anticipated Findings

The purpose of the current study was to investigate the beliefs held by individuals who have experienced an eating disorder and lay people regarding the process of recovery and factors that aid or hinder the recovery process. The first aim of this study was to ascertain from the participants' responses the categories of recovery that would naturally emerge. This aspect of the current study was exploratory. There were therefore no expectations regarding the categories that would emerge from the data describing the process of recovery and the factors believed to aid or hinder recovery from an eating disorder. The second aim of this study was to investigate whether the participants' responses regarding the process of recovery and the factors that aid recovery would correspond with the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). It was anticipated that the majority of the participants' responses regarding the process of recovery would correspond with the stages of change found in the TTM and the ACM, but that a smaller amount of these responses may also correspond with the processes of change from the TTM and the support factors of the ACM. It was also anticipated that the majority of the participants' responses regarding the factors that aid recovery from an eating disorder would

correspond with the process factors of the TTM and the support factors of the ACM, but that a smaller amount of these responses may also correspond with the stages of change found within each of these models.

Summary

Previous research has investigated how individuals who have experienced an eating disorder perceive the process of recovery and the factors that aid and hinder this process. Little research, however, has investigated the beliefs of lay people regarding the process of recovery from an eating disorder or the factors that aid and hinder this process. The first aim of this study was to investigate and compare the beliefs regarding of the process of recovery, and factors that may aid and hinder this process, held by individuals who have experienced an eating disorder and lay people. Only one known study by Keski-Rahkonen and Tozzi (2005) has compared the perceptions of the process of recovery from an eating disorder, held by individuals who have experienced an eating disorder, to the stages of change found within the TTM (Prochaska & DiClemente, 1982). Previous research reviewed in this thesis indicates that the TTM may help explain the process of recovery from the eating disorders. This research also indicates that the ACM (Bowles, 2000) may also be useful in explaining the process of recovery. The second aim of this study was to extend Keski-Rahkonen and Tozzi's research by comparing the responses of individuals who have experienced an eating disorder and lay people to the various factors of change found within the TTM and the ACM in order to investigate whether these individuals would explain the process of recovery using concepts similar to those found in each of these models. In the next section of this thesis, the methodology of the current study will be presented.

CHAPTER EIGHT

Study Two Method

Participants

The participants in the present study comprised two different groups. The first group of participants consisted of individuals who were currently experiencing an eating disorder, or who had previously experienced an eating disorder. In order to recruit these participants, numerous eating disorder treatment facilities and eating disorder support services found in English-speaking countries were contacted via email. These treatment facilities and services were provided with information regarding the current study and an advertisement that could be displayed on their website, premises, or used as a handout to be distributed to potential participants. The advertisement contained an Internet address where the information letter (see Appendix D) and questionnaire for the current study could be accessed. The eating disorder participants were also recruited via a snowball technique, as participants who had completed the questionnaire were invited to pass the detail of the study on to other potential participants.

As the data was collected via the Internet, and due to the international nature of the participant sample, the medical records for each of the participants in the eating disorder group were not obtainable. It was therefore not possible to access information regarding the diagnosis of each of the participants according to *DSM-IV-TR* criteria (APA, 2000) and the history of their eating disorder. The participants in this group were thus required to self-report their diagnosis or type of eating disorder and information regarding their recovery status.

The questionnaire used in the current study was completed by 205 participants in the eating disorder group. Of this sample, 10 participants were excluded due to their

age. The Human Research Ethics Committee that provided approval for the current study required that any participants under the age of 18 years provide consent from a parent or guardian prior to their participation. Provisions were made for any such participants to contact the researcher in order to obtain the required consent forms. The 10 participants under the age of 18 years who completed the questionnaire did not provided the necessary consent for their participation, and so unfortunately had to be excluded from the study. A further nine participants were excluded from the study as they reported experiencing binge eating disorder or overeating, disorders which were outside the scope of the current study. An additional seven participants were also excluded from the study as they provided only their background information and did not answer the items contained in the questionnaire. Following these exclusions the final eating disorder sample used in all data analyses comprised 179 participants. These participants were recruited from 13 countries, as shown in Table 16.

Table 16

Countries in which the Eating Disorder Group Participants Resided

Country	Number of participants
Australia	57
United States of America	50
United Kingdom	36
Canada	15
New Zealand	5
Germany	3
Sweden	2
Austria	1
Belgium	1
Colombia	1
Finland	1
Italy	1
Norway	1
Poland	1

Note: 4 participants did not report their country

The participants in the final eating disorder group ranged in age from 18 years to 54 years. Of these participants, 173 were female (M = 25.75 years, SD = 7.33 years), and 6 were male (M = 31.50 years, SD = 14.46 years). The majority of these participants (*n* = 129, 72.1%) reported that they were currently suffering from an eating disorder, while the remainder of the participants (*n* = 50, 27.9%) reported that they had recovered from an eating disorder. In relation to the type of eating disorders the

participants reported they had experienced, 67 participants (37.4%) reported that they had experienced anorexia nervosa, 47 participants (26.3%) reported that they had experienced bulimia nervosa, and 42 participants (23.5%) reported that they had experienced an eating disorder not otherwise specified. A further 23 participants (12.8%) indicated that they did not fit into one of the aforementioned diagnostic categories, but tended to report that they had experienced a combination of these diagnostic categories (e.g. a participants may have reported being initially diagnosed with anorexia nervosa but then later being diagnosed with bulimia nervosa).

The second group of participants in the current study consisted of lay people. The participants in this group were all recruited from Australia, and completed a paper version of the questionnaire rather than the online version. The participants in the lay group were considered to be lay people as they were not recruited from services associated with eating disorders. A snowball technique was used to recruit these participants. Initially, participants were recruited from undergraduate classes at a university in metropolitan Australia. The participants were also invited to pass a copy of the questionnaire on to other people that they thought might be interested in participating in the study. Using these techniques, data was collected from 170 lay group participants. This number was subsequently reduced to 166 participants, as four participants indicated to the researcher during the data collection period that they, or an immediate family member, had previously experienced an eating disorder. It was decided that these participants could not be viewed as lay people and as such these individuals were excluded from the study. The remaining 166 participants included in the lay group ranged in age from 18 years to 56 years. Of these participants, 137 were female (M = 20.33 years, SD = 3.88 years) and 29 were male (M = 22.10 years, SD = 7.78 years). The majority of these participants (97.6%) reported that they were

currently studying, with 113 of the participants (68.1%) reporting that they were studying undergraduate psychology at university.

Materials

The participants in both the eating disorder and lay groups completed a background questionnaire and a number of open-ended questions regarding their views on recovery from an eating disorder. The background questionnaire gathered information regarding the participants' age, sex, and country of residence. For participants in the eating disorder group, the background questionnaire also gathered information regarding their current diagnostic status (i.e. recovered or non-recovered) and type of eating disorder (anorexia nervosa, bulimia nervosa, eating disorder not otherwise specified, or other). As part of this questionnaire, all of the participants completed three open-ended questions devised by the researcher. These questions comprised:

1. How does one go about recovering from an eating disorder? How would you describe the process of recovery from an eating disorder?
2. What things help someone recover from an eating disorder?
3. What makes recovery from an eating disorder more difficult?

The participants were provided with space to write as much or as little as they wanted in response to each of these questions. The first question was designed to gather information regarding participants' beliefs about the process of recovery from an eating disorder. The second question was designed to collect information about the participants' beliefs regarding factors that aid this recovery process. The third question was designed to determine the participants' beliefs about the factors that hinder the process of recovery from an eating disorder.

Methodology

In order to assess the research questions of the current study, the participants' responses to the open-ended questions contained in the questionnaire needed to be subjected to content analysis and compared to the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). To achieve this, each participant's response for each question was broken down into smaller units, each containing one idea or response unit. For example, in response to the question "What makes recovery from an eating disorder more difficult?" a participant may have written "Family and friends talking about dieting, and dieting always being in the media". This response would have been broken down into three response units (1) family talking about dieting, (2) friends talking about dieting, and (3) dieting always being in the media. Each of these response units were then alphabetised, numbered, and used as the basis for all subsequent data analysis.

In order to achieve the first aim of this study, content analysis was used to discover the categories that would naturally emerge from the data. Content analysis is a general inductive approach to qualitative data analysis (Thomas, 2006). Using this approach, frequent or significant themes present in the raw data are allowed to emerge through numerous readings and interpretations of the participants' responses (Thomas). In order to discover the themes or patterns present in the data, key word or ideas are identified and grouped together in common categories (Lacey & Luff, 2001; Miles & Huberman, 1984; Ryan & Bernard, 2000). In the current study, the numbered response units drawn from the eating disorder participants' responses were printed onto sheets of paper and then each response unit was cut into a separate strip of paper. These separate strips of paper each containing a single response unit were systematically sorted through

to identify similar responses or ideas, which were then grouped together. Once all of the response units had been sorted into groups, similar groups of responses were combined together into categories. All of the response units within each category were reviewed to ensure that they had been sorted into the most appropriate category. These categories of responses were then labelled, and a brief description of each category was written. In order to complete this process, all of the response units within each category were reviewed once again and each of the category labels and descriptions refined.

Following the inductive approach to content analysis used with the eating disorder participants' response units, deductive analysis was employed to analyse the lay participants' response units. Deductive analysis occurs when the research objectives influence the research findings by determining how the data is analysed, for example by guiding the researcher to analyse the data in view of a priori expectations or models (Thomas, 2006). Within the present study, deductive analysis was used to systematically sort the lay participants' response units into the categories derived from the eating disorder participants' responses. In order to achieve this, a spreadsheet was created containing the lay participants' numbered response units and a column for each of the categories found to naturally emerge from the eating disorder participants' responses. The lay participants' responses were then systematically sorted into each of these categories by placing a check-mark in the category column to which each response corresponded (see Appendix E for an example). It was anticipated that any response units that could not be sorted into these a priori categories would be subjected to a general inductive approach of content analysis. This step was not required, however, as the eating disorder group categories were sufficient to sort nearly all of the lay participants' response units. All of the lay group response units regarding the process of recovery fitted into the categories describing the process of recovery that

were derived from the eating disorder group response units. Only four of the lay group response units regarding factors that aid recovery and five of the lay group response units regarding the factors that hinder recovery did not fit into the categories describing the factors that aid and hinder recovery that were derived from the eating disorder group response units.

In order to achieve the second aim of this research deductive analysis was again employed. The a priori categories that the participants' responses were sorted into were each of the factors found within the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). In accordance with the process of deductive analysis, the eating disorder and lay participants' response units regarding the process of recovery and the factors that may aid recovery were systematically sorted into the factors of the TTM and the ACM. In order to achieve this, spreadsheets were created containing the eating disorder and lay groups' numbered response units and a column for each of the factors of the TTM or the ACM (see Appendix F for an example). The participants' responses were then systematically sorted into these columns by placing a check-mark in the factor column to which each response best corresponded. Responses that did not correspond with any of the factors were allocated to the "Not in TTM" or "Not in ACM" column.

CHAPTER NINE

Study Two Results

The results of the current study are divided into three areas: the process of recovery from an eating disorder, factors that aid the process of recovery, and factors that hinder the process of recovery. Within each of these sections, the categories or themes that naturally emerged from the data are presented and the frequency with which the eating disorder and lay participants' responses were sorted into each of these categories are compared to one another. The participants' responses regarding the process of recovery and factors that aid recovery are also compared to the factors found within the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), and the frequency with which the eating disorder and lay groups' responses were sorted into each of these factors are compared to one another. In the following sections, the results of this study as they pertain to the process of recovery, the factors that aid recovery, and the factors that hinder recovery are presented.

The Process of Recovery

In order to investigate the process of recovery from an eating disorder, the participants were asked "How does one go about recovering from an eating disorder? How would you describe the process of recovery from an eating disorder?" The participants in the eating disorder group provided 413 different response units describing the process of recovery from an eating disorder, while participants in the lay group provided 454 different response units.

The Naturally Emerging Categories Describing the Process of Recovery

In accordance with the first aim of this study, the eating disorder participants' response units were subjected to content analysis. From this content analysis, the categories that naturally emerged from the eating disorder group's data were ascertained. The lay participants' response units were then sorted into these categories. During this process of data analysis, three categories emerged from the participants' responses describing the steps involved in recovery. These categories comprised (1) the initiation of the recovery process, (2) seeking help and support, and (3) dealing with thoughts, feelings, and behaviours related to the eating disorder. Two additional categories emerged from the data describing the difficult and ongoing nature of recovery and communicating a lack of knowledge about the recovery process. The definitions of each of these categories are presented in Table 17.

Table 17

Definitions of the Five Categories Describing the Process of Recovery from an Eating Disorder

Category	Definition
Initiation of the recovery process	Factors leading to the initiation of the recovery process including recognition of the problem and a desire to recover
Seeking help and support	Gaining help and support from treatment professionals, family, and friends
Dealing with thoughts, feelings, and behaviours related to the eating disorder	Focus on accepting oneself, addressing the underlying causes of the eating disorder, and addressing the thoughts, feelings, and behaviours related to one's eating disorder
Difficult and ongoing nature of recovery	The process of recovery is different for everyone, long and difficult, takes a great deal of time, and is fraught with relapses
Lack of knowledge about the recovery process	A lack of knowledge or awareness of the recovery process, and have not yet been able to recover

Further analysis of the data was required in order to ascertain whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the categories found to describe the process of recovery from an eating disorder. As this data was categorical a chi-square test for independence was employed. Using a chi-square test for independence, the responses of the eating

disorder and lay groups were compared to one another. The results of this analysis indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were allocated into each of the categories: $\chi^2(4) = 44.57$, $p < .001$. The results of this analysis are presented in Table 18.

Table 18

Crosstabulation of the Eating Disorder and Lay Groups' Response Units According to the Categories of the Process of Recovery

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Initiation of the recovery process	82	59.2	63.1	3.0	48	70.8	36.9	-2.7
Seeking help and support	136	166.6	37.2	-2.4	230	199.4	62.8	2.2
Thoughts, feelings, and behaviours	124	141.1	40.0	-1.4	186	168.9	60.0	1.3
Difficult and ongoing process	83	62.8	60.1	2.5	55	75.2	39.9	-2.3
Lack of knowledge	21	16.4	58.3	1.1	15	19.6	41.7	-1.0

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

In order to ascertain which categories pertaining to the process of recovery contributed to the significant chi-square value, the standardised residuals displayed in the crosstabulation table were examined. A standardised residual greater than 2.00 within any given cell indicates that the specified cell is a main contributor to the overall chi-square value (Becker, 1999; SPSS, 1999). From an examination of Table 18, it is apparent that the main contributors to the overall chi-square value were the cells regarding the initiation of the recovery process, seeking help and support, and the difficult and ongoing nature of the process of recovery. With regard to the initiation of the recovery process, the eating disorder participants tended to refer more to this category than did participants in the lay group, as 63.1% of the responses in that category were given by participants from the eating disorder group. The eating disorder participants also referred more to the difficult and ongoing nature of the recovery process than did the lay group participants, with 60.1% of the responses in that category being derived from the eating disorder group. The participants in the lay group tended to emphasise more the aspect of the recovery process related to seeking help and support than did the participants in the eating disorder group, providing 62.8% of the responses in that category. The following is an explanation of each of these categories describing the process of recovery.

Initiation of the recovery process.

The participants from both the eating disorder and lay groups indicated that there was an initiation or beginning to the recovery process. The participants believed that this initiation can be triggered by a variety of internal turning points or external life circumstances. For example, the participants in the eating disorder group stated that recovery can be initiated by reaching the point where "eventually I got tired of [the

eating disorder]", "deciding [I] don't want to live that way any more", "[hitting] rock bottom", because of the "decision to get pregnant", or because of a "partner [who] threatened relationship break-up". The participants in the lay group believed that turning points or life circumstances such as a "friend finds out- is worried", "others noticing the problem", and "being more mature about the problem" can initiate the recovery process for an individual who is experiencing an eating disorder. The participants also declared that the initiation of the recovery process can occur due to a recognition or acknowledgement of the problem by the individual who is experiencing the eating disorder. The eating disorder group participants stated that recovery can begin by "acknowledging the problem", "admitting the problem", and "[realising they] are suffering from a serious illness". The participants from the lay group stated that an individual needs to "[realise] that they have an eating disorder]", "accept that they have an eating disorder", and "admit the problem exists". The participants also indicated that an individual with an eating disorder must have a desire or drive to recover in order to initiate the recovery process. The participants from the eating disorder group believe that an individual must "have to want to get better", "[needs] motivation to recover", needs to "fight to recover", and that "desire to get better is [a] key step". The lay group participants stated that an individual experiencing an eating disorder must "[decide] to change", "must want to change", and needs to "[want] to fix the problem".

Help and support.

The participants in both the eating disorder and lay groups indicated that the process of recovery from an eating disorder involves gaining help and support. The participants indicated that one element of this help and support relates to that provided in the form of treatment from a variety of professionals. The participants from the

eating disorder group stated that an individual with an eating disorder "must see a specialist- either inpatient, outpatient, psychiatrist, [or] psychologist", needs "a lot of treatment", should "get help from professionals to learn other and more healthy ways of coping", and needs a "partnership between patient, clinical psychologist, dietitian and a good GP". The lay group participants believed that an individual experiencing an eating disorder needs to "get support from professionals", "seek professional help from a psychologist/counsellor", and attend "therapy/treatment". The participants also indicated that an individual engaging in the process of recovery from an eating disorder should seek help from other, non-professional sources. The eating disorder group participants stated that an individual experiencing an eating disorder should "ask for help", "[enlist] appropriate caregivers and support system", "[gain] support from various sources", seek "support from family" and "support from friends", and have a "support system at home that respects how the eating disordered patient is feeling". The participants in the lay group believed that it is important to "[enlist] help", receive "constant support from family", gain "help from friends" and "help from parents", receive "help and support from loved ones", have the "support of people around you", and "make sure there is a close friend or family [member] the sufferer can talk to".

Deal with thoughts, feelings, and behaviours.

Both the eating disorder and lay groups expressed the idea that the process of recovery involves the individual with an eating disorder dealing with the thoughts, feelings, and behaviours associated with their eating disorder. The participants indicated that an individual in the process of recovering from an eating disorder should focus on accepting themself. The eating disorder group participants stated that such an individual must "come to terms with oneself", gain "acceptance of who you are and

your validity outside of an eating disorder", and "learn the truth about who you are as a person". The lay group participants believed that an individual with an eating disorder "needs to be able to accept themselves for who they are", "learn to love themselves", "build confidence and happiness", and "develop a positive self-concept". The participants also indicated that an individual experiencing an eating disorder needs to address the underlying causes of their eating disorder. The participants from the eating disorder group stated that the individual needs to "work on underlying issues and discover what caused the eating disorder", "work on what the disorder is doing for you and how else you can get that", "[embrace] and [come] to peace with the conflicting parts of myself", and "come to terms with [the] fact [that] have learned to deal with [the] stress and strain of life in [a] particularly bad way". The lay participants indicated that the individual with an eating disorder must "find out what factors 'caused' the eating disorder", "address underlying psychological issues", and "address what was causing the individual to develop an eating disorder". The participants also believed that an individual experiencing an eating disorder must address the thoughts that underlie their condition. The participants from the eating disorder group stated that an individual must "address mental needs", "challenge thoughts", and "[learn] to think normally about food". The participants from the lay group indicated that an individual must "[confront the] negative focused thoughts", "[replace] distorted thoughts/ideas with realistic ones", and "change their mindset". The participants believed an individual with an eating disorder must also address the feelings related to their eating disorder. The eating disorder group participants indicated that an individual with an eating disorder must "explore [their] feelings", "challenge [their] anxiety", and "re-learn how to deal with stuff". The lay group participants indicated that an individual experiencing an eating disorder must "[change their] thoughts and feelings about food",

"move away from stress causing situations" and "learn how to cope with body image". Furthermore, the participants indicated that the process of recovering from an eating disorder involves addressing the behaviours related to the eating disorder. The participants from the eating disorder group stated that an individual experiencing an eating disorder needs to "change patterns of behaviour", "try to normalise eating patterns", and "[force themselves] to do what [is] feared most- eat normally and regain some weight". The participants from the lay group stated that an individual must "break down habits", "[change] behaviours", and "slowly [get] back into a regular pattern of eating".

Difficult and ongoing process.

The participants from both the eating disorder and lay groups suggested that recovery from an eating disorder is difficult, ongoing, and very much an individual process. The participants stated that the process of recovery is long and arduous, taking a great deal of time and fraught with relapses. For example, the participants in the eating disorder group believed that the process of recovery "is a very long battle", "is always difficult", often has "many relapses", and is a "long and very hard journey". The lay group participants believed that the process is "a long hard road", is a "lengthy and difficult process", and has "relapses". The participants also indicated that the process of recovery is different for everyone. The eating disorder group participants stated that the "process would be different depending on the individual" and that "recovery needs to be tailored to the individual person". The participants from the lay group indicated that the process of recovery "is very complicated and that there is no one answer" and "it would vary from patient to patient".

Lack of knowledge.

A small number of participants in both the eating disorder and lay groups expressed a lack of knowledge about the recovery process. A small amount of the participants in the eating disorder group indicated that they were unaware of the process of recovery as they themselves had not recovered from their own eating disorder. These participants in the eating disorder group stated "I don't know- I can't imagine what I could do to get over this", "no idea", "I do not know as I've not yet been able to recover myself", "if I knew that, don't you think I'd have done it by now?" and "if I knew that I wouldn't still be eating disordered". The lay group participants stated "I don't know", "no idea", and "I don't think I can really answer that".

The Process of Recovery Compared to the Factors of the TTM and the ACM

In accordance with the second aim of this study, the response units of the eating disorder and lay groups regarding the process of recovery were compared to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). For an example of these comparisons, see Appendices F and G. The results of these comparisons are shown in Table 19. As shown in Table 19, a large proportion of the eating disorder and lay groups' response units corresponded with the stages of change found in the TTM and the ACM. A smaller proportion of the response units also corresponded with the process factors of the TTM and the support factors of the ACM, rather than with the stages of change. Overall, the factors of the TTM and the ACM were able to account for the majority of the responses given by the participants within this study.

Table 19

Percentage of the Eating Disorder and Lay Groups' Response Units Regarding the Process of Recovery that Corresponded with the TTM and the ACM

	Eating Disorder Group	Lay Group
TTM		
Stages of Change	49.4%	65.4%
Process Factors	32.2%	14.8%
Total	81.6%	80.2%
ACM		
Stages of Change	54.2%	63.7%
Support Factors	30.3%	15.4%
Total	84.5%	79.1%

Further analysis of the data was required in order to ascertain whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the factors of the TTM (Prochaska & DiClemente, 1982). A chi-square test for independence was used to compare the frequency of the responses of the eating disorder and lay groups to one another. The chi-square test requires that the minimum expected frequency for each cell of the crosstabulation table should be 5 or greater (Becker, 1999; Coakes & Steed, 2001). In order to assure that this assumption was not violated, a constant of 10 was added to all cell frequencies (see Fidell & Tabachnick, 2003 and Grissom & Kim, 2005 for a discussion of this practice, or Kim, Lee, & Park, 2007 for a practical example of this practice). The results of the chi-square test indicated that the eating disorder and lay groups differed significantly in the

frequency with which their responses were allocated into each of the factors of the TTM: $\chi^2(14) = 64.20$, $p < .001$. The results of this analysis are presented in Table 20.

Table 20

Crosstabulation of the Eating Disorder and Lay Groups' Response Units Regarding the Process of Recovery Compared to the Factors of the TTM

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Precontemplation	10	10.1	47.6	0.0	11	10.9	52.4	0.0
Contemplation	49	44.5	52.7	0.7	44	48.5	47.3	-0.6
Preparation	41	35.0	56.2	1.0	32	38.0	43.8	-1.0
Action	153	203.5	36.0	-3.5	272	221.5	64.0	3.4
Maintenance	21	18.7	53.8	0.5	18	20.3	46.2	-0.5
Consciousness raising	41	24.4	80.4	3.4	10	26.6	19.6	-3.2
Dramatic relief	10	9.6	50.0	0.1	10	10.4	50.0	-0.1
Environmental re-evaluation	11	10.1	52.4	0.3	10	10.9	47.6	-0.3
Social liberation	11	10.1	52.4	0.3	10	10.9	47.6	-0.3
Self re-evaluation	29	24.4	56.9	0.9	22	26.6	43.1	-0.9
Stimulus control	10	9.6	50.0	0.1	10	10.4	50.0	-0.1
Helping relationships	91	90.5	48.1	0.1	98	98.5	51.9	-0.1
Counter conditioning	10	9.6	50.0	0.1	10	10.4	50.0	-0.1
Reinforcement management	12	10.5	54.5	0.5	10	11.5	45.5	-0.4
Self liberation	31	19.6	75.6	2.6	10	21.4	24.4	-2.5

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of the standardised residuals in Table 20 indicated that the cells referring to the action stage, as well as the consciousness raising and self liberation process factors, were the main contributors to the significant chi-square value. With regard to the action stage of change found in the TTM (Prochaska & DiClemente, 1982), the lay group tended to refer more to this stage than the eating disorder participants, as 64.0% of the responses relating to this stage were given by the participants from the lay group. The eating disorder participants referred more to the consciousness raising process factor than did the lay group participants, with 80.4% of the responses for this factor being derived from the eating disorder group. The eating disorder group also tended to refer more to the self liberation process factor of the TTM than did the participants in the eating disorder group, providing 75.6% of the responses for this factor.

A chi-square test for independence was also used to determine whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the factors of the ACM (Bowles, 2000). In order to assure all cell frequencies were of a sufficient size, a constant of 10 was added to all of the cells. The results of this chi-square test indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were allocated into each of the factors of the ACM: $\chi^2(7) = 57.58$, $p < .001$. The results of this analysis are presented in Table 21.

Table 21

Crosstabulation of the Eating Disorder and Lay Groups' Response Regarding the Process of Recovery Compared to the Factors of the ACM

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Openness to opportunity	68	55.9	58.1	1.6	49	61.1	41.9	-1.6
Visualisation	17	13.4	60.7	1.0	11	14.6	39.3	-0.9
Planning	22	23.4	44.9	-0.3	27	25.6	55.1	0.3
Action	159	204.4	37.1	-3.2	269	223.6	62.9	3.0
Closure	19	14.3	63.3	1.2	11	15.7	36.7	-1.2
Inner drive	49	28.7	81.7	3.8	11	31.3	18.3	-3.6
Social support	99	93.6	50.5	0.6	97	102.4	49.5	-0.5
Negative emotions	24	23.4	49.0	0.1	25	25.6	51.0	-0.1

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of the standardised residuals in Table 21 indicated that the cells referring to the action stage and the inner drive support factor were the main contributors to the significant chi-square value. With regard to the action stage of change found in the ACM (Bowles, 2000), the lay group tended to refer more to this stage than did the eating disorder participants, as 62.9% of the responses relating to this stage were given by the participants from the lay group. The eating disorder participants referred more to the inner drive support factor of the ACM in comparison to

the lay group participants, with 81.7% of the responses for this factor being derived from the eating disorder group.

Factors Aiding Recovery

In order to investigate the factors that aid the recovery process from an eating disorder, the participants were asked "What things help someone recover from an eating disorder?" The participants in the eating disorder group provided 417 different response units describing factors that aid recovery from an eating disorder. The participants in the lay group provided 327 different response units describing the factors that aid recovery.

The Naturally Emerging Categories Describing the Factors that Aid Recovery

In line with the first aim of this study, the eating disorder group response units were subjected to content analysis. From this content analysis, the categories that naturally emerged from the eating disorder participants' responses describing the factors that aid recovery were ascertained. The lay group's response units were then sorted into each of these categories. During this process of data analysis, five categories emerged from the data describing the factors that aid recovery from an eating disorder. These categories comprised (1) support, (2) qualities of the environment, (3) personal qualities of the individual experiencing an eating disorder, (4) tasks of the individual experiencing an eating disorder, and (5) professional treatment. The definitions of each of these categories are presented in Table 22.

Table 22

Definitions of the Five Categories Describing the Factors that Aid Recovery

Category	Definition
Support	Sources of support such as family and other individuals who have experienced an eating disorder, types of support such as encouragement and empathy
Qualities of the environment	An environment that is positive, models healthy behaviours, and is structured
Personal qualities of the individual	Qualities such as determination, hope, trust, patience, understanding, and insight
Tasks of the individual	Developing a desire to recover, plan of action, and responsibility for oneself, gain knowledge and coping skills, maintain features of a non-eating disordered life
Professional treatment	Treatment that is accessible and provided by specialists

Further analysis of the data was required to examine whether the eating disorder and lay participants differed in the frequency with which their responses were allocated into each of these categories describing the factors that aid recovery from an eating disorder. The response frequencies of these two groups were compared to one another using a chi-square test for independence. This test indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were

allocated into each of the categories: $\chi^2(4) = 47.37$, $p < .001$. The results of this analysis are presented in Table 23.

Table 23

Crosstabulation of the Eating Disorder and Lay Groups' Response Units According to the Categories of the Factors that Aid Recovery

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Support	213	249.4	43.2	-2.3	280	243.6	56.8	2.3
Environment	26	23.8	55.3	0.5	21	23.2	44.7	-0.5
Qualities of the individual	61	49.1	62.9	1.7	36	47.9	37.1	-1.7
Tasks of the individual	138	101.2	69.0	3.7	62	98.8	31.0	-3.7
Professional treatment	119	133.6	45.1	-1.3	145	130.4	54.9	1.3

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of the standardised residuals in Table 23 indicated that the cells referring to support and tasks of the individual were the main contributors to the significant chi-square value. In comparison to the participants in the eating disorder group, the participants in the lay group tended to emphasise more the need for support as a factor that aids recovery, providing 56.8% of the responses in this category. The

eating disorder participants tended to refer more to the tasks of the individual experiencing an eating disorder than did participants in the lay group, as 69.0% of the responses in that category were given by participants from the eating disorder group. The following is an explanation of each of these categories describing the factors that aid recovery from an eating disorder.

Support.

Both the eating disorder and lay groups expressed the idea that support from others can aid recovery from an eating disorder. The participants indicated that support can be provided by a variety of sources, including significant others, professionals, and other individuals who have experienced an eating disorder. For example, the participants in the eating disorder group stated that recovery can be assisted by "support from family", "support from friends", "support from [a] multidisciplinary team-dietitian, therapist, physician, etc.", and "talking to recovered/recovering eating disorder sufferers". The participants from the lay group also reported that recovery can be assisted by "support from family", "support from friends", "support from trained professionals", and "other people who were in the same situation but recovered". The participants also described the nature of support that should be provided in order to aid an individual in their recovery from an eating disorder. The participants indicated that these individuals providing support to someone with an eating disorder should be loving, encouraging, and challenge the individual's eating disorder. For example, the eating disorder group participants stated that an individual with an eating disorder needs "acceptance from others", "people who are sympathetic but firm", "someone who cheers for the small steps made", "someone who sees [the] sufferer as a person, not a disorder", "love from others", and "someone supportive over [the] long course of

recovery". The lay participants explained that an individual with an eating disorder needs "encouragement to keep them going", "reassurance of [their] worth", "love and care from family", a "motivational influence from others", and "understanding without judgement".

Qualities of the environment.

The participants in both the eating disorder and lay groups indicated a number of different qualities of the environment that can aid recovery from an eating disorder. The participants explained that it can be helpful for an individual experiencing an eating disorder to be in an environment that is supportive, models normal eating and healthy behaviours, does not place undue pressure or stress upon the individual, and contains routine or structure, especially regarding meals and therapy. For example, the participants from the eating disorder group reported that it may be helpful to be in a "positive environment" and a "happy environment", have "structure in days" and "structured eating times", and be presented with "a good example of being healthy" and "a good example of eating without worry". The participants from the lay group believed that an individual with an eating disorder can be assisted by a "change in environment", "supportive environments", a "healthy family environment", "taking away stressful situations", and having "positive role models".

Personal qualities of the individual experiencing an eating disorder.

Both the eating disorder and lay groups stated that a number of personal qualities of an individual who is experiencing an eating disorder can assist them in their recovery. The participants believed that it can be helpful for an individual with an eating disorder to be motivated, understanding, patient, to have hope and trust in others,

and to demonstrate acceptance and insight. The eating disorder group participants believed that "will power", "trust for others", a "positive attitude", "patience", "determination", "hope for the future", and "insight" can aid an individual experiencing an eating disorder during their recovery. The participants from the lay group stated that "acceptance", "courage", "positivity", "the right frame of mind", "realisation", and "inner confidence" can aid recovery from an eating disorder.

Tasks of the individual experiencing an eating disorder.

The participants in both the eating disorder and lay groups mentioned a number of tasks that may be undertaken by an individual experiencing an eating disorder in order to aid them in their recovery process. The first of these tasks mentioned by the participants was developing a desire to recover and plan of action regarding the changes to be made over time. The participants explained that an individual experiencing an eating disorder needs to develop a desire to recover, that is driven by some kind of purpose or reason, and entails a plan and goals. For example, the eating disorder group participants stated that an individual with an eating disorder will be aided in their recovery if they develop a "desire to stop hurting [themselves] and others", have a "willingness to face the pain", come to "[know] why [they] want to recover", and organise a "plan of action" and "goals and ambitions in life". The lay group participants believed that an individual with an eating disorder will be assisted by "admitting there is a problem", developing a "desire to get better", and "understanding that it does take a while to recover". The second task mentioned by the participants as an aid to the recovery process from an eating disorder was the development of acceptance, responsibility, and love for oneself. The participants from the eating disorder group indicated that an individual with an eating disorder should learn to "accept [themself]",

"build [a] sense of self separate to body/appearance", "regain self-esteem", "learn to think of [their] body as not just an object or shape", and become "responsible for oneself". The participants from the lay group stated that an individual experiencing an eating disorder should "accept one's image", "improve [their] self-esteem", and develop "self-acceptance". The third task mentioned by the participants as aiding recovery from an eating disorder was to learn about eating disorders and develop skills to overcome or manage one's eating disorder. The eating disorder group participants stated that an individual with an eating disorder should "read about eating disorders", gather "information about normal eating", develop "strategies to deal with food and emotions", learn "new coping mechanisms", and "[remove] anything that triggers [one's] eating disorder". The participants from the lay group explained that an individual experiencing an eating disorder should "[become] educated about what is healthy or beautiful", gain "education" and "information", and should try to "[understand] how society contributes to their illness". The final task mentioned by the participants as an aid to the recovery process was to maintain features of one's life that are not associated with an eating disorder. The participants from the eating disorder group indicated that an individual with an eating disorder should "engage in enjoyable hobbies", "maintain interests", "maintain or establish relationships with friends", and "[have] responsible tasks e.g. university or work". The lay group participants stated that individuals should "have a social life", have "other activities to engage in", and do "fun things".

Professional treatment.

Both the eating disorder and lay groups stated that professional treatment is an important factor that can aid the process of recovery from an eating disorder. The participants explained that this treatment should be provided by trained professionals.

The participants from the eating disorder group stated that treatment should be provided by “doctors”, “dietitians”, “nutritionists”, “psychiatrists”, and “psychologists”. Furthermore, they stated that these treatment providers should be “eating disorder specialists” who have “expertise and experience with eating disorders”. The lay group participants stated that treatment should be provided by these same professionals. The participants also talked about the types or features of treatment that can aid an individual experiencing an eating disorder during their recovery. The eating disorder group participants stated that helpful treatment could come in the form of “cognitive behavioural therapy”, “twelve step meetings”, “family therapy”, “group therapy”, “individual therapy”, “inpatient treatment”, and “medical treatment” including “medication”. The eating disorder group participants also stated that treatment should “address underlying issues”, “explore [the] function of the eating disorder”, “encourage weight gain/loss where appropriate”, “pay attention to the sufferer’s individual mental needs”, and reintroduce “all food groups during treatment to reduce food fears”. The participant from the lay group also believed that treatment should involve an “assessment of the individual and why they got the disorder”, “[address] larger issues and conflicts from [the individuals] past and personal life which have created the climate in which an eating disorder can develop”, involve a “behaviour change program”, and the “treatment of other mental illnesses”. The participants also stated that having treatment that is easily accessible can aid recovery from an eating disorder. The participants from the eating disorder group stated that “available treatment” and “insurance coverage/financial means to access treatment” is needed. The lay group participants stated that it is helpful to “[have] services readily available” and have “resource availability”.

The Factors Aiding Recovery Compared to the Factors of the TTM and the ACM

In accordance with the second aim of this study, the response units of the eating disorder and lay groups regarding the factors that aid recovery from an eating disorder were compared to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). For an example of these comparisons see Appendices H and I. The results of these comparisons are shown in Table 24. As shown in Table 24, a very large proportion of the eating disorder and lay groups' response units corresponded with the process factors of the TTM and the support factors of the ACM. A smaller proportion of the response units also corresponded with the stages of change found in both of these models. Overall, the factors of the TTM and the ACM were able to account for the majority of the responses given by the participants within this study.

Table 24

Percentage of the Eating Disorder and Lay Groups' Response Units Regarding the Factors that Aid Recovery Corresponding with the TTM and the ACM

	Eating Disorder Group	Lay Group
TTM		
Stages of Change	8.9%	17.7%
Process Factors	66.9%	63.3%
Total	75.8%	81.0%
ACM		
Stages of Change	17.9%	22.4%
Support Factors	60.0%	54.4%
Total	77.9%	76.8%

Further analysis of the data was required in order to ascertain whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the factors of the TTM (Prochaska & DiClemente, 1982). A chi-square test for independence was used to compare the frequencies of the responses of the eating disorder and lay groups to one another. A constant of 10 was added to all cell frequencies to ensure that the minimum expected frequency of each cell exceeded 5. The results of the chi-square test indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were allocated into each of the factors of the TTM: $\chi^2(14) = 28.70$, $p < .05$. The results of this analysis are presented in Table 25.

Table 25

Crosstabulation of the Eating Disorder and Lay Groups' Response Units Regarding the Factors that Aid Recovery Compared to Factors of the TTM

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Precontemplation	10	10.2	47.6	-0.1	11	10.8	52.4	0.1
Contemplation	10	14.5	33.3	-1.2	20	15.5	66.7	1.2
Preparation	16	19.9	39.0	-0.9	25	21.1	61.0	0.9
Action	47	47.5	48.0	-0.1	51	50.5	52.0	0.1
Maintenance	11	10.2	52.4	0.2	10	10.8	47.6	-0.2
Consciousness raising	27	23.7	55.1	0.6	22	25.3	44.9	-0.6
Dramatic relief	18	13.6	64.3	1.2	10	14.4	35.7	-1.1
Environmental re-evaluation	13	11.6	54.2	0.4	11	12.4	45.8	-0.4
Social liberation	13	13.6	46.4	-0.2	15	14.4	53.6	0.2
Self re-evaluation	11	14.5	36.7	-1.0	19	15.5	63.3	0.9
Stimulus control	38	24.2	76.0	2.7	12	25.8	24.0	-2.7
Helping relationships	335	346.3	46.9	-0.8	380	368.7	53.1	0.7
Counter conditioning	15	14.5	50.0	0.1	15	15.5	50.0	-0.1
Reinforcement management	15	14.0	51.7	0.2	14	15.0	48.3	-0.2
Self liberation	19	15.5	63.3	1.1	11	14.5	36.7	-1.1

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of the standardised residuals in Table 25 indicated that the cell referring to the stimulus control process factor was the main contributor to the significant chi-square value. With regard to the stimulus control process factor of the TTM (Prochaska & DiClemente, 1982), the eating disorder participants tended to refer more to this factor than the lay group participants, with 76.0% of the responses for this factor being derived from the eating disorder group.

A chi-square test for independence was once again used to determine whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the factors of the ACM (Bowles, 2000). In order to assure all cell frequencies were of a sufficient size, a constant of 10 was added to all of the cells. The results of this analysis indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were allocated into each of the factors of the ACM: $\chi^2(7) = 16.49$, $p < .05$. The results of this analysis are presented in Table 26.

Table 26

Crosstabulation of the Eating Disorder and Lay Groups' Response Units Regarding the Factors that Aid Recovery Compared to Factors of the ACM

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Openness to opportunity	16	18.9	42.1	-0.7	22	19.1	57.9	0.7
Visualisation	21	15.9	65.6	1.3	11	16.1	34.4	-1.3
Planning	20	17.9	55.6	0.5	16	18.1	44.4	-0.5
Action	58	66.7	43.3	-1.1	76	67.3	56.7	1.1
Closure	11	10.5	52.4	0.2	10	10.5	47.6	-0.2
Inner drive	30	23.9	62.5	1.3	18	24.1	37.5	-1.2
Social support	344	355.3	48.2	-0.6	370	358.7	51.8	0.6
Negative emotions	38	28.9	65.5	1.7	20	29.1	34.5	-1.7

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of Table 26 revealed no standardised residuals greater than 2.00 within any of the cells. The standardised residuals for the cell referring to the negative emotions support factor of the ACM (Bowles, 2000), however, appear to be approaching this value. With regards to the negative emotions support factor, the eating disorder group tended to refer more to this factor in comparison to the lay group, as 65.5% of the responses for this factor were given by the participants from the eating disorder group.

Factors Hindering Recovery

In order to investigate the factors that hinder the process of recovery from an eating disorder, the participants were asked "What makes recovery from an eating disorder more difficult?" The participants in the eating disorder group provided 438 different response units describing factors that hinder recovery from an eating disorder. The participants in the lay group provided 291 different response units describing factors that hinder recovery. As neither the TTM nor ACM describe factors that inhibit change or recovery the participants' responses were not compared to these models.

The Naturally Emerging Categories Describing the Factors that Hinder Recovery

In accordance with the first aim of the current study, the eating disorder group response units were subjected to content analysis. From this process of content analysis, the categories that naturally emerged from the eating disorder group's response units describing the factors that hinder recovery were ascertained. The lay participants' response units were then sorted into these categories. Using this process of data analysis, seven categories emerged from the data describing the factors that hinder the process of recovery from an eating disorder. These categories comprised (1) difficult thoughts and emotions, (2) difficulties with food, weight, and shape, (3) compounding and maintaining factors, (4) valued and habitual aspects of an eating disorder, (5) unhelpful relationships with others, (6) daily living, and (7) treatment. The definitions of each of these categories are presented in Table 27.

Table 27

Definitions of the Seven Categories Describing the Factors that Hinder Recovery

Category	Definition
Difficult thoughts and emotions	Experiencing negative emotions and thoughts including intrusive self-talk
Difficulties with food, weight, and shape	Ongoing fears relating to weight gain, difficulties with body image, having to eat regularly
Compounding and maintaining factors	Co-morbid or dual diagnoses, underlying issues, barriers to developing a desire to recover
Valued and habitual aspects of an eating disorder	Valuing the comfort and means of coping provided by an eating disorder, the addictive and habitual nature of eating disorders
Unhelpful relationships with others	Individuals that exert a negative influence through such means as unhelpful comments, criticism, and a lack of support
Daily living	Daily life events, features of a weight-conscious society, the media
Treatment	Inability to access or finance treatment, lack of specialist treatment providers, difficulties experienced in treatment such as feeling forced and not being given a voice

Further analysis of the data was required to ascertain whether the eating disorder and lay groups differed in the frequency with which their responses were allocated into each of the categories describing the factors that hinder recovery from an eating disorder. The response frequencies of these two groups were compared to one another using a chi-square test for independence. This test indicated that the eating disorder and lay groups differed significantly in the frequency with which their responses were allocated into each of the categories: $\chi^2(6) = 76.77$, $p < .001$. The results of this analysis are presented in Table 28.

Table 28

Crosstabulation of the Eating Disorder and Lay Groups' Response Units According to the Categories of the Factors that Hinder Recovery

Category	Eating Disorder Group				Lay Group			
	OC	EC	%	Std Resid	OC	EC	%	Std Resid
Thoughts and emotions	56	56.6	57.1	-0.1	42	41.4	42.9	0.1
Food, weight, and shape	58	43.3	77.3	2.2	17	31.7	22.7	-2.6
Compounding and maintaining factors	49	55.4	51.0	-0.9	47	40.6	49.0	1.0
Valued and habitual aspects	36	26.6	78.3	1.8	10	19.4	21.7	-2.1
Unhelpful relationships	124	168.0	42.6	-3.4	167	123.0	57.4	4.0
Daily living	69	69.9	57.0	-0.1	52	51.1	43.0	0.1
Treatment	93	65.2	82.3	3.4	20	47.8	17.7	-4.0

Note: OC = Observed Count; EC = Expected Count; Std Resid = Standardised Residuals

An examination of the standardised residuals presented in Table 28 indicated that the cells referring to food, weight, and shape; the valued and habitual aspects of an eating disorder; unhelpful relationships; and treatment were the main contributors to the significant chi-square value. The eating disorder participants tended to refer more to

difficulties with food, weight, and shape than did the participants in the lay group, as 77.3% of the responses in this category were given by the participants from the eating disorder group. The eating disorder group participants also referred more to the valued and habitual aspects of an eating disorder than did participants in the lay group, with the eating disorder group providing 78.3% of the responses in this category. In comparison to the lay group, the eating disorder group also tended to emphasise more the aspects of treatment that can hinder recovery, providing 82.3% of the responses for this category. The participants in the lay group tended to emphasise more that unhelpful relationships can hinder recovery than did the participants in the eating disorder group, providing 57.4% of the responses for this category. The following is an explanation of each of these categories describing the factors that hinder recovery from an eating disorder.

Difficult thoughts and emotions.

The participants in both the eating disorder and lay groups declared that experiencing difficult thoughts and emotions can hinder recovery from an eating disorder. The participants indicated that an individual with an eating disorder may experience difficult thoughts and intrusive self-talk. The participants from the eating disorder group stated that recovery can be hindered by "the voices in your mind", "the inner critic", and "thoughts that cannot be over-ridden despite rationale". The lay group participants believed that recovery can be hindered by "mental weakness/negativity", "very persistent thoughts", and "negative thoughts". The participants also indicated that recovery from an eating disorder may be hindered by the experience of difficult or negative emotions. The eating disorder group participants thought that the "emotional turmoil of recovery", "growing anxiety", "guilt", "anger", and "fear" can all hinder recovery from an eating disorder. The participants from the lay group stated that

recovery can be hindered by “negative emotions”, “very persistent feelings”, “self-hatred”, “grief”, “fear”, “anxiety”, “anger”, and “alienation”.

Difficulties with food, weight, and shape.

Both the eating disorder and lay groups indicated that ongoing difficulties regarding food, weight, and shape can hinder recovery from an eating disorder. The participants believed that recovery can be hindered by difficulties associated with eating and the necessity to eat regularly to recover. The eating disorder group participants stated that “being around food”, not being able to “avoid food or fat in day to day life”, “needing to eat normally all day but wanting to diet”, and not being able to “get away from food (i.e. like you could with alcoholism)” can hinder recovery from an eating disorder. The participants from the lay group believed recovery can be hindered by the fact that “a person has to eat/drink every day, thus they must face their fears constantly”. The participants indicated that recovery is also hindered by ongoing fears relating to weight gain and a continued desire to be thin. The participants in the eating disorder group reported that recovery can be rendered more difficult by “knowing what you weigh”, “knowing you will be gaining weight”, a “fear of being fat”, and “wanting to be thin”. The lay group participants explained that “beliefs about being thin”, “[wanting] to be thinner and thinner”, “fat phobia”, and “gaining weight” can hinder recovery from an eating disorder. The participants also reported that difficulties associated with ones body image can make recovery from an eating disorder more difficult. The participants from the eating disorder group stated that recovery can be hindered by “fears relating to body image”, a “distorted body image” and “body image-for me a healthy weight looks like being obese”. The lay group participants stated that recovery can become more difficult as a result of a “disturbed image of self”, “the fact

that they are never satisfied with their body image" and "having a lot of conversations which revolve around body image".

Compounding and maintaining factors.

The participants from both the eating disorder and lay groups expressed the idea that a number of difficulties that either compound or maintain an eating disorder can serve to hinder recovery from an eating disorder. The participants stated that focusing on the external manifestation of an eating disorder more than on the underlying issues can hinder recovery. The eating disorder group participants explained that recovery can be hindered by the "fear that treatment will deal with eating, but not [the] emotional issues", the "realisation/fear that when remove that way of coping, [you] may be left to face immense anger/grief/memories that you have been avoiding", and "great focus on the symptoms". The participants from the lay group stated that "only addressing the symptoms of not eating and not the cause", "not solving the problem that caused the disorder", and "not targeting triggering influences" can hinder recovery from an eating disorder. The participants also stated that co-morbid or dual diagnoses can make recovery more difficult. For example, participants from the eating disorder group stated that "co-morbid diagnoses (e.g. depression, anxiety, obsessive compulsive disorder)", "drugs/alcohol problems", and "other mental health issues" can hinder recovery from an eating disorder. The participants from the lay group stated that "depression" and "other mental illnesses" can hinder recovery. The participants also indicated that a lack of motivation to recover, or believing that the benefits of remaining unwell outweigh the benefits of recovery, can hinder recovery from an eating disorder. The eating disorder group participants declared that recovery can be hindered by "fear of giving up [your] eating disorder", "losing motivation", "not being able to see a reason to change", "loss

of [the] visual signal of your distress", and "having no reason to get better because [the] eating disorder has destroyed one's life". The lay group participants stated that recovery can be hindered by "having a negative attitude towards getting better", "ignoring the reality of having an eating disorder", a "lack of motivation", and "avoidance/not wanting to change".

Valued and habitual aspects of an eating disorder.

Both the eating disorder and lay groups mentioned that the valued aspects and habitual nature of an eating disorder may serve to hinder recovery. The participants explained that recovery may be hindered by their attachment to the comfort, and means of coping with life, that an eating disorder can provide. The participants in the eating disorder group stated that "taking comfort in the eating disorder", "having to let go of behaviours that have become so comforting", "letting go of an effective coping mechanism", and the fact that it is so "difficult to establish [a] new way of coping" can hinder recovery from an eating disorder. The participants from the lay group indicated that "the fact that they want to go back to their own ways" can hinder the recovery of an individual who is experiencing an eating disorder. The participants also reported that recovery can be hindered by the addictive and habitual nature of an eating disorder. The eating disorder group participants stated that the "temptation to return to old habits", the fact that an "eating disorder becomes habit", "giving up routines that you know so well", "having had [an] eating disorder for a long time", the fact that "it is an addiction", and one's "strong dependence on [the] eating disorder for feelings of control" can hinder recovery. The participants from the lay group explained that recovery from an eating disorder can be hindered by "falling back into old habits", "the

length of time that they have suffered from their eating disorder", and "the disorders persistence".

Unhelpful relationships with others.

The participants from both the eating disorder and lay groups emphasised aspects of relationships with others that can prove unhelpful and hinder an individual's recovery from an eating disorder. The participants indicated that unhelpful comments from others can hinder recovery. The participants from the eating disorder group reported that "having people tell you that you've gained weight (congratulate you)", "being surrounded by friends, family, etc. who are constantly talking about weight, dieting, etc.", "being told to get over it", "others giving negative attention ('You look anorexic/you throw up? That's awful…')", and "others giving positive attention ('I wish I was as thin as you')" can all hinder recovery from an eating disorder. The lay group participants stated that "being forcefully told to eat", "being made fun of", "people commenting on your weight all the time", and "outside people with no experience say 'it's all in your head' and to 'just eat something'" can hinder recovery. The participants reported that the criticism and judgement of others can also hinder recovery. The participants from the eating disorder group explained that recovery can be hindered by "being judged negatively for having an eating disorder", having "blame placed on [the] sufferer by those around them", and "others criticism of changes made by [the] sufferer". The lay group participants stated that "judgement", "lack of acceptance", and "negative attitudes from others" can hinder recovery from an eating disorder. The participants also reported that lack of support and understanding from others can hinder an individual's recovery from an eating disorder. The eating disorder group participants stated that recovery can be hindered by a "lack of support from

family", "unsupportive friends", "parents/friends/family that don't understand", and "people not understanding that it is not a quick fix". The participants from the lay group also indicated that recovery can be hindered by "family who lack understanding and empathy", "having no support", and a "lack of social support and understanding". Furthermore, the participants indicated that recovery can be hindered by the unhelpful behaviours of others. The participants in the eating disorder group reported that recovery can be rendered more difficult when confronted with "other people around [the] sufferer eating abnormally", "mum being on [a] diet", and "people staring and watching what you eat". The participants from the lay group stated that recovery can be hindered by "getting treated different or people acting different around them", "having family who also have an eating disorder", "having friends who also have an eating disorder", and "parents constantly dieting".

Daily living.

The participants in both the eating disorder and lay groups suggested that features of daily living can hinder the recovery of an individual with an eating disorder. The participants indicated that daily life events and aspects of one's living environment can hinder recovery. The participants from the eating disorder group stated that "stresses in everyday life", "personal or family crisis", "pressures from home, work, or study", and "adverse life events" can hinder recovery from an eating disorder. The participants in the lay group reported that a "lack of control in life", a "stressful environment at work, school, home, etc.", and "reoccurring stressful situations" can hinder recovery. The participants also indicated that features of ones society and the media, such as attitudes towards obesity, being thin, and eating disorders, can hinder the recovery of an individual with an eating disorder. The eating disorder group

participants stated that recovery can be hindered by “pressure from society to be thin”, “government anti-obesity campaigns adding stigma to being overweight”, “conflicting messages from [the] media and government about what is healthy, what to eat, what not to eat”, a “media focus on thin is beautiful”, and “seeing skinny people everywhere (e.g. magazines, television, fashion)”. The participants from the lay group believed that recovery from an eating disorder can be hindered by the “media constantly having very thin people promoted as ‘beautiful’”, “pressure from society”, “ideals presented in society”, and “clothing stores”.

Treatment.

Both the eating disorder and lay groups declared that a number of aspects related to treatment can hinder the recovery of an individual who is experiencing an eating disorder. The participants expressed the idea that an inability to access or finance treatment can hinder recovery. The eating disorder group participants believed that recovery can be hindered by a “lack of treatment available”, “being male- little treatment options”, having the “stigma of a borderline personality disorder diagnosis”, “ long waiting lists for services”, the “high cost of healthcare and support”, and a “lack of insurance coverage and/or reimbursement”. The participants from the lay group also indicated that recovery can be hindered by a “lack of professional help”, “not having access to resources”, and a “lack of medical treatment”. The participants also believed that an individual with an eating disorder can experience a number of difficulties during their treatment which can render their recovery more difficult. These aspects of treatment included such things as feeling forced into treatment, having no voice in their treatment options, and receiving poor treatment. The participants from the eating disorder group stated that recovery can be hindered by “feeling ‘pushed’ or ‘tricked’

into treatment", "having control taken away regarding [my] own recovery", "inadequate training of those who say they provide treatment", "no specialist help", "professionals focussing on symptoms rather than finding and resolving the cause", and the "therapist not taking it seriously enough". The participants in the lay group indicated that recovery from an eating disorder can be hindered by "being forced into recovery", "being told how/why by people who do not understand the illness properly", "poor medical services", and "not gaining proper advice".

CHAPTER TEN

Study Two Discussion

The purpose of the current study was to investigate eating disorder and lay participants' beliefs regarding the process of recovery, and the factors that aid and hinder recovery, from the eating disorders. The first aim of this study was to determine the factors of recovery that naturally emerged from the participants' responses. The second aim of this study was to compare the participants' responses to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) in order to ascertain whether the participants would explain the process of recovery using concepts similar to those found in these models. The structure of this discussion is as follows. Firstly, the results of the current study will be presented, accompanied by a discussion of the possible explanations of these findings. These findings will then be discussed in light of the previous research in this area. The implications of this research will then be expounded upon and suggestions for future research described.

Findings of the Current Study

The first aim of this study was exploratory in nature. In accordance with this aim, the categories that naturally emerged from the participants' responses describing the process of recovery, factors that aid recovery, and factors that hinder recovery, were ascertained. No expectations were asserted regarding the nature of the categories that would emerge from the participants' responses or the differences to be found between the responses of the eating disorder and lay groups. The second aim of this study was to compare the extent to which both the eating disorder and lay participants' responses would correspond with factors of the TTM (Prochaska & DiClemente, 1982) and the

ACM (Bowles, 2000). There were a number of anticipated findings associated with this aim. These anticipated findings were based on comparisons made within the introduction of this study, between the naturally emerging categories of factors related to recovery found in past research and the factors of the TTM and the ACM. As these anticipated findings were therefore not based on the actual results of this past research as concluded by the authors of those studies, but upon comparisons made by the current author, they were not put forward as formal hypotheses. It was anticipated that with respect to the participants' responses regarding the process of recovery the majority of these responses would correspond with the stages of change found in the TTM and the ACM. It was also anticipated that a smaller amount of the responses may also correspond with the processes of change found in the TTM and the support factors found in the ACM. With regard to the participants' responses regarding the factors that aid recovery, it was anticipated that the majority of these responses would correspond with the process factors of the TTM and the support factors of the ACM. It was also anticipated that a smaller amount of the responses may also correspond with the stages of change found in these models. No expectations were asserted, however, regarding the differences to be found in the frequency with which the eating disorder and lay participants' responses were allocated into the factors of the TTM and the ACM.

The Naturally Emerging Categories Describing Recovery

The process of recovery.

In accordance with the first aim of this study, the categories that naturally emerged from the participants' responses were ascertained. With regard to the process of recovery, three categories emerged from the data describing the steps involved in recovery. These categories related to (1) the initiation of the recovery process, (2)

seeking help and support, and (3) dealing with the thoughts, feelings, and behaviours related to an eating disorder. Two categories also emerged from the data describing the difficult and ongoing nature of recovery from an eating disorder, and expressing a lack of knowledge about the recovery process. The eating disorder and lay groups differed significantly with respect to the frequency with which their responses were allocated into each of these categories.

The first category derived from the participants' responses describing the process of recovery related to the initiation of the recovery process. The eating disorder group participants provided more responses than the lay participants within this category. This finding suggests that the eating disorder participants may have appreciated to a greater extent than the lay participants the need for an individual who is experiencing an eating disorder to reach a point where they are ready, or decide, to begin recovery, rather than choosing to remain in their present condition. The eating disorder participants therefore understood, more than the lay participants, the importance of recognising an eating disorder for the problem that it is, and developing a strong drive to recover in order to initiate, and then sustain, the process of recovery.

In relation to the categories describing the process of recovery, the category mentioned most frequently by both participant groups related to seeking help and support. This result suggests that both the eating disorder and lay participants placed a high value on the help and support that can be provided by others, and see this help and support as useful during the recovery process. Although both groups strongly emphasised the support of others during recovery, a large number of the participants' responses also referred to the need to deal with the thoughts, feelings, and behaviours associated with both the onset and the maintenance of an eating disorder. This result demonstrates that the participants understood that recovery from an eating disorder

involves more than learning to eat healthily and maintain a healthy weight, it also involves changing other problematic or distressing thoughts, feelings, and behaviours. This response category reveals the depth of the participants' understanding regarding the complex nature of eating disorders and the many facets of their thoughts, feelings, and behaviours that an individual must change in order to recover.

With regard to the category describing the difficult and ongoing nature of recovery from an eating disorder, both groups demonstrated a clear awareness that recovery involves a great many struggles and a great deal of work. Both of the participant groups also demonstrated an awareness that set backs and relapses can often occur for an individual who is striving to overcome an eating disorder. However, the eating disorder participants provided more responses than the lay group with respect to this category, suggesting that the eating disorder participants tended to have a better understanding than the lay participants of the individual nature of recovery, such that it can be a different journey for each individual.

Only a small proportion of the participants from both the eating disorder and lay groups expressed a lack of knowledge regarding the process of recovery. This finding highlighted the fact that the majority of the participants from both of the participant groups possessed a great deal of understanding about the various aspects of the recovery process.

Factors aiding recovery.

The categories found to naturally emerge from the participants' responses regarding the factors that aid recovery were (1) support, (2) qualities of the environment, (3) personal qualities of the individual experiencing an eating disorder, (4) tasks of the individual experiencing an eating disorder, and (5) professional treatment.

The eating disorder and lay groups differed significantly with respect to the frequency with which their responses were allocated into these categories. Similar to the findings regarding the process of recovery, the most frequently mentioned category of responses related to the use of support. This category was mentioned far more than any of the other categories. This finding reveals the great deal of appreciation possessed by the participants regarding the means by which other people can help an individual during recovery from an eating disorder.

Both the eating disorder and lay groups also provided a large number of responses referring to professional treatment as a factor that aids recovery. This finding suggests the participants placed a high value on the use of professional treatment, provided by trained professionals with experience and expertise in the field of eating disorders. This finding is encouraging, indicating that although further research is needed into the efficacy of different treatments for the eating disorders (Treasure & Schmidt, 2003), many of the services currently provided are considered to be helpful.

A variety of tasks that can be undertaken by an individual experiencing an eating disorder in order to aid their recovery were frequently mentioned by the eating disorder participants. The lay participants, however, provided far fewer responses in this category. This finding signifies that the eating disorder participants were far more attuned than the lay participants to the variety of tasks or strategies that an individual can implement in order to aid their recovery from an eating disorder. This finding also suggests that individuals experiencing an eating disorder often have a great deal of knowledge to draw on regarding the strategies that they can employ or the tasks that they can engage in to facilitate their recovery.

To a much lesser extent both the eating disorder and lay groups described qualities of the individual experiencing an eating disorder and qualities of the

environment that can aid recovery. The number of responses in these categories was quite small in comparison to each of the preceding categories, suggesting that these qualities of the individual and the environment are less helpful during recovery than each of the other categories mentioned, or that the participants were less aware of the impact of these factors.

Factors hindering recovery.

The seven categories found to naturally emerge from the participants responses regarding the factors that hinder recovery related to (1) difficult thoughts and emotions, (2) difficulties with food, weight, and shape, (3) compounding and maintaining factors, (4) valued and habitual aspects of an eating disorder, (5) unhelpful relationships with others, (6) daily living, and (7) treatment. The eating disorder and lay groups differed significantly with respect to the frequency with which their responses were allocated into these categories. Similar to the findings regarding the process of recovery and the factors that aid recovery, by far the most frequently mentioned category related to unhelpful relationships as a hindrance to recovery. This finding demonstrates that the participants were clearly able to recognise and distinguish between people that provide support and help, and people or comments that can have a detrimental impact on recovery.

The eating disorder participants, but not the lay participants, also provided a large number of responses referring to aspects of treatment that can hinder recovery. In relation to the factors aiding recovery, both participant groups provided a large number of responses regarding professional treatment. In conjunction with one another, these findings suggest that although the lay group saw the value of treatment, the eating disorder participants recognised to a far greater extent the different facets of treatment

that can also hinder recovery. These facets included limited access to treatment services and a lack of quality treatment or specialist treatment providers.

Although mentioned less frequently than the preceding categories, both participant groups provided responses regarding aspects of daily living that can hinder recovery. This finding suggests that these participants have been very attuned to the numerous messages present within society, and aspects of daily living, that can exert a negative influence on an individual endeavouring to recover from an eating disorder. Both of the participant groups also mentioned that difficult thoughts and emotions can hinder recovery from an eating disorder. This finding demonstrates the participants' awareness of the negative self talk that can drive and sustain an eating disorder, and the negative emotions that not only accompany an eating disorder but are also experienced when an individual attempts various recovery activities.

Difficulties with food, weight, and shape were frequently mentioned by the eating disorder group as hindering recovery. The lay group provided far fewer responses in this category. This finding suggests that the eating disorder participants were far more aware than the lay group of the strongly held thoughts and feelings associated with eating and weight that accompany an eating disorder, but that must be confronted again and again every single day in order to recover. Both of the participants groups, however, reported to an equal extent that a variety of compounding and maintaining factors can hinder recovery. This finding suggests that both participant groups understood that an eating disorder is not simply a problem with eating and weight, but reflects other underlying difficulties or mental health problems. The participants therefore recognised the need to address eating disorder behaviours during recovery, and to also address additional difficulties that can contribute to the development and maintenance of an eating disorder.

Finally, a small number of participants from both the eating disorder and lay participant groups mentioned that valued and habitual aspects of an eating disorder can hinder recovery. This finding implies that an eating disorder can serve some kind of a purpose or role for an individual experiencing an eating disorder and as such it may be difficult to let go of, or easy to slip back into, this eating disorder. This finding also indicated that, due to the ease of slipping back into habitual eating disordered routines or behaviours, constant vigilance may be required for an extended period of time to prevent relapse.

In summary, the first aim of the present study was to ascertain the categories that naturally emerged from the participants' responses describing the process of recovery, factors that aid recovery, and factors that hinder recovery. The participants' responses revealed a great deal of understanding regarding the many aspects of recovery from an eating disorder. In particular, a large proportion of the participants' responses emphasised relationships with others, including treatment providers, which can serve to aid or to hinder recovery.

Participants' Responses Compared to the Factors of the TTM and the ACM

In accordance with the second aim of this study, the participants' responses concerning the process of recovery and the factors that aid recovery were compared to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). As anticipated, the majority of the eating disorder and lay participants' responses regarding the process of recovery corresponded with the stages of change found in both the TTM and the ACM. A smaller proportion of these responses also corresponded with the processes of change found in the TTM and the support factors found in the ACM. Interestingly, examination of the crosstabulation tables of the participants'

responses showed that, of the stages of change, the largest proportion of both the eating disorder and the lay participants' responses corresponded with the action stage found in each of these models. This finding is understandable upon consideration of the categories relating to the process of recovery that naturally emerged from the eating disorder and lay participants' responses. Aspects of most of these naturally emerging categories related to different types of action that can be undertaken as part of recovery, for example seeking treatment, attempting to eat healthily, changing one's behavioural patterns, and arguing against negative self talk. In accordance with the naturally emerging categories, these responses were grouped together into categories describing common clusters of actions. When these responses were sorted into the categories of the TTM and the ACM, however, these actions were all grouped together within the single action stage. Of the remaining responses that corresponded with the process factors of the TTM and the support factors of the ACM, the largest proportion of these responses corresponded with the helping relationships process factor and the social support factor of each of these models respectively. This finding reflects the emphasis placed on seeking help and support evident in the categories describing the process of recovery that naturally emerged from the participants' responses. These findings suggest that, although the eating disorder and lay participants did explain the process of recovery using concepts similar to those found in the TTM and the ACM, these explanations related mostly to taking action and using the support or help provided by others.

In relation to the eating disorder and lay participants' responses regarding the factors that aid recovery, as anticipated the majority of these responses corresponded with the process factors of the TTM (Prochaska & DiClemente, 1982) and the support factors of the ACM (Bowles, 2000). A smaller number of the participants' responses

also corresponded with the stages of change found in each of these models. Examination of the crosstabulation tables of the participants' responses revealed that, in relation to the TTM, the vast majority of the participants' responses corresponded with the helping relationships process factor. With regards to the ACM, the majority of the participants' responses corresponded with the social support factor. Once again, this finding is understandable upon consideration of the categories that naturally emerged from the eating disorder and lay participants' responses that described the factors that aid recovery. The largest proportion of the responses given by both of the participant groups related to the naturally emerging categories of support and professional treatment. Within the TTM and the ACM, however, these responses were all grouped together within the helping relationships process factor or the social support factor of each model respectively.

In summary, the second aim of the present study was to compare the participants' responses regarding the process of recovery and factors that aid recovery to the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). As anticipated, the majority of the eating disorder and lay groups' responses regarding the process of recovery corresponded with the stages of change. More particularly, the majority of these responses corresponded with the action stage of change as found in both the TTM and the ACM. Also as anticipated, the majority of the participants' responses regarding factors that aid recovery were found to correspond with the process factors of the TTM and the support factors of the ACM. The vast majority of these responses, however, corresponded with the TTM helping relationships process factor and the ACM social support factor.

Support for Previous Research

A number of the categories found to naturally emerge from the participants' responses within the current study are consistent with the findings of past research in this area. The first aspect of the process of recovery found within the current study, the initiation of the recovery process, is consistent with the component of recovery found by Lamoureux and Bottorff (2005) referred to as seeing the dangers, the turning point described by Weaver et al. (2005) and also D'Abundo and Chally (2004), Sharkey-Orgnero's (1999) awakening variable, and Peters and Fallon's (1994) continua of denial to reality. Seeking help and support, another aspect of the process of recovery found within the current study, is consistent with Peters and Fallon's continuum of alienation to connection and with the need to accept the involvement of others described by D'Abundo and Chally. The participants in the study by Lamoureux and Bottorff also described recovery as extremely slow and difficult, which is consistent with the category within the present study which describes recovery as difficult and ongoing.

Most of the categories within the present study that were found to describe the factors that aid recovery are consistent with the findings of past research in this area. The most frequently mentioned category, support, was also frequently mentioned in past research investigating factors that aid recovery (e.g. Cockell et al., 2004; Colton & Pistrang, 2004; Garrett, 1997; Granek, 2007; Keski-Rahkonen & Tozzi, 2005; Nilsson & Hägglöf, 2006; Offord et al., 2006; Pettersen & Rosenvinge, 2002; Rorty et al., 1993; Tierney, 2008; Woods, 2004). Similarly, the tasks of an individual experiencing an eating disorder that were described by the participants in the present study have also been mentioned within previous research (e.g. Cockell et al.; Federici & Kaplan, 2008; Furnham & Hume-Wright, 1992; Hsu et al., 1992; Nilsson & Hägglöf; Pettersen & Rosenvinge; Rorty et al.; Tozzi et al., 2003). Professional treatment, as a factor that

aids recovery, has also been described in previous research (e.g. Colton & Pistrang; Federici & Kaplan; Furnham & Hume-Wright; Furnham et al., 2001; Hsu et al.; Keski-Rahkonen & Tozzi; Nilsson & Hägglöf; Pettersen & Rosenvinge; Tozzi et al.). Qualities of the individual were also mentioned in the past research of Hsu et al., and qualities of the environment were mentioned by Offord et al.

A number of the categories describing the factors that hinder recovery were also consistent with the findings of past research in the area. Similar to the findings of the present study, aspects of treatment that can hinder recovery have been mentioned in past research (e.g. Colton & Pistrang, 2004; Federici & Kaplan, 2008; Garrett, 1997; Keski-Rahkonen & Tozzi, 2005; Offord et al., 2006; Tierney, 2008). Unhelpful relationships were also perceived as hindering recovery in a number of these past studies (e.g. Granek, 2007; Rorty et al., 1993; Tierney, 2008). Difficult thoughts and emotions, as well as aspects of daily living that can hinder recovery, were mentioned by Cockell et al. (2004). Finally, compounding and maintaining factors, as well as difficult thoughts and emotions, were also mentioned by Federici and Kaplan.

Implications of the Findings of the Current Study

The findings of the present study have important implications for the treatment of the eating disorders and subsequent relapse prevention. The information within this study regarding recovery from the eating disorders was derived from the responses of individuals who have themselves experienced an eating disorder as well as from lay people. As such, the findings of the current study reveal the great depth of understanding and insight held by many of these individuals into parts of the process of recovery. Few participants, however, had a comprehensive vision of the entire recovery process. This study indicates therefore that many individuals experiencing an eating

disorder can be relied upon to know what they can do to help their own recovery. Importantly though, it is also likely that many individuals experiencing an eating disorder do not possess an understanding of the entire range of factors associated with recovery that have been revealed within the current study. Each of the naturally emerging categories derived from the participants' responses, along with the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), therefore suggest areas for discussion during treatment and discharge planning prior to the termination of treatment.

The information derived from the naturally emerging categories associated with the process of recovery and the factors that aid recovery provide greater detail of how different elements of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) can be applied to the eating disorders. Clinicians may therefore find it useful to first talk with eating disordered clients about the TTM or the ACM, in order to help these clients gain an appreciation for how they may apply these models during their recovery process. Clinicians may then discuss each of the naturally emerging categories describing the process of recovery and the factors that aid recovery that were found within this study, and explain how this information demonstrates some of the ways that the TTM or the ACM can be specifically applied to recovery from an eating disorder. Such discussion may allow clients to gain a greater understanding of what they can be doing to initiate and sustain their own recovery.

More specifically, the findings of the current study regarding the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) showed that the eating disorder participants in this study tended to mostly mention the action stage of change and the use of helping relationships or social support during recovery from an eating disorder. This finding indicates that the remaining factors of the TTM and the ACM

may be skipped over, undervalued, or not consciously considered by individuals who are endeavouring to recover from an eating disorder. These individuals may therefore not be passing through the entire sequence of stages of change found in each of these models. According to the theory behind each of these models, however, successful and lasting change or recovery is more likely following a successful transition through each of the various stages (Prochaska, DiClemente, Velicer, & Rossi, 1992; Bowles, 2000). It may be useful, therefore, for clinicians to emphasise the use and practice of all of the stages and process or support factors of these models where possible, in order to optimise the likelihood of recovery, reduce relapse, and strengthen the healthy management of eating behaviours.

The participants' responses regarding the process of recovery and the factors that aid recovery helped clarify the means by which an individual can recover from an eating disorder. The participants' responses regarding the factors that can hinder recovery from an eating disorder also provide a rich source of information that can be discussed with clients during treatment and discharge planning. This information can help clinicians and clients develop strategies for clients to implement when confronted with these various factors that can hinder recovery. For example, within the current study unhelpful relationships, daily living, and valued and habitual aspects of an eating disorder were identified as factors that can hinder recovery. In order to help negate the negative impact of such factors, clients may be encouraged during treatment to develop a plan of action for dealing with friends who talk about dieting, confronting media portrayals of thinness, and developing new and healthy coping skills.

The findings of the present study will not only be a plentiful source of information for discussion during the treatment of individuals who are experiencing an eating disorder, but should also be a valuable source of information for the family

members and friends of these individuals. By gaining a knowledge and understanding of the categories regarding recovery from an eating disorder that naturally emerged from the participants' responses in this study, family and friends can gain a greater appreciation of the challenges faced by an individual experiencing an eating disorder. More particularly, it is noteworthy that the largest proportion of responses in each of the three areas of this research related to interpersonal relationships. Receiving help and support was viewed by the participants in this study as an important aspect of the process of recovery and as a factor that aids recovery, while unhelpful relationships were seen by the participants as a factor that can hinder recovery. This finding highlights the important role family and friends can play in promoting recovery from an eating disorder. By receiving education about these factors, family and friends can learn about how they can best provide support to an individual experiencing an eating disorder. They can also learn about aspects of recovery in which an individual with an eating disorder may need the greatest amount of support, and the kinds of comments they may say and behaviours they may engage in that could be considered helpful or unhelpful.

The findings of the current study also draw attention to the degree of understanding held by many lay individuals regarding recovery from an eating disorder. Within this study, the lay participants gave similar responses to those of the eating disorder group, although these groups differed in the frequency with which their responses were allocated into each of the naturally emerging categories and the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000). This finding is encouraging as it reveals the depth of the lay participants understanding regarding recovery from the eating disorders. The results of this study also demonstrate the degree of knowledge regarding the TTM and the ACM held by the lay participants.

This finding revealed that, as with the eating disorder participants, the lay participants tended to emphasise the action stage of change and the helping relationships process factor of the TTM or social support factor of the ACM. The lay participants therefore did not tend to report that the remaining factors of the TTM and the ACM are involved in the process of recovery from an eating disorder. This finding may indicate that the lay participants do not have much knowledge or understanding of these remaining factors, or that they simply do not perceive these factors to be involved in recovery from an eating disorder. Future research is necessary in order to clarify this finding.

Finally, the findings of this study also have implications with regard to the availability and provision of treatment for the eating disorders. The participants' responses within this study stressed the importance of quality treatment provided by treatment providers who have expertise in the field of eating disorders. The participants also underlined the need for this treatment to be accessible, both financially and with regards to the time it takes to be seen by a treatment provider. These findings highlight the negative impact poor quality or inaccessible treatment can have on an individual who is experiencing an eating disorder. These findings therefore have implications with regard to how eating disorder treatment services are provided, speaking to the need for a greater provision of services to be made available that cater adequately to the special needs of this population.

In summary, the findings of the present study illustrate topics for discussion that clinicians may choose to incorporate into their work with eating disordered clients. These topics may be discussed not only during treatment, but also when planning for relapse prevention following the termination of treatment. The current study also highlights the importance of support during the recovery process, and provides a great deal of information that may be useful for the family and friends of individuals who are

experiencing an eating disorder. Finally, the current study emphasises the importance of accessible and specialist treatment for the eating disorders.

Limitations of the Current Study

The findings of this study must be considered in light of a number of limitations. The participants in this study revealed a great deal of knowledge regarding the process of recovery from the eating disorders, with only a small proportion of participants expressing a lack of knowledge regarding this process. This great expanse of knowledge, however, may be an artefact of the recruitment practices employed within this study. The participants in the eating disorder group completed the questionnaire via the Internet. It may be that individuals who felt more comfortable or were more familiar with computers and the Internet were more likely to participate in the study, or to provide more extensive responses, than individuals who felt less comfortable using such a medium (Reja, Lozar Manfreda, Hlebec, & Vehovar, 2003). It is also important to consider the fact that only the eating disorder participants completed the questionnaire via the Internet, with the lay participants completing a paper version of the same questionnaire. It is currently unclear just how comparable responses are that have been provided over the Internet versus via a paper questionnaire (Naglieri et al., 2004; Reja et al., 2003). It may also be that individuals who possessed knowledge about the eating disorders, and recovery from the eating disorders, may have been more motivated to participate in the study than individuals lacking in such knowledge. It should also be noted that approximately two-thirds of the participants from the lay group were undergraduate psychology students, which may also have influenced their level of knowledge regarding the process of recovery from the eating disorders. When reflecting on the strengths and limitations of the current study, it is important consider

the self-reported information provided by the eating disorder group. As the data from this group was collected via an online questionnaire, and due to the international nature of the sample, each participant was required to self-report their own diagnosis or type of eating disorder and their recovery status. Diagnosis and recovery status were not affirmed by a qualified clinician or medical practitioner, nor were standardised measures of eating disorder symptomatology administered, such as the EDI-3 (Garner, 2004) in order to assess each participant's current level of eating disorder symptomatology. As such, the information found within this study regarding the type of eating disorder experienced by each participant and their current recovery status should be viewed tentatively. Finally, it is important to consider the geographical and cultural differences that were present between the eating disorder and lay groups. The eating disorder group of participants may be considered a geographically and culturally diverse group, as these participants were drawn from 13 different countries. The lay participants, however, were all Australian. It is currently unclear how these differences between the groups may have impacted on the findings of the current study.

Suggestions for Future Research

The results of this study signal a number of potential areas for future research. Within the present study, the beliefs held by eating disorder and lay participants regarding recovery from an eating disorder were investigated. The eating disorder participant group contained individuals who reported that were currently experiencing an eating disorder, as well as individuals who reported that they had recovered from an eating disorder. It may prove informative, in future qualitative research, to compare the views of such recovered and non-recovered individuals to one another. It may be that the factors that aid and hinder recovery from an eating disorder change over time during

the recovery process, or that different elements of the recovery process are emphasised more or less at different times during recovery. It may also prove informative, in future qualitative research, to compare the views of individuals who are experiencing each of the different eating disorders to one another (e.g. to compare the views of individuals experiencing anorexia nervosa to those held by individuals experiencing bulimia nervosa).

In conclusion, the current study provides valuable information regarding the beliefs about recovery held by eating disorder and lay participants. This study revealed the depth of understanding held by these two groups, who particularly emphasised the use of support and taking action during recovery from an eating disorder. The findings of this study have implications for the future treatment of the eating disorders and subsequent relapse prevention.

CHAPTER ELEVEN

Summary and Conclusions

This thesis provided an investigation into the process of change as it relates to eating disorder symptomatology. Two models of the process of change, the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), provided the theoretical foundation for this investigation, which was divided into two studies. The first study of this thesis examined changes over time in the levels of eating disorder symptomatology exhibited in a non-clinical population. Previous research has indicated that the level of readiness to change possessed by an individual with an eating disorder tends to be predictive of subsequent improvements to their level of eating disorder symptomatology or treatment outcome over time (e.g. Ametller et al., 2005; Geller et al., 2004; Gusella et al., 2003; Rieger et al., 2000; Treasure et al., 1999). The first study of this thesis examined whether such a relationship would also be evident in a non-clinical sample experiencing varying levels of eating disorder symptomatology. Contrary to expectations, the non-clinical participants' level of readiness to change did not predict an improvement over time in their level of eating disorder symptomatology. The participants' prior level of eating disorder symptomatology and BMI did, however, predict their subsequent level of eating disorder symptomatology. The results of this study indicated that the participants tended to make only small changes to their level of eating disorder symptomatology over time, and that these changes were not influenced by the factors of the TTM or the ACM. On the basis of these findings, it was suggested that these individuals may be unaware of the best means of engaging in the change process (i.e. in accordance with the TTM or the ACM). The second study of this thesis

investigated this assertion, exploring eating disorder and lay participants' beliefs about the process of reducing an individual's level of eating disorder symptomatology.

In the second study of this thesis, eating disorder and lay participants were asked to describe the process of change or recovery from an eating disorder, as well as the factors that may aid and hinder such a change. The categories that naturally emerged from the participants' responses describing each of these areas were ascertained. Within these categories both the eating disorder and lay groups of participants demonstrated a great deal of understanding regarding the process of recovery from an eating disorder. These participants also demonstrated a great deal of understanding regarding the factors that can aid and hinder recovery from an eating disorder. The participants particularly emphasised the role of interpersonal relationships during this recovery process. The eating disorder and lay participants' responses were also compared to each of the factors of the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000), to investigate whether the participants would explain the process of recovery using concepts similar to those found within these models. The majority of the participants' responses were found to correspond with the factors of the TTM and the ACM. However, the majority of the responses that corresponded with the factors of these models tended to be over-represented in the action stage of change of both of these models, or the helping relationships process factor of the TTM and the social support factor of the ACM. These findings suggests that, although the eating disorder and lay participants did explain the process of recovery using concepts similar to those found in the TTM and the ACM, these explanations related mostly to taking action and using the help and support provided by others. This finding indicates that the participants in this study tended to be unaware of or undervalue the remaining factors of these models. On the basis of these findings it was suggested that it may be useful for

individuals with an eating disorder to participate in psychoeducational programs teaching the importance of each of the different elements of a strategic change model, such as the TTM or the ACM. It was also suggested that individuals with an eating disorder, as well as their family and friends, may benefit from learning about the categories that naturally emerged from the participants' responses describing the process of recovery from an eating disorder and the factors that can aid and hinder recovery. It was anticipated that this information could not only be a useful point for discussion during treatment, but also during discussions about relapse prevention and discharge planning.

Overall, the two studies contained within this thesis demonstrated how the TTM (Prochaska & DiClemente, 1982) and the ACM (Bowles, 2000) are applied and understood with regard to changes in eating disorder symptomatology over time. Both of these studies indicated that eating disordered and non-eating disordered individuals appear not to utilise all of the factors contained within these change models, or use these models to change in a systematic and planned manner. The findings of this thesis therefore suggest that, for individuals to engage in more effective change with respect to their eating disorder symptomatology, it may be beneficial to first gain a greater awareness of the TTM and the ACM in their totality. It would also be beneficial to gain an awareness and understanding of how these models can be used to best engage in the change process. By doing so, these individuals would then be able to apply knowledge that has come to be understood as influential in aiding and hindering adaptive change. Future research within this area could then assess how effective it is to provide such individuals with information and education regarding all aspects of the TTM and ACM. Future research should also investigate the effectiveness of providing individuals with

an eating disorder, and their family and friends, with the information derived from the categories describing recovery in the second study of this thesis.

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Appendix A: Study One Information Letter

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INFORMATION LETTER TO PARTICIPANTS FROM THE COMMUNITY

PROJECT TITLE: *An Evaluation of the Adaptability of Eating Behaviour Over Time*

SUPERVISOR: Dr. Terry Bowles
STUDENT RESEARCHERS: Bridie Hellings (Masters of Psychology/PhD)

Dear Participant,

You are invited to participate in research into adaptive functioning, eating behaviour and adjustment. The purpose of this study is to examine the relationship between how people change their eating and exercise behaviour, and the facilitators and inhibitors to this change. This is an investigation into the practical and psychological ways that people bring about and manage changes in eating in their lives.

All participants are asked to complete the whole questionnaire, which contains approximately 200 questions. It is estimated that this will take you approximately one hour to complete. This questionnaire is divided into a number of smaller questionnaires about the patterns of behaviour of eating you may experience, how you feel or have gone about changing some of these patterns, and how your family functions. You will also be asked to complete a number of these smaller questionnaires again in three months and six months from now. It is estimated this will take you approximately 30-40 minutes to complete. You will also be asked to provide some biographical information, including your name and contact details so that we can contact you again in three and six months to complete these smaller questionnaires again. You will also be asked to provide information regarding your current height and weight at each of these time points, which will be used to calculate your Body Mass Index (BMI). Please be as accurate as possible when reporting this information. All of the information you provide is important and will assist in understanding how people deal with changes in the nature of their eating patterns. If you prefer, you can complete the questionnaire in more than one sitting.

Completing the questionnaire may also prompt you to consider in greater detail how you change and handle the everyday challenges of your life. The consequence of this is expected to be positive and prompt you to consider some important aspects of your behaviour. However, if you do have any reactions to the questionnaire that are negative or make you uncomfortable, please talk to Dr.

CRICOS registered provider:
00004G. 00112C. 00873F. 00885B

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Lisa Eisen from the Australian Catholic University on 9953 3119 and she will help you or help you find someone who will.

Participation in this research project is voluntary. You can withdraw from the study at any stage without giving a reason. Individual participants will not be able to be identified in any reports of the study, as only data from groups will be reported.

Before commencing or after participating, please feel free to ask any questions. The contact details of each of the researchers are as follows: Dr. Terry Bowles can be contacted on 03 9953 3117, at the Australian Catholic University, School of Psychology, St Patrick's Campus at 115 Victoria Parade, Fitzroy, 3065. Bridie Hellings can be contacted on 03 9953 3102, at the same address as above. Anna Mortensen can also be found at the same address. If you would like information regarding the results and outcomes of this research, please let us know on the above phone numbers or address and this information will be made accessible to you once it becomes available at the completion of the study.

This study has been approved by the Human Research Ethics committee at Australian Catholic University. In the event that you have any complaint or concern about the way you have been treated during the study, or if you have any query that the Student Researcher and Staff Supervisor have not been able to satisfy, you may write to:

Chair, Human Research Ethics Committee
C/o Research Services
Australian Catholic University
Locked Bag 4115
Fitzroy Vic 3065 Phone: 03 9953 3157 Fax: 03 9953 3315

Any complaints will be treated in confidence and fully investigated, and you will be informed of the outcome.

If you are willing to participate, please sign the attached informed consent forms. You should sign both copies of the consent form, retaining one copy for your records and returning the other copy to the researcher. Your support for this research project will be most appreciated.

Dr. Terry Bowles
Staff Supervisor

Bridie Hellings
Student Researcher

Appendix B: Study One Consent Forms

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PARTICIPANTS FROM THE COMMUNITY

CONSENT FORM FOR PARTICIPANT TO KEEP

PROJECT TITLE: *An Evaluation of the Adaptability of Eating Behaviour Over Time*

SUPERVISOR: Dr. Terry Bowles
STUDENT RESEARCHERS: Bridie Hellings (Masters of Psychology/PhD)

I ..... *(the participant)* have read and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that I can withdraw at any time. I agree that research data collected for the study may be summarised and published or may be provided to other researchers in a form that does not identify me in any way.

Name of participant:_____

Signature:_____ Date:_____
(Participant)

Signature of supervisor and student researchers:_____
_____

Date:_____

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PARTICIPANTS FROM THE COMMUNITY

CONSENT FORM FOR PARTICIPANT TO GIVE TO THE RESEARCHER

PROJECT TITLE: *An Evaluation of the Adaptability of Eating Behaviour Over Time*

SUPERVISOR: Dr. Terry Bowles
STUDENT RESEARCHERS: Bridie Hellings (Masters of Psychology/PhD)

I ..... *(the participant)* have read and understood the information provided in the Letter to Participants. Any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realising that I can withdraw at any time. I agree that research data collected for the study may be summarised and published or may be provided to other researchers in a form that does not identify me in any way.

Name of participant:_____

Signature:_____ Date:_____
(Participant)

Signature of supervisor and student researchers:_____
_____

Date:_____

Appendix C: Study One Questionnaire

ID no:_____

DATE:_____

An Evaluation of the Adaptability of Eating Behaviour Over Time[1]

Background Information

Please fill in all information as accurately and honestly as possible. All responses will remain confidential.

Name _____

Mobile _____ Phone (home) _____

Postal Address _____

_____

Age:_____

Date of birth:_____

Height:_____

Weight:_____

[1] Please note that due to copyright laws the EDI-3 (Garner, 2004) is not included in this Appendix

Stage of Change[2]

Each of the items below is made up of five statements. For each item, please read the statements carefully. Then select the statement (or statements) which best describe/s your *current* attitude or behaviour (not how you have been in the past or how you would like to be). Select your statement by circling the letter that corresponds with your chosen statement. If you have any problems, please ask for assistance. Your answers are completely confidential.

1. The following statements refer to gaining weight:

a. As far as I am concerned, I do not need to gain weight.
b. In some ways I think that I might be better off if I gained weight.
c. I have decided that I will attempt to gain weight.
d. At the moment I am putting in a lot of effort into gaining weight.
e. I am working to maintain the weight gains I have made.

2. The following statements refer to body weight:

a. As far as I am concerned, I do not need to weigh at least my minimal normal weight.
b. In some ways I think that I might be better off if I weighed at least my minimal normal weight.
c. I have decided that I will attempt to reach at least my minimal normal weight.
d. At the moment I am putting in a lot of effort to reach at least my minimal normal weight.
e. I am working to maintain at least my minimal normal weight.

3. The following statements refer to parts of your body which may particularly concern you in terms of weight gain (such as hips, thighs, stomach, or buttocks):

a. There is no way I would be prepared to gain weight on these body parts.
b. Sometimes I think I would be prepared to gain weight on these body parts.
c. I have decided that I am prepared to gain weight on these body parts.
d. I am presently trying to gain weight on these body parts.
e. I am working to maintain the weight I gained on these body parts.

[2] The ANSOCQ (Rieger et al., 2000)

4. The following statements refer to your appearance:

a. I do not want to be a normal weight because I would be less satisfied with my appearance at a weight that is at least my minimal normal weight.
b. I have occasionally though about being a normal weight because in some ways I would be more satisfied with my appearance at a weight that is at least my minimal normal weight.
c. I have decided to reach a normal weight because I would be more satisfied with my appearance at a weight that is at least my minimal normal weight.
d. I am presently trying to reach a normal weight because I will be more satisfied with my appearance at a weight that is at least my minimal normal weight.
e. I am working to maintain a normal weight because I am more satisfied with my appearance at a weight that is at least my minimal normal weight.

5. The following statements refer to your health:

a. I do not need to be a normal weight because there are no risks to my health when I weigh below my minimal normal weight.
b. I have occasionally thought about being a normal weight because of the risks to my health when I weigh below my minimal normal weight.
c. I have decided to reach a normal weight because of the risks to my health when I weigh below my minimal normal weight.
d. I am presently trying to reach a normal weight because of the risks to my health when I weigh below my minimal normal weight.
e. I am working to maintain a normal weight because of the risks to my health when I weigh below my minimal normal weight.

6. The following statements refer to the importance of body shape and weight:

a. I do not exaggerate the importance of my body shape or weight in determining my happiness and success.
b. Sometimes I think that I exaggerate the importance of my body shape or weight in determining my happiness and success.
c. I have decided that I need to reduce the importance that I place on my body shape or weight in determining my happiness and success.
d. I often try to challenge the importance that I place on my body shape or weight in determining my happiness and success.
e. I have succeeded in reducing my tendency to place too much importance on my body shape or weight in determining my happiness and success and want it to stay this way.

7. The following statements refer to a fear of fatness:

a. My fear of becoming fat is not excessive.
b. I occasionally think that my fear of becoming fat is excessive.
c. I have decided that I need to do something about the fear I have of becoming fat because it is controlling me.
d. I know that my fear of becoming fat has caused problems and I am now trying to correct this.
e. I have succeeded in reducing my fear of becoming fat and want it to stay this way.

8. The following statements refer to weight loss:

a. I would prefer to lose more weight.
b. Sometimes I think that it might be time to stop losing weight.
c. I have decided that it is time to stop losing weight.
d. I am trying to stop losing weight.
e. I have managed to stop losing weight and hope to stay this way.

9. The following statements refer to body fat versus muscle:

a. I might think about gaining muscle on purpose, but I would never think of gaining fat on purpose.
b. Sometimes I think that I may need to gain some fat even though I would prefer to have only muscle.
c. I have decided that to be healthy I need to have some fat on my body.
d. I realise that I need to have some fat on my body and am working to achieve this.
e. I have managed to increase the level of fat on my body which I am trying to maintain.

10. The following statements refer to the rate of weight gain:

a. There is no way I would be prepared to gain at least 1 kg a week.
b. Sometimes I think I would be prepared to gain at least 1 kg a week.
c. I have decided that in general it would be best for me to gain at least 1 kg a week.
d. I am putting in a lot of effort to gain at least 1 kg a week.
e. I am working to maintain my weight but would be prepared to gain at least 1 kg a week if necessary.

11. The following statements refer to certain shape and weight standards which you may have for evaluating your body (such as only being satisfied with your body when your stomach is flat or when you are below a certain weight):

a. The standards I use to evaluate my body are not too strict.
b. Sometimes I think that the standards I use to evaluate my body may be too strict.
c. I have decided that the standards I use to evaluate my body are too strict and need to be changed.
d. I am putting in a lot of effort to change the strict standards which I use to evaluate my body.
e. I have managed to let go of the strict standards which I used in the past to evaluate my body and am hoping to keep it this way.

12. The following statements refer to certain foods which you may avoid eating (such as food high in calories or fat, red meat or dairy products):

a. There are certain foods which I strictly avoid and would not even consider eating.
b. There are certain foods which I try to avoid, although sometimes I think that it might be okay to eat them occasionally.
c. I think that I am too strict in the foods which I allow myself to eat and have decided that I will attempt to eat foods which I usually avoid.
d. I am putting in a lot of effort to regularly eat foods which I usually avoid.
e. I used to avoid eating certain foods which I now eat regularly.

13. The following statements refer to daily food consumption:

a. There is no need for me to eat 3 standard-size meals and a snack each day.
b. Sometimes I think that I should eat 3 standard-size meals and a snack each day.
c. I have decided that I need to eat 3 standard-size meals and a snack each day.
d. I am putting in a lot of effort to eat 3 standard-size meals and a snack each day.
e. I am working to maintain a current eating pattern which includes 3 standard-size meals and a snack each day.

14. The following statements refer to time spent thinking about food and your weight (such as thoughts about becoming fat, counting the calories or fat content of food, or calculating the amount of energy used when exercising):

a. There is nothing wrong with the amount of time I spend thinking about food and my weight.
b. The amount of time I spend thinking about food and my weight is a problem sometimes.
c. I have decided that I need to use strategies to help me reduce the amount of time I spend thinking about food and my weight.
d. I am using strategies to help me reduce the amount of time I spend thinking about food and my weight.
e. I used to spend too much time thinking about food and my weight which I have managed to reduce and am working to keep it this way.

15. The following statements refer to certain eating behaviours (such as needing to eat food at a specific rate or time, moving food around on the plate, being unable to eat all food on a plate, taking longer than others to eat meals, having difficulty eating with others, needing to chew food a certain number of times or needing to stick to the same food plan each day):

a. There is nothing that I need to change about the way I eat my meals.
b. I sometimes think that I need to change aspects of the way I eat my meals.
c. I have decided that I will try to change aspects of the way I eat my meals.
d. I am putting in a lot of effort to change aspects of the way I eat my meals.
e. I have succeeded in changing aspects of the way I eat my meals and want it to stay this way.

16. The following statements refer to feelings associated with eating (such as feeling guilty) and not eating (such as feeling in control):

a. There is no need for me to change the feelings I associate with eating and not eating.
b. I sometimes think that I need to change the feelings I associate with eating and not eating.
c. I have decided that I will try to change the feelings I associate with eating and not eating.
d. I am putting in a lot of effort to change the feelings I associate with eating and not eating.
e. I have succeeded in changing the feelings I associate with eating and not eating and want it to stay this way.

17. The following statements refer to methods which you may use to control your weight (such as restricting your eating, exercising, vomiting, taking laxatives or other pills). You may select more than one statement for the different methods you use to control your weight. Please indicate which weight control method/s you are referring to in the blank space/s provided.

a. There is nothing seriously wrong with the methods (_____) I use to control my weight.
b. I have been thinking that there may be problems associated with the methods (_____) I use to control my weight.
c. I have decided that I will attempt to stop using certain methods (_____) to control my weight.
d. I am putting in a lot of effort to stop using certain methods (_____) to control my weight.
e. I have managed to stop using certain methods (_____) to control my weight and I would like to keep it this way.

18. The following statements refer to certain emotional problems (such as feeing depressed, anxious or irritable):

a. I do not have any emotional problems which I need to work on.
b. I sometimes think that I may have certain emotional problems which I need to work on.
c. I have certain emotional problems which I have decided to work on.
d. I am actively working on my emotional problems.
e. My emotional problems have improved and I am trying to keep it this way.

19. The following statements refer to certain characteristics (such as perfectionism, low self-esteem or feeling a need for control):

a. I do not have any problems in the way I approach life which I need to work on.
b. I sometimes think that I may have certain problems in the way I approach life which I need to work on.
c. I have certain problems in the way I approach life which I have decided to work on.
d. I am actively working on problems in the way I approach life.
e. The problems in the way I approach life have improved and I am trying to keep it this way.

20. The following statements refer to relationship problems (such as relationships with family or friends):

a. I do not have any problems in my relationships with others which I need to work on.
b. I sometimes think that I may have certain problems in my relationships with others which I need to work on.
c. I have certain problems in my relationships with others which I have decided to work on.
d. I am actively working on problems in my relationships with others.
e. The problems in my relationships with others have improved and I am trying to keep it this way.

A Change In Life[3]

We are interested in how you have gone about changing your eating and body shape.

A briefly as possible, how would you describe the change?

_____

_____

Please circle whether you agree or disagree with the statements numbered below in response to the change that you have chosen to refer to above.

1	2	3	4	5	6
Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree

I…

1	Stayed open to change.	1	2	3	4	5	6
2	Had a clear picture in mind of what was needed.	1	2	3	4	5	6
3	Planned in a responsible way.	1	2	3	4	5	6
4	Knew I could act in response.	1	2	3	4	5	6
5	Found completing things enjoyable.	1	2	3	4	5	6
6	Was not confident I would stay with my goals.	1	2	3	4	5	6
7	Didn't stay open, I closed up.	1	2	3	4	5	6
8	Had a view of what it would be like after the change had occurred.	1	2	3	4	5	6
9	Thought about ordering the process.	1	2	3	4	5	6
10	Procrastinated and put the change off.	1	2	3	4	5	6
11	Marked the finish of the change with something special.	1	2	3	4	5	6
12	Knew I would not be changing back.	1	2	3	4	5	6
13	Considered myself flexible.	1	2	3	4	5	6
14	Couldn't imagine what the change would bring.	1	2	3	4	5	6
15	Planned the change.	1	2	3	4	5	6
16	Prepared to act in an ordered way.	1	2	3	4	5	6
17	Celebrated completing things to do with the change.	1	2	3	4	5	6

[3] The ACQ (Bowles, 2000). This version of the ACQ contains additional items not used within this thesis.

18	Rewarded myself so that the change could be kept up.	1	2	3	4	5	6
19	Thought I was too set in my ways to change.	1	2	3	4	5	6
20	Could imagine the outcome of the change.	1	2	3	4	5	6
21	Couldn't get organized to change.	1	2	3	4	5	6
22	Needed a push to get going.	1	2	3	4	5	6
23	Found it hard to finish and let go.	1	2	3	4	5	6
24	Practiced so that the change could be kept up.	1	2	3	4	5	6
25	Was uncertain about keeping the change going.	1	2	3	4	5	6
26	Accepted the change as a part of my reality.	1	2	3	4	5	6
27	Had no view of the future.	1	2	3	4	5	6
28	Got organized to change.	1	2	3	4	5	6
29	Didn't put things off.	1	2	3	4	5	6
30	Found finishing tasks a pleasant experience.	1	2	3	4	5	6
31	Was confident I would stay with my goals.	1	2	3	4	5	6
32	Wasn't adaptable.	1	2	3	4	5	6
33	Imagined what might be with ease.	1	2	3	4	5	6
34	Didn't plan the change well.	1	2	3	4	5	6
35	Just got on and took the necessary action.	1	2	3	4	5	6
36	Didn't find completing things enjoyable.	1	2	3	4	5	6
37	Was certain I could maintain the change.	1	2	3	4	5	6
38	Recognized that the change was required.	1	2	3	4	5	6
39	Had a vision of the future.	1	2	3	4	5	6
40	Pre-planned well.	1	2	3	4	5	6
41	Took actions easily.	1	2	3	4	5	6
42	Left things unfinished.	1	2	3	4	5	6
43	Felt uncertain about keeping the change going for long.	1	2	3	4	5	6

Please circle whether you agree or disagree with the statements numbered below in response to the change that you have chosen to refer to above.

1	2	3	4	5	6
Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree

I…

1	Had a lot of social support.	1	2	3	4	5	6
2	Had the skills to change.	1	2	3	4	5	6
3	Felt guilty after change.	1	2	3	4	5	6
4	Felt internally motivated.	1	2	3	4	5	6

5	Had very little support from others.	1	2	3	4	5	6
6	Had the influence to bring change about.	1	2	3	4	5	6
7	Felt out of control.	1	2	3	4	5	6
8	Didn't feel motivated.	1	2	3	4	5	6
9	Thought that I had a supportive social network.	1	2	3	4	5	6
10	Had enough time to adapt.	1	2	3	4	5	6
11	Got angry.	1	2	3	4	5	6
12	Had an inner drive that keeps me going.	1	2	3	4	5	6
13	Had too little influence to adjust.	1	2	3	4	5	6
14	Felt very alone.	1	2	3	4	5	6
15	Had energy to change.	1	2	3	4	5	6
16	Felt despaired.	1	2	3	4	5	6
17	Knew I had enough resources to change.	1	2	3	4	5	6
18	Was not motivated.	1	2	3	4	5	6
19	Had the money to use to change.	1	2	3	4	5	6
20	Knew I had close relationships that would help.	1	2	3	4	5	6
21	Had no reserves to change	1	2	3	4	5	6
22	Felt anxious about changing.	1	2	3	4	5	6
23	Had no problem changing things myself.	1	2	3	4	5	6
24	Had too few resources to assist me to adapt.	1	2	3	4	5	6
25	Knew there were people that could give me the support I need.	1	2	3	4	5	6
26	Had a low drive to change.	1	2	3	4	5	6
27	Feared new situations.	1	2	3	4	5	6
28	Had no problem changing myself.	1	2	3	4	5	6
29	Knew friends that were helpful to me.	1	2	3	4	5	6
30	Had the know-how to change.	1	2	3	4	5	6
31	Felt resentment when I had to change.	1	2	3	4	5	6
32	Felt self-motivated.	1	2	3	4	5	6

Appendix D: Study Two Information Letter

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INFORMATION LETTER TO PARTICIPANTS

PROJECT TITLE: *Recovery and Prevention of Eating Disorders: Multiple Perspectives*

SUPERVISOR: Dr. Terry Bowles
STUDENT RESEARCHER: Bridie Hellings (Master of Psychology/PhD)

Dear Participant,

You are invited to participate in research into the prevention of, and recovery from, eating disorders. The purpose of this study is to examine the beliefs of people. These people include individuals who have suffered from, or currently suffer from, an eating disorder, and parents and siblings of individuals who have suffered from, or currently suffer from, an eating disorder. This is an investigation into the ways that these individuals view recovery from an eating disorder, and how they believe eating disorders could be prevented.

All participants are asked to complete the whole questionnaire, which contains approximately 100 short questions. It is estimated that this will take you approximately 20-30 minutes to complete. This questionnaire is divided into a number of sections about how you view eating disorders as an illness, how you define recovery, how you think recovery occurs, and how you believe eating disorders can be prevented. You will be asked to provide some biographical information, such as your age and gender. All of the information you provide is important and will assist in understanding how people recover from eating disorders, and how eating disorders can be prevented.

Participants aged 18 years and over are not required to complete a consent form to participate in this research, as their submission of the questionnaire is taken to assume their consent. Participation by individuals younger than 18 years requires the consent of a parent or guardian. Thus, individuals under the age of 18 who would like to participate are invited to contact the student researcher, Bridie Hellings, via email (bvhell001@student.acu.edu.au) requesting a hard copy of the questionnaire via post. Any other individuals who would like a hard copy of the questionnaire can also contact the student researcher on the above email address.

Completing the questionnaire may prompt you to consider in greater detail how you change and handle the everyday challenges of your life. The consequence of this is expected to be positive

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and prompt you to consider some important aspects of your behaviour. However, if you do have any reactions to the questionnaire that are negative or make you uncomfortable, please talk to Dr. Lisa Eisen from the Australian Catholic University on 9953 3119 and she will help you or help you find someone who will.

Participation in this research project is voluntary. You can withdraw from the study at any stage without giving a reason. Confidentiality will be maintained during the study. To ensure your confidentiality, no individual participants will be identified in any reports (published or unpublished) of the study, as only data from groups will be reported.

Before commencing or after participating, please feel free to ask any questions. The contact details of each of the researchers are as follows: Dr. Terry Bowles can be contacted on 03 9953 3117, at the Australian Catholic University, School of Psychology, St Patrick's Campus at Locked Bag 4115, Fitzroy, 3065 or via email: t.bowles@patrick.acu.edu.au. Bridie Hellings can be contacted on 03 9953 3102, at the same address as above or via email: bvhell001@student.acu.edu.au. If you would like information regarding the results and outcomes of this research, please let us know and this information will be made accessible to you once it becomes available at the completion of the study.

This study has been approved by the Human Research Ethics committee at Australian Catholic University. In the event that you have any complaint or concern about the way you have been treated during the study, or if you have any query that the Student Researcher and Staff Supervisor have not been able to satisfy, you may write to:

Chair, Human Research Ethics Committee
C/o Research Services
Australian Catholic University
Locked Bag 4115
Fitzroy Vic 3065 Phone: 03 9953 3157 Fax: 03 9953 3315

Any complaints will be treated in confidence and fully investigated, and you will be informed of the outcome.

Your support for this research project is greatly appreciated.

Dr. Terry Bowles
Staff Supervisor

Bridie Hellings
Student Researcher

Appendix E: A Sample of the Spreadsheet used to Sort the Lay Group Responses Regarding the Process of Recovery into the Naturally Emerging Categories

		Initiate process	Help & support	Think, feel, act	Difficult & ongoing	Lack of knowledge	Other
11	accept that they have a problem	1					
19	acknowledge that there is a problem	1					
21	actively seeking help/treatment		1				
22	address underlying psychological issues			1			
35	ask for/obtain help		1				
40	be surrounded by helping individuals		1				
46	stop binging			1			
48	break down habits			1			
52	can be slow and long				1		
54	change how the person thinks about food			1			
55	change how the person thinks about their body			1			
79	constant battle				1		
84	continuing support emotionally		1				
103	discussing the disorder with a professional		1				
105	don't really know much about the recovery					1	
106	eat and maintain healthy weight			1			
132	gain more positive attitude towards food			1			
133	gather social support		1				
138	get help from a psychologist		1				
139	get help from family		1				
162	going to trained professionals		1				
167	group therapy		1				
176	having complete support from friends		1				

Appendix F: Samples of the Eating Disorder Group Responses Regarding the Process of Recovery Compared to the TTM and the ACM

Appendix F-1: A Sample of the Eating Disorder Group Responses Regarding the Process of Recovery Compared to the TTM

		Pre con	Con	Prep	Act	Main	Cons	Dram	Self eval	Env eval	Self lib	Soc lib	Cond	Stim con	Rein	Help	Not in TTM
4	a lot of soul-growth																1
9	accept that have a problem		1														
10	accept yourself								1								
20	address mental needs				1												
21	address physical needs				1												
26	admitting to the problem		1														
28	allow weight gain				1												
33	as all EDs vary, so does each persons recovery path																1
35	ask for help				1												
37	balanced exercise				1												
39	be devoted to a recovery program										1						
40	be willing to change			1													
44	become able to eat properly				1												
45	begin to live daily life in recovery from the ED- hardest part of the journey				1												
54	challenge thoughts				1												
55	challenge your anxiety				1												
57	change of diet				1												
59	change patterns of behaviour				1												
63	come to terms with oneself								1								
78	develop self-esteem/self-belief								1								

79	developing interests				1												
80	developing interests in the world				1												
83	dietitian sessions															1	
87	eating plans			1													
88	ED specialists															1	
95	establish healthy weight				1												
96	establish 'normal' eating patterns				1												
107	fight anorexic thoughts				1												
108	fight the urges				1												
109	fight to recover				1												
120	friends															1	
122	gain self-esteem								1								
123	gaining support from various sources															1	
125	get in touch with your doctor															1	
126	get professional help															1	
128	getting help from dietitan															1	
129	getting help from therapist															1	
130	getting in the habit of eating normally				1												
131	getting information				1												
136	goal setting			1													
139	gradually following a healthy eating pattern				1												
140	gradually stopped throwing up everything I put into my mouth				1												
141	group therapy															1	

144	hard work																1
146	have people can speak to even in crisis															1	
151	have to be committed										1						
154	have to force yourself to eat				1												
157	have to want to change		1														
160	having a good diet				1												
161	having and using tools				1												
163	healthy exercise				1												
165	help from professionals															1	
167	hospital treatment or therapy				1												
173	I don't know																1
178	I grew up				1												
179	I had to develop a sense of responsibility								1								
191	individual counselling															1	
193	individual therapy															1	
195	intense inpatient treatment															1	
199	internet group															1	
215	learning healthy coping skills				1												
226	lots of effort																1
228	lots of support															1	
230	maintaining your weight				1												
232	many relapses																1
240	must have support from family															1	
241	must have support from friends															1	

247	need lots of counselling therapy															1	
249	need motivation to recover										1						
255	normalise eating habits				1												
265	ongoing after care support					1											
270	outpatient treatment															1	
281	personal journey																1
284	plan of action			1													
296	reach point where it's automatic					1											
323	regaining weight to normal BMI				1												
345	self-awareness								1								
347	self-nurturing				1												
359	stick to a meal plan- eating regular meals				1												
360	strong social support system															1	
367	support from family															1	
368	support from friends															1	
374	tackling underlying causes				1												
382	talking to others is helpful															1	
404	treatment															1	
412	try to increase social eating				1												
413	try to normalise eating patterns				1												
416	trying to normalise eating habits				1												
419	understanding the causes						1										
439	working on the ED beliefs				1												
440	writing				1												

Appendix F-2: A Sample of the Eating Disorder Group Responses Regarding the Process of Recovery Compared to the ACM

		Op	Vis	Plan	Act	Clos	SS	NE	ID	Not in ACM
15	acknowledging that you have an ED	1								
16	acknowledging the problem	1								
17	acknowledgment of what's going on	1								
21	address physical needs				1					
22	address spiritual needs				1					
28	allow weight gain				1					
30	an ongoing battle									1
37	balanced exercise				1					
38	be aware that it takes time to recover	1								
43	be willing to work through the pain	1								
44	become able to eat properly				1					
50	big big thing is a commitment to change								1	
54	challenge thoughts				1					
55	challenge your anxiety				1					
59	change patterns of behaviour				1					
60	changing behavioural patterns				1					
61	changing thinking patterns				1					
67	continue treatment for several more years					1				
69	correcting the ED actions				1					
70	custom meal plan from nutritionist			1						
80	developing interests in the world				1					
85	don't know									1
86	drive not just to live but to thrive								1	
87	eating plans			1						

88	ED specialists						1			
95	establish healthy weight				1					
96	establish 'normal' eating patterns				1					
103	explore feelings				1					
104	explore thoughts				1					
107	fight anorexic thoughts				1					
108	fight the urges				1					
109	fight to recover								1	
114	firm decision by sufferer that they WILL recover								1	
117	first comes recognition of the problem	1								
123	gaining support from various sources						1			
125	get in touch with your doctor						1			
126	get professional help						1			
136	goal setting			1						
138	gradual incorporation of new foods				1					
139	gradually following a healthy eating pattern			1						
143	hard thing is committing to change								1	
144	hard work				1					
148	have people you can be accountable to						1			
151	have to be committed								1	
154	have to force yourself to eat				1					
155	have to get help to change						1			
158	have to want to get better								1	
160	having a good diet				1					
161	having and using tools				1					
173	I don't know									1

193	individual therapy						1			
197	intense therapy to deal with underlying issues				1					
198	intensive therapy not focussed on the illness but on coping strategies in life				1					
199	internet group						1			
204	it is a very long battle									1
205	it is oh so hard									1
206	it may take a few tries before one recovers								1	
215	learning healthy coping skills				1					
216	learning to think differently about food				1					
218	learning to think normally about your body				1					
223	long process									1
228	lots of support						1			
230	maintaining your weight				1					
233	medical team- therapist, nutritionist and doctor						1			
240	must have support from family						1			
249	need motivation to recover								1	
255	normalise eating habits				1					
261	nutritional guidance						1			
262	one day at a time is the best approach									1
273	painful process									1
276	patient must desire to get better								1	
284	plan of action			1						
285	positive self-talk goes a long way				1					
291	process of small steps			1						
294	reach a healthy weight				1					

296	reach point where it's automatic					1				
309	recognition of the problem	1								
314	recovery is a challenging process									1
322	re-establishing normal eating habits				1					
323	regaining weight to normal BMI				1					
329	restoring a more normal eating pattern				1					
334	seek medical help				1					
335	seek professional help				1					
349	significant changes in thought processes				1					
353	slowly trying to change body image				1					
359	stick to a meal plan- eating regular meals				1					
360	strong social support system						1			
366	support and understanding						1			
367	support from family						1			
368	support from friends						1			
381	talking about root cause of ED				1					
382	talking to others is helpful						1			
389	therapy- outpatient, inpatient or day treatment						1			
403	training in emotional literacy and intimacy				1					
406	treatment program						1			
407	treatment until it's completely gone					1				
412	try to increase social eating				1					
413	try to normalise eating patterns				1					
421	understanding the original addictive behaviours				1					
426	very long and difficult journey									1
428	wanting to be helped								1	

Appendix G: Samples of the Lay Group Responses Regarding the Process of Recovery Compared to the TTM and the ACM

Appendix G-1: A Sample of the Lay Group Responses Regarding the Process of Recovery Compared to the TTM

		Pre con	Con	Prep	Act	Main	Cons	Dram	Sel eval	Env eval	Self lib	Soc lib	Cond	Stim Con	Rein	Help	Not in TTM
1	a habit of healthy eating				1												
5	a lot of support through family															1	
11	accept that they have a problem		1														
22	address underlying psychological issues				1												
23	address unreasonable concern with putting on weight				1												
30	admitting you have a problem		1														
31	aiming to change habits in eating			1													
32	allow for relapse																1
46	stop binging				1												
48	break down habits				1												
50	build confidence and happiness																1
53	CBT				1												
60	change their eating habits				1												
61	change their mindset				1												
64	changing behaviours				1												
79	constant battle																1
80	constant love from family															1	
84	continuing support emotionally															1	
85	continuing support medically															1	
98	develop a positive self-concept								1								
101	difficult																1
106	eat and maintain healthy weight				1												

108	eating properly				1												
109	eating regularly				1												
119	family support															1	
120	family therapy				1												
125	find what's causing the problem																1
126	finding a sense of autonomy																1
128	forcing yourself to eat				1												
130	gain a healthy weight/BMI				1												
135	get a diagnosis				1												
139	get help from family				1												
140	get help from friends				1												
142	get help from professionals				1												
149	get support from family				1												
150	get support from friends				1												
151	get support from professionals				1												
152	get support or counselling				1												
165	gradually get over it																1
170	have eating monitored				1												
172	have supportive family															1	
173	have supportive friends															1	
177	having family better understand															1	
180	help and support from family															1	
181	help and support from friends															1	
184	help from doctors															1	
185	help from therapists															1	
190	I don't know																1

193	I wonder if you ever do really!																	1
199	identifying cues/triggers				1													
208	individual therapy sessions				1													
209	intensive counselling				1													
211	it would be a hard process																	1
215	learn about health and nutrition				1													
216	learn about nutrients				1													
220	learn to love themselves																	1
223	learning to accept yourself				1													
226	let people know eg. your parents				1													
227	likely to have many relapses																	1
233	maintaining a healthy weight					1												
234	maintaining healthy thoughts					1												
241	medical treatment				1													
251	normal weight maintenance					1												
265	process would be very slow																	1
285	recognise you have a problem		1															
288	recording what is eaten and when				1													
296	regular visits to nutritionist				1													
301	request help and support from family				1													
309	seeing a psychologist				1													
311	seek guidance				1													
313	seek help from a doctor				1													
314	seek help from family				1													

315	seek help from friends				1												
319	seek nutritional advice				1												
321	seek professional help				1												
326	seek psychiatric help				1												
327	seek psychological help				1												
345	seeking support				1												
350	serious change in behaviours				1												
352	set up social support				1												
353	setting a diet				1												
359	slowly change eating habits				1												
360	slowly change thought processes				1												
363	slowly gain weight to get a healthy BMI again				1												
375	step by step plan			1													
376	stop purging				1												
382	support from family															1	
383	support from friends															1	
384	support from loved ones															1	
389	support of people around you															1	
390	support through the recovery															1	
399	talking about the problem				1												
401	talking through your problems				1												
402	talking to friends and family				1												
404	talking to other people about the thoughts and feelings				1												
417	therapy- maybe with the family				1												

Appendix G-2: A Sample of the Lay Group Responses Regarding the Process of Recovery Compared to the ACM

		Op	Vis	Plan	Act	Clos	SS	NE	ID	Not in ACM
22	address underlying psychological issues				1					
23	address unreasonable concern with putting on weight				1					
25	admit the problem exists	1								
31	aiming to change habits in eating			1						
32	allow for relapse									1
38	be aware of the problem	1								
39	be monitored by family or friends						1			
40	be surrounded by helping individuals						1			
45	being more mature about the problem									1
46	stop binging				1					
48	break down habits				1					
54	change how the person thinks about food				1					
55	change how the person thinks about their body				1					
56	change how the person thinks about themselves				1					
59	change the sufferers habits and lifestyle				1					
60	change their eating habits				1					
62	changes in thoughts and feelings about food				1					
63	changes in thoughts and feelings about self				1					
66	changing eating habits									1
70	changing the way they think about themselves				1					
75	cognitive restructuring				1					
78	confrontation of the issue				1					
79	constant battle									1
81	constant support from family						1			

84	continuing support emotionally						1			
86	continuing therapy and professional assistance						1			
89	counselling to learn how to retrain your eating habits				1					
90	counselling to learn how to retrain your thoughts				1					
93	create a more positive self-esteem							1		
100	develop healthier patterns of behaviour				1					
103	discussing the disorder with a professional				1					
104	doing activities to build self-esteem				1					
106	eat and maintain healthy weight				1					
108	eating properly				1					
112	education about food				1					
113	education about good food, health, exercise				1					
117	enlisting help				1					
127	focus on other aspects of their life except their weight				1					
130	gain a healthy weight/BMI				1					
137	get assistance to stop self-harming				1					
140	get help from friends				1					
142	get help from professionals				1					
143	get involved in a rehabilitation program				1					
157	getting treatment				1					
161	going through therapy afterwards to maintain recovery					1				
170	have eating monitored				1					
172	have supportive family						1			
175	having complete support from family members						1			
182	help and support from loved ones						1			
184	help from doctors						1			

185	help from therapists						1			
189	hospitalisation for monitoring purposes				1					
190	I don't know									1
191	I don't think I can really answer that									1
203	identifying ways to manage disorder			1						
208	individual therapy sessions				1					
212	it would be extremely tough									1
213	it would vary from patient to patient									1
215	learn about health and nutrition				1					
219	learn how to cope with body image				1					
223	learning to accept yourself				1					
232	loving environment						1			
233	maintaining a healthy weight				1					
234	maintaining healthy thoughts				1					
245	monitoring weight gain or food intake				1					
246	move away from stress causing situations				1					
255	one must want to change	1								
265	process would be very slow									1
266	professional help						1			
275	realising they have a problem	1								
288	recording what is eaten and when				1					
295	regular updates/checks				1					
300	replacing distorted thoughts/ideas with realistic ones				1					
301	request help and support from family				1					
302	request help and support from friends				1					
311	seek guidance				1					

313	seek help from a doctor				1					
321	seek professional help				1					
326	seek psychiatric help				1					
327	seek psychological help				1					
339	seeking help from professionals: doctors and counsellors				1					
341	seeking medical attention				1					
351	serious change in mental attitudes				1					
359	slowly change eating habits				1					
360	slowly change thought processes									1
364	slowly getting back into a regular pattern of eating				1					
375	step by step plan			1						
376	stop purging				1					
378	sufferer needs to be willing to recover	1								
379	support						1			
382	support from family						1			
383	support from friends						1			
399	talking about the problem				1					
404	talking to other people about the thoughts and feelings				1					
416	therapy confronting underlying issues				1					
426	treat medical issues				1					
427	treat the mental state- antidepressants				1					
429	treatment						1			
430	treatment of other mental illnesses				1					
439	very tough and hard									1
442	wanting to fix the problem	1								
449	work through issues- why you have the disorder				1					

Appendix H: Samples of the Eating Disorder Group Responses Regarding the Factors that Aid Recovery Compared to the TTM and the ACM

Appendix H-1: A Sample of the Eating Disorder Group Responses Regarding the Factors that Aid Recovery Compared to the TTM

		Pre con	Con	Prep	Act	Main	Cons	Dram	Sel eval	Env eval	Self lib	Soc lib	Cond	Stim Con	Rein	Help	Not in TTM
5	able to feel and express emotions							1									
6	able to recover at own speed																1
10	acceptance from others															1	
20	available treatment															1	
21	avoid pro-ED websites													1			
25	be mindful in situations						1										
30	being in a happy environment													1			
32	being loved															1	
39	care from others															1	
40	caring ED organisations															1	
43	change of scenery											1					
44	changes in diet				1												
45	changes in exercise				1												
51	compassion															1	
53	continual reassurance															1	
54	continuing help															1	
60	daily meal plan				1												
61	daily routine				1												
75	dietitian/nutritionist															1	
79	discussion with others															1	
84	drive to fight to recover										1						
92	ED specialists															1	
98	encouragement from family															1	

102	engage in enjoyable hobbies				1												
105	examine the underlying issues						1										
113	exposure to recovered sufferers															1	
115	face to face 12 step meetings															1	
116	family															1	
117	family and friends not making a ‘big deal of it’															1	
118	family involvement															1	
119	family therapy															1	
121	fill time with non-eating related things													1			
134	friends															1	
140	goals and ambitions in life			1													
141	goals not related to weight			1													
143	good communication															1	
154	having a life to return to																1
157	having hope in the future																1
160	healthy relationships															1	
161	healthy social life															1	
166	help to look at things differently						1										
169	helpful advice															1	
181	informed family															1	
184	inpatient treatment															1	
192	intervention to break the cycle				1												
193	journaling							1									
194	keeping a diary							1									

203	learning how to deal with food				1												
211	long term outpatient treatment															1	
217	love from family															1	
226	maintaining new habits					1											
235	mood diaries							1									
241	network of professional help															1	
242	no blame															1	
245	no food policing															1	
246	no negative comments															1	
247	no pressure															1	
248	no punishment														1		
251	non-judgmental support															1	
258	not isolating oneself															1	
270	open dialogue															1	
275	others showing faith															1	
285	people who are sympathetic but firm															1	
288	plan of action			1													
291	positive encouragement															1	
292	positive environment											1					
300	professional help															1	
317	reassurance															1	
330	respect															1	
333	routine													1			
344	social support															1	
349	someone trust to talk to															1	

353	someone who sees sufferer as person, not a disorder															1	
354	someone who understands															1	
358	specialist help															1	
361	stable meal plan				1												
364	stay socially connected															1	
366	stop punishing self														1		
368	strategies to deal with food and emotions												1				
374	structure in eating				1												
379	support															1	
385	support from family															1	
386	support from friends															1	
396	support from recovered ED sufferers															1	
404	support system															1	
425	talking to recovered sufferers															1	
427	talking with a professional															1	
433	therapy with ED specialist															1	
434	therapy/treatment															1	
436	throw away magazines													1			
437	throw away weighing scales													1			
445	treatment from professionals															1	
453	trust others															1	
454	unconditional love															1	
461	understanding from friends															1	

Appendix H-2: A Sample of the Eating Disorder Group Responses Regarding the Factors that Aid Recovery Compared to the ACM

		Op	Vis	Plan	Act	Clos	SS	NE	ID	Not in ACM
5	able to feel and express emotions							1		
17	address underlying issues									1
20	available treatment						1			
21	avoid pro-ED websites				1					
28	being accepted						1			
32	being loved						1			
39	care from others						1			
40	caring ED organisations						1			
43	change of scenery									1
44	changes in diet				1					
45	changes in exercise				1					
46	changes in others attitudes towards sufferer						1			
50	commitment to process of recovery								1	
53	continual reassurance						1			
56	coping strategies eg. relaxation techniques							1		
57	counselling						1			
60	daily meal plan				1					
61	daily routine				1					
66	desire to recover								1	
73	developing better coping strategies							1		
74	dietitian						1			
79	discussion with others						1			
83	doctors who do not just try to feed the sufferer						1			
90	eating with normal eaters- social eating						1			

98	encouragement from family						1			
102	engage in enjoyable hobbies				1					
105	examine the underlying issues									1
111	explore options		1							
113	exposure to recovered sufferers						1			
117	family and friends not making a ‘big deal of it’						1			
118	family involvement						1			
123	find out what other people found difficult						1			
124	find a purpose/passion/reason to recover								1	
127	focus on other things eg. hobbies/interests				1					
132	food journal									1
141	goals not related to weight			1						
147	group therapy						1			
149	guidance from family						1			
156	having a sponsor						1			
159	having responsible tasks eg. uni or work				1					
165	help reintegrate into society						1			
167	help understanding effects of an ED						1			
178	individual therapy						1			
185	input from sufferer in treatment choices			1						
192	intervention to break the cycle				1					
194	keeping a diary							1		
200	learn to express anger							1		
204	learning new coping mechanisms							1		
217	love from family						1			
218	love from friends						1			

223	maintain interests				1					
224	maintain/establish relationships with family						1			
228	making reasonable goals			1						
229	meal plan/regular meals				1					
232	medical treatment									1
235	mood diaries							1		
241	network of professional help						1			
243	no coercion						1			
244	no comments about one's weight or looks						1			
251	non-judgemental support						1			
254	not being forced to eat									1
256	not focussing on negative activities and behaviours									1
258	not isolating oneself						1			
266	nutritionist						1			
273	other people's stories						1			
274	other's acceptance of weight						1			
276	outpatient ED treatment						1			
285	people who are sympathetic but firm						1			
288	plan of action			1						
291	positive encouragement						1			
292	positive environment									1
300	professional help						1			
306	psychiatrists						1			
308	psychologists						1			
309	quality treatment						1			
313	realise do not want to live rest of life with ED	1								

315	reasons to change								1	
317	reassurance						1			
322	regular contact with a professional						1			
327	relaxation							1		
331	retaining control of the situation									1
333	routine				1					
334	security in relationships						1			
344	social support						1			
345	social support from non-ED individuals						1			
347	someone to listen unconditionally						1			
349	someone trust to talk to						1			
351	someone who cheers for the small steps made						1			
353	someone who sees sufferer as person, not a disorder						1			
366	stop punishing self									1
370	strong relationships with family						1			
372	strong support system						1			
380	support and encouragement from friends						1			
385	support from family						1			
386	support from friends						1			
387	support from loved ones						1			
396	support from recovered ED sufferers						1			
399	support from someone who understands EDs						1			
400	support groups						1			
433	therapy with ED specialist						1			
445	treatment from professionals						1			
461	understanding from friends						1			

Appendix I: Samples of the Lay Group Responses Regarding the Factors that Aid Recovery Compared to the TTM and the ACM

Appendix I-1: A Sample of the Lay Group Responses Regarding the Factors that Aid Recovery Compared to the TTM

		Pre con	Con	Prep	Act	Main	Cons	Dram	Sel eval	Env eval	Self lib	Soc lib	Cond	Stim Con	Rein	Help	Not in TTM
7	accept one's image								1								
13	admitting there is a problem		1														
19	assistance from school															1	
21	assistance from workplace															1	
25	behaviour change program														1		
28	being around people that care															1	
37	being monitored															1	
43	change in environment											1					
44	change of diet				1												
46	changing thoughts about body								1								
47	changing thoughts about food				1												
48	changing thoughts about self								1								
59	counselling															1	
64	desire to get better			1													
65	diet plan			1													
66	dietitian															1	
70	doctors															1	
72	eating				1												
73	eating healthy bit by bit				1												
74	eating properly				1												
77	emotional support															1	
81	empathy from family															1	
82	empathy from friends															1	

95	finding one's own strength								1								
97	food				1												
98	food diaries				1												
100	friends															1	
102	friends influence- not encouraging of the behaviour															1	
106	getting help															1	
107	goals			1													
108	going to health professionals															1	
110	good carers															1	
113	good social support															1	
115	good therapy															1	
119	guidance															1	
121	having a good supportive family															1	
123	having a social life																1
124	having services readily available																1
126	having the support and help of friends															1	
127	healthy attitudes																1
128	healthy diet				1												
129	healthy eating plan				1												
133	help and support from family															1	
134	help and support from friends															1	
141	hospitalisation				1												
146	increasing self-esteem																1
149	information				1												

151	internet support groups															1	
159	knowledge about food						1										
160	learning about food						1										
161	lots of emotional support															1	
163	love															1	
164	love and care from family															1	
165	love and care from friends															1	
182	need to want to recover			1													
185	nutritional help															1	
186	nutritional information															1	
187	ongoing support															1	
188	ongoing treatment/counselling															1	
189	other activities to engage in											1					
199	positive environment												1				
203	positive reinforcement														1		
204	positive role models																1
211	professional help															1	
215	proper diet				1												
217	psychiatric help															1	
222	realising the reasons behind it						1										
223	reassurance															1	
224	reassurance of worth															1	
227	resource availability																1
228	resources																1
229	routine			1													
230	safe environment											1					

235	self-acceptance								1								
238	self-confidence programs				1												
242	self-respect																1
243	social awareness within society											1					
244	social network															1	
245	social support															1	
248	social support from family															1	
249	social support from friends															1	
251	something to look forward to																1
261	supervision															1	
265	support from community															1	
267	support from doctor															1	
276	support from work															1	
285	supportive environments													1			
289	taking away stressful situations													1			
291	talking about their problem				1												
299	the right frame of mind																1
303	therapy/counselling															1	
307	to not be referred to as the 'anorexic' or 'bulimic'																1
308	treatment from professionals															1	
316	understanding from family															1	
317	understanding from friends															1	
323	understanding the disorder						1										
326	wanting to recover		1														
329	working with a dietitian															1	

Appendix I-2: A Sample of the Lay Group Responses Regarding the Factors that Aid Recovery Compared to the ACM

		Op	Vis	Plan	Act	Clos	SS	NE	ID	Not in ACM
13	admitting there is a problem	1								
19	assistance from school						1			
21	assistance from workplace						1			
25	behaviour change program				1					
28	being around people that care						1			
30	being around their family						1			
31	being around their friends						1			
43	change in environment									1
44	change of diet									1
47	changing thoughts about food				1					
48	changing thoughts about self				1					
58	contact with others who have been through it						1			
64	desire to get better	1								
65	diet plan			1						
66	dietitian						1			
74	eating properly				1					
78	emotional support from family						1			
79	emotional support from friends						1			
90	family having positive attitude towards sufferer						1			
92	family support and understanding						1			
96	finding the cause of their problem				1					
98	food diaries				1					
101	friends having positive attitude towards sufferer						1			
102	friends influence- not encouraging of the behaviour						1			

107	goals			1						
108	going to health professionals						1			
117	good treatment facilities									1
121	having a good supportive family						1			
122	having a good supportive social network						1			
129	healthy eating plan			1						
133	help and support from family						1			
134	help and support from friends						1			
142	hospitalisation if serious enough				1					
143	identification of other co-morbid mental illnesses				1					
153	know that there is someone to help them						1			
154	knowing others who have overcome the disease						1			
160	learning about food				1					
161	lots of emotional support						1			
164	love and care from family						1			
165	love and care from friends						1			
187	ongoing support						1			
189	other activities to engage in				1					
192	parents advice						1			
199	positive environment									1
200	positive feedback						1			
204	positive role models						1			
205	positive thinking				1					
211	professional help						1			
213	professional help from a psychologist						1			
215	proper diet				1					

217	psychiatric help						1			
222	realising the reasons behind it	1								
224	reassurance of worth						1			
229	routine			1						
230	safe environment									1
243	social awareness within society									1
244	social network						1			
245	social support						1			
248	social support from family						1			
249	social support from friends						1			
250	socialising with people									1
255	strong solid support network including friends						1			
257	strong support system						1			
258	structured and healthy eating plan			1						
261	supervision						1			
262	support						1			
263	support and understanding from family						1			
264	support and understanding from friends						1			
265	support from community						1			
270	support from professionals						1			
272	support from school						1			
273	support from surrounding individuals						1			
276	support from work						1			
277	support groups						1			
283	supportive and non-judgemental family						1			
284	supportive and non-judgemental friends						1			

285	supportive environments						1			
288	surrounding yourself with people who care for you						1			
289	taking away stressful situations									1
298	tender loving care						1			
300	therapist						1			
301	therapy						1			
307	to not be referred to as the 'anorexic' or 'bulimic'									1
309	treatment of other co-morbid mental illnesses									1
310	treatment of other mental illnesses									1
311	trust from people around them						1			
312	trusted people						1			
313	trying to develop a positive relationship with food				1					
315	understanding						1			
316	understanding from family						1			
317	understanding from friends						1			
318	understanding from the community						1			
319	understanding how society contributes to their illness									1
321	understanding people						1			
322	understanding that it does take a while to recover									1
323	understanding the disorder									1
325	wanting to change	1								
326	wanting to recover	1								
327	will power								1	
328	work network						1			
329	working with a dietitian						1			